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11 November 2015

Lithium Hydroxide – Definitive Feasibility Study Commences

Neometals Ltd (ASX: NMT) (“Neometals”) and Mineral Resources Limited (ASX: MIN) (“MinRes”) are pleased to announce the commencement of a Definitive Feasibility Study (“DFS”) on their patented ELi Process, to produce 20,000 tonnes per annum of battery-grade Lithium Hydroxide (“LiOH”) directly from spodumene (lithium oxide) concentrates.

All downstream lithium processing technology and patents associated with the ELi Process are owned by Reed Advanced Materials Pty Ltd (“RAM”), which is beneficially owned 70:30 by the Company and MinRes. Neometals and MIN as equity holders in the Mt Marion Lithium Project are entitled to purchase up to 51% of lithium concentrates produced from the Mt Marion Lithium Project after the third year of production.

A Pre-feasibility Study conducted in 2012 (see Appendix A) demonstrated the potential for the ELi Process to deliver industry leading operating costs (US\$3,877/t LiOH) and robust financial returns (NPV_{12%} US\$321M and IRR 94%). The DFS will incorporate the results of a semi-pilot scale test work program conducted by a specialist chlor-alkali laboratory in Buffalo, USA in 2014. The semi-pilot plant exceeded expectations in the purification of lithium chloride solutions and current efficiency across the electrolysis membrane, exceeding assumptions in the Pre-feasibility study (“PFS”).

The DFS is expected to be completed in the June quarter 2016.

Lithium Market

One of the world’s leading lithium producers has announced that, effective 1 October 2015, its lithium compound prices will increase by 15%. This strong market growth is underpinned by the increasing market penetration of renewable energy storage, and electric/ hybrid electric vehicles (EV and HEV) in commercial and private applications.

The current price of battery-grade LiOH in China is over US\$10,000/t and a leading producer announced last week that it had increased its price for lithium carbonate to over US\$11,000/t in line with other producers.

The processing plant design has the flexibility for any lithium hydroxide not sold under contract to be carbonated into battery-grade lithium carbonate, a much larger market.

Mt Marion Lithium Project – Overview of Feedstock Source

Mt Marion is a globally significant lithium deposit, containing total Indicated and Inferred Mineral Resources of 23.24Mt at 1.39% Li₂O and 1.43% Fe₂O₃, at a 0% Li₂O cut-off grade (refer ASX Announcement 21 September 2015) (see below). The Project has recently entered the construction phase with first production expected by mid-2016. Once in production, Mt Marion will produce more than 200,000tpa of chemical grade spodumene concentrate.

ENDS

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MINERAL RESOURCE ESTIMATE

Mt Marion Resource Table for 0% Li₂O cut-off

Category (JORC, 2012)	Tonnage (Mt)	Li ₂ O (%)	Fe ₂ O ₃ (%)
Indicated	10.5	1.45	1.33
Inferred	13.19	1.34	1.5
Total	23.24	1.39	1.43

All tonnage and grade figures have been rounded down to two or three significant figures, respectively; slight errors may occur due to rounding of values.

Neometals confirms that it is not aware of any new information or data that materially affects the Mineral Resource Estimate, all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

APPENDIX A: PRE-FEASIBILITY STUDY

Neometals (then Reed Resources Ltd) completed a study investigating the economic viability of producing up to 20,000 tonnes per annum of battery-grade lithium hydroxide monohydrate (57.5% LiOH.H₂O) in Malaysia. The study assumed the availability of requisite Malaysian approvals, purchase and supply of spodumene feed, and all operating and capital expenditure.

The production of LiOH involves hydrochloric acid leaching of spodumene concentrate, purification of lithium chloride solution and electrolysis applying proprietary technology owned by Reed. Process test work was conducted by the CSIRO utilising product specifications from the Mt Marion Lithium Project.

The LiOH production costs generated by the PFS are estimated to be lower than all known LiOH producers.

For the purpose of the PFS, a kiln feed rate of 147,000 tonnes per annum @ 6.0% Li₂O was assumed and the following key process steps applied:

- Decrepiation in a rotary kiln
- Hydrochloric acid leaching of beta spodumene
- Solvent extraction and ion exchange
- Electrolysis (identical to chlor-alkali process)
- Lithium Hydroxide crystallisation and carbonisation to lithium carbonate
- 20 year effective plant life

Operating Parameters	Quantity
Spodumene Concentrate Feed	147,100 tpa
Spodumene Concentrate Grade	6.0 % Li ₂ O
Lithium Hydroxide/Lithium Carbonate Production	10,000/8,810 tpa
PFS Highlights	
Life of Mine (LOM) Production	200,000t LiOH 176,200t Li ₂ CO ₃
LOM Revenue	US\$ 3.15 billion
Pre-tax Cashflow	US\$ 1.19 billion
Pre-tax NPV 12%	US\$ 321 million
Pre-tax Internal Rate of Return	94%
Average Cost per tonne of LiOH	US\$ 3,878
Average Cost per tonne of Li ₂ CO ₃	US\$ 4,538
Total initial capital costs	US\$ 83 million
Payback of capital costs	2 years

All analysis is in US dollars and assumes a selling price of US\$6,900/t for lithium hydroxide and lithium carbonate, a spodumene cost of US\$350/t CIF, an AUD exchange rate of US\$1.05 and a MYR exchange rate of US\$0.32. Operating Revenues and Costs are both escalated at 2% pa. Capital costs are valid as at September 2012 with an indicative accuracy range of ±35% and a 15% contingency.