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ASX ANNOUNCEMENT

Crystalline flake graphite up to 150 micron (100 mesh) identified from recent drill samples

Highlights

- **Petrology of selected drill intervals confirms the presence of abundant crystalline fine flake graphite.**
- **The samples taken from recent reverse circulation drill holes show the flake graphite to be well liberated independent flakes within the highly weathered rock.**
- **Flake size ranges from 5 micron (µm) to 150 micron (µm) in width and length.**
- **The petrology indicates that Sugarloaf is likely to provide predominantly fine flake graphite with an opportunity to provide some coarser crystalline graphite.**
- **Confirmation of the presence of fine and medium flake graphite has greatly improved the exploration potential of the deposit.**
- **Drilling results confirm that the graphitic-rich body consists of two steeply dipping zones of graphitic schist that in aggregate average 40m in true width, extend to a vertical depth of at least 120m and show no sign of thinning at depth.**

Previous detailed petrology by Pontifex and Associates in Adelaide on a sample of graphitic schist taken from the collar of a historic shaft within the Sugarloaf graphite deposit revealed the presence of fine, medium and coarse flake sized graphite. The presence of crystalline flake graphite greatly increases both the marketability and price of graphite.

The scope given to Pontifex was to identify and estimate the flake size of graphite from thin section. This initial work identified that the graphite occurred as crystalline flakes with an **average size of 100µm**, with a range from 20µm to 200µm in length. Most flakes were independently arranged in the matrix with some graphite flakes arranged in ‘booklets’ up to 50µm in width.

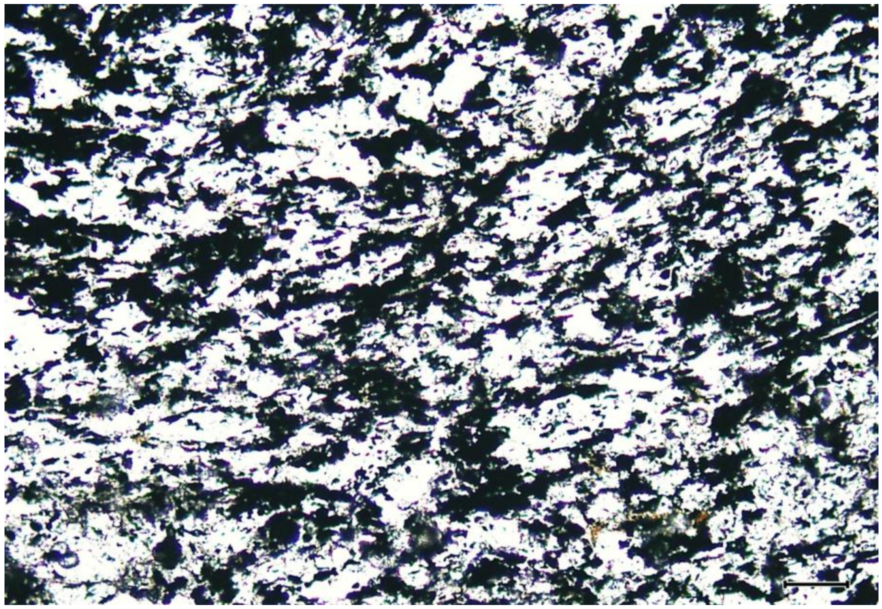

Plate 1. Photomicrograph of thin section of graphite rock under ordinary transmitted light showing typical mode of occurrence and flake size of schistose black-opaque graphite within (muscovite) quartz-rich metasiltstone.

Archer completed a 4 hole reverse circulation drilling program over the southern portion of the Sugarloaf deposit in April 2011. The drilling was dual purposed. The first objective was to replicate historic drilling by Goldstream and Helix that had recorded wide intervals of graphite in 23 of 41 drill holes designed to target gold mineralisation. Whilst recording abundant graphite, Goldstream and Helix did not assay for carbon. The results demonstrated that the geological logging of the historic drill holes correctly identified intervals of significant graphite.

Table 1 (below) reports the average Total Carbon grade for the graphitic intervals observed in the April 2011 drilling.

Table 1. Significant intervals of Total Carbon (TC) % for 2011 drilling

Hole ID	From (m)	To (m)	Interval (m)	Total Carbon %
SLRC11_001	**60**	**82**	**22**	**12.31%**
SLRC11_001	**96**	**144**	**48**	**10.02%**
SLRC11_002	0	20	20	**6.31%**
SLRC11_002	**28**	**93**	**65**	**9.00%**
SLRC11_003	47	53	6	9.90%

Figure 1, below, shows the locations of the holes drilled in April 2011.

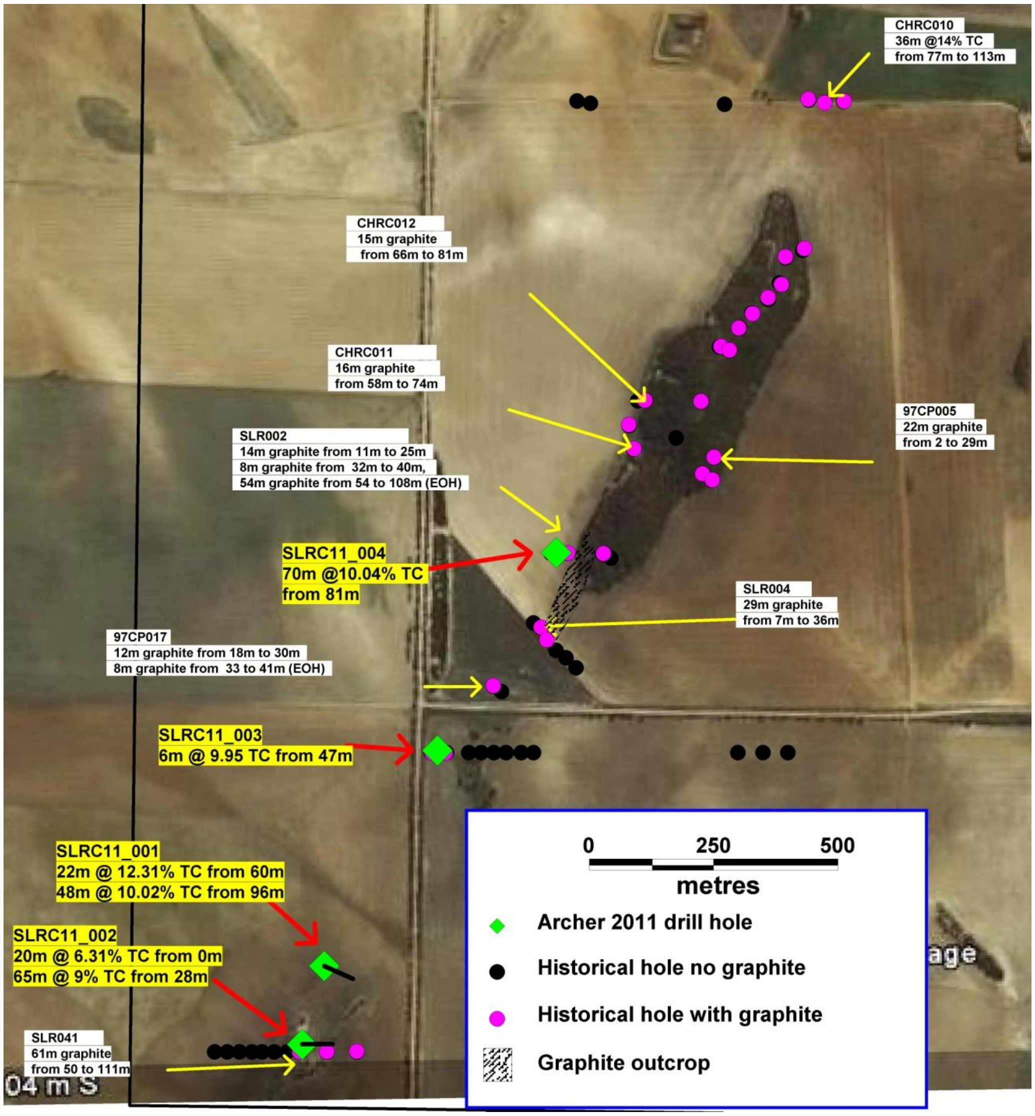

Figure 1. Location of April 2011 drilling at Sugarloaf

The second objective of the April 2011 drilling was to enable a series of samples to be taken to determine the nature and morphology of graphite across a 1km strike of the Sugarloaf graphite deposit and to provide composite samples for sizing and flotation test work. The latter metallurgical test work is in progress and will be reported in a subsequent announcement.

Petrology from a series of samples taken along 1km of the Sugarloaf deposit identified the following:

Hole SLRC11_004

Four drill intervals were submitted; 83 to 84m; 96 to 97m; 112 to 113m and 124 to 125m. These 4 samples represent 2 zones reported in SLRC11_004, the first zone from 81 to 114m (10% C) and the second 124 to 151m (11.9% C).

Table 2. Average dimensions and maximum length of graphite flakes observed

Hole Id	From (m)	To (m)	Width (µm)	Length (µm)	Max (µm)	Carbon (%)
SLRC11_004	96	97	20	40	55	13.6
SLRC11_004	112	113	10	40	65	17.75
SLRC11_004	124	125	20	60	150	10.15

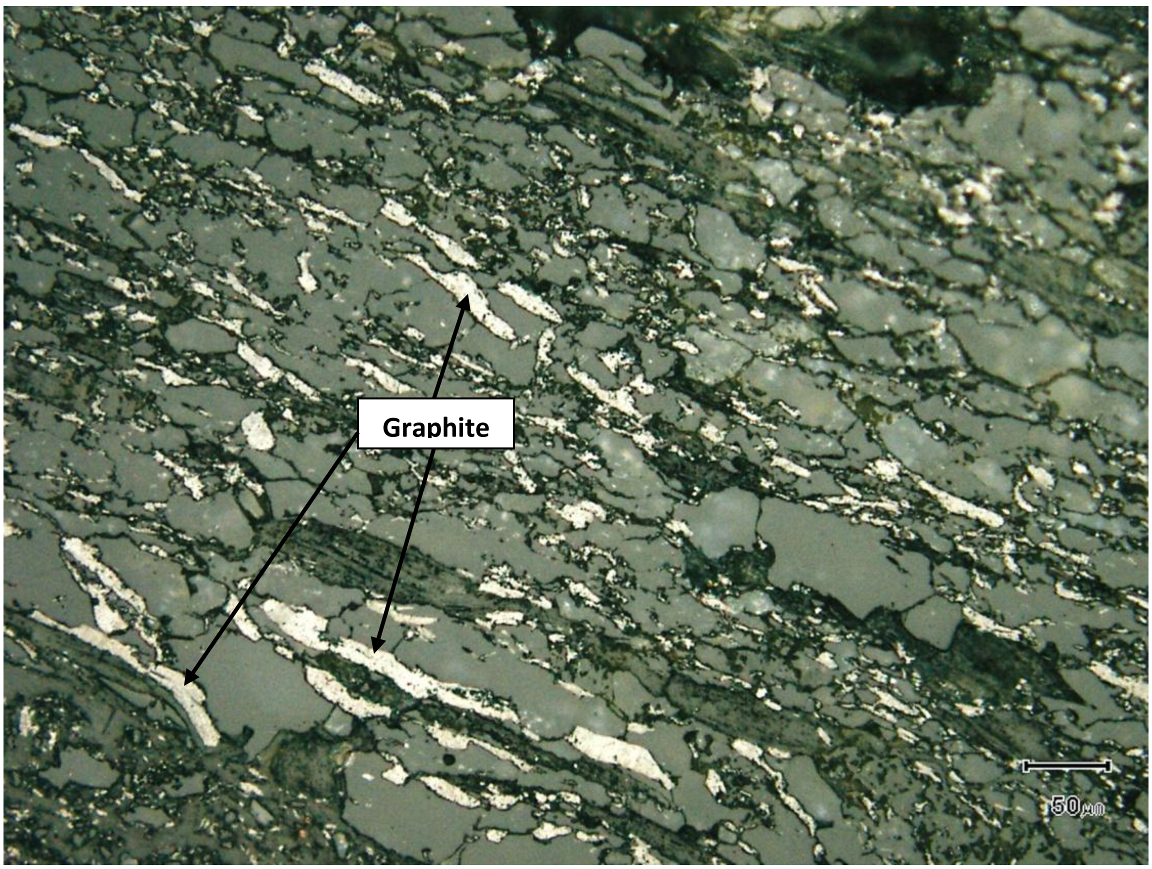

Plate 2. Photomicrograph of SLRC11_004 96 to 97m - graphite flakes are the white crystals

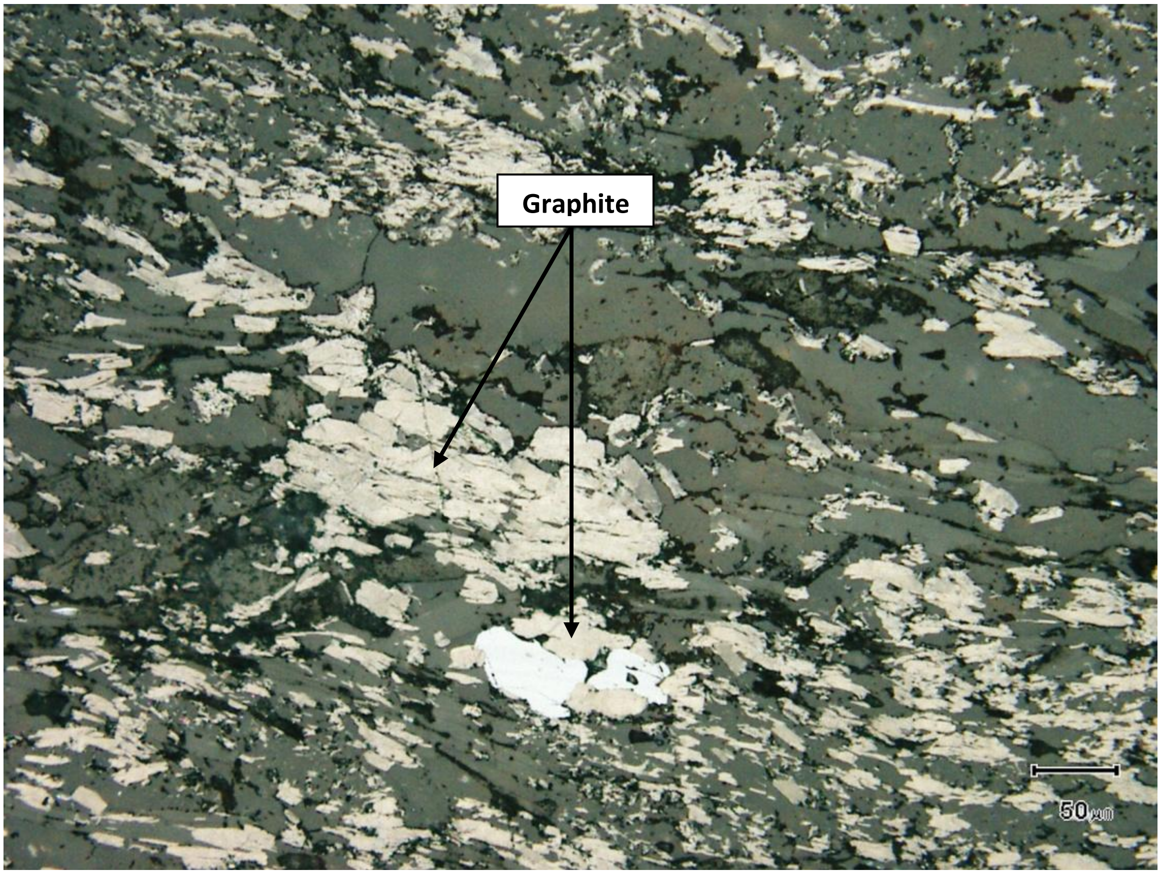

Plate 3. SLRC11_004 124 to 125m, graphite flakes are the white crystals

<u>Hole SLRC11_001</u>

Four Intervals were submitted; 96 to 97m; 122 to 123m; 128 to 129m and 134 to 135m. These 4 samples are from the lower graphitic interval of 48m (from 96m) at 10% C.

Table 2. Reported average sizes and maximum length of graphite flake observed

Hole Id	From (m)	To (m)	Width (µm)	Length (µm)	Max (µm)	Carbon (%)
SLRC11_001	96	97	15	45	50	5.06
SLRC11_001	122	123	5	15	15	10.85
SLRC11_001	128	129	5	20	20	16.25
SLRC11_001	134	135	10	20	35	10.9

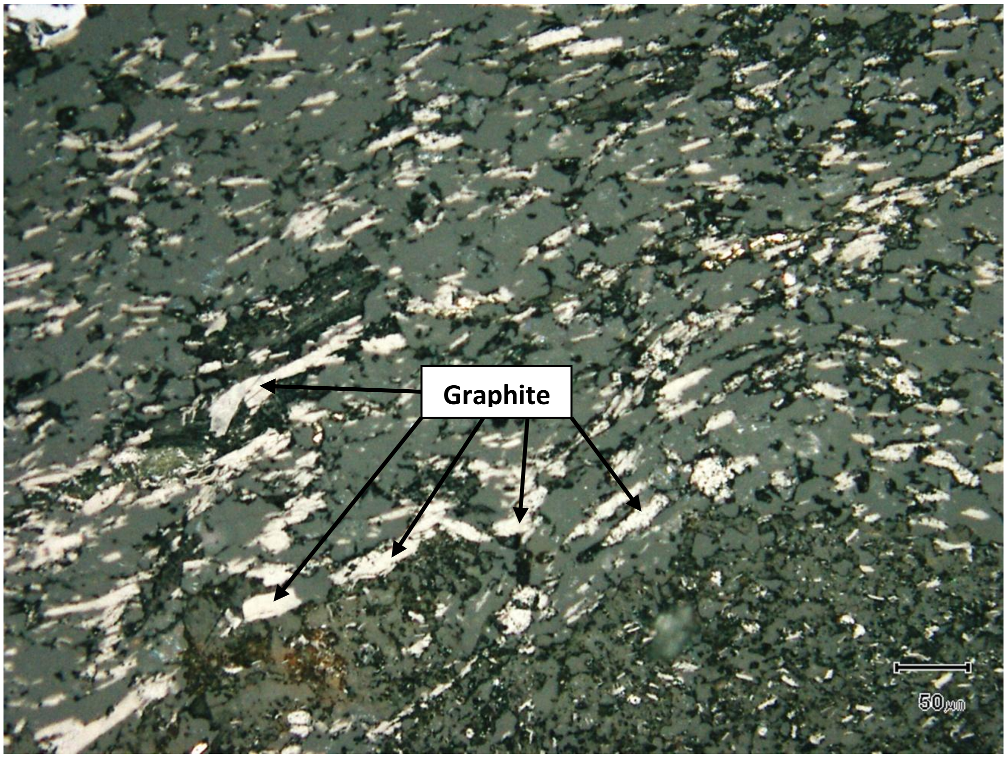

Plate 4. SLRC11_001 96 to 97m, graphite flakes occur as well liberated free crystals

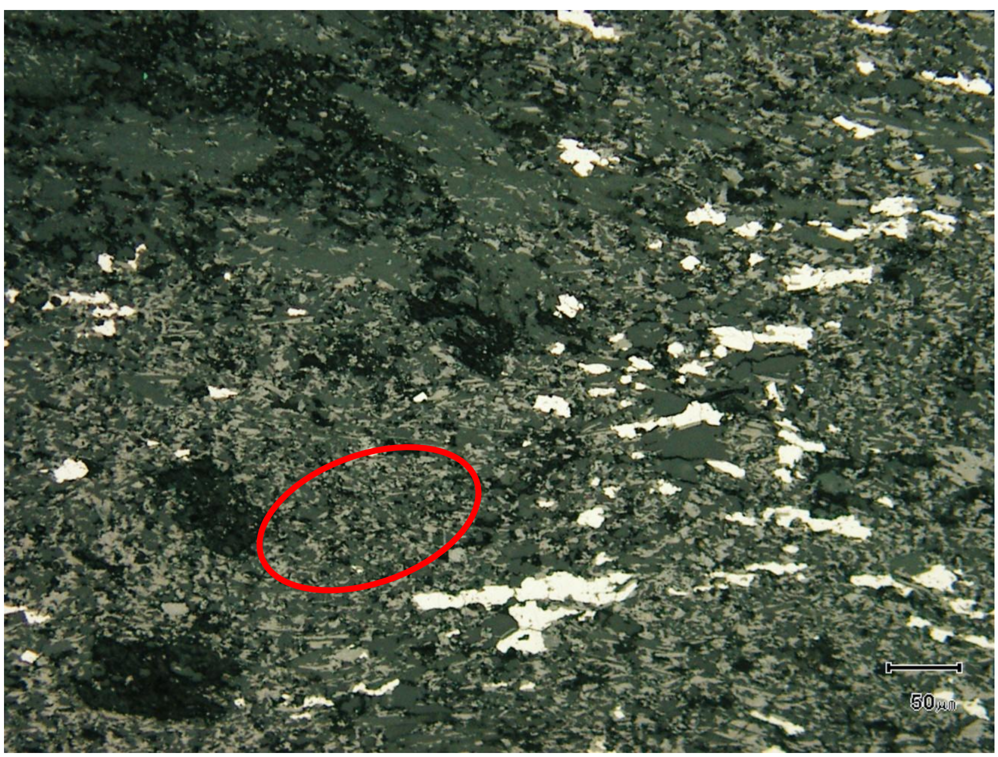

Plate 5. SLRC11_001 128 to 129m, very fine graphite flakes circled. Brightest material is sulphide.

This preliminary petrological examination has shown that at Sugarloaf the graphite is present mostly as fine crystalline graphite. The deposit is also likely to provide both coarser graphite flake and amorphous or powder graphite.

Outstanding Metallurgical Test Work

Composite samples of graphitic material have been collected to represent the identified lithological domains within the deposit, namely oxidised; sulphide-rich and silica-rich graphitic material. These composite samples have been submitted for screening to determine if the graphite can be upgraded prior to floatation by screening out silica-rich fractions or sulphide-rich fractions.

Once the results of the screening tests are received a series of float tests will be undertaken to determine the liberation characteristics of the graphitic ore and to determine the grade and characteristics of floated graphite concentrates. The floatation test results are expected by the end of June 2011.

About Graphite

Graphite and diamonds are the only two naturally formed polymers of carbon. Graphite is essentially a two dimensional, planar crystal structure whereas diamonds are a three dimensional structure. Graphite is an excellent conductor of heat and electricity and has the highest natural strength and stiffness of any material. It maintains its strength and stability to temperatures in excess of 3,600°C and is very resistant to chemical attack. At the same time it is one of the lightest of all reinforcing agents and has high natural lubricity.

Traditional Uses for Graphite

Traditional demand for graphite is largely tied to the steel industry where it is used as a liner for ladles and crucibles, as a component in bricks which line furnaces and as an agent to increase the carbon content of steel. In the automotive industry it is used in brake linings, gaskets and clutch materials. Graphite also has a myriad of other uses in batteries, lubricants, fire retardants, and reinforcements in plastics.

Industrial demand for graphite has been growing at about 5 per cent per annum for most of this decade due to the ongoing industrialization in China, India and other emerging economies.

Rapidly Growing Non-Traditional Demand for Graphite

The “blue sky” for the graphite industry is the incremental demand that is rapidly being created by a number of green initiatives including lithium ion batteries, fuel cells, solar energy, semi-conductors, and nuclear energy. Many of these applications have the potential to consume more graphite that all current uses combined.

The market for graphite exceeds one million tonnes per year with some 600,000 tonnes produced as amorphous graphite powder and 400,000 tonnes of various sized crystalline flake graphite.

China produces over 80 per of the world's graphite supply. Approximately 70% of Chinese production is graphite powder termed amorphous graphite.

China was responsible for the large decline in graphite prices in the 1990s as a substantial amount of product was dumped on the market. This is unlikely to be repeated due to the phenomenal growth in the Chinese domestic steel industry which internally consumes a great deal of graphite. Furthermore, Chinese graphite is declining in quality and costs are increasing due to the effects of high grading and to tightening labor and environmental standards. The majority of Chinese graphite mines are small and many are seasonal. Easily mined surface oxide deposits are being depleted and mining is moving into deeper and higher cost deposits. China now has a 20% export duty on graphite, as well as a 17% VAT, and has instituted an export licensing system. This is creating serious supply concerns for the rest of the world. The situation is being exacerbated by declining production and the impending closure of the only North American mine.

The demand for graphite is surging as the world seeks newer and better energy storage solutions to provide clean portable energy, alternative fuel for the automotive industry (the emergence of hybrid electric vehicles) and energy storage solutions for green energy initiatives such as solar energy.

Graphite is in strong demand for use lithium ion batteries. Lithium ion batteries are smaller, lighter and more powerful than traditional batteries. They have no memory effect and a very low rate of discharge when not in use. As a result, most portable consumer devices such as laptops, cell phones, MP3 players and digital cameras use lithium ion batteries. These batteries are now being used in power tools. While this market is growing, the batteries are small and the resultant demand for metal is relatively small. Graphite demand in lithium ion batteries was estimated at 44,000 tonnes in 2008 or about 10 per cent of the flake market.

However, lithium ion batteries are now being used in hybrid electric vehicles ("HEV"), plug in electric vehicles ("PEV") and all electric vehicles ("EV") where the batteries are large and the potential demand for graphite huge. There is twenty times more graphite that lithium in lithium ion batteries.

While batteries store electrical energy for subsequent use, fuel cells also generate electricity through chemical reactions and therefore need to be periodically "refueled". Fuel cells can be used in both stationary and mobile applications. Fuel cells use substantially more graphite than lithium ion batteries. Fuel cells have no moving parts, are long lasting, low maintenance, quiet and reliable and produce little or no waste products.

Graphite use is expected to rise sharply due to its growing use in Pebble Bed Nuclear Reactors. These reactors are small, modular nuclear reactors. The fuel is uranium imbedded in graphite balls the size of tennis balls. These reactors have a number of advantages over large traditional reactors namely:

- Lower capital and operating costs.
- They use an inert gases rather than water as a coolant. Therefore, they do not need the large, complex water cooling systems of conventional reactors and the inert gases do not dissolve and carry contaminants.
- The passive safety removes the need for redundant active safety systems. In other words, these reactors cool naturally when shut down.
- The reactors operate at higher temperatures leading to more efficient use of the fuel and they can directly heat fluids for low pressure gas turbines.

The first prototype is operating in China and the country has firm plans to build 30 by 2020. China ultimately plans to build up to 300 Gigawatts of reactors and Pebble Bed Nuclear Reactors are a major part of the strategy.

Small, modular reactors are also very attractive to small population centers or large and especially remote industrial applications. Companies such as Hitachi are currently working on turn-key solutions. Researchers at West Virginia University estimate that 500 new 100 GW pebble reactors will be installed in the US by 2020 with an estimated graphite requirement of 400,000 tonnes. This alone is equal to the world's current annual production of flake graphite without taking into account pebble reactor demand from the rest of the world, growing industrial demand and growing demand from other applications such as lithium ion batteries. It is estimated that each pebble reactor will require 300 tonnes of graphite at start up and 60-100 tonnes per year to operate.

Graphite Prices

Surging demand has and continues to drive graphite prices higher.

Graphite Prices

2010 Year End Graphite Prices per Tonne

99% to 99.9% C, +400 mesh#	$3,500	$35,000
94% to 97% C, +80 mesh	$1,900	$2,500
90% C, +80 mesh	$1,250	$1,375
94% to 97% C, -80 +100 mesh	$1,650	$1,795
90% C, -80 +100 mesh	$1,070	$1,150
85% to 87% C, -80 +100 mesh	$989	$1,020
94% to 97% C, +100 mesh	$1,425	$1,489
90% C, -100 mesh	$975	$1,050
Amorphous powder 80% to 85C	$730	$850

Source : www.megagraphite.com

 # Denotes number of openings per (linear) inch of mesh. 400 mesh is equivalent to a size of 37 micron.

Exploration Potential – Tonnage*

When combined all drilling results confirm that the graphitic-rich body consists of two steeply dipping zones of graphitic schist that in aggregate average 40m in true width, extend to a vertical depth of at least 120m and show no sign of thinning at depth. Drilling results are limited to a strike length of 2km however, the deposit remains open along strike and at depth. The host rock is a muscovite bearing quartz-rich metasiltstone. No density measurements have been conducted at this time but given the dominant quartz and muscovite composition it is reasonable to ascribe a density of 2.5gm/cc.

The lower bound exploration potential assuming a strike length of 2,000m, a width of 40m, a down-dip extent of 120m and a specific gravity of 2.5gm/cc is estimated at 24Mt.

The upper bound exploration target assumed a strike of 2,500m and a vertical extent to the deposit of 150m is estimated at 37Mt.

Exploration Potential – Grade*

Prior to the April 2011 drilling Archer was reluctant to allocate a grade range for the graphitic schist due to the paucity of assay results. The April 2011 drilling when combined with the 4 holes assayed in 2009 is now considered sufficient in terms of the number of assayed intervals to enable a conservative estimate of the Total Carbon grade for the graphitic schist. The arithmetic average of all drill intervals of graphitic schist (sample size n=319) is 10.9% Total Carbon. Intervals chosen for the analysis had to have visible graphite however no lower grade cut-off was used. In view of no lower cut-off grade being applied it is therefore reasonable to assume that the likely grade will be between 10 – 12% Total Carbon.

The depth of oxidation in the area is approximately 80m vertically below surface corresponding with the current water table. Petrological observations when combined with field observations of this large oxidised portion of the deposit suggest that the run-of-mine total carbon grade may be able to be significantly upgraded by dry screening out coarse gangue material (largely quartz).

The potential quantities and grades presented 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

Summary

Confirmation of the presence of fine and medium flake graphite at Sugarloaf has greatly improved the exploration potential of the deposit. Archer will accelerate exploration and metallurgical studies over the coming months not only to better quantify the Sugarloaf deposit but also to test several regional targets within the Company's controlled tenements where coarse flake graphite ranging from 300 – 500 microns has been identified in historic drilling and from historic shafts dug for graphite.

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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 sixteen years experience in the field of activity being reported. Mr. Bollenhagen consents to the inclusion in the report of matters based on his information in the form and context in which it appears.