

Test work results greatly reduce capital costs of magnesium extraction for Latrobe Magnesium

14 June 2012, Sydney Australia: Latrobe Magnesium Limited (ASX:LMG) has completed three of its four test work programs that indicate about \$10 million in expected capital cost reductions for its magnesium extraction plants in Victoria's Latrobe Valley. The four test work programs are a precursor to the launch of the company's bankable feasibility study.

Latrobe Magnesium has achieved improved results in each of its tests and expects that as well as the capital cost savings there will also be reduced operating costs through high rates of iron removal.

The prefeasibility study (PFS) completed in October was based on a number of assumptions and these assumptions are now being proven by subsequent test work.

A comprehensive four part test work program has been set. The objectives are to:

- Conduct optimisation tests to refine the conditions for the removal of sulfur in the hydromet process (Program 1).
- Prepare larger amounts of beneficiated fly ash for magnesium reduction and cement test work and conduct tests to optimise conditions for iron removal in the hydromet process (Program 2).
- Test the suitability of LMG's hydromet process on RWE fly ash (Program 3).
- Test the suitability of LMG's hydromet process on Yallourn fly ash (Program 4).

Program 1 was conducted in January. This program focussed on the conditions for the removal of sulfur. The results indicated that a shorter reaction time of one hour is required versus the four hours assumed in the PFS. The effect of quicker reaction time is that the size of the tanks can be reduced by four times thereby reducing the capital costs by up to \$5 million.

Program 2 started at the end of March and involved 15 tests to produce significant quantities of material for additional thermal reduction process work and cement property test work. The test work was also designed to investigate some process improvements in relation to iron removal.

Iron removal in these tests has increased and reaction times reduced. The results have indicated an increased iron removal from 55% to 65% and also a reduced reduction time from 24 hours to two hours. The reduction in tank size and supporting facilities has led to a reduced capital cost of \$5 million.

Program 3 focuses on processing RWE fly ash from Germany using the hydromet process. Initial XRF and XRD analyses have been conducted on this fly ash. This work revealed the ash contains lower sulphur but slightly higher iron but with magnesium at acceptable levels. Indications are positive to achieving a successful result from the Company's hydromet process. The detailed hydromet test work has commenced and the results are expected by the end of June.

Program 4 will focus on processing Yallourn fly ash using the hydromet process. Initial XRF and XRD analyses have occurred on this fly ash. The work on this fly ash will be conducted after the results of the RWE fly ash are available.

Latrobe Magnesium is moving closer to launching its bankable feasibility study with the assistance of Clark & Marron Pty Ltd and Beijing Tieforce Engineering Co Ltd. This project entails development of an initial plant to produce 10,000 tonnes of magnesium per annum from brown coal fly ash at the Latrobe Valley's Hazelwood power station. These studies are also a precursor for the expansion of this capacity to a 40,000 tonnes per annum plant.



Kevin Torpey
Director

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The information in this statement that relates to the laboratory results is based on information compiled by Mr Kevin Torpey, who is a member of the Australasia Institute of Mining and Metallurgy. Mr Torpey is a Director of Latrobe Magnesium Limited and has sufficient experience which is relevant to the style of mineralization and type of deposit and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Torpey consents to the inclusion in this statement of the matters based on his information in the form and context which it appears.

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 from industrial fly ash, which is currently a waste stream from brown coal power generation.

LMG recently completed a pre-feasibility study validating its combined hydromet / thermal reduction process that extracts the metal. Construction of the production plant is due to start in July 2013 with production to begin a year later. The plant will be in the heart of Victoria's coal power generation precinct, providing immediate access to feedstock.

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 as a low CO₂ emitter.