

## QUARTERLY ACTIVITIES REPORT To 31 December 2014

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### LATROBE MAGNESIUM PROJECT

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#### **1. Project Up date**

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;
- negotiations with major customers and suppliers; and
- the conversion of some of the debt facility.

#### **2. China Bulk Sample**

In November, the Company successfully processed its bulk sample of beneficiated fly ash (BFA) to produce magnesium metal and cementitious material in its first full scale commercial smelter tests in China. The BFA was prepared using LMG's unique hydromet patented process.

The test work involved smelting three charges of some 150kg each through a commercial retort at the Wu Long's magnesium plant in Shanxi province. This work was managed and supervised by LMG's Chinese construction partner, BTE Engineering Co. Ltd.

Based on initial data, magnesium recoveries are in the range between 80% and 90%. The final numbers will be determined once more comprehensive assaying has been completed in January 2015.

At the lower end of the range, the magnesium recoveries are already 5% higher than the average magnesium recovery levels of Chinese plants that process dolomite. These higher recoveries reflect an advantage of LMG's unique BFA feedstock.

This work replaces pilot plant tests that might otherwise have been required and has addressed directly any scale-up risks using BFA as a feedstock in a full scale commercial operation.

At the end of December 2014, the magnesium crowns and the cementitious material from each test was returned to LMG in Australia for further chemical and mineralogical analyses.

The large amount of cementitious material generated will enable large-scale cement tests to be completed. Previous test work will be replicated to confirm the earlier results, together with a full suite of cement tests to determine the specific properties and advantages of this cementitious material. This work will take 56 days to complete, although 80% of data is expected to be available within 28 days. Initial results should be available late February 2015 with the full tests results due by the end of March 2015.

### **3. Iron Removal Test Work**

Since July 2014, the Company has completed a substantial amount of test work to optimise the further removal of iron in the BFA. The removal of iron has the capacity to reduce the operating costs of the smelter activities and improve the quality of the cementitious material.

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.

### **4. Major Customers and Suppliers**

Following the completion of the cement tests, LMG will be able to start finalising its negotiations with potential customers who have expressed interest in entering into long term supply agreements for both its magnesium and cementitious material.

The Company has commenced its negotiations with its major suppliers and over the next six months these commitments will be formalised in writing. The major commodity cost elements are ferrosilicon, natural gas, fly ash, dolomite, lime and soda ash.

### **5. Conversion of Debt Finance**

In November 2014 and January 2015, a number of fast finance lenders converted their loans to shares. This action had the effect of reducing the Company's indebtedness from \$400,000 as at 15 October 2015 to a maximum of \$204,560.



David Paterson  
Chairman

19 January 2015

### **About Latrobe Magnesium**

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 the last half of 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<sub>2</sub> emitter.