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Neometals Ltd ABN 89 099 116 631

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# QUARTERLY ACTIVITIES REPORT For the quarter ended 31 December 2016

## Highlights:

#### Mt Marion Lithium Project

- > Beneficiation plant primary and secondary DMC circuit construction completed
- Beneficiation plant commissioning continued, first production achieved
- ➤ 'Pacific Venus' vessel booked for first shipment, laycan of 2<sup>nd</sup>-5<sup>th</sup> February

#### <u>Lithium Hydroxide Project</u>

Progressed study with Mineral Resources for determining feasibility of producing 20,000tpa LCE Lithium Hydroxide in Eastern Goldfields of WA

#### Barrambie Titanium Project

- > Titanium test work completed
- Process design improvements identified and successfully tested
- > Evaluation of process design improvement commenced

## Neomet Process Commercialisation with Sedgman

Maiden third party test work commenced December 2016

#### Corporate

- Cash and restricted access term deposits \$61.28 million
- Listed securities \$11.5 million



#### **PROJECT LOCATIONS**



### MT MARION LITHIUM OPERATION

(Neometals Ltd 13.8%, Mineral Resources Limited 43.1%, Ganfeng Lithium Co., Ltd 43.1% through Reed Industrial Minerals Pty Ltd (RIM))



Image 1:. Aerial View of Mt Marion Lithium Operation's Processing and Tailings Storage Facilities

The first production of lithium was achieved during the quarter, with the beneficiation plant being methodically commissioned and ramped up towards its full nameplate capacity of 2.2 million tonnes per annum (MTPA). This follows the completion of the crushing plant in the same quarter, which was constructed and fully commissioned within an industry-leading timeframe of 8 months.

The first shipment of approximately 15,000 tonnes of lithium concentrate is expected to depart Kwinana on the 'Pacific Venus' in the first week of February.

The MRL-operated Mt Marion Project is a joint project between MRL (43.1%), Neometals Limited (13.85%) and one of the world's largest lithium producers, Ganfeng Lithium Co (43.1%).



Image 2. Mt Marion Deposit 1



Image 3. Spodumene Concentrate Stockpile and Load Out

#### Resource Extension and In-fill drilling

No further resource extension drilling was conducted during the quarter.

The results of the 2016 drilling program increased the Mineral Resource Estimate to the previously-announced Indicated and Inferred Mineral Resources of 77.8 Mt at 1.37%  $\text{Li}_2\text{O}$  and 1.09% Fe (Table 1), at a cut-off grade of 0.5%  $\text{Li}_2\text{O}$ . The Mineral Resource Estimate and Exploration Target is represented in Figure 4.

Table 1. Mt Marion Resource Table for 0.5% Li<sub>2</sub>O cut-off

Category (JORC, 2012)	Tonnage (Mt)	Li₂O%	Fe %	
Indicated	28.9	1.35	1.06	
Inferred	48.9	1.38	1.10	
Total	77.8	1.37	1.09	

Figures may not sum due to rounding
Significant figures do not imply an added level of precision

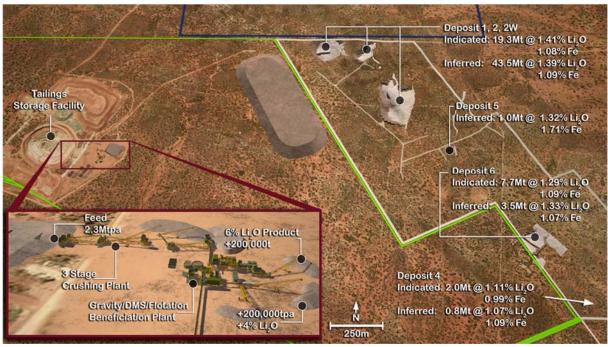


Figure 1. Mineral Resource Estimate over tenure

## Spodumene market

The price of Talison chemical grade lithium concentrates (6%  $\text{Li}_2\text{O}$ ) are estimated at US\$572 per tonne on a CIF basis to China. (source: Ganfeng). Supply of this grade of concentrate is tight due to the marketing policy of the only significant current supplier. Galaxy Resources Limited (ASX:GXY) reported it has entered agreements to supply concentrates in 2017 at higher prices than the current Talison price. This is anticipated to have a positive impact on average fair market prices for concentrates in 2017. RIM will sell concentrates to Ganfeng at the market price.

#### DOWNSTREAM LITHIUM PROCESSING PROJECT

#### **Project Development and Corporate strategy**

The Company announced on 30 September 2016 it had entered into a MOU with MIN to jointly assess the development of a downstream lithium processing facility close to its Mt Marion Lithium Operation. As previously reported, a modern version of the direct hydroxide sulphate process is favoured for initial production located the Eastern Goldfields region of Western Australia to eliminate the substantial bulk overseas shipping costs from the process. NMT and MIN have continued to study the project process and potential locations during the Quarter.

#### Lithium market

Lithium prices have remained high and are stimulating interest in construction of new processing capacity. The market demand is forecast to grow significantly for the next 4 years through to 2020 and will support the NMT/MIN plans to commence production of lithium hydroxide in 2020.

The supply of lithium compounds, especially to battery applications, remained tight and spodumene concentrate supply is very constrained to any converter that has not entered into close partnership with concentrate producers. China Customs declared import prices increased to approximately USD11,000/t Li2CO3 (Source: GTIS). The addition of Chinese tariffs and taxes on the import price lifts the delivered prices for imported product broadly in line with the reported rates achieved by Chinese domestic producers of approximately USD15,000/t.

The current median prices for battery-grade lithium hydroxide have had steep increases to approximately USD14,000/t, on a CIF basis to Europe and US and now converged with Chinese prices average. There is anecdotal evidence of prices for small volume transactions in-excess of USD20,000/t (source: Industrial Minerals, 26 January 2017).

## LITHIUM HYDROXIDE PROCESSING TECHNOLOGY – ELi Process® (Neometals 70% through Reed Advanced Materials Pty Ltd)

All downstream lithium processing technology and patents are owned by Reed Advanced Materials Pty Ltd ("RAM"). RAM is beneficially owned 70:30 by the Company and MIN.

The commercialisation program of the JV Partners patented ELi process will continue separately from arrangements under the aforementioned MOU with primary focus on its application to traditional salar brines as well as spodumene/hard rock supply sources.

RAM is in discussions with potential users regarding sub-licensing the ELi Process to produce lithium hydroxide.

## BARRAMBIE TITANIUM PROJECT (Neometals 100% through Australian Titanium Pty Ltd)

During the Quarter, the Company completed the refurbishment of the laboratory and mini-plant test facility in Montreal in preparation for the Barrambie pilot study. The laboratory facilities are at operational status, the mini-plant has been refurbished and resumed operation on 12 December 2016 while the upgrade of the pilot facility is nearly complete. Barrambie is one of the world's highest grade titanium deposits, containing total Indicated and Inferred Mineral Resources of 47.2Mt at 22.2%  $TiO_2$ , 0.63%  $V_2O_5$  and 46.7%  $Fe_2O_3$ , at a cut-off grade of 15%  $TiO_2$  (Appendix B).

#### **Project Development and Corporate Strategy**

The mini-plant operation results were successful and some changes to the process were successfully evaluated. Those changes could deliver significant improvements to process economics and final product specification with material benefit to the Barrambie Project if implemented. The changes will be further evaluated and incorporated into a revision of the PFS if they prove to deliver an improved project value. A schematic of the Neomet Process application to the Barrambie Deposit and the PFS feed/output rates from the PFS is below.

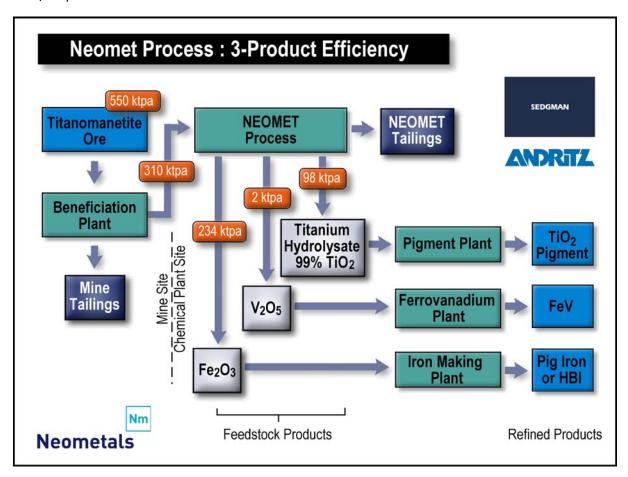


Figure 2. Pre-Feasibility Study - Physical Inputs and Outputs

The full pilot plant evaluation of the proprietary hydrometallurgical technology is planned to commence in the second half of 2017 following the revised mini-pilot plant optimisation testwork. Subject to the success of the full pilot scale test work it is Neometals' intention to proceed to Feasibility Study (FS) in 2018.

The currently preferred project development strategy is to advance the project to a suitable stage of evaluation to obtain a titanium industry partner who would fund and operate the development of the Barrambie project on a shared equity or joint-venture basis.

#### **Titanium market**

The majority of titanium feedstocks (an annual market of US\$17 Billion or 85% by value) are used to produce titanium dioxide pigment which is then used as an additive in paints, plastics, paper and ink with the balance (15%) used to produce titanium metal products.

The current median price for high quality titanium dioxide pigment is US\$2,650 per tonne on a CIF basis to USA (source: Industrial Minerals 26 January 2017).

## NEOMET PROCESSING TECHNOLOGY (25% Net Profit Interest through Alphamet Management Pty Ltd)

Neometals is responsible for managing the commercialisation and development of the technology ("Neomet Process"). All revenue received from the commercialisation of the technology will be split 25:75 between Neometals and the owners of the technology.

Neometals has a Strategic Alliance with Sedgman Limited (a wholly owned subsidiary of CIMIC Group Limited (ASX:CIM) to provide the platform for the commercialisation of the technology, at no up-front cost to Neometals. Sedgman's project team has been marketing the Acid Regeneration Plant and process technology, identifying initial QuickTest evaluation customers and readying the laboratory facilities. Neometals' strategy is to develop and hold a portfolio of royalty interests from sub-licencing the technology in addition to deploying the technology for the Barrambie Project.

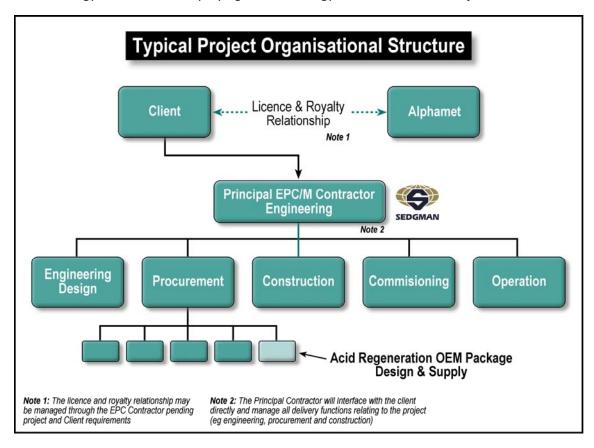


Figure 3. Structure of Strategic Alliance with Sedgman Limited.

The Company has a long term lease for the commercial laboratory facilities from one of the owners of the technology for use by the Strategic Alliance partners to test third party material. These facilities are referenced in above paragraphs.

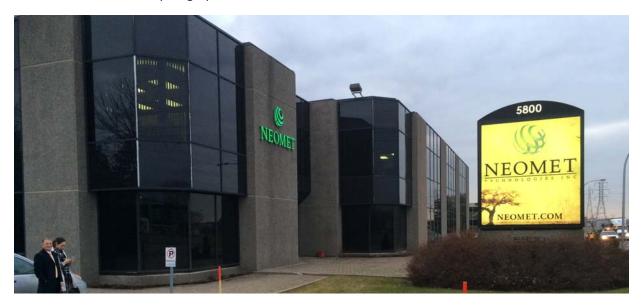


Image 4. Neometals' Leased Laboratory at 5800 Thimens, Montreal, Canada

#### **CORPORATE**

## Hannans Limited (ASX:HNR) (Nickel assets) and Estrella Resources Ltd (ASX: ESR) (Mt Edwards Lithium)

As at 31 December 2016 Neometals holds 709,833,333 Ordinary fully paid shares (42% of the issued capital) in Hannans Limited on an undiluted basis. At 31 December Hannans shares closed at 1.6c.

Neometals will assist Hannan's subsidiary Scandinavian Co to realise lithium, cobalt and carbon opportunities in Scandinavia through a technical assistance agreement. Neometals will hold 13.5% of Hannan's subsidiary once that agreement is finalised.

Neometals entered into a binding commitment to subscribe for 9,000,000 shares in Estrella Resources (ASX:ESR) at 2 cents each (\$180k) as part of its acquisition of Mt Edwards Lithium, a former WMC nickel project at Widgiemooltha south of Mt Marion. This settled on 30 December 2016 and the shares were issued by the Company on 6 January 2017 with NMT holding approximately 2.61% of ESR.

#### Finances (unaudited)

Cash and term deposits on hand as of 31 December 2016 totalled A\$61.28 million, including \$4.1 million in restricted use term deposits supporting performance bonds and other contractual obligations.

### **Capital Management**

The Company has not acquired any shares through the on-market share buy-back (to acquire up to a maximum of 5% of the Company's current shares) that is currently open or initiated the unmarketable parcel sale facility as previously foreshadowed.

#### **Issued Capital**

The total number of shares on issue at 31 December 2016 was 563,000,865.

#### **ENDS**

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#### **Compliance Statement**

The information in this report that relates to Mineral Resource Estimates at the Mt Marion Lithium Project and Barrambie Titanium Project are extracted from the ASX Announcements entitled "Mt Marion Resource Upgrade" lodged 27 October 2016, and "Barrambie - Amended JORC 2012 Mineral Resource Estimate" lodged 6 December 2013. The Company confirms that it is not aware of any new information or data that materially affects the information included on the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified form the original market announcement.

## **APPENDIX A: TENEMENT INTERESTS**

As at 31 December 2016 the Company has an interest in the following projects and tenements in Western Australia.

PROJECT NAME	LICENCE NAME	BENEFICIAL INTEREST	STATUS	
Barrambie	E57/769	100%	Live	
Barrambie	E57/770	100%	Live	
Barrambie	E57/1041	100%	Live	
Barrambie	L57/30	100%	Live	
Barrambie	L20/55	100%	Live	
Barrambie	M57/173	100%	Live	
Barrambie	E57/1046	100%	Live	
Mount Marion	L15/315	13.8% (*)	Live	
Mount Marion	L15/316	13.8% (*)	Live	
Mount Marion	L15/317	13.8% (*)	Live	
Mount Marion	L15/321	13.8% (*)	Live	
Mount Marion	L15/0220	13.8% (*)	Live	
Mount Marion	L15/360	13.8% (*)	Live	
Mount Marion	M15/999	13.8% (*)	Live	
Mount Marion	M15/1000	13.8% (*)	Live	
Mount Marion	M15/717	13.8% (*)	Live	
Mount Marion	E15/1496	13.8% (*)	Live	
Mount Marion	E15/1504	13.8% (*)	Live	
Mount Marion	P15/6050	13.8% (*)	Pending	
Mount Marion	P15/6042	13.8% (*)	Pending	
Mount Marion	P15/6043	13.8% (*)	Pending	

Mount Marion	P15/6044	13.8% (*)	Pending
Mount Marion	P15/6045	13.8% (*)	Pending
Mount Marion	P15/6046	13.8% (*)	Pending
Mount Marion	P15/6047	13.8% (*)	Pending
Mount Marion	P15/6041	13.8% (*)	Pending
Mount Marion	P15/6049	13.8% (*)	Pending
Mount Marion	L15/0360	13.8% (*)	Live
Mount Marion	P15/6052	13.8% (*)	Pending
Mount Marion	P15/6053	13.8% (*)	Pending
Mount Marion	P15/6054	13.8% (*)	Pending
Mount Marion	P15/6055	13.8% (*)	Pending
Mount Marion	P15/6056	13.8% (*)	Pending
Mount Marion	P15/6057	13.8% (*)	Pending
Mount Marion	P15/6058	13.8% (*)	Pending
Mount Marion	P15/6048	13.8% (*)	Pending
Pilgangoora	P45/3003	70% (**)	Pending

<sup>\* -</sup> registered holder is Reed Industrial Minerals Pty Ltd (Neometals Ltd 13.8%, Mineral Resources Ltd 43.1%, Ganfeng Lithium Co.,Ltd 43.1%).

## Changes in interests in mining tenements

Interests in mining tenements acquired or increased

PROJECT NAME	LICENCE NAME	ACQUIRED OR INCREASED
Barrambie	E57/1046	Granted 11 October 2016
Mount Marion	L15/0360	Granted 3 November 2016

## Interests in mining tenements relinquished, reduced or lapsed

PROJECT NAME	LICENCE NAME	RELINQUISHED, REDUCED OR LAPSED
n/a	n/a	n/a

<sup>\*\* -</sup> registered holder is Reed Advanced Materials Pty Ltd (Neometals Ltd 70%, Mineral Resources Ltd 30%).

### **APPENDIX B: MINERAL RESOURCE ESTIMATES**

## Mt Marion Resource Table for 0.5% Li<sub>2</sub>O cut-off

Category (JORC, 2012)	Tonnage (Mt)	Li₂O%	Fe %	
Indicated	28.9	1.35	1.06	
Inferred	48.9	1.38	1.10	
Total	77.8	1.37	1.09	

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.

## Barrambie Mineral Resource Estimate for 15% TiO<sub>2</sub> cut-off

Category (JORC, 2012)	Tonnage (Mt)	TiO₂ (%)	V₂O₅ (%)	Fe₂O₃ (%)	Al₂O₃ (%)	SiO₂ (%)
Indicated	34.7	22.25	0.64	46.77	9.48	14.95
Inferred	12.5	21.99	0.58	46.51	9.32	15.40
Total	47.2	22.18	0.63	46.70	9.44	15.07

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.