



## ASX ANNOUNCEMENT

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ASX: **LMB**

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## EXCEPTIONAL HIGH PURITY METALLURGICAL RESULTS FROM TARGET 4 AND 6 BULK SAMPLES

Lamboo Resources Limited ("Lamboo") is pleased to report the exceptional bulk scale metallurgical results from Targets 4 and 6 at its 100% owned McIntosh Flake Graphite Project in the East Kimberley, Western Australia.

### HIGHLIGHTS:

- Bulk scale metallurgical test work samples from Target 6 (200kgs) and Target 4 (100kg) have both produced 97% TC concentrates using simple floatation, gravity and magnetic separation techniques (*\*with no acid or chemical leaching*)
- Optimisation test work is ongoing and will focus on achieving even higher concentrate grades and recoveries
- Concentrate ground to average flake size of approximately 100µm (140#), being the optimal feed size for spherical graphite, resulting in a finer grained sphere which is ideal for lithium ion battery use
- Spherical graphite test work to commence using air powered jet milling (spheroidisation) equipment including an investigation into the potential for producing spherical graphite on-site at McIntosh
- Data and concentrate samples from the bulk scale metallurgical test work to be sent to currently engaged end users and prospective new overseas customers
- The McIntosh Flake Graphite Project is now well positioned to supply the multi-billion dollar battery sector
- Infill drilling at Target 6 has now been completed targeting a higher resource classification for the maiden resource estimate due in Jan 2016

*"These first pass bulk metallurgical results are exceptional and highlight the high purity of the McIntosh flake. We certainly have a unique graphite deposit at McIntosh which is unlike almost all the other known deposits around the world. It is high purity and highly crystalline flake graphite which can produce a high grade, high value concentrate using simple floatation, gravity and magnetic separation techniques. Adding further value to our product by producing spherical graphite on-site for use in batteries is a focus of the company"* commented Lamboo's CEO / Head of Operations, Tony Cormack.

## BULK SCALE METALLURGICAL TESTWORK

Representative bulk scale metallurgical samples were compiled from HQ diamond core from Target 6 (200kg) and Target 4 (100kg) and delivered to ALS laboratory in Adelaide for test work. Using only simple floatation, gravity and magnetic separation techniques has produced 97% concentrates along with high recoveries of 80%.

These high grade results have been achieved using simple separation techniques and without the use of any acid or chemical leaching. Further test work is continuing with the aim of optimising performance to further increase the concentrate grade and recovery rates.

## SPHERICAL GRAPHITE

Spherical graphite is predominantly used in lithium ion batteries with the main demand driver currently being electrical vehicles (EV) and increasingly for home energy storage. Approximately 15kg – 40kg of spherical graphite is needed for one EV, with the International Energy Agency has predicting annual sales of electrical vehicles (which includes hybrid and plug in hybrid vehicles) of 5.9 million units by 2020 (Source: *International Energy Agency*) and Navigant Research forecasting the global light duty EV market expected to grow from 2.7 million vehicle sales in 2014 to 6.4 million in 2023 under a base case scenario (Source: *Navigant Research*).

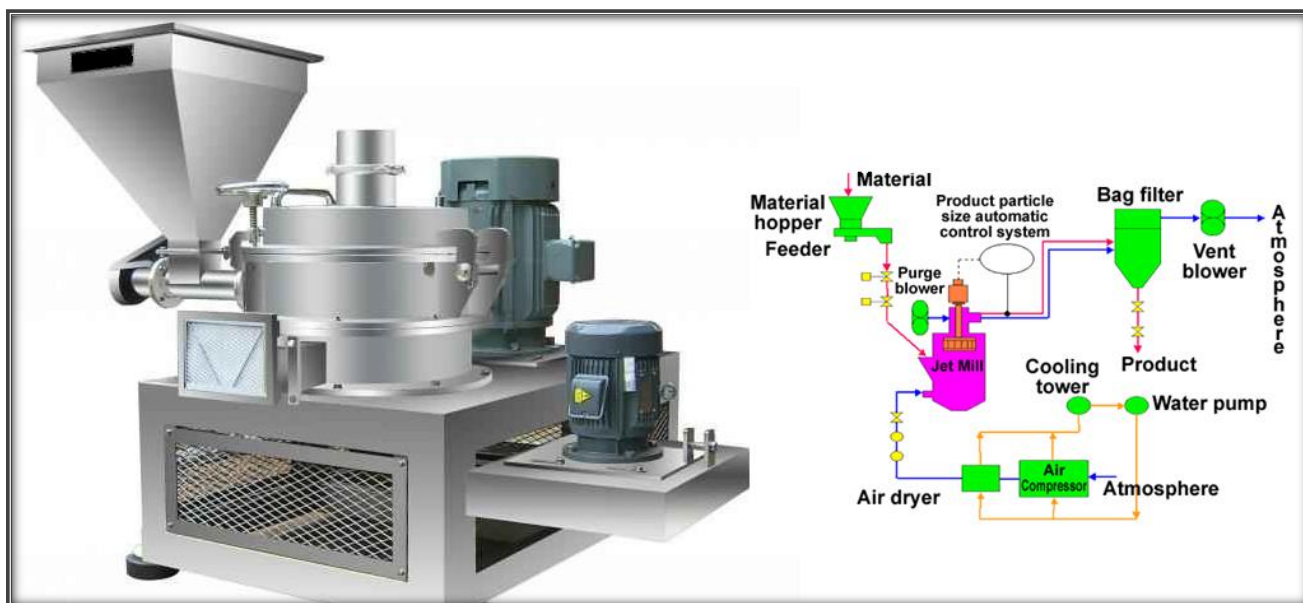
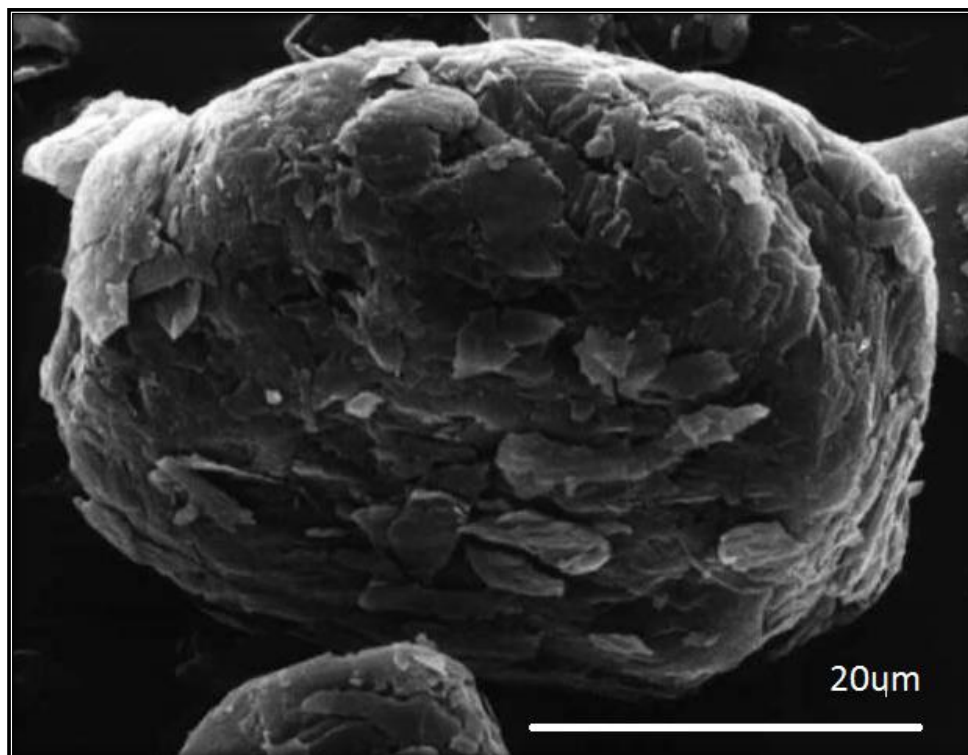


Figure 1: Air powered jet mill and process flow sheet

Spherical graphite particles range from 3 to 50 microns with particle size for lithium ion batteries split into two main categories; the coarse size battery requires spherical graphite with particle size 25 to 50 microns and the fine sizing battery requiring spherical graphite with a particle size 3 to 25 micron.



**Figure 2: Photomicrograph of coarse size battery grade spherical graphite**

A standard deviation system is used in the industry to classify particle distribution and it has been found that smaller spherical particle size creates a larger surface area with a higher density allowing for increased potential for storage capacity.

Based on a 1.25Mtpa throughput, and assuming a yield loss of approximately 50 – 60% due to the edges of the flake graphite breaking off during the spheroidisation process, McIntosh will theoretically be able to produce approximately 20,000 to 25,000tpa of spherical graphite. Uncoated spherical graphite sells for approximately US\$3,500 per tonne while coated spherical graphite currently sells for approximately US\$7,000 to US\$10,000 per tonne.



## LITHIUM ION BATTERIES

The battery market is a rapidly growing sector driven mainly by demand from the significant growth in electric vehicles (EV's) along with home and commercial energy storage. There is approximately 10 times more graphite than lithium required in a lithium ion battery.

Lambooo is able to produce high purity / high quality crystalline flake graphite without the use of acid or chemical leaching from its McIntosh project, anticipated to be at a significantly reduced cost when compared to synthetic graphite, with the potential to be a cost effective option for the production of high quality spherical graphite for use in lithium ion batteries. The rapid growth in this sector is being influenced by many factors, including significant developments in fuel economy, greater acceptance and increased confidence in EV's along with major advancements in battery technology and an ever increasing focus on environmental responsibility.

With increasing improvements and decrease in cost for lithium ion batteries for use in consumer EV's it is estimated that EV sales will reach 100 million units by 2050 with a global market share of 60% (Source: *International Energy Agency*). Lambooo is well placed to take advantage of the high growth sector.

*"The battery and energy storage market is an exciting, high growth sector with Lambooo well positioned to become a major supplier to this multi-billion dollar market. We are continuing our test work and are investigating options to value add to our product by potentially incorporating on-site spherical graphite production into future processing operations at our McIntosh project"* commented Lambooo's CEO / Head of Operations, Tony Cormack.



## **Tony Cormack**

CEO / Head of Operations

### **Competent Persons Statement**

*The information in this report relating to Exploration, Drilling, Assay Results, Metallurgy and Geological Data at the McIntosh Project is based on information previously compiled and / or reviewed by Mr. Tony Cormack, Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Lamboo Resources Limited. Mr. Cormack has sufficient experience which is relevant to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Cormack consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*