

# QUARTERLY ACTIVITIES REPORT

## For the quarter ended 31 December 2018

### HIGHLIGHTS

#### INTEGRATED LITHIUM BUSINESS UNIT

- Mt Marion mine – 94kt of concentrate produced (69kt of 6% Li<sub>2</sub>O and 25kt of 4% Li<sub>2</sub>O) with shipments totalling 93kt (2% increase in SC6 proportionate production QoQ). Construction of the flotation circuit expansion is nearly completed with commissioning scheduled to commence in March Q 2019 with steady state operation in June Q 2019;
- The FEED Study on Kalgoorlie Lithium Refinery (KLR) substantially completed with final review scheduled for March Q 2019. Site approvals and commercial negotiations progressing in line with offtake/partner selection and financing processes;
- Investigations into zeolite by-product from refinery residue advanced with patent lodged over process and engineering cost estimates underway for a zeolite plant potentially co-located alongside the KLR. Revenue assumptions being market tested with industry sample analysis and further test-work to improve product quality and process efficiency; and
- Award for construction and operation of mixed feed lithium ion battery recycling pilot plant to SGS Canada Inc. Factory acceptance testing of the 50tpd comminution circuit was completed. Commissioning of battery feed preparation stage of pilot plant imminent.

#### TITANIUM / VANADIUM BUSINESS UNIT

- Commenced formal update to the 2009 Barrambie vanadium salt roast leach DFS. Updated DFS to incorporate revised reserve with operating and capital cost estimates on each stage of production process to broaden opportunities for staged exploitation of vanadium plus titanium and iron;
- Lodged extension for existing environmental approval and mining proposal for initial 1Mtpa direct shipping ore (DSO) operation; and
- Ongoing metallurgical and market development work in China to determine feasibility of producing saleable products from Eastern Band DSO.

#### CORPORATE

- Neometals agreed the conditional sale of Mt Marion equity for \$104 million with retention of 'life of mine' spodumene concentrate offtake option rights. Demerger activities on hold;
- Appointment of a highly credentialled General Manager Metallurgy / IP, Dr David Robinson; and
- Cash \$30.3 million, receivable and investments at \$9.9 million (ex-Mt Marion equity sale proceeds).

## INTEGRATED LITHIUM BUSINESS UNIT

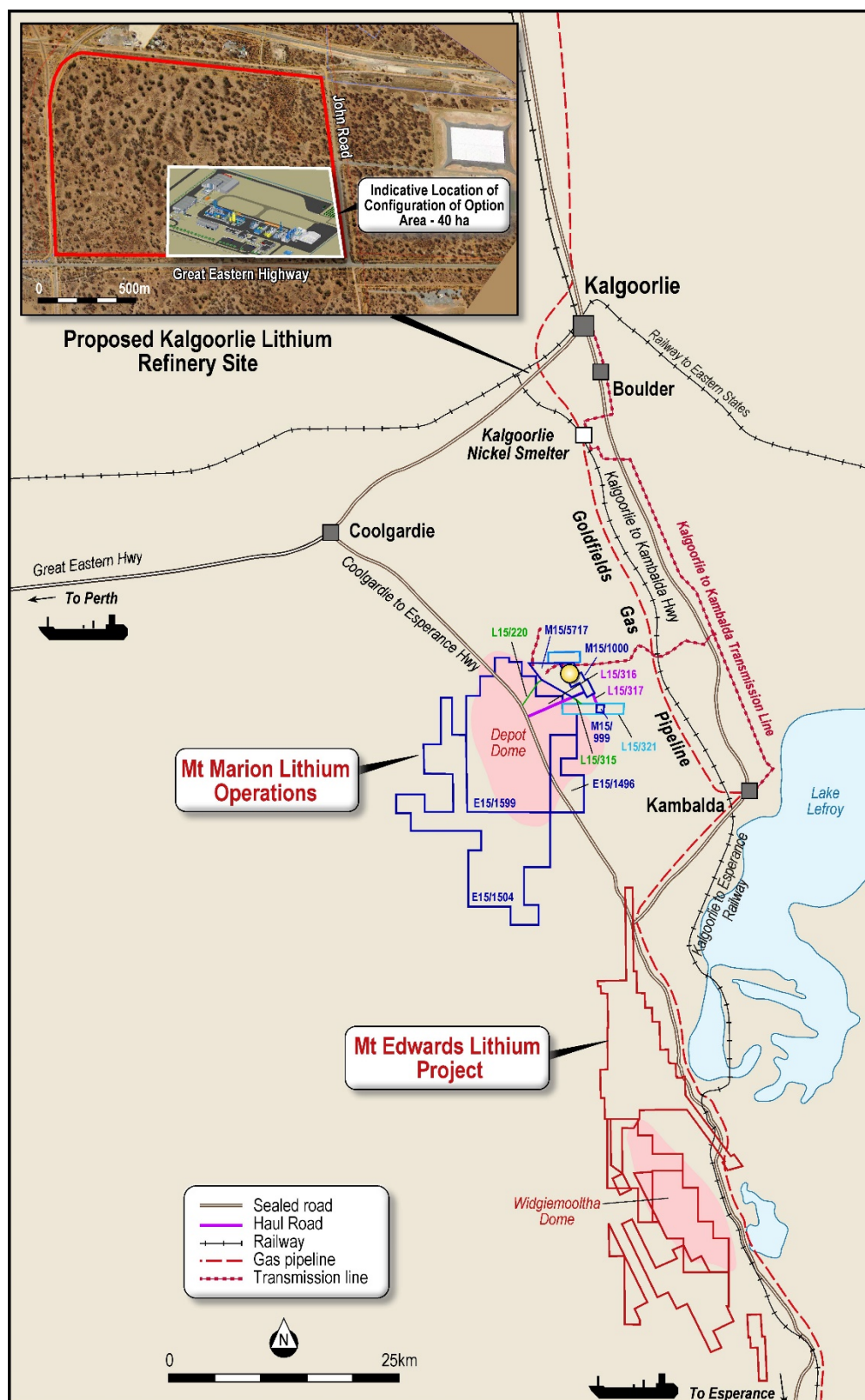


Figure 1 - Neometals Lithium Business Locations

**Mt Marion Lithium Operation (“Mt Marion”)**

At the end of the quarter, Neometals executed a sale agreement to divest its equity interest in Mt Marion to its co-shareholders for A\$103.8 million cash. The conditional transaction includes a binding life of mine offtake option agreement for 57,000 tpa of Mt Marion 6% spodumene concentrate production at market-linked prices (*see the ‘Corporate’ section for further details*).

The ownership structure of Mt Marion (at the end of the quarter) was Neometals Ltd with 13.8% (“**NMT**”), Mineral Resources Limited with 43.1% (“**MRL**”) and Ganfeng Lithium Co., Ltd with 43.1% (“**GFL**”) through Reed Industrial Minerals Pty Ltd (“**RIM**”).



**Image 1** - Aerial View of the Mt Marion Lithium Operation Processing and Tailings Storage Facilities

Production at the Mt Marion Lithium Operation (“**Mt Marion**”) was stable during the quarter, achieving:

- 738k wet metric tonnes (“**wmt**”) ore mined;
- 94k wmt concentrates produced; and
- 93k wmt concentrates shipped

The Beneficiation plant throughput increased from 604,654wmt to 618,509 wmt.

Spodumene concentrate production increased slightly QoQ with a total production of 93,561wmt

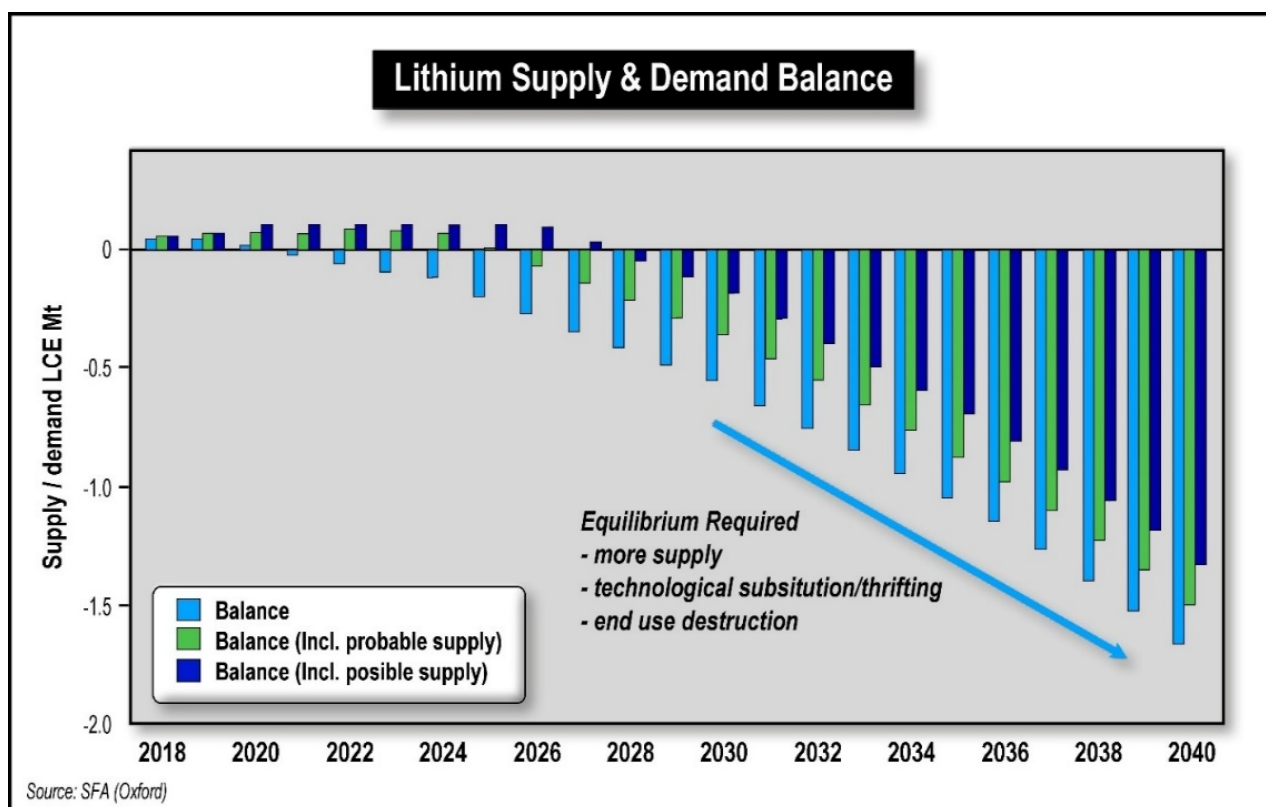
Shipments of lithium concentrates to Ganfeng during the quarter totalled 93,561 wet metric tonnes (an increase of 2% QoQ) comprising 31,010 tonnes in October, 26,766 tonnes in November and 35,226 tonnes in December.

During the quarter, RIM shipped concentrates to Ganfeng at pricing linked to international lithium carbonate and hydroxide prices imported into China. The realised price for Mt Marion SC6 during the quarter averaged US\$931/dmt CFR China.

Construction of the additional flotation concentrator circuits to upgrade production to all SC6 concentrate is in progress and on track for completion. Commencement of commissioning is scheduled in the March quarter of 2019. Steady state operation of the expansion and the achievement of all SC6 product is anticipated in the June quarter of 2019.

During the Quarter, Neometals entered an agreement to sell its 13.8% shareholding in RIM to Ganfeng Lithium (subject to FIRB and Chinese authorities’ approval) and Mineral Resources. Neometals will retain an annual option for life of mine to purchase 57,000tpa SC6 concentrates at market-linked price from February 2020. The transaction is expected to close at the end of February 2019. Consideration for the transaction is A\$103.8M.



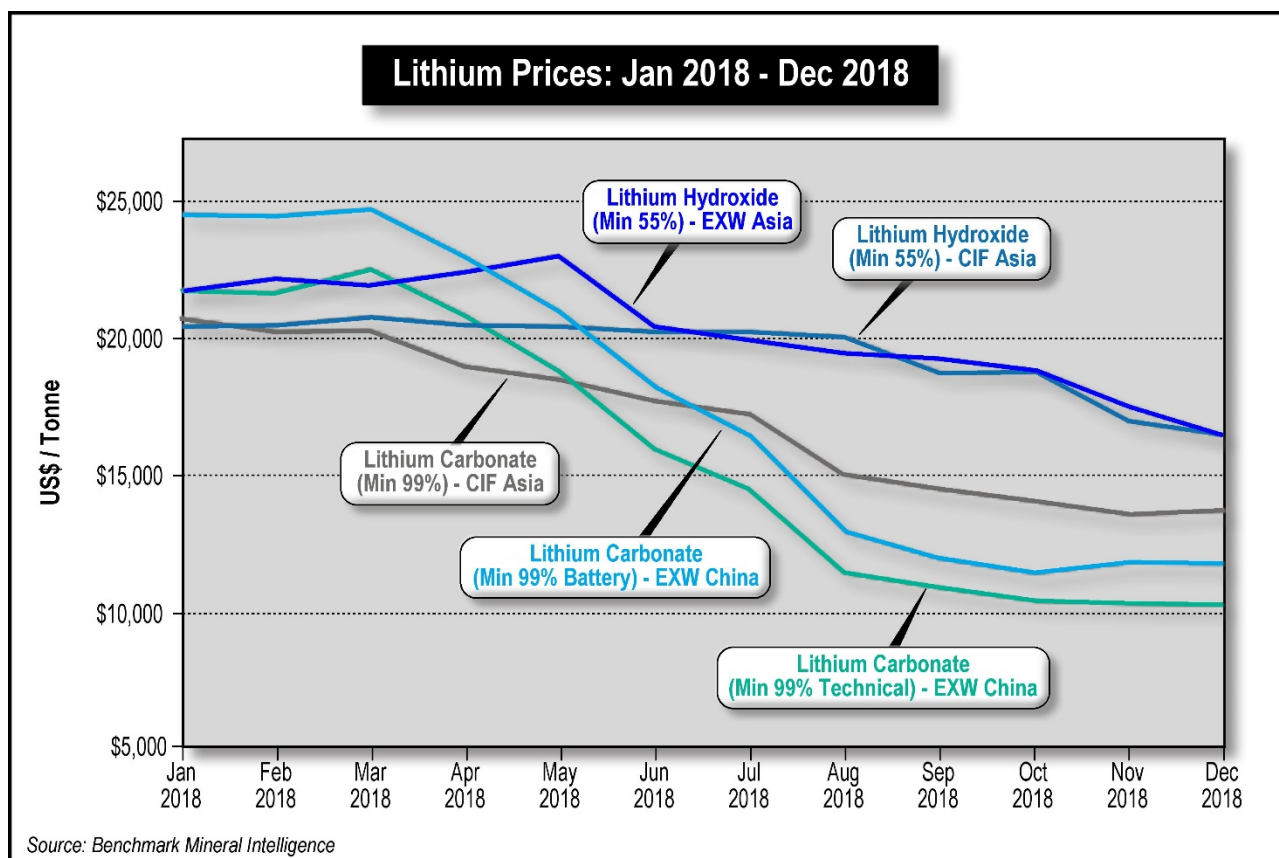
**Lithium Market Commentary**

**Figure 2** –LCE supply and demand balance graph showing material increase in demand, and hence shift to supply deficit from 2023

The lithium market has undergone a rapid expansion in recent years fuelled by investment in electric vehicle (“EV”) production capacity, lithium battery manufacturing capacity, lithium chemical capacity (including mineral conversion capacity) and lithium mining operations. China has been ramping up its import of spodumene from Australia and securing strategic shares in mines and projects worldwide to guarantee future supply. A temporary shortage of spodumene combined with rising demand from battery manufacturers led to record prices for lithium carbonate and lithium hydroxide of >\$20,000/t in early 2018. However, a surge in raw material supply in 2018 ran ahead of the demand curve and has resulted in a decline in lithium feedstock and chemical prices since this time. Nonetheless, prices remain above historic levels. Neometals is anticipating an interim period of LCE oversupply in the next few years during which prices will be subdued although continuing strong market demand fundamentals thereafter.

### *Lithium Hydroxide*

The price of lithium hydroxide softened in the December quarter with the most notable declines in China and North East Asia. According to Benchmark Mineral Intelligence the average price in China in December was US\$16,625/tonne, whilst in Korea and Japan lithium hydroxide prices were in the range of US\$15,000 – US\$18,000/tonne CIF, down US\$2,000 or thereabouts from the previous quarter. The broad trend during 2018 was for domestic and international price convergence. Whilst lithium hydroxide prices have been following the recent downward trend in lithium carbonate prices, they have generally been more resilient owing to the growing demand for energy-dense, nickel-rich cathodes in EVs that require lithium hydroxide as the lithium source and to the more constrained global supply of lithium hydroxide.



**Figure 3 – Lithium Hydroxide Price, Jan 2015 – Dec 2018**

#### Lithium Carbonate

According to Benchmark Mineral Intelligence, international lithium carbonate prices continued to soften in the December quarter while Chinese domestic prices stabilised at lower levels. The decreases in lithium carbonate prices in international markets have primarily related to technical grade products with battery grade products remaining reasonably stable. The CIF price of lithium carbonate delivered into Europe finished the year at an average of \$13,250/tonne, down 8.6% on December 2017. The average FOB price for South American exports in December was down 3.6% year on year. Asian prices have seen the most dramatic decreases throughout 2018, fuelled by Chinese Ex Works prices which fell to \$10,250/tonne for technical grade and \$11,875/tonne for battery grade in December.

### **Kalgoorlie Lithium Refinery Project (Neometals 100%)**

During the quarter, Neometals continued pursuing its downstream lithium chemical production strategy. Key activities included:

- Front-End Engineering and Design (“FEED”) Study with M+W Group (“M+W”) in relation to the Kalgoorlie Lithium Refinery (“KLR”);
- Working with the City of Kalgoorlie Boulder (“CKB”), pursuant to the memorandum of understanding between the parties, to progress fundamental service agreement terms including provision of access roads, reclaimed water pipeline etc for the proposed KLR; and
- Formal offtake/partner selection and funding process with Azure Capital.

The key driver of the KLR Project is to increase the value of future spodumene concentrates purchased under the Company’s Mt Marion Spodumene Concentrate Offtake Option (“**Offtake Option**”). The annual Offtake Option provides a fixed volume of up to 57,000tpa of spodumene concentrate for conversion into battery grade lithium hydroxide and lithium carbonate for supply to Lithium Ion Battery (“**LiB**”) cathode and cell makers. The KLR is designed to produce approximately 10,000tpa of lithium hydroxide equivalents.

M+W will deliver the FEED Study for the Company’s KLR during the March quarter of 2019. The FEED Study will establish project capital and operating costs to an accuracy of +/- 15% to form a sufficient basis from which to evaluate the project feasibility. Subsequent development includes the pilot testing of the calcining and sulphating sections of the process flowsheet.

**Table 1 - KLR Indicative Key Dates and Schedule**

FEED Study Results	March Q 2019
Feasibility Study Results	June Q 2019
Offtake/Partner and Funding Process	Ongoing



**Figure 4 – Proposed KLR Layout**

The FEED Study is based on the successful process flowsheet testing report delivered by Veolia Water Technologies' HPD division in March 2018. The Veolia program produced a 99.99% pure battery grade lithium hydroxide material from Mt Marion run of mine spodumene concentrates (6% Li<sub>2</sub>O) and demonstrated that the proposed KLR refining process is technically fit for purpose. These results validate the suitability of a conventional direct-conversion sulphate process. Leading Chinese lithium chemical producer Ganfeng Lithium uses a technically-similar direct sulphate conversion process and it has been producing battery grade lithium hydroxide from Mt Marion concentrates for more than a year.

The Company has executed an option agreement with the City of Kalgoorlie-Boulder ("**CKB**") over a sub-lease for a 40-hectare industrial site near the township. The site is only 70km by major highway from Mt Marion, near the Kalgoorlie rail terminal and has adjacent reticulated power, water and gas supply.

The agreement provides Neometals with a two-year option over the site (with provision for an additional two-year extension). The associated MOU provides the Company with assistance from CKB in procurement of certain infrastructure and utilities for the KLR. Site studies and permit application drafting is in progress. The application for Works Approval was prepared during the quarter and is nearing completion in readiness for submission in the March quarter of 2019.

Neometals executives have been working with Azure Capital in relation to its formal partner selection process for the KLR project. A range of preliminary discussions continued throughout the quarter with potential project partners, product off-takers and financiers. Dialogue with industry participants to date has indicated a preference for establishing off-take partnerships, however, formalising such arrangements is likely to be predicated on outcomes of the FEED study and completion of the subsequent feasibility study. Neometals will continue to progress these discussions, including with potential financiers, in parallel to completion of the relevant studies.

### **Zeolite Research and Development Project** **(Neometals 100%)**

During the quarter, Neometals also completed further work on its interrelated zeolite developments. Having confirmed its ability to synthesize commercial grade zeolite from spodumene leach residue (lithium hydroxide processing waste) in September 2018, Neometals has been pursuing the opportunity to add co-product revenue (and reduce waste) thereby improving the KLR competitive cost position. To this end, Neometals has been working with M+W on a preliminary economic assessment cost study for a zeolite manufacturing facility adjacent to the KLR (completion expected in January 2019). Subject to the results of this study, Neometals plans to accelerate the development of this opportunity with pilot testing, a more detailed engineering cost study and product evaluation. Thereafter, successful testing and product evaluation will trigger commencement of a zeolite processing front-end engineering and design study.

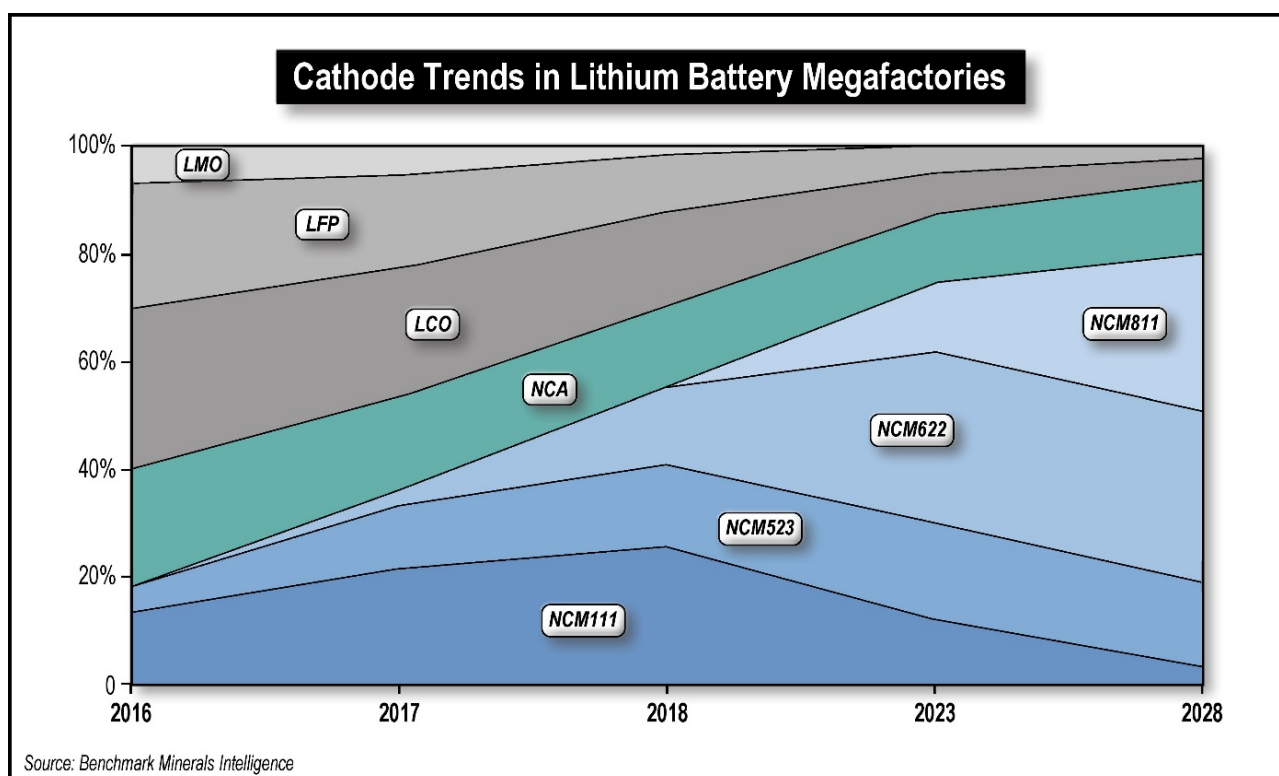
Additionally, the quarter also saw the CSIRO and Queensland University of Technology produce two further 0.5kg sample batches of zeolite for potential customer analysis. These batches were produced under modified conditions to match end user specific zeolite quality requirements.

Zeolite materials are produced as both naturally occurring and synthetic materials. Synthetic zeolites are typically used in more demanding industrial applications such as molecular sieves for air and hydrocarbon purification. According to Markets and Markets (2017), the global zeolite market was approximately 2.4Mtpa with a total estimated value in excess of US\$13B per annum.



## Lithium Battery Recycling Project (Neometals 100%)

During the quarter, Neometals made strong progress on its lithium ion battery (“LiB’s”) recycling project. As previously reported, Neometals has broadened its initial focus from consumer electronics cobalt recovery to a multi chemistry flowsheet that can accommodate various types of LiB’s. The evolution of the LiB recycling process follows significant market interaction and the approach aims to recover >90% of all metals (plus recycle water and minimise plastic and graphite waste) from both EV and stationary storage battery chemistries (lithium-nickel-manganese-cobalt (“NMC”) cathodes) and cobalt-rich (lithium cobalt oxide cathodes (“LCO”)) chemistries.



**Figure 5** – Graph highlighting predicted uptick in demand for NCA/NCM volumes and the merit in a universal EV battery recycling flowsheet to retain flexibility and meet market demand as producer trends change.

Neometals has finalised its mixed feed flowsheet which has been incorporated into the design of the pilot plant test-work program (“Pilot”). The Pilot will demonstrate and showcase Neometals’ re-designed and engineered flowsheet and follows on from the historical ‘proof of scale’ test work.

Neometals LiB recycling involves two distinct stages:

1. LiB’s are shredded/deactivated in a feed preparation first step and metal casings and plastics are removed (“Stage 1”); and
2. feed material is sent to a second stage hydrometallurgical circuit where saleable materials are recovered and refined as required (“Stage 2”).

The Stage 1 feed preparation flowsheet removes steel casings and waste plastic wrapping, concentrating the high value cobalt, nickel and lithium powders contained within the batteries into a feed material (“Black Powder”) for subsequent Stage 2 processing. The Black Powder is a mixture of high value cobalt, nickel and lithium compounds as well as shredded copper and aluminium foil which is suitable for the hydrometallurgy recovery and refining stage.



Neometals successfully completed factory acceptance testing of its 50/t day commercial scale Stage 1 circuit which was then sent to Canada. In parallel, the Stage 2 hydrometallurgical circuit engineering design was completed, and for independent verification reasons, a decision was made to use an external laboratory to undertake the Pilot, the contract was awarded to SGS Canada Inc.

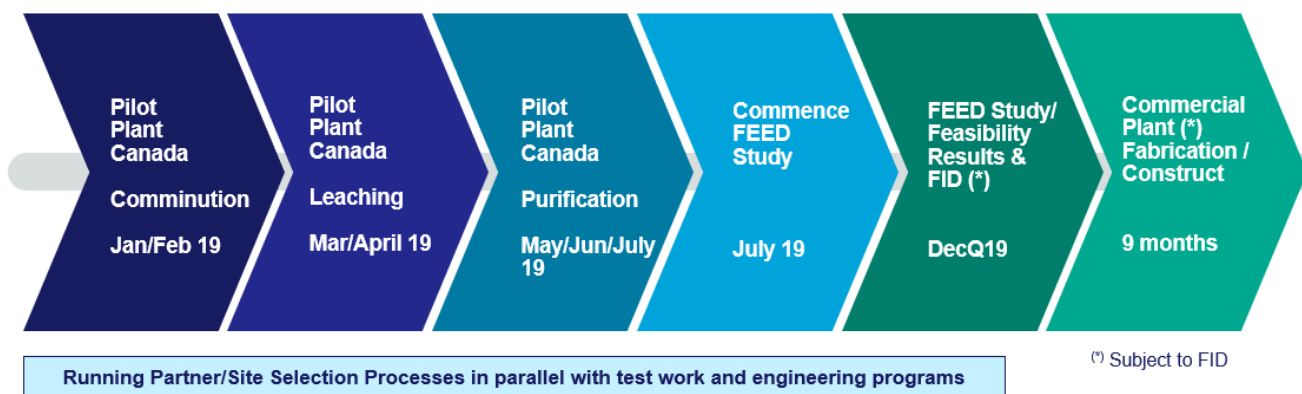


**Image 2 – Stage 1 feed preparation plant ready for pilot commissioning in Canada**

Subject to the success of the Pilot, Neometals intends to proceed with a Front-End Engineering and Design Study (“**FEED Study**”) (±15% accuracy) to complete the technical and economic evaluation associated with the decision to construct a commercial plant (“**Commercial Plant**”) with a capacity of 50/tpd of battery feed (~17,000 tpa).

Having commercially relevant, independent data early in the development is intended to fast track meaningful engagement with potential partners. The Commercial Plant, which will be driven by customer requirements, will only require design and construction of an upgraded Stage 2 hydrometallurgical circuit as the Stage 1 feed preparation circuit is already commercial scale at 50tpd.

**Figure 6 – Indicative timeline for LiB recycling project:**



**Mt Edwards Lithium Project**  
**(Neometals 100% through Mt Edwards Lithium Pty Ltd)**

Mt Edwards is located 40km south of Mt Marion and is situated centrally within what is emerging as a highly endowed and globally significant lithium province. The Mt Edwards tenements cover an area of 240 square kilometres and early stage exploration confirms that multiple fertile Lithium-Caesium-Tantalum (“**LCT**”) pegmatites are present. The Mt Edwards project (“**Mt Edwards**”) was acquired by Neometals in the June quarter of 2018.

Exploration work at Mt Edwards continues to be guided by a CSA Global (“**CSA**”) prospectivity and targeting study. Further pegmatites have been identified, rock chip sampled and submitted for assay.

Target areas identified by CSA Global geological consultants have been mapped and grid sampled for soils. The target areas were selected using desirable distances from potential source granites for lithium zones, and the local and regional structural setting. Soil sampling has been carried out in a trial area across and to the north of the Atomic 3 prospect. 150 samples were taken in a 40m x 200m spaced grid, with soils collected from 15cm depth. The sieved samples were submitted for assay testing for lithium and related elements.

Soil samples have also been collected on a grid pattern over the target areas at Groundlark and Larkinvile.

Drone based high definition aerial photography was conducted during the quarter over lithium target areas across the project. The photography is currently being processed and will be used to quickly identify prospective pegmatite areas that require ground truthing and sampling.

An 18 hole for 460 metre Air Core drill and sample program was undertaken over Prospecting Licenses P15/5905 & P15/5906 in November 2018. Samples were assayed for Lithium and related elements and gold, no significant results returned.

A 7 RC drill and sample program at Atomic 3 tested for extension to the LCT pegmatites defined and reported in the 2018 September quarter. A total of 620 metres were drilled, confirming that the pegmatites have either been pinched out or are offset by late stage faulting.

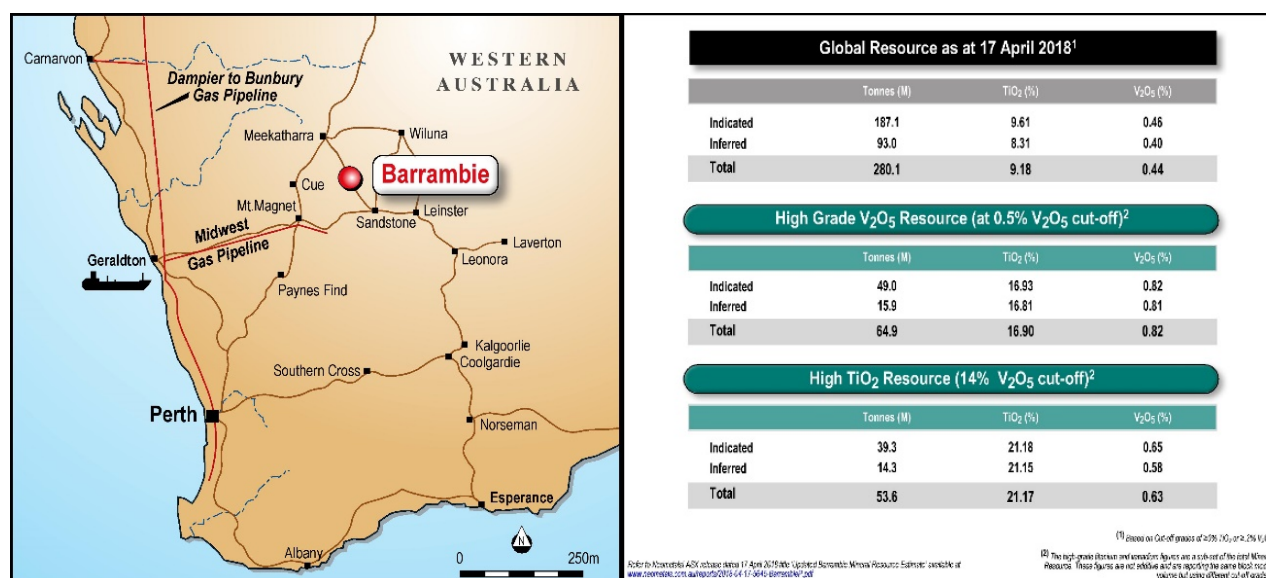
A 9-hole RC drill and sample program for 970 metres was conducted on E15/1576 testing stratigraphic targets for gold and Nickel. The ultramafic to mafic contact targets were located and tested however no significant results were returned.

## TITANIUM/ VANADIUM BUSINESS UNIT

### Barrambie Titanium/Vanadium Project (Neometals 100%)

The Barrambie Vanadium and Titanium Project in Western Australia (“**Barrambie**”) is one of the world’s largest vanadiferous-titanomagnetite (“**VTM**”) resources (280.1Mt at 9.18%  $\text{TiO}_2$  and 0.44%  $\text{V}_2\text{O}_5$ ), containing the world’s second highest-grade titanium resource (53.6Mt at 21.17%  $\text{TiO}_2$  and 0.63%  $\text{V}_2\text{O}_5$ ) and high-grade vanadium resource (64.9Mt at 0.82%  $\text{V}_2\text{O}_5$  and 16.9%  $\text{TiO}_2$ ) subsets (based on the latest Neometals 2018 Mineral Resource Estimate (see *Neometals ASX announcement dated 17th April 2018 and Figure 7 below*)).

Barrambie is located approximately 80km Northwest of Sandstone in Western Australia, has a granted mining permit and has been the subject of approximately AUD\$30 million in Neometals exploration expenditure since 2003.



**Figure 7 – Barrambie project location map and Mineral Resource Estimate, April 2018**

During the quarter, Neometals announced the commencement of a formal update (“**Updated DFS**”) to the historic Barrambie Vanadium Definitive Feasibility Study (“**DFS**”). The DFS considered primary vanadium production from a traditional salt roast-leach operation. The updated DFS will be JORC 2012 compliant based on the latest Neometals 2018 Mineral Resource Estimate (see *Neometals ASX announcement dated 17th April 2018*).

Adaman Resources (Mining), Snowdens (Reserves) and Ausenco (Operating and Capital Costs), are all actively working with Neometals on the Updated DFS. A formal update to operating and capital will allow a revised JORC 2012 Reserve to be released. Snowdens has completed the pit optimisation and design, and is currently working on a schedule and waste landform design to support the release of the mining reserve in the March quarter of 2019. Ausenco provided draft updates to operating and capital costs during the quarter which is currently under review. Final numbers will be delivered on each stage of production (Mining, Beneficiation and Vanadium Chemical Plant) to broaden opportunities for staged exploitation of vanadium plus titanium and iron.

In preparation for progressing to a FEED study (subject to Board approval), drilling commenced to provide samples for the production of representative samples for Pilot-scale salt roast leach test-work to enable kiln vendors sufficient information for detailed design and quotation.



## Approvals and Permits

Given the long Company history with Barrambie, Neometals is in the privileged position of being able to fast track development by relying on significant historical work already completed.

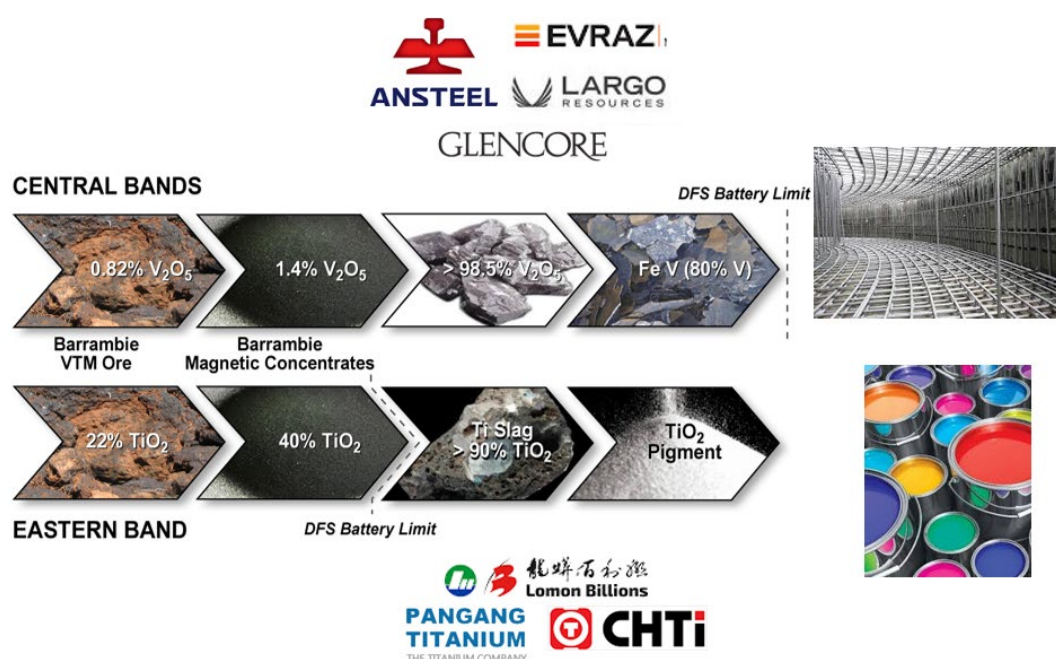
Neometals received environmental approval to develop an open-cut vanadium mine and processing plant at Barrambie in 2012 via Ministerial Statement 911 (the “**Proposal**”). During the September quarter a Section 46 Application was lodged by Neometals requesting an extension of time limit for implementation of the Proposal (i.e. project execution). Approval is expected in the March quarter of 2019. Ongoing advances were also made during the period on mine planning and tenement management.

A Mining Proposal for an initial 1Mtpa DSO operation was lodged during the quarter, and once approved will be followed by a proposal for a ramp up to 3.2Mtpa Salt-Roast Leach Operation being lodged, planned in the September quarter of 2019.

## DSO Metallurgical Program

Neometals is focused on maximising the value of both vanadium and titanium mineralisation contained within the project. If, for example, Neometals was to mine the Central Bands (high grade vanadium) material first, it will extract the Eastern Band mineralisation (high grade titanium) immediately adjacent, as part of an open pit operation. Barrambie Eastern Band can yield some of the same titanium minerals recovered from mineral sand projects, including sulphate and chloride grades of ilmenite.

Rather than stockpile this material long-term as a secondary or substitute vanadium feed source for salt roast leach recovery, Neometals has been investigating metallurgical pathways that can generate cashflow. If Neometals can exploit its titanium mineralisation it would likely look to sell a mineral concentrate or an ilmenite feed product to a downstream producer that either consumes the mineral directly to produce sulphate  $\text{TiO}_2$  pigment or titanium slag that would subsequently be used to produce either chloride  $\text{TiO}_2$  pigment or titanium metal.



**Figure 8 - Image showing vanadium (central bands) and titanium (Eastern band) products it is investigating supplying the market and key producers. Neometals development work likely to stop at the “DFS Battery Limit”**

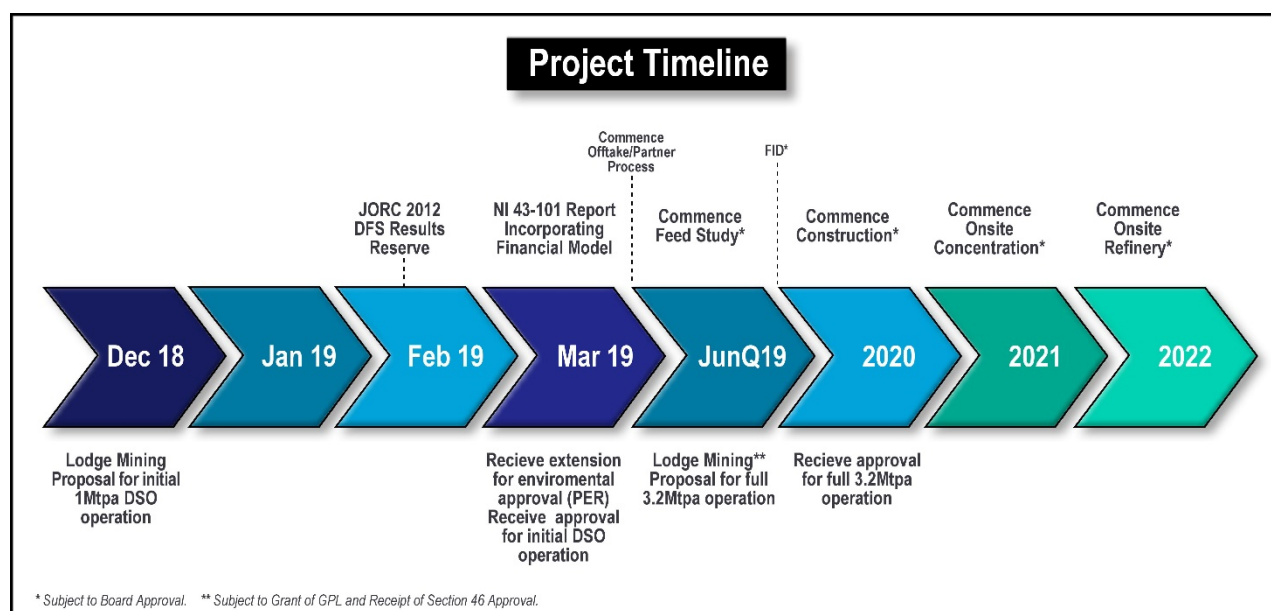


Initial Eastern Band results from metallurgical test-work conducted in China with the Institute of Multipurpose Utilisation of Mineral Resources – Chinese Academy of Geological Sciences (“**IMUMR**”) were very encouraging. The program with IMUMR continues and work advanced during the quarter on small scale test work to complete a Salt Roast Leach on the mixed concentrate prior to undertaking a Titanium slagging process. Final results are expected to be received by the end of the March quarter of 2019.

In parallel with the program of test work being undertaken by IMUMR in China, Allied Mineral Laboratories (AML) continued with a test work program in Perth, focussed on optimising the beneficiation circuit to enable the efficient recovery of a mixed Fe/V/Ti concentrate as well as separate Fe/V and Ti concentrates.

### Marketing

Management have been actively advancing discussions with potential partners and offtake parties for supply of ore, concentrates and chemical products (the latter being either vanadium pentoxide flake (99%  $V_2O_5$ ) and/or Ferrovandium (“**FeV**”). With Updated DFS results to hand, these discussions will ultimately drive the development strategy at Barrambie which requires offtake arrangements to drive future financing negotiations. Subsequent to the end of the quarter a debt advisory firm has been appointed to assist with putting together an initial financing plan for Barrambie.



**Figure 9 - Indicative milestones for Barrambie**

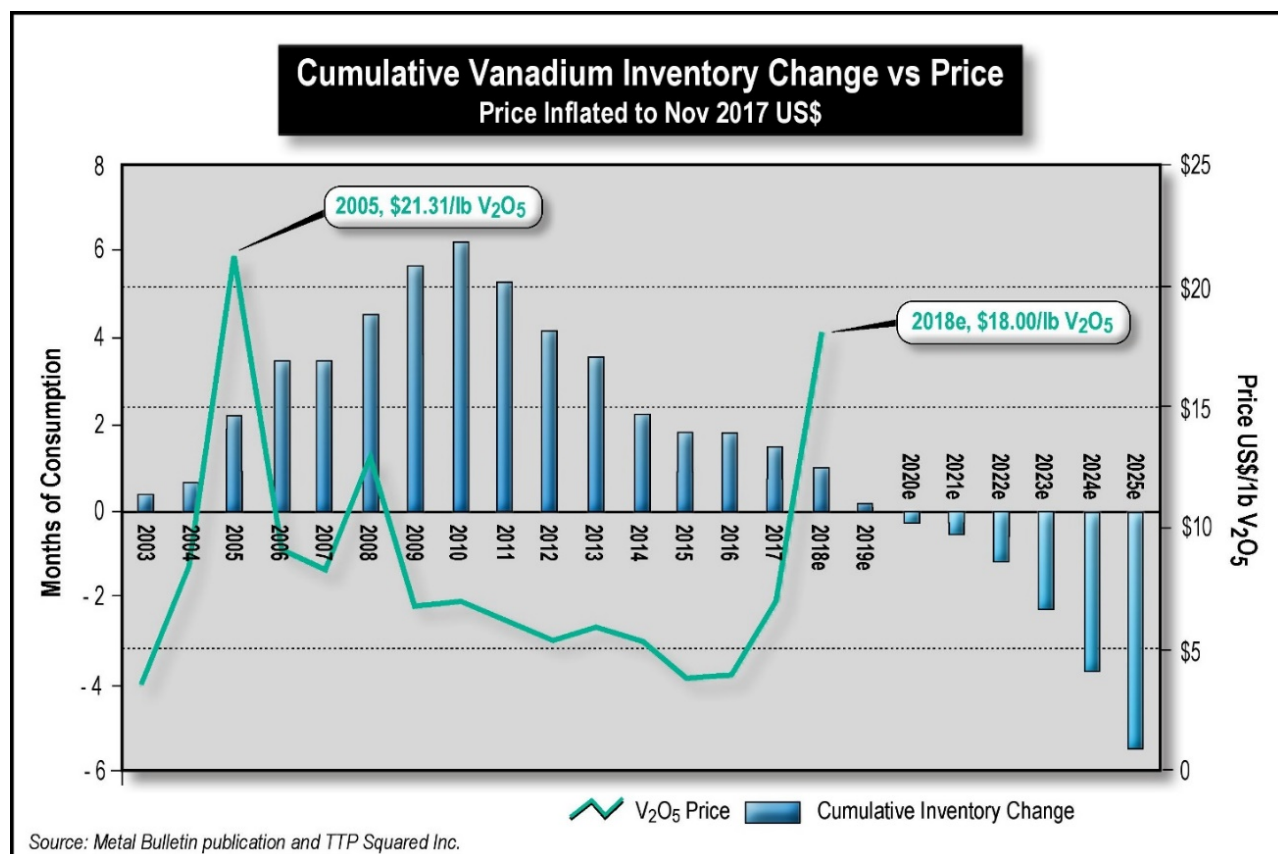
### Titanium and Vanadium Market Commentary

#### Vanadium

According to TTP Squared, Inc. estimated global production of vanadium in 2018 was 89kt, an increase of 6% on 2017. 57% of supply was from China, where vanadium is produced primarily as a byproduct of steel manufactured from VTM ores. Demand of 92kt (an increase of 7% on 2017) outstripped vanadium production in 2018. As well as being a major source of vanadium, the steel industry accounts for 90% of consumption where it is used as an alloy for strengthening construction steels such as reinforcing bar (rebar). China is also the largest consumer of vanadium and accounted for 47% of demand in 2018.

In the period 2018 to 2025, vanadium consumption is forecast to grow by 45% to 133kt at a CAGR of 5.5% (with the majority of this growth coming from China).

This growth in vanadium demand via consumption is underpinned by global steel production / consumption, which is being driven by recent regulatory changes requiring greater use of vanadium in steel rebar. Global vanadium inventories have been declining since 2010 and have now reached a critically low level. Coupled with strong demand growth, lagging supply created a dramatic price spike in 2018. This growth in demand will be partially satisfied by Chinese companies extracting vanadium from stone coal, the expansion of existing primary producers and the restart of shuttered operations. However, large new sources of supply will be required to meet demand beyond 2021.



**Figure 10** - showing vanadium cumulative vanadium inventory change vs price

The average price of vanadium pentoxide (98% min) in 2018 was US\$18.00/lb  $V_2O_5$  and the second highest on record. It peaked at an historic high of US\$33.88/lb  $V_2O_5$  in mid-November and dropped back to US\$15.00/lb by the end of December, largely a consequence of traders selling aggressively to clear out inventories and close their books before year end. Post the end of the quarter, January 2019 prices have rebounded against what many market forecasters saw as a necessary market normalisation against huge price increases. There remains however very little idle vanadium production capacity in the market and increased demand for 'strong' rebar in China is likely to result in continued inventory depletion and buoyant pricing.

### Titanium

According to TZMI, the major market for titanium, accounting for 90% of demand, is  $TiO_2$  pigment which is used to impart whiteness and opacity to paints, coatings, plastics, paper, inks, fibres, food and cosmetics. There are two primary technologies used to manufacture  $TiO_2$  pigment - the sulphate process and the chloride process. These processes require different quality  $TiO_2$ -bearing mineral feedstocks that are described as either sulphate feedstock or chloride feedstock. The main raw materials for the sulphate process are sulphate ilmenite (45-55%  $TiO_2$ ) and beneficiated sulphate slag (~80%  $TiO_2$ ). The chloride process, often regarded as more being environmentally friendly, typically requires higher grade feedstocks. The titanium mineralisation within the Barrambie VTM project could be used in both the sulphate and chloride pigment processes.

During 2018, following two years of international price gains and high plant utilisation rates, TiO<sub>2</sub> pigment sales volumes and prices started to soften. TiO<sub>2</sub> pigment and formulated product inventories started to build during the year and this along with a flat demand outlook in 2019 is likely to result in lower production rates in 2019.

In China TiO<sub>2</sub> pigment prices declined gradually during 2018 as large-capacity investments over the past few years increased supply to a level exceeding domestic demand. This resulted in more Chinese pigment being exported and downward pressure on international pigment prices, which contributed to the softer prices described above.

Notwithstanding gradual price declines in 2018, leading market analysts are predicting a growing TiO<sub>2</sub> supply deficit without the development of new titanium resource projects i.e. supporting firmer prices in the longer term.

#### **Neomet Processing Technology**

##### **(25% Net Profit Interest through Alphamet Management Pty Ltd - 100% Neometals)**

Neometals, via its wholly owned Canadian subsidiary Alphamet Management Pty Ltd, is responsible for managing the commercialisation and development of the “Neomet Process”. This patented (USA, Canada, Australia), environmentally friendly process technology has broad application in the recovery of a wide range of metal oxides from chloride leach solutions, including titanium.

During the quarter work continued on installation of a bench scale test program for the recovery of zinc and iron from electric arc furnace (“EAF”) dust and the regeneration of hydrochloric acid. This installation was materially complete at the end of the quarter and commissioning commenced subsequent of the end of the quarter with results expected by the end of the March quarter of 2019. A high-grade mineral concentrate from Barrambie is already on site at our Montreal facilities and will be the next test work program after successful completion of the EAF dust work.

## CORPORATE

### Strategy

Neometals continues to successfully prosecute its strategy with the long-term aim of continuing to combine innovative cost advantages and strong partners to develop a portfolio of globally significant projects into low risk, long life and high margin operations.

Neometals agreed the conditional sale of Mt Marion equity for \$104 million with retention of 'life of mine' spodumene concentrate offtake rights (*see NMT ASX Announcement dated 21<sup>st</sup> December 2018*). The equity sell-down effectively realises the present value of future income streams from the mine and secures Neometals' access to upstream spodumene concentrate supply. This development is in keeping with Neometals desire to increase margins from producing higher value downstream products from its captive mineral feedstocks. The Company's conviction in the long-term lithium battery thematic remains very strong.

Neometals considerations regarding its proposed demerger of Barrambie are necessarily subject to review. Guidance will be provided once the Mt Marion equity sale is settled.

### Financial

#### **Hannans Limited (ASX:HNR) (Hannans) (Yilgarn Nickel/Lithium/Gold)**

As at 31 December 2018 Neometals holds 706,209,483 ordinary fully paid shares (36% of the issued capital) in Hannans on an undiluted basis. At 31 December 2018, Hannans' shares closed at 1.2c implying a value of \$8.47M.

#### **Critical Metals Limited (Unlisted, Scandinavian Lithium/Cobalt/Base Metals)**

Neometals holds 13.5% of unlisted public company Critical Metals Ltd, a company which now houses the Scandinavian mineral assets previously held by Hannans. Neometals will assist Critical Metals to realise lithium, cobalt and carbon opportunities in Scandinavia through a technical assistance arrangement.

### **Other Investments**

The market value of the Company's other investments as at 31 December 2018 totaled \$0.8M.

### **Finances (unaudited)**

Cash and term deposits on hand as of 31 December 2018 totalled A\$30.3 million, including \$4.0 million in restricted use term deposits supporting performance bonds and other contractual obligations. The Company's has net receivables and listed securities totalling approximately \$9.9 million.

### **Issued Capital**

The total number of shares on issue at 31 December 2018 was 543,947,221.

### Human Resources

The September quarterly activities report flagged the imminent appointment of a highly credentialled General Manager Metallurgy/IP who would be focused on Vanadium and Titanium developments. Neometals made the valuable addition to its technical team during the quarter and welcomes David Robinson to the team. David is PhD qualified and brings a wealth of commercial and research based hydrometallurgical and titanium / vanadium specific knowledge to Neometals. He is responsible for supervising all vanadium/titanium business metallurgy programs, project technology development and managing research programs and associated IP protection.



## ENDS

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**Compliance Statement**

*The information in this report that relates to Mineral Resource Estimates and Exploration Targets for the Barrambie Titanium Project, Mt Edwards Project and Mt Marion Project are extracted from the ASX Announcements:*

17/04/2018	Updated Barrambie Mineral Resource Estimate
25/06/2018	Mt Edwards Project Mineral Resource Over 120,000 Nickel Tonnes
31/10/2018	Mt Marion Mineral Resource Update

*The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.*

**About Neometals Ltd**

Neometals Ltd ("Neometals" - ASX:NMT) is a developer of industrial mineral and advanced materials projects. Neometals has two key divisions – an integrated Lithium business and a Vanadium-Titanium resource development business. Both are supported by proprietary technologies that assist downstream integration through revenue enhancement and cost efficiencies.

Neometals owns a 13.8% stake in the Mt Marion lithium mine near Kalgoorlie (subject to sale), which operates one of the world's biggest lithium concentrators. Neometals holds an offtake option, which forms the backbone to its fully-integrated lithium business aspirations which include a Lithium Hydroxide Refinery and Lithium-ion Battery Recycling process. The 100%-owned Barrambie Titanium-Vanadium Project in WA's Mid-West is one of the world's highest-grade hard-rock titanium-vanadium deposits.

Neometals' strategy focuses on de-risking and developing long life projects with strong partners and integrating down the value chain to increase margins. The company aims to leverage its cashflows to grow opportunities that provide sustainable mineral and material solutions to customers and to return value to shareholders.

## APPENDIX: TENEMENT INTERESTS

As at 31 December 2018 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	L20/80	100%	Pending
Barrambie	G57/11	100%	Pending
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	L15/220	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	L15/353	13.8% (*)	Live
Mount Marion	E15/1599	13.8% (*)	Live
Mt Edwards	M15/45	100% (^)	Live
Mt Edwards	M15/46	100% (^)	Live
Mt Edwards	M15/48	100% (^)	Live
Mt Edwards	M15/74	100%	Live
Mt Edwards	M15/75	100%	Live
Mt Edwards	M15/87	100% (**)	Live
Mt Edwards	M15/77	100% (^)	Live
Mt Edwards	M15/78	100% (^)	Live
Mt Edwards	M15/79	100% (^)	Live
Mt Edwards	M15/80	100% (^)	Live
Mt Edwards	M15/94	100% (^)	Live
Mt Edwards	M15/96	100% (#)	Live
Mt Edwards	M15/97	100% (#)	Live

Mt Edwards	M15/99	100% (#)	Live
Mt Edwards	M15/100	100% (#)	Live
Mt Edwards	M15/101	100% (#)	Live
Mt Edwards	M15/102	100% (#)	Live
Mt Edwards	M15/103	100% (^)	Live
Mt Edwards	M15/105	100% (^)	Live
Mt Edwards	L15/102	100%	Live
Mt Edwards	M15/478	100% (^)	Live
Mt Edwards	M15/633	100% (^)	Live
Mt Edwards	M15/653	100% (#)	Live
Mt Edwards	M15/693	100% (^)	Live
Mt Edwards	M15/698	100%	Live
Mt Edwards	M15/699	100%	Live
Mt Edwards	M15/1271	100% (#)	Live
Mt Edwards	L15/254	100%	Live
Mt Edwards	E15/989	100% (^)	Live
Mt Edwards	L15/280	100%	Live
Mt Edwards	P15/5905	100%	Live
Mt Edwards	P15/5906	100%	Live
Mt Edwards	E15/1505	100%	Live
Mt Edwards	E15/1507	100%	Pending
Mt Edwards	E77/2397	100%	Pending
Mt Edwards	E15/1562	100%	Pending
Mt Edwards	E15/1576	100%	Live
Mt Edwards	E15/1583	100%	Live
Mt Edwards	E77/2427	100%	Pending
Mt Edwards	E15/1679	100%	Pending
Mt Edwards	P15/6362	100%	Pending

\* - registered holder is Reed Industrial Minerals Pty Ltd (Neometals Ltd 13.8%, Mineral Resources Ltd 43.1%, Ganfeng Lithium Co. Ltd 43.1%) (subject to sale agreement).

^Nickel rights only

\*\*Lithium rights only

# No gold interest

**Changes in interests in mining tenements****Interests in mining tenements acquired or increased**

PROJECT NAME	LICENCE NAME	ACQUIRED OR INCREASED
Mt Edwards	E15/1679	Application
Mt Edwards	P15/6362	Application
Barrambie	G57/0011	Application
Barrambie	L20/0080	Application

**Interests in mining tenements relinquished, reduced or lapsed**

PROJECT NAME	LICENCE NAME	RELINQUISHED, REDUCED OR LAPSED
Mount Marion	E15/1496	Relinquished
Mount Marion	E15/1504	Relinquished
Mount Marion	P15/6041	Relinquished
Mount Marion	P15/6042	Relinquished
Mount Marion	P15/6043	Relinquished
Mount Marion	P15/6044	Relinquished
Mount Marion	P15/6045	Relinquished
Mount Marion	P15/6050	Relinquished
Mount Marion	P15/6048	Relinquished
Mount Marion	P15/6052	Relinquished
Mount Marion	P15/6053	Relinquished
Mount Marion	P15/6054	Relinquished
Mount Marion	P15/6055	Relinquished
Mount Marion	P15/6057	Relinquished
Mount Marion	P15/6058	Relinquished
Mount Marion	E15/1679	Relinquished
Mount Marion	P15/6362	Relinquished
Mount Marion	G57/0011	Relinquished
Mount Marion	L20/0080	Relinquished