Latrobe Magnesium

Annual General Meeting

November 2012

David Paterson
Chairman

ASX:
LMG

Presentation

1. Corporate background
2. LMG opportunity
3. LMG process
4. LMG current activities
5. Timelines and milestones
6. Financial overview

1. Corporate Background

Valuation Fundamentals and Performance

- Shares issued 741 million at 1.7 cents Market Capitalization $13m
- Shares price history

2009	High 1.5 cents	Low 0.3 cents
2010	High 3.6 cents	Low 1.1 cents
2011	High 4.2 cents	Low 2.2 cents
2012	High 2.4 cents	Low 1.2 cents

- Top 4 major shareholders represent 29% of share capital

K Torpey	85m
D Paterson	55m
J Wolfe	35m
M Gibbs	31m

1. Corporate Background

People

Directors and Staff

- David Paterson — Executive Chairman
- Kevin Torpey — Director & mining consultant
- John Lee — Non executive director
- Philip Bruce — Non executive director
- Jim Siemon — Project director

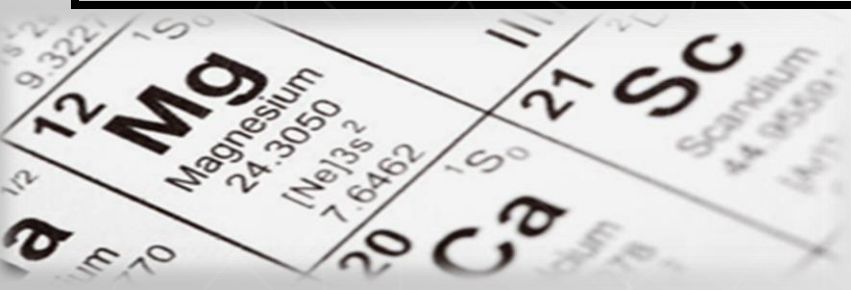
Consultants

- CSIRO - both Perth & Melbourne - Fine particle specialists.
- Clark & Marron - Magnesium industry experts.
- GHD - Engineers for PFS.
- Beijing Tieforce Engineering - Magnesium smelter construction company.
- Curtin & Monash Universities - Mineralogy analyses & alternative process consultants.
- Prominco & Ecoengineers - Hydromet and smelter advisors.
- Engineered Material Solutions, Daksh Baweja - Cement advisor.
- JJ Wolfe Consulting – Property advisor

1. Corporate Background

Brief History

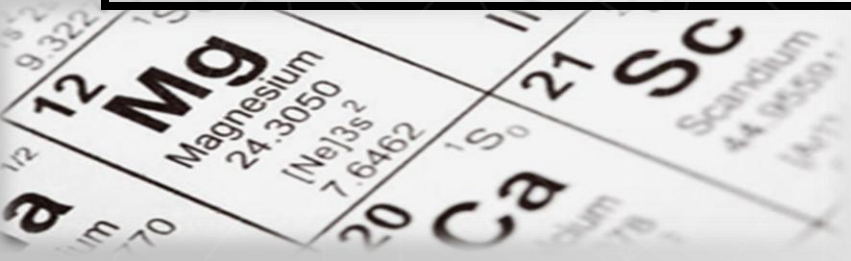
- Listed on Australian Stock Exchange (LMG) in 2002.
- Dealing with Latrobe Valley fly ash for over 10 years.
- Tested every proven magnesium process technology.
- Breakthrough with Ecoengineer's hydromet process some 2.5 years ago.
- Conducted over 100 lab tests and 20 retort tests in proving that LMG's hydromet process can extract Mg from brown coal fly ash.
- Completed the prefeasibility study in October 2011 and currently finalizing the adjustment study.



2. LMG opportunity

80% of fly ash waste converted into:	%
• Magnesium	10
• Cementitious Material	65
• Char	5
	80

In addition, 10 to 15 tonnes of carbon credits created per tonne of Mg depending upon feed stock composition.



2. LMG opportunity

Magnesium uses	%
• Steel desulphurization	25
• Alloy in aluminium can production	45
• Motor car parts for strength & weight savings	30

	100

New China uses - planes and trains

New Korea uses - consumer products (laptops, mobile phones etc)

2. LMG opportunity

Magnesium metal production

- 2000 210,300 tons
- 2009 653,000 tons
- 2011 809,000 tons
- 2016 projected production 950,000 tons
- 2021 projected production 1,370,000 tons

Average annual growth in the range between 6% to 7%

2. LMG opportunity

Latrobe Magnesium

Magnesium sources in 2011 (tons)

• China	660,000	83%
• Russia	37,000	
• USA	44,000	
• Israel	28,000	
• Kazakhstan	20,000	
• Brazil	16,000	
• Other	4,000	
	809,000	

2. LMG opportunity

Magnesium Pricing

Note: US magnesium price was approx 50% above the FOB China Price for this period.

2. LMG opportunity

Magnesium cost and demand factors:

- China operating costs between US$2,500 to US$3,100 per tonne
- China rising costs of inputs - FeSi, fuel & labour
- USA anti dumping duties on China Mg
- Mg substitution with Al - cost factor between 1.33 to 1.5 times
- Environmental factor - CO2 emission differential between Mg and Al primary production

2. LMG opportunity

Conventional magnesium processes

- Feedstock is traditionally a MgCO3 either dolomite, magnesite or brine.
- Process is either thermal (83% of world production) or electrolysis.
- Thermal - modular, smaller production & lower capital cost
  - higher labour & energy consumption & high CO2 emitter
- Electrolysis - lower operating costs
  - complex technology, large plant size
- AMC and IMA difficulties were new electrolysis technology and a difficult process respectively.

3. LMG process

LMG business parts

- Access to brown coal fly ash with sufficient MgO.
- Use of proprietary Hydromet technology.
- Construction expertise contracted for the thermal reduction process and its modernization.
- Availability of existing infrastructure and personnel in Latrobe Valley.
- Accessible local and overseas markets for both magnesium and cementitious products.

3. LMG process

Unique and proprietary process

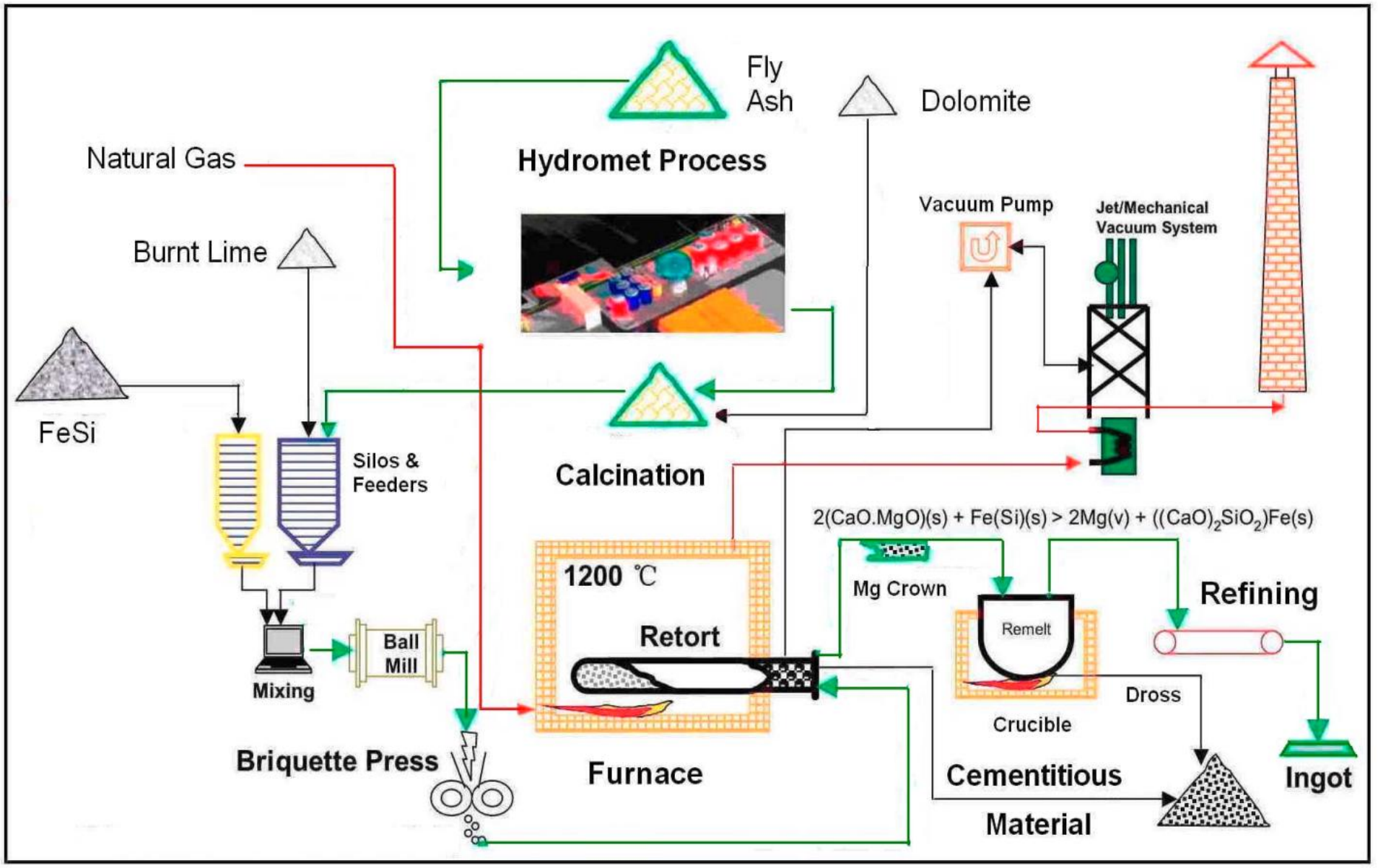
- Process is a combination of its unique patented hydromet process with the proven thermal reduction process been in operation since 1941.
- Hydromet process uses standard industrial reagents to remove impurities from the ash - SO3, Fe2O3, SiO2, Na2O & K2O.
- Hydromet process simply described as a cyclone extraction process followed by two agitator tank systems.
- Beneficiated material used as feedstock to the established thermal reduction process to produce magnesium.
- Owing to high Mg recoveries, the resultant product represents a cementitious product.

3. LMG Process

Process attributes

- Simplified proven technology responsible for 83% of world's magnesium production.
- Can economically produce small quantities of magnesium.
- Production can be expanded on modular basis.
- Much lower capital cost compared to electrolytic plants.
- Plant construction – 1 year.
- Scalability reduces overall risks.
- Production can be initially to meet Australian demand of 10,000 tonnes per annum.

3. LMG process



4. LMG Current Activities

Latrobe Magnesium

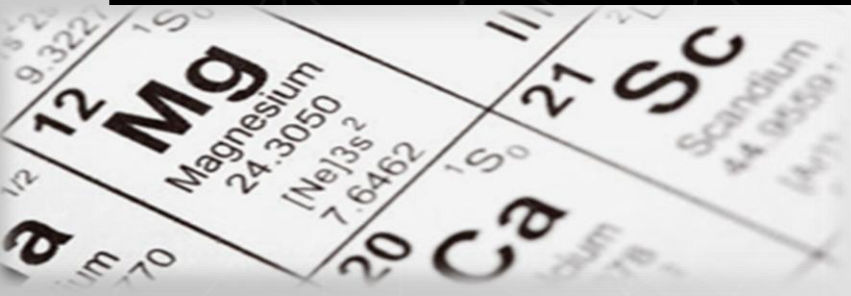
Current Activities:

- Acquiring a brown field site.
- Finalizing the Latrobe Valley fly ash agreement.
- Conducting additional retort process test work.
- Completing a detailed assessment of the cementitious material.

5. Timelines & Milestones

Key Dates

- Oct 2011 completed pre-feasibility study on a 10,000 t/a plant.
- Apr 2012 signed Chinese technology cooperation agreement.
- Sep 2012 expand the range of fly ashes - RWE and Yallourn.
- Dec 2012 finalize agreements for fly ash and land.
- Mar 2013 start bankable feasibility study.
- Nov 2013 complete bankable feasibility study.
- Sep 2014 start installation of 5,000 tonnes plant.
- Jul 2015 start production of 5,000 tonnes plant.
- Dec 2016 expand the plant to 40,000 tonnes capacity.



6. Financial overview

Key Assumptions per tonne of Mg

1. Revenue Streams	**A$/tMg**
Magnesium	3,870
Cementitious Material	690
Carbon Credits	230
Char	50
Total	4,840
2. Operating Costs	
Ferrosilicon	1,840
Labour	775
Natural Gas	646
Hydromet & Feed stock	485
Other Costs	368
Total	4,114

6. Financial overview

Chinese Comparison

Pricing:	China US$/tonne	LMG forecast US$/tonne	USA US$/tonne
Current Magnesium price	3,250	3,750	4,500
Aluminium Price at 1.5 multiple	2,170	2,500	3,000

Magnesium metal substitution for aluminium takes place between 1.33 to 1.5 times the aluminium price. LME aluminium price currently US$1,850 per tonne.

Costs:

Operating Costs	2,500 – 3,100	2,550

Exchange rate used is the current two year forward rate.

Operating costs are stated net of income generated from other products and based on 40,000 tpa of magnesium.

6. Financial overview

Financial Parameters	5,000 tonnes A$/tonne	40,000 tonnes A$/tonne
Magnesium revenue	3,870	3,870
Net Cash operating costs	(3,144)	(2,550)
Operating surplus	726	1,320
Capex	A$45M	A$260M
NPV at 12% discount factor		A$ 83M
NPV per share		11 cents

Disclaimer

- This presentation may contain forward looking statements that are subject to risk factors associated with the magnesium business.
- It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially including but not limited to: price fluctuations, actual demand, currency fluctuations, production results, reserve estimates, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory developments, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.
- Investors should undertake their own analysis and obtain independent advice before investing in LMG shares.
- All reference to dollars, cents or $ in this presentation are to Australian currency, unless otherwise stated.