

# QUARTERLY ACTIVITIES REPORT To 30 September 2014

# LATROBE MAGNESIUM PROJECT

# 1. Project Update

Latrobe Magnesium Limited (ASX:LMG) provides the following update on the events that have taken place since the last quarter, being:

- testing and production of the large China sample;
- further test work conducted on the iron removal process; and
- the rollover of the fast finance debt facility.

#### 2. China Sample

In June 2014, LMG produced a large sample of beneficiated fly ash ("BFA"), using its unique hydromet patented process, for full scale commercial smelter processing in China.

Since July the bulk fly ash sample was calcined, mixed and extensively tested at a Melbourne laboratory. The results of this test work proved that this sample has achieved the company's hydromet and smelter specifications as set in its prefeasibility and adjustment studies.

The China smelter tests will be the first testing in actual commercial conditions and are expected to validate LMG laboratory results to date.

On 24 September, LMG dispatched via air freight its 600kg treated fly ash sample to China for processing through a commercially operating magnesium plant. The first two of the three tests have been completed in China and the third test is to be completed this week. The magnesium recovery results should be available next week. LMG will advise the market when the results for all the three tests are known. This work replaces pilot plant tests that might otherwise have been required and will address directly any risks with the use of BFA as a feed stock in a commercial operation.

After completion of the processing in China, the resulting magnesium and cementitious material will be air freighted back to Australia. Engineer Material Solutions Pty Ltd will then conduct a full suite of cement tests to replicate previous results and more precisely determine the properties of this material.

About 80% of the cement test results will be known within 28 days after Engineer Material Solutions receives the material, with the remaining 20% of results expected to take a further month.

The timetable is therefore:

07 November : Magnesium smelter test results15 December : Cementitious material initial results

### 3. Further Iron Removal Tests

During the last quarter, LMG conducted some 20 tests to improve the removal of iron in the beneficiated fly ash. As a result of the high iron content, LMG uses up to a 30% excess of ferrosilicon in its smelter operations to produce its magnesium.

A reduction in the iron will mean a reduced ferrosilicon usage and an operating cost saving of up to \$350 per tonne of magnesium produced. The iron removed may also produce an additional product to sell.

The results of the initial tests were encouraging. The tests were able to achieve a 90% plus decomposition of the iron holding mineral and was able to stop the forming of any iron hydrotalcites which was previously locking up the residual iron.

A further 6 tests are currently being planned which will use these results to treat the fly ash to achieve a higher iron removal.

#### 4. Fast Finance Rollover

On 14 October 2014, LMG rolled over its fast finance debt facility of \$400,000 for a further 12 month period on primarily the same terms and conditions as last year. This rollover allows the company to keep its 2014 research and development tax rebate of \$396,000 to fund the project's development and provide the company with additional working capital.

David Paterson Chairman

27 October 2014

#### **About Latrobe Magnesium**

D. Pateron

Latrobe Magnesium is developing a magnesium production plant in Victoria's Latrobe Valley using its world-first patented extraction process. LMG intends to extract and sell magnesium metal and its cementitious material from industrial fly ash, which is currently a waste stream from brown coal power generation.

LMG has completed a pre-feasibility and an adjustment study validating its combined hydromet / thermal reduction process that extracts the metal. Construction of the production plant is due to start in July 2015 with production to begin a year later. The plant will be in the heart of Victoria's coal power generation precinct at its site located at Tramway Road in Morwell, providing immediate access to feedstock, infrastructure and a workforce.

LMG plans to sell the refined magnesium under long-term contracts to Australian and American users. Currently, Australia imports 100% of the 10,000 tonnes annually consumed.

Magnesium has the best strength-to-weight ratio of all common structural metals and is increasingly used in the manufacture of car parts, laptop computers, mobile phones and power tools.

The LMG project is at the forefront of environmental benefit – by recycling power plant waste, avoiding landfill and being a low CO<sup>2</sup> emitter.