

## QUARTERLY ACTIVITIES REPORT

31 March 2016

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# LATROBE MAGNESIUM PROJECT

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### 1. Feasibility Study

LMG will release the results of the first stage of its feasibility study by the end of the first week in May. The first stage includes production flowsheet, mass balance modelling, engineering design, equipment specification and costing, and financial modelling. The second stage will look at more detailed engineering work and optimisation of the capital expenditure.

In March, BTE Engineering Co Ltd (BTE), LMG's Chinese engineers, visited Melbourne for four days and provided their engineering inputs. From these discussions a detailed monthly timetable was agreed with LMG, its engineers and BTE for the finalisation of detailed engineering design and construction of the initial plant by the end of 2017.

It was decided that further vertical retort testing will be conducted in China in the middle of this year and that this work will delay the commencement of on-site construction until the end of the year.

The plant will take some 12 months to install and the plant will be in production by the end of 2017.

LMG will commence the approval process for these construction works in the second half of this year. This process is expected to take 4 months.

### 2. Offtake Agreements

On 15 March 2016, LMG signed a Memorandum of Understanding with a Japan-based company committing to purchase up to 4,000 tonnes of magnesium per annum from the LMG planned production facility in Morwell Victoria.

The offtake company is Advanced Material Corporation of Japan (AMCJ), the largest titanium and magnesium trading house in Tokyo. AMCJ has also agreed to consider providing LMG with a deposit against its sales contract to assist with costs of acquiring, installing and commissioning LMG's expanded plant. AMCJ has also agreed to assist LMG to obtain financial assistance from the Japanese government owned banks for the funding of its initial and expanded plants.

In September 2015 LMG and AMCJ met with the three largest users of magnesium in Japan and they all indicated willingness to buy LMG magnesium. These three users consumed in the order of 17,000 tonnes per annum of magnesium. The customers were interested in the low carbon emissions from the LMG plant – LMG's plant emits approximately 60% less emissions than the Chinese plants.

The Japanese commitment is subject to LMG completing a satisfactory feasibility study and securing financial close for the plant's construction. In addition, LMG's magnesium has to pass some standard magnesium industry specifications. As there are very few impurities in LMG's beneficiated fly ash, it currently produces 99.7% pure magnesium before the refinery stage. Magnesium produced by the normal dolomite production is in the order of 95%.

Japan currently uses 40,000 tonnes of magnesium per annum and this is projected to increase with greater use of magnesium by the motor vehicle industry. Currently most of this magnesium is imported from China. The Japanese Magnesium Association has a stated objective to diversify their magnesium supply chain.

This is the first of four LMG's offtake agreements that will see all the magnesium and cementitious material outputs sold. The offtake agreements will form the basis for funding the plant.

LMG is currently in the final stage of negotiations with a USA distributor for the sale of its magnesium into the USA market. This contract should be executed within the next month.

LMG are also in discussions with a prospective German customer. A meeting has been set for the middle of May to continue these offtake negotiations which commenced last year.

These three proposed agreements will not just cover the pre-sale of the magnesium produced from its 5,000 tonnes per annum plant but also most of its proposed expanded 40,000 tonnes per annum plant.

### **3. Funding**

LMG is in discussion with both the Federal and Victorian State Government in relation to the provision of financial assistance for the financing of the initial plant.

LMG has commenced discussions with two banks for the provision of a debt facility.

These funding discussions are reliant on the completion and outcomes of the feasibility study. LMG expects to conclude these funding negotiations by September 2016.



David Paterson  
Chief Executive Officer

26 April 2016

## **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 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. Production from its initial 5,000 tonne per annum magnesium plant is due to start at the end of 2017. The plant will then be expanded to 40,000 tonne per annum magnesium 18 months later. The plant will be in the heart of Victoria's coal power generation precinct, providing immediate access to feedstock, infrastructure and labour.

LMG plans to sell the refined magnesium under long-term contracts to Australian and overseas customers. 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 is a low CO<sub>2</sub> emitter. LMG adopts the principles of an industrial ecology system.