

# QUARTERLY ACTIVITIES REPORT

## For the quarter ended 31 March 2020

### HIGHLIGHTS

#### CORPORATE

- Balance sheet strength underpins 2cps partially franked dividend. Strategy of delivering cash returns to shareholders continues with approximately AUD\$56m returned in the past 5 financial years;
- Continued focus on commodities linked to the electric vehicle (EV) and energy storage (ESS) thematic, with a pivot towards more sustainable resource recovery and recycling projects to compliment upstream resources with collaboration deal announced (post the quarter end) to recover vanadium from high-grade by-products of leading Scandinavian steel producer, SSAB; and
- Cash \$94.9 million, receivables, and investments at \$6.0 million and no debt.

#### CORE DEVELOPMENT ACTIVITIES

##### *Lithium-ion Battery Recycling Project*

- Successful completion of the Neometals lithium battery recycling pilot occurred in March with all proof-of-scale objectives met and technical risk significantly reduced;
- Data delivered to SMS group for it to conclude diligence on forming a 50:50 recycling joint venture, commence feasibility level studies and commence construction of the proposed demonstration plant in Europe;
- Chemical product samples from the pilot achieved high purities and positive early product evaluation feedback received from battery industry participants; and
- Market evaluation activities advanced. Discussions with potential battery supply and offtake partners advanced targeting agreements for the demonstration plant trials, to as a prelude to formal agreements for the first commercial plant.

##### *Barrambie Titanium and Vanadium Project*

- Pilot scale processing trials support the technical feasibility of Neometals' beneficiation flowsheet to produce concentrates and hydrometallurgy flowsheet to produce high purity chemical intermediates; and
- 'Product value in use' has been demonstrated. Pilot results, concentrate and chemical samples shared with Chinese JV partner (IMUMR) as well as related titanium pigment production end users.

##### *Lithium Refinery Project*

- Finalised preparations for commencement of a jointly funded Feasibility Study as part of collaboration with leading Indian power trader, Manikaran Power Limited, to evaluate the development of the first lithium refinery in India utilising Neometals offtake arrangements from Mt Marion, the second largest producer of lithium concentrate in the world; and
- The project is a strategic, low-cost option for to develop a downstream lithium chemical operation as a first-mover into a large market where the central government is striving to develop a domestic supply chain to remove its total reliance on imports and achieve its planes for 100% electric vehicle sales

#### EXPLORATION ACTIVITIES

- Strong drilling results at the Armstrong deposit and Cassini-Wannaway trend continue to enhance the projects value. The delineation and evaluation of high-grade massive mineralisation within existing resource inventory supports development of a pipeline of short lead-time nickel sulphide deposits for future demand from EV's.

## COMPANY OVERVIEW

Neometals innovatively develops opportunities in minerals and advanced materials essential for a sustainable future. With a focus on the electric vehicle and energy storage megatrends, the strategy focuses on de-risking and developing long-life projects with strong partners and integrating down the supply chain to increase margins and return value to shareholders.

Neometals has four core projects with large partners that span the battery value chain:

### *Upstream Minerals:*

1. Barrambie Titanium and Vanadium Project - one of the world's highest-grade hard-rock titanium-vanadium deposits, working towards a development decision in mid-2021 with potential JV partner IMUMR.

### *Advanced Materials:*

2. Lithium Refinery Project – progressing plans for a lithium refinery development to supply lithium hydroxide to the battery cathode industry in a potential 50:50 JV with partner Manikaran Power, underpinned by a binding life-of-mine annual offtake option for 57,000 tonnes per annum of Mt Marion 6% spodumene concentrates.

### *Recycling and Resource Recovery:*

3. Lithium-ion Battery Recycling – a proprietary process for recovering cobalt and other valuable materials from spent and scrap lithium batteries. Pilot plant testing completed with plans well advanced to conduct demonstration scale trials with potential 50:50 JV partner SMS Group; and
4. Vanadium Recovery – a 27-month option to evaluate establishing a 50:50 joint venture to recover vanadium from processing by-products (“**Slag**”) from leading Scandinavian steel maker SSAB. Underpinned by a 10-year Slag supply agreement the sustainable European production of high-purity vanadium pentoxide is targeted for late 2024.



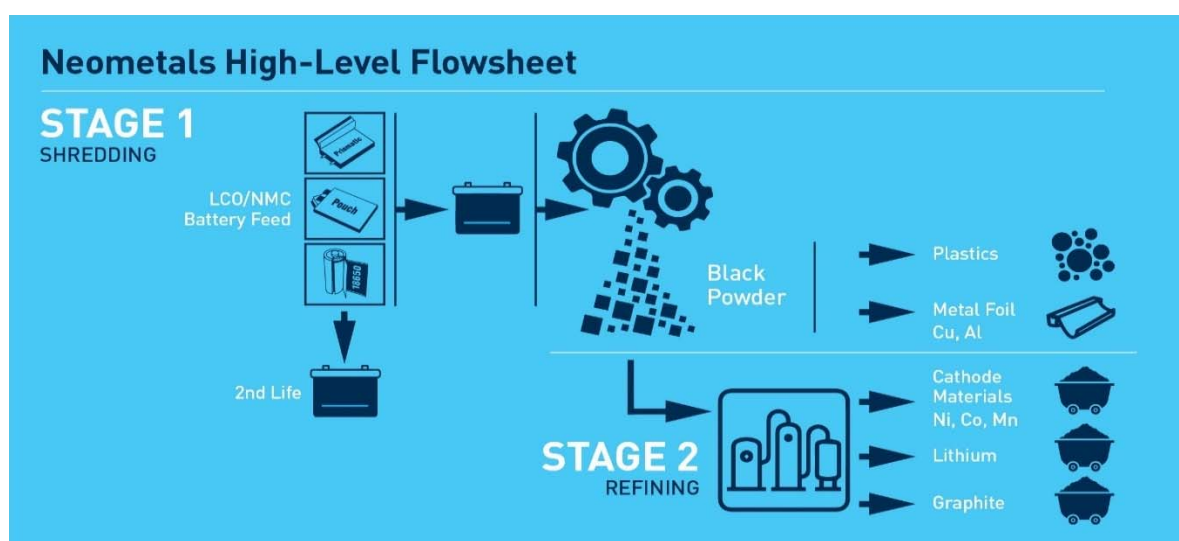
Figure 1 – Location map of Neometals ‘Upstream’ mineral projects

## CORE PROJECTS

### Lithium Battery Recycling Project (Neometals 100%)

Neometals has developed a sustainable process flowsheet targeting the recovery of battery materials contained in production scrap and end-of-life lithium-ion batteries (LIBs) that might otherwise be disposed of in land fill or processed in high-emission pyrometallurgical recovery circuits. Neometals' process flowsheet targets the recovery of valuable materials from consumer electronic batteries (devices with lithium cobalt oxide (LCO) cathodes), and nickel-rich EV and stationary storage battery chemistries (lithium-nickel-manganese-cobalt (NMC) cathodes). The flowsheet is designed to recover cobalt, nickel, lithium, copper, iron, aluminium and manganese into saleable products and demonstration scale trials are targeted at showcase facilities in Europe commencing in the second half of CY 2020.

A 2019 scoping study, based on previous bench scale test-work, highlighted robust economics. Data from the recently concluded pilot will feed next stage engineering and feasibility studies.



**Figure 2** - High level flowsheet showing the materials generated from Feed Preparation and Hydrometallurgical Processing stages

The recycling flowsheet, comprises two sections:

1. Shredding and removal of metal casings and plastics in the feed preparation facility ("**Feed Preparation**"); and
2. Leaching, recovery and refining to deliver chemical products via the hydrometallurgical processing facility ("**Hydrometallurgical Processing**").

### Pilot Plant

During the quarter, the Neometals lithium battery recycling pilot in Canada was successfully completed ("Pilot"). The Pilot validated earlier bench scale assumptions with high recoveries of a targeted suite of cathode active elements that were refined into high purity chemicals for re-use in the battery supply chain.

The Pilot, undertaken by SGS Canada Inc., represents part of the pre-development activities for a proposed commercial LIB recycling venture to recover LIB materials from electric vehicle and consumer electronics batteries. Neometals successfully shredded and processed 2.3 tonnes of spent commercial LIBs during the 'Feed Preparation' stage of the Pilot. A total of 980 kg of shredded and upgraded cathode and anode material ("**Black Powder**") was fed into the subsequent 'Hydrometallurgical Processing' stage from which cathode materials have been recovered and refined into high-purity chemical products.

During the concluding phase of the Pilot:

- the previously recovered Pilot cobalt and nickel sulphate solutions were successfully purified and crystallised to generate cobalt and nickel sulphate solids at specifications suitable for cathode production; and
- lithium was successfully recovered leaving only ammonium sulphate in the depleted solution for crystallisation as ammonium sulphate (“**Amsul**”). The remaining water will be recycled; and
- the Pilot data was modelled in a Metsim mass/energy balance and documented in a comprehensive test report that have been issued to potential joint venture (“**JV**”) partner, SMS Group, ahead of a JV formation decision.

Successful completion of the Pilot, which commenced in February 2019, represented a significant commercial milestone for the Neometals recycling technology. Objectives were met and surpassed, no fatal technical flaws arose, and the Company now has the data to commence feasibility-level studies and proposed demonstration trials in Europe (“**Demonstration Trial**”). With the Pilot significantly reducing the technical risk of commercialising its proprietary process, Neometals can proceed confidently towards the SMS Group commercialisation JV and advance feed supply and product offtake activities (*see SMS MOU section below for further information*).

Initial feedback from leading market participants on Pilot sample products has been encouraging and Neometals will look to secure evaluation partnerships with end-users to qualify products from the Demonstration Trial for future offtake agreements.

#### **MOU with SMS**

To accelerate commercial development of the recycling project, Neometals announced during the December 2019 quarter that it had entered a binding memorandum of understanding (“**MOU**”) with leading global processing plant manufacturer SMS Group (“**SMS**”). SMS has an exclusive due diligence period in which it will evaluate the results of the Neometals Pilot before a decision is made to form a 50:50 JV, to design and construct a demonstration plant at SMS sites in Germany and Austria. A Class 3 Engineering Cost Study will be completed concurrently. A final investment decision (“**FID**”) which will follow feasibility evaluation, will be considered to construct the first commercial-scale operation.

A positive FID would involve Neometals contributing technical and commercial know how to the JV and SMS contribute to the engineering design, fabrication, operation and maintenance of future recycling plants. SMS would also, on a best endeavours basis, procure debt financing for no less than 50% of the capital expenditure required.

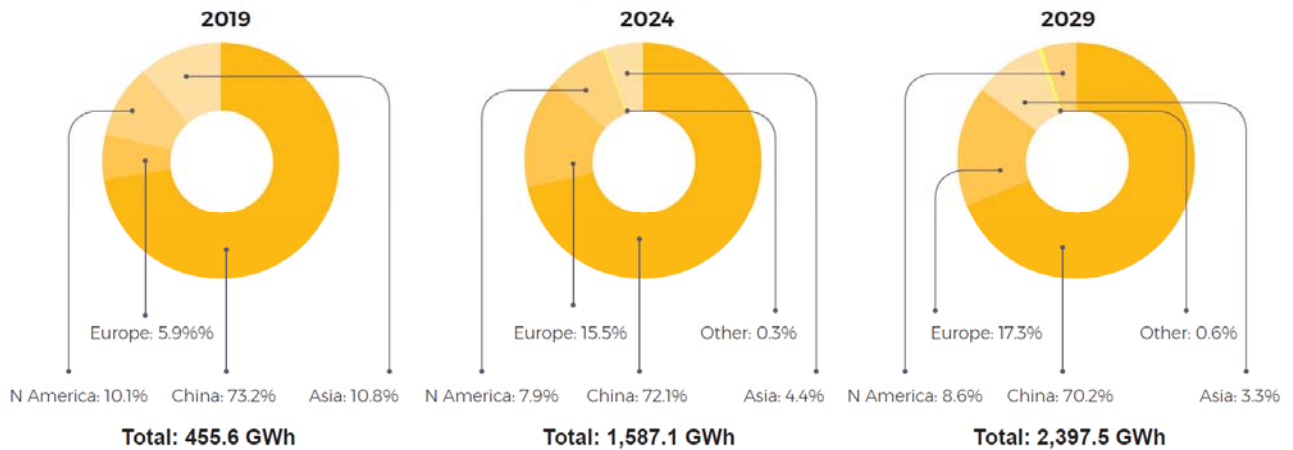
#### **Market Development**

Neometals has advanced battery feedstock supply and product offtake dialogues as part of its market evaluation and marketing activities.

The first commercial recycling plant will require sufficient volume of feed material to support a commercial operation that has viable economy of scale, nominally 50t per day or 18,000t of spent LIBs per annum. During the quarter, further additions in European and North American cell-making capacity were announced with 2 to 5 year production lead-times. Of note to Europe, Groupe PSA and Saft (battery arm of Total) confirmed a battery joint venture, which will see two separate 24GWh plants constructed at sites in France and Germany. In addition, the next phase of LG Chem’s Polish cell making expansion received loan funding from the European Investment Bank. The loan underpins the rise of LG Chem’s cell production capacity by 35 GWh to reach 67 GWh by 2023.

Neometals has strong confidence that together with its partner, it can source cell production scrap from the proposed battery megafactories in quantities sufficient to support its initial operations. The longer-term source of feed material for recycling will come from end-of-life cells from current electric vehicle and energy storage applications.

## Megafactory Capacity by Region



Source: Benchmark Mineral Intelligence

**Figure 3 – Developments in global cell production capacity**

### European New Green Deal

The European Green Deal, proposed in December 2019, is a strategy to transform the 27-country bloc from a high to a low-carbon economy. The deal is a roadmap to make the EU economy sustainable with no net emissions of greenhouse gases by 2050. Its key actions include boosting the efficient use of resources by moving to a clean circular economy and cutting pollution. The Green deal will unlock funding to enable at least 1 trillion euro in sustainable investments between 2021-2027.

The Green Plan together with a new regulatory framework in Europe for sustainable batteries augurs well for a ‘carrot and stick’ to drive clean batteries, which necessarily includes ethical sourcing of raw materials and sustainable recycling. Neometals is busy laying the foundations to be an important participant in this new landscape and it is encouraging to see the legislative and funding steps being made to support this green outcome.

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

The Barrambie Vanadium and Titanium Project in Western Australia (“Barrambie”) is one of the largest vanadiferous-titanomagnetite (“VTM”) resources globally (280.1Mt at 9.18% TiO<sub>2</sub> and 0.44% V<sub>2</sub>O<sub>5</sub>)\*, containing the world’s second highest-grade hard rock titanium resource (53.6Mt at 21.17% TiO<sub>2</sub> and 0.63% V<sub>2</sub>O<sub>5</sub>)\* and high-grade vanadium resource (64.9Mt at 0.82% V<sub>2</sub>O<sub>5</sub> and 16.9% TiO<sub>2</sub>) subsets (referred to as the Eastern and Central Bands respectively) based on the latest Neometals 2018 Mineral Resource Estimate (\*for full details refer to ASX announcement entitled “Updated Barrambie Mineral Resource Estimate” released on 17 April 2018 and Table 1 below).

**Table 1 – Barrambie Mineral Resource Estimate, April 2018**

<b>Global Resource as at 17 April 2018<sup>1</sup></b>			
	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	187.1	9.61	0.46
Inferred	93.0	8.31	0.40
<b>Total</b>	<b>280.1</b>	<b>9.18</b>	<b>0.44</b>

<b>High Grade V<sub>2</sub>O<sub>5</sub> Resource (at 0.5% V<sub>2</sub>O<sub>5</sub> cut-off)<sup>2</sup></b>			
	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	49.0	16.93	0.82
Inferred	15.9	16.81	0.81
<b>Total</b>	<b>64.9</b>	<b>16.90</b>	<b>0.82</b>

<b>High TiO<sub>2</sub> Resource (14% TiO<sub>2</sub> cut-off)<sup>2</sup></b>			
	Tonnes (M)	TiO <sub>2</sub> (%)	V <sub>2</sub> O <sub>5</sub> (%)
Indicated	39.3	21.18	0.65
Inferred	14.3	21.15	0.58
<b>Total</b>	<b>53.6</b>	<b>21.17</b>	<b>0.63</b>

<sup>(1)</sup> Based on Cut-off grades of ≥20% TiO<sub>2</sub> or ≥2% V<sub>2</sub>O<sub>5</sub>  
<sup>(2)</sup> The high-grade titanium and vanadium figures are a sub-set of the total Mineral Resource. These figures are not additive and are reporting the same block model volume but using different cut-off grades.

Refer to Neometals' ASX release dated 17 April 2018 titled 'Updated Barrambie Mineral Resource Estimate' available at [www.neometals.com.au/reports/2018-04-17-3645-BarrambieP.pdf](http://www.neometals.com.au/reports/2018-04-17-3645-BarrambieP.pdf)

Barrambie is located approximately 80km North-west of Sandstone in Western Australia (see Figure 1), and has a granted mining lease covering its mineral resource.

### **Test-work**

Neometals is focused on evaluating metallurgical processing routes to determine how best to realise value from both titanium and vanadium which are coincident in the mineral resource. More than 95% of the contained metal in the Barrambie resource is titanium and as such, its successful extraction is the primary driver of project economics.

Metallurgical test-work activities progressed well during the quarter and have been scoped to align with evaluation steps in the Neometals MOU with IMUMR towards a commercial mining and processing venture (see the MOU summary below). The test-work can be considered in two parts:

1. beneficiation to produce high quality concentrates which are suitable feedstocks for conventional downstream processing into titanium and vanadium products (metals and chemicals); and
2. design and trialling of a hydrometallurgical downstream processing flowsheet to make high-purity titanium and vanadium chemical products.

### Beneficiation

During the quarter, magnetic and gravity-based pilot beneficiation campaigns were completed in Perth. Encouragingly, it has been shown that Eastern Band ore from Barrambie can be beneficiated using either (or a combination of) magnetic- and gravity-based beneficiation technologies. In addition to the samples of iron/vanadium concentrate that have already been sent to China for customer evaluation, Neometals now has approximately 11 tonnes of additional Barrambie Eastern Band concentrate available for blending and delivery to meet IMUMR MOU commitments.

### Downstream Processing Flowsheets

Downstream test-work (hydrometallurgy) has been completed on Eastern band concentrates to:

- i) extract and recover the vanadium values; and
- ii) produce feed for pilot processing of titanium chemicals in Perth.

The MOU with IMUMR foreshadows a commercialisation outcome where the Chinese partner will likely have responsibility for processing Barrambie concentrates into titanium and vanadium products. It is essential however that Neometals demonstrates the ability to make a high-purity intermediate chemical that is commonly produced by prospective titanium pigment customers. Industrial minerals need to be benchmarked for value in use to attract off-takers and industry partners.

More specifically, Neometals generated high purity (+99%) titanium chemical at high recovery rate (+89%) in lab trials which was followed by pilot recovery of high purity (>98%) titanium hydrolysate (hydrated titanium dioxide -  $TiO_2 \cdot 2H_2O$ ) with titanium recoveries from Barrambie concentrate exceeding 90%. Of commercial relevance, the hydrometallurgical titanium chemical results will support investigations by potential partners who will look to add value to titanium and vanadium/iron bearing concentrates prepared in Australia.

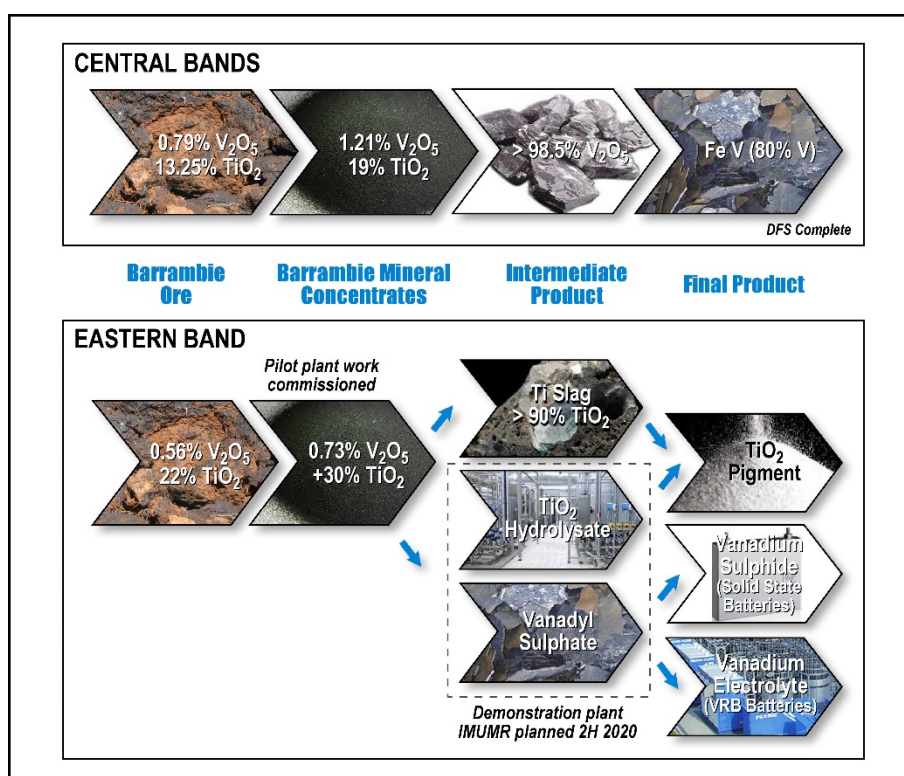


Figure 4 - Barrambie Processing Options, split between high grade vanadium in the Central Bands and high-grade titanium in the Eastern Bands.

## IMUMR MOU

During the December 2019 quarter, Neometals entered a memorandum of understanding (“**MOU**”) with Chinese research organisation, IMUMR, to jointly advance development of Barrambie. The MOU has commenced with evaluation activities, including a hydrometallurgical processing demonstration plant, and outlines a potential pathway towards a 50:50 joint venture to advance Barrambie’s commercial exploitation.

IMUMR is among the top Chinese metallurgical institutes and has extensive experience in mineral processing and smelting of VTM concentrates. Importantly, IMUMR also has acknowledged expertise and deep relations with China’s titanium and vanadium chemical processing industry. IMUMR has previously conducted beneficiation and pyrometallurgical test-work for Neometals on bulk-ore samples from Barrambie and from those studies is intimately familiar with the Barrambie orebody.

Under the MOU, Neometals’ is responsible for completion of beneficiation and hydrometallurgical pilot test work in Australia. Subject to pilot study results, and subject to a decision to proceed with a Chinese demonstration plant, Neometals will deliver up to 10 tonnes of Eastern Band concentrate for evaluation. IMUMR proposes to fund the demonstration plant at its extensive test work facilities in China and subject to satisfactory results, the parties will jointly fund a Class 3 Engineering Cost Study (“**ECS**”) to evaluate a mining and concentrating operation at Barrambie with subsequent downstream processing in China. Following completion of the ECS, the parties will review the results to determine whether to proceed to a financial investment decision and negotiate in good faith the terms of the 50:50 production JV. At completion of the proposed IMUMR demonstration trial and subsequent ECS, Neometals will have a complete and extensive data set to choose the best processing path from which to base a FEED study.

The MOU establishes a pathway to enhance and realise value through the development of Barrambie with a potential partner to considerably reduce Neometals funding requirements and project risk. It should also be recognised that IMUMR has a Chinese national mandate that includes development of upstream supply chains for industries of strategic relevance to China. IMUMR will have the right, subject to Neometals approval, to assign its interests under the MOU to a commercial Chinese chemical processing partner.

## Class 5 Scoping and Engineering Studies

Data from the pilot test-work is supporting the ongoing Class 5 engineering studies being managed by Neometals. Significant progress was made on the studies during the quarter and completion is expected during the current quarter.

With ore, concentrate and chemical product quality in a position to be measured by third parties via evaluation samples, the Class 5 engineering study outcomes will provide the remaining information to IMUMR and other potential industry partners from which to make preliminary assessments on economic viability with their various business models. The study can also be used as a basis from which to consider any additional or alternate flowsheet variations which may be suggested by end users.

## Market Commentary

### *Titanium*

In Q1 2020, TiO<sub>2</sub> pigment prices increased in Europe and North America but decreased in Asia. This follows an extended period of relative price stability in the TiO<sub>2</sub> pigment market, which consume 90% of titanium-bearing mineral feedstock. The European and North American price increases followed announcements by major producers that prices would rise following two years of flat pricing and sustained cost pressures. In Asia prices decreased in response to surplus production by Chinese producers.

Increasingly, China is influencing global TiO<sub>2</sub> markets. Chinese TiO<sub>2</sub> pigment production has increased tenfold in the last 20 years from 300ktpa to 3Mt pa and now represents more than 40% of global production. Chinese exports of TiO<sub>2</sub> pigment have also increased dramatically during this time. China now exports 900kpa TiO<sub>2</sub> pigment, which is nearly one third of domestic production.



Whilst the impact of the COVID-19 pandemic on the TiO<sub>2</sub> feedstock and TiO<sub>2</sub> pigment industries has not yet been fully assessed, it is probable that demand for TiO<sub>2</sub> pigment will decline during 2020. This is likely to result in reduced operating rates across the industry and the possible shuttering of some high-cost TiO<sub>2</sub> pigment producers. The consumption of titanium feedstock will also decline in 2020, especially in the titanium metal sector, which has been impacted by an acute decline in demand for aircraft from the aviation industry.

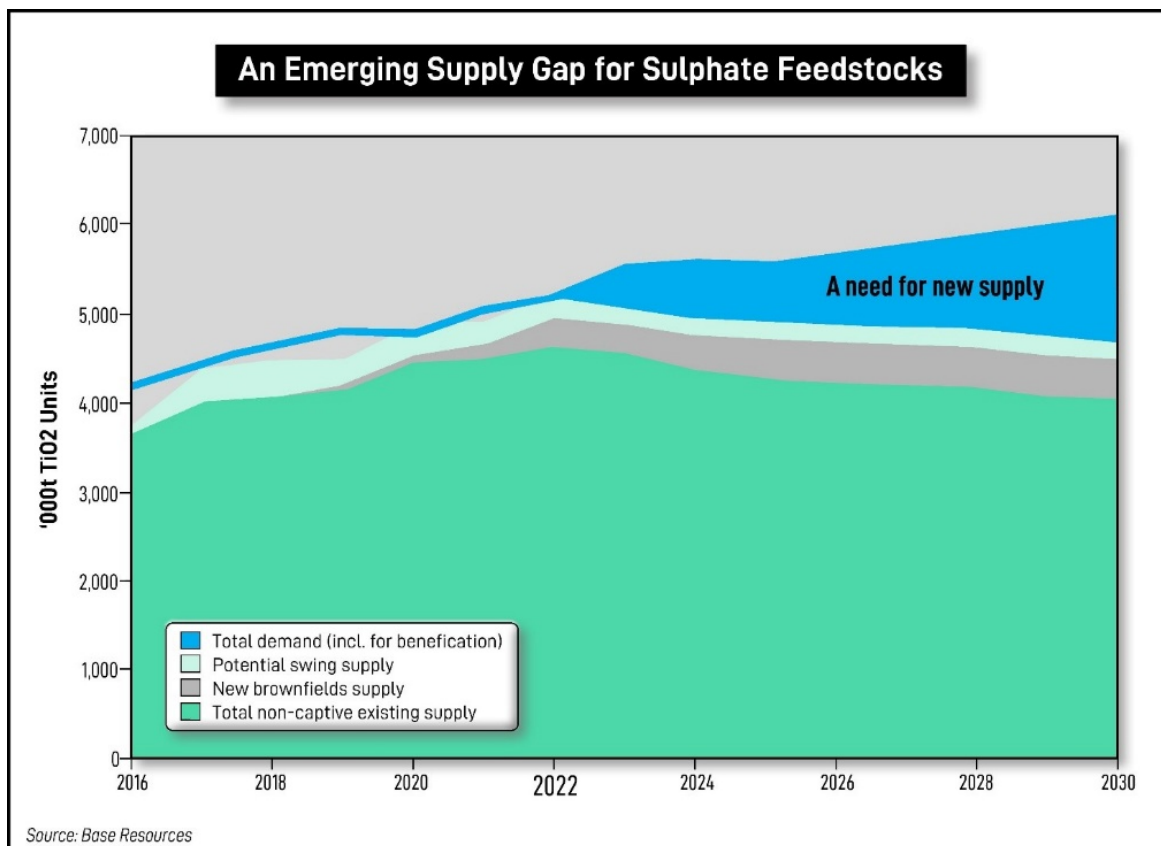


Figure 5– Forecast production of TiO<sub>2</sub> showing a need for new sulphate feedstock supply from ~2022

### Vanadium

Upward momentum in vanadium markets faded at the end of Q1 as the COVID-19 pandemic reduced steel consumption globally, dampening demand for vanadium from steelmakers. Vanadium prices posted impressive gains in February with concerns about the availability of supply from China, which exports 8,000 - 10,000 tonnes per year of vanadium in the form of vanadium pentoxide and ferrovanadium. However, as China began to emerge from the worst of the pandemic these supply concerns eased. The rapid spread of the coronavirus in Europe and the US has dampened demand for vanadium in these regions as steelmakers slash output and shutter furnaces.

Looking forward, vanadium prices may find support from both supply and demand factors. The government-imposed shutdown of the South African mining industry resulted in Glencore and Bushveld Minerals placing their operations on care and maintenance. Glencore produces 9ktpa vanadium at its Rhovan operations and Bushveld produces 3ktpa vanadium at its Vametco and Vanchem operations. The reduction in South African supply coupled with improving demand from China’s steel mills is likely to result in short-term price increases. In China, government sponsored stimulus efforts including increased construction spending will benefit the Chinese rebar industry and, in turn, boost vanadium demand.

## **Lithium Refinery Project**

### **(Neometals 100%)**

The key driver of the lithium refinery project (“**LR**”) is to realise value by the conversion of future spodumene concentrates purchased under the Company’s Mt Marion spodumene concentrate offtake option (“**Offtake Option**”). The annual Offtake Option from Mt Marion provides a fixed volume of up to 57,000tpa of 6% spodumene concentrate for conversion into battery grade lithium hydroxide (**LiOH**) for supply to LIB cathode and cell makers. The LR has been designed with a flexible capacity of no less than 10,000tpa lithium hydroxide.

The LR represents a strategic option for Neometals that will allow it to be prepared when the lithium market returns to a position of strength. Development timelines have been designed to align with projected supply deficits forecast from ~2025.

### **MOU with Manikaran Power**

Pursuant to the MOU between the parties, Neometals and Manikaran Power Limited (“**Manikaran**”) have agreed to contribute their respective skills, resources and know-how to co-fund evaluation studies of the development of a LR in India and to share the costs of the evaluation equally. Upon completion of evaluation studies, and subject to agreement on terms, a final investment decision (“**FID**”) will be considered for a 50:50 joint venture (“**JV**”) to progress and develop the LR in India.

A positive FID and formal JV commitment would see Neometals contributing to the venture its ‘life-of-mine’ Offtake Option volume. Additional spodumene feed would be secured, as required, from external sources to meet the LR’s needs depending on nameplate capacity. It is proposed Manikaran will take the lead role in procuring project financing for not less than 50% of the capital expenditure required, securing regulatory approvals and Indian government subsidies (as available), securing a suitable site for the LR and necessary utility and reagent supplies.

March quarter activities associated with the Manikaran MOU included:

- Evaluation of potential project sites that has identified a location in the State of Gujarat as the recommended location for the feasibility study;
- Commercial terms and detailed geotechnical data for the preferred locations has been provided and is being evaluated;
- Contractor proposals received, evaluated and a recommendation made, for delivery of a Class 3 feasibility study; and
- Proposals for design and estimates for major equipment packages and test work for integration into the above study were discussed and appointments proposed.

Appointments of contractors are planned in the current quarter with work to commence promptly. It is estimated that the feasibility study will take approximately 12 months, with a decision on whether to form the JV and commence the detailed design to be considered thereafter.

### **Synthetic Zeolite from Lithium Refinery Residue**

Zeolites are advanced industrial materials (naturally occurring and synthetically produced) used for water treatment, gas adsorption and green chemistry applications. Synthetic zeolites, including the types now produced by Neometals at bench-scale, are typically used in demanding industrial applications such as molecular sieves for air and hydrocarbon purification.

In addition to potentially minimising the waste footprint from the Company’s proposed LR, zeolite manufacture creates an opportunity for co-product revenue to improve the LR competitive cost position. Lithium refinery residue (LR waste) is topical at present and the potential to convert the largest waste stream into a valuable by-product makes not only economic sense, but more importantly, mitigates significant environmental challenges in disposal.

Neometals' zeolite research and development and feasibility assessments are running in parallel with continued evaluation of the optimal design scale for its LR. Neometals has engaged Queensland University of Technology ("QUT") to manage research and development activities associated with pilot trials and joint funding for the \$2.57 million program was awarded by the IMCRC.

Global engineering company Exyte completed a Class 4 Engineering Cost Study ("ECS") (pre-feasibility level) based on the bench scale test-work that was also managed by QUT. The study review process identified a need to perform further test-work (aimed at reducing the complexity of the proposed process) before piloting. That test work is in progress at QUT and is expected to be completed later in 2020, after which the ECS will be re-evaluated. A class 3 engineering cost and feasibility study would follow successful completion of the pilot plant demonstration of the process.

Commercial product evaluation will be undertaken in parallel with the QUT pilot trials, with product sent to zeolite manufacturers and end-users for independent product endorsement. The Neometals technology has successfully processed residues from multiple feedstock sources to support the potential to commercialise with third party lithium refiners.

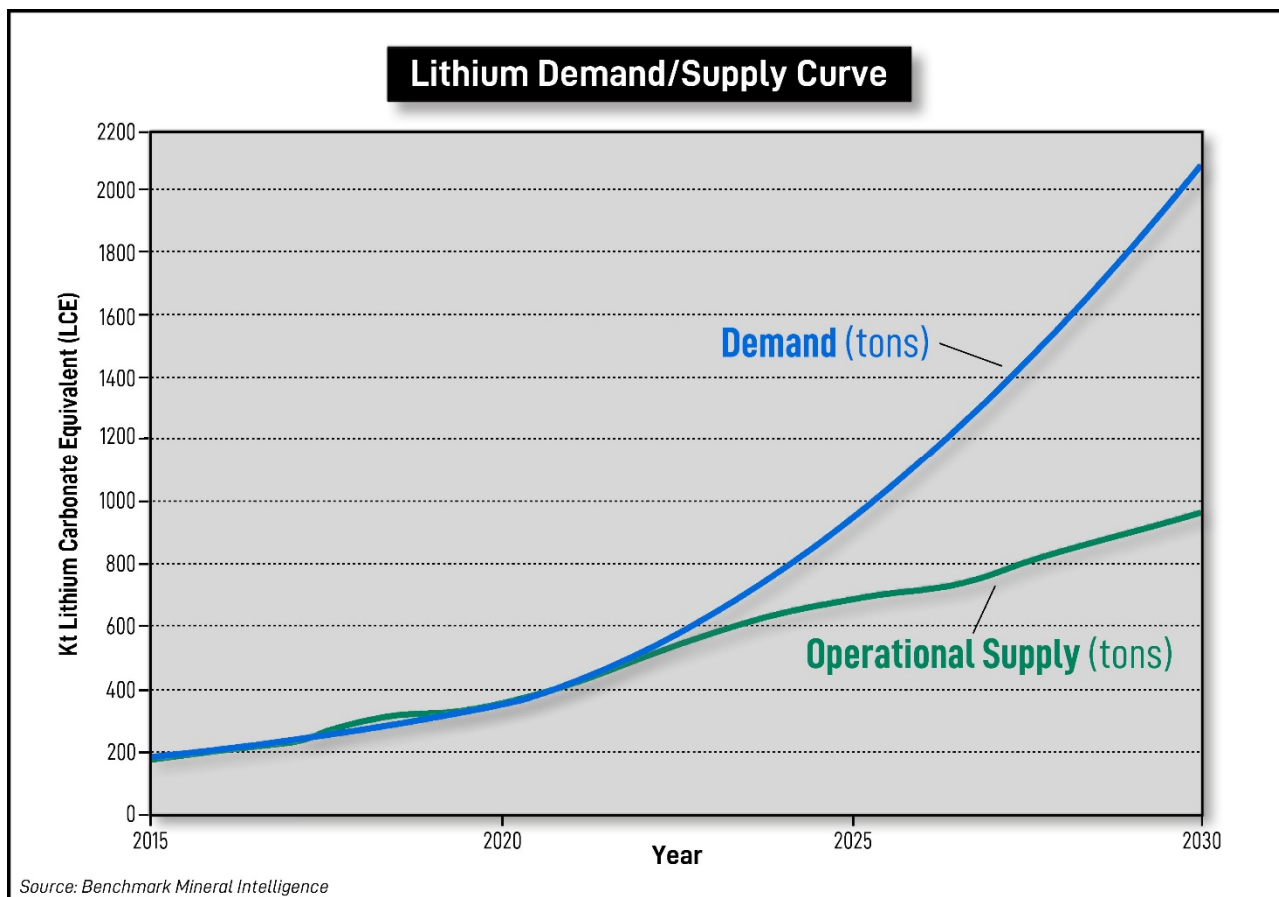
### Lithium Market Commentary

Lithium supply and demand was directly and adversely affected by the coronavirus pandemic in the first quarter of 2020 as the virus spread rapidly across international borders and governments imposed stringent quarantine measures to restrict the spread of the virus. These quarantine measures, which typically involved restrictions to the movement of personnel, halted or severely reduced the production and flow of finished products and raw materials alike. OEMs shuttered operations as EV sales declined, cathode and cell manufacturers reduced output in response to the deteriorating short-term demand outlook from OEMs, and raw materials producers closed mining and processing operations to reduce the build-up of inventories in the supply chain. Whilst the easing of government-imposed restrictions will favourably impact levels of lithium demand and supply during Q2, the overall trend remains bearish as demand is expected to be hit harder than supply during this period.

Whilst sales of electric vehicles (EV) are being impacted by the coronavirus pandemic in the short term, the long-term trajectory remains bullish. This is especially the case in Europe which has a large urban population, a supportive regulatory framework, a highly developed auto market and high average household incomes. In Europe, the high retail cost of petrol and diesel fuels, a wide variety of tax breaks and purchase subsidies, and strong regulations improve the economics of owning EVs in this region. Governments across Western Europe have been proactive in planning and installing public charging infrastructure, creating the world's second-largest charging network behind China. In 2018-19, EU governing bodies agreed upon a suite of policy measures to support decarbonization of the EU transportation sector. Strict emission standards were established for light duty vehicles, mandating reductions to 95g, 81g and 60g of CO<sub>2</sub> emissions per kilometre in 2021, 2025 and 2030 respectively from a base of 120.5 g CO<sub>2</sub>/km in 2018. This reinforcing regulatory environment has proved very effective at encouraging consumers (demand) and manufacturers (supply) to invest in EVs.

With the above borne in mind, we find the global lithium market being currently oversupplied with it forecast to remain oversupplied until ~2023 due to the cumulative capacity of new conversion plants, particularly those under construction in Australia.

However, a supply deficit from 2025 is probable due to a lack of new medium-term conversion capacity in the planning and design phases. From that time, market conditions are anticipated to once again support and stimulate the commissioning of new production capacity (with all the positive knock-on effects to battery supply chain feedstock demand).



**Figure 6** – The lithium demand/supply curve indicates a substantial deficit will emerge by 2025, around the time Neometals plans to enter lithium chemical production, subject to board and other approvals.

## EXPLORATION PROJECTS

### Mt Edwards Lithium and Nickel Project (Neometals 100% through Mt Edwards Lithium Pty Ltd)

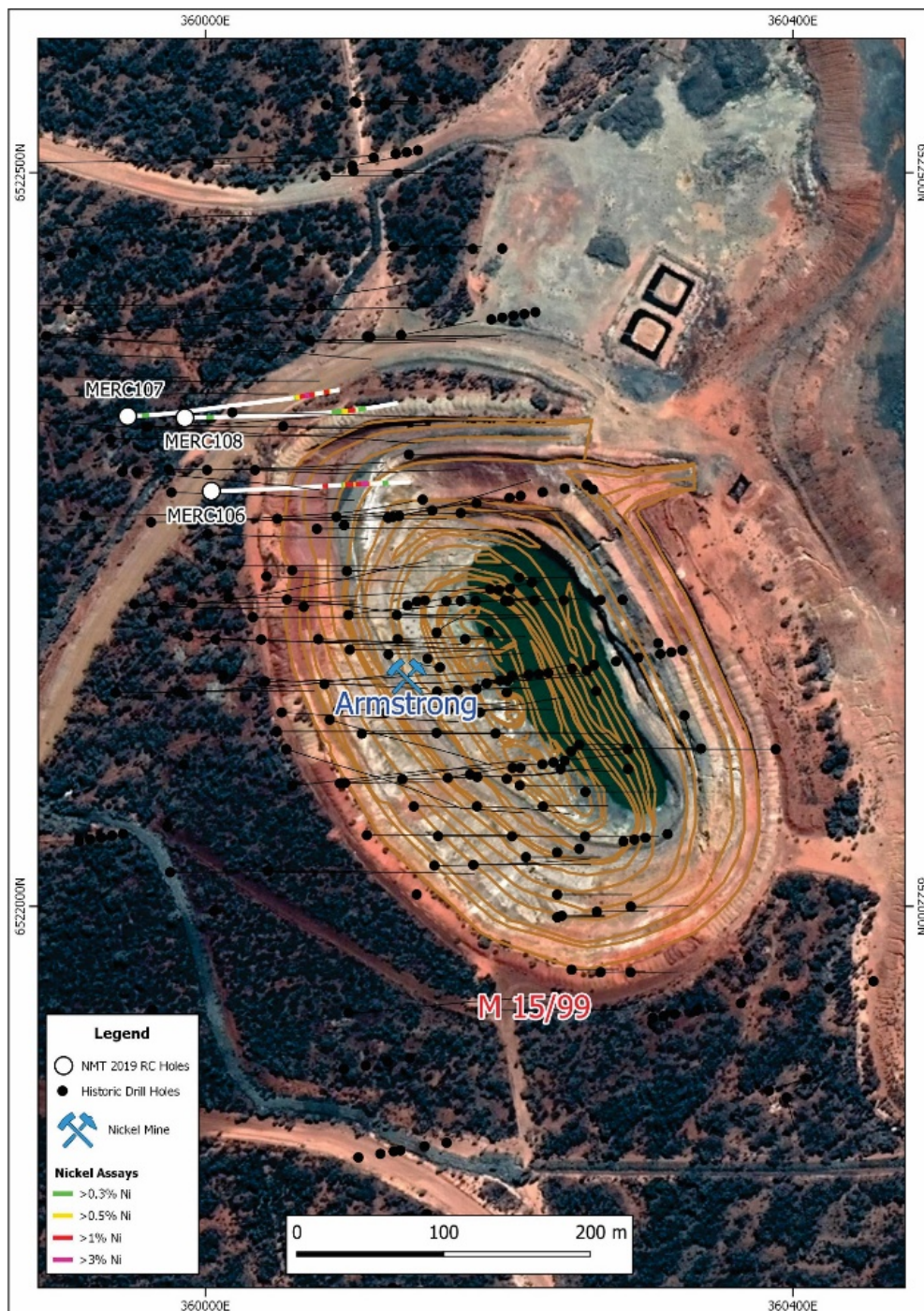
Neometals continued to build shareholder value during the quarter at Mt Edwards. Since acquisition in 2018, drill programs have defined high grade massive nickel mineralisation and several Mineral Resources have been reviewed with estimates updated. Successful exploration outcomes at Mt Edwards are driving development of a pipeline of short lead time nickel sulphide deposits for further evaluation via mining studies. Exploration results to date have provided strong encouragement regarding alternatives to realise value at Mt Edwards.

The Mt Edwards project is located 90km south of Kalgoorlie and 35km south west of Kambalda in Western Australia. The tenements cover an area of 240km<sup>2</sup> across the Widgiemooltha Dome nickel sulphide belt and host more than 135,000 tonnes of contained nickel estimated across eleven Neometals held nickel sulphide Mineral Resources (for full details refer to ASX announcement entitled “Mt Edwards Nickel – 60% Increase in Armstrong Mineral Resource” released on 16 April 2020).

During the quarter, Neometals has been actively engaged in exploration programs across the Mt Edwards project. Campaigns have included re-sampling and interpretation of RC drilling and interpretation of down-hole electromagnetic (“DHEM”) surveys conducted at the Armstrong deposit. Further work includes an analysis of assay results from air core drilling at the Lake Eaton, Percy and other prospects at the south side of the Widgiemooltha Dome, and a passive seismic surveying was also trialed over the Lake Eaton, Percy and E15/1553 areas.

### RC drilling and sampling results

In January, Neometals announced encouraging assay results from RC drilling with 11 holes for a total of 2,083 metres completed. The drilling, sampling and DHEM surveys were conducted at the Armstrong deposit on Mining Lease M15/99, and on the recently acquired Exploration License E15/1553 located less than 2 kilometers directly north and along strike from Mincor’s Resources NL (“Mincor”) Cassini Deposit.



**Figure 7** - Location of the NMT RC drill hole collars and drill traces in white at Armstrong on M15/99 drilled in December 2019. Drill-holes were collared north-west of the abandoned open pit and drilled to the east. Mineralised sections of the drill traces are coloured.

### Armstrong RC drilling assay result and Geological Interpretations

The drilling at Armstrong comprised 3 RC holes for a total of 826 metres and was completed in December 2019. The program included a sampling and assay program with rigid QAQC controls that enabled results to be used in the recent Armstrong Mineral Resource estimation (*for full details refer to ASX announcement entitled “Mt Edwards Nickel – 60% Increase in Armstrong Mineral Resource” released on 16 April 2020*).

The drilling was planned to infill and test extents of the mineralisation with a focus on understanding the interpreted down plunge nickel rich zone, and remobilised high-grade shoots at depth below the main ultramafic-basalt contact. Results at Armstrong support the interpretation of thick disseminated nickel sulphide intercepts (up to 34 metres down-hole width) with high-grade zones of matrix to massive nickel sulphide up to 5 metres thick (5 metres at 9.63% nickel).

### Significant RC Assay Results and Geological Interpretation at E15/1553

Eight RC holes were drilled on the recently acquired Exploration Licence E15/1553 in November 2019. Two of the eight holes drilled (MERC100 and MERC101) showed nickel mineralisation, while a further two holes have successfully penetrated and located ultramafic – basalt contacts.

Drill holes MERC100 and MERC101 were drilled near the southern boundary of the Exploration Licence E15/1553, only a short distance from Mincor’s Cassini North prospect. The drill holes intersected disseminated sulphide in ultramafic rock at 100 and 99 metres downhole depth respectively. Assay results have returned 3 metres at 0.69% nickel, including 1 metre at 1.13% nickel from 100 metres for MERC100, and 2m at 0.37% Ni at 99 metres for MERC101.

These results were particularly pleasing as the successful discovery of nickel sulphide mineralisation along strike from Cassini, just inside the boundary of a newly acquired tenement, provides encouragement that the extensive Neometals tenement package around the Widgiemooltha Dome is one of the most prospective areas for nickel sulphide discoveries in Western Australia.

### Air Core drilling and assay results on the Cassini-Wannaway trend

In March Neometals announced assay results from AC drilling and sampling programs that were carried out during November and December 2019 across five mining tenements located south of the Widgiemooltha Dome. The drill program comprised 93 drill holes for 3,262 metres (refer to Table 2 below) and was designed to test numerous nickel targets to confirm bedrock geology and identify the basal contact of the komatiite flows with the underlying basalt.

**Table 2 - The number of holes and meterage for each prospect and mining tenement**

Prospect	Mining Tenement(s)	AC holes	Meterage
E15/1553	E15/1553	13	705
Double Eagle, Baldrick	M15/45, M15/46, M15/77	61	1,728
Percy	M15/79	19	829

The first of two specific areas drilled was at exploration licence ‘E15/1553’, located directly along strike from the Mincor Resources NL’s (“Mincor”) Cassini North prospect, where 13 AC holes targeted stratigraphic locations and some historical geophysics conductors. Results included **1 metre @ 1.09% nickel** from 49 metres downhole in ultramafic rock near the southern boundary of the tenement.

The second area covered four mining leases on which the Double Eagle, Baldrick and Percy prospects are located. Highly anomalous nickel grades (>0.3% Ni) at the Percy and Double Eagle prospects have been identified in numerous komatiite flows. Both Percy and Double Eagle prospects occur ~10 kilometres south and along strike from Mincor’s historic Wannaway Nickel Mine, which has similar interpreted geology.

The results support the likelihood of significant nickel sulphide mineralisation in the area. The grade encountered along strike from Mincor’s Cassini North endorses the results from the RC program announced in January 2020. The proximity of third-party nickel sulphide drilling success is also encouraging with ‘E15/1553’ being situated approximately 250 meters directly along strike from Mincor’s Cassini North prospect, and near Mincor’s Cassini Mineral Resource (1.254Mt @ 4.0% nickel) (*for full details refer to ASX announcement entitled “Mt Edwards Nickel – Drill Results From Cassini-Wannaway Trend released on 26 March 2020*).

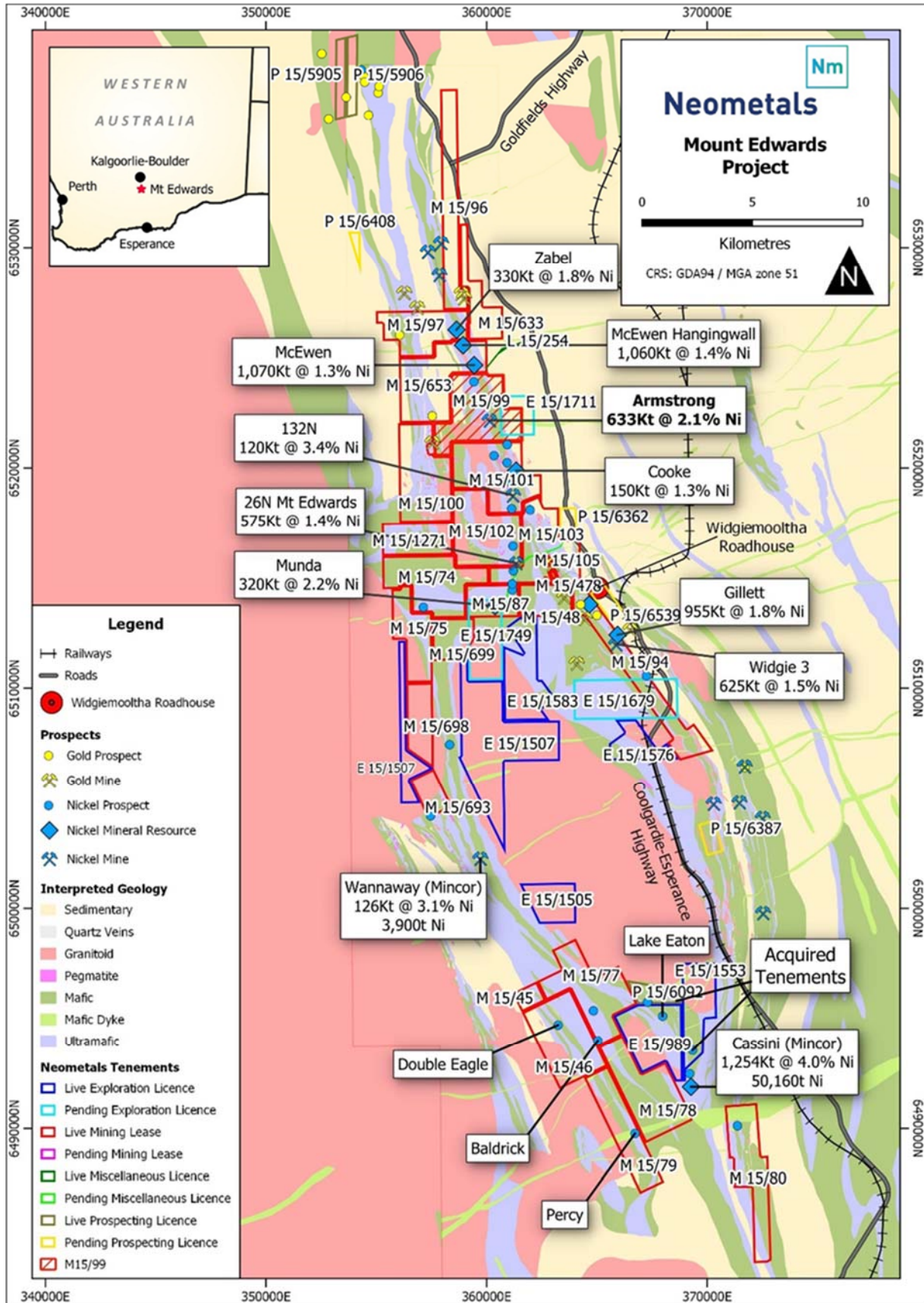


Figure 8 – Mt Edwards Project tenure over geology, with the Armstrong Mining Lease M15/99 located within the Mt Edwards Project, and other Mineral Resources. Neometals hold 100% nickel rights for all live tenements shown above

## CORPORATE

### Commercial / Corporate

Neometals provided shareholders with a summary of its response to Covid19 and the Company is grateful that its staff are social distancing via work from home arrangements with minimal disruption to activities.

Immediately following the quarter end, Neometals announced a significant collaboration to evaluate a potential joint venture to recycle steel production by-product stockpiled by SSAB in Scandinavia. The long-term goal being to commercially recover the high-grade vanadium contained therein (*for full details refer to ASX announcement entitled “High-Grade Vanadium Recycling Agreement” released on 6 April 2020*). Successful evaluation will lead to a 50:50 incorporated joint venture between Neometals and Critical Metals Ltd, which has a 10-year supply agreement with Scandinavian steel producer SSAB.

Importantly, the Scandinavian vanadium collaboration supports the Neometals recycling narrative in Europe where regulators are committing extraordinary resources and finances towards sustainability and boosting efficient use of mineral resources. Moreover, Covid-19 impacts are likely to throw doubt on globalised supply chains with future continental localisation and greater utilisation of materials from non-mineral extraction sources. Neometals continues to pivot towards more sustainable recycling and resource recovery to compliment its upstream mineral resources.

Neometals now has 4 core projects, with three of those co-funded through the final project evaluation stages with strong industry partners.

### Financial

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

As at 31 March 2020 Neometals holds 706,209,483 ordinary fully paid shares (36% of the issued capital) in Hannans on an undiluted basis. At 31 March 2020, Hannans’ shares closed at 0.4c implying a value of \$2.8M.

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

Neometals holds 15.7% of unlisted public company Critical Metals Ltd, a company which now houses the Scandinavian mineral assets previously held by Hannans.

#### **Other Investments**

The market value of the Company’s other investments as at 31 March 2020 totalled \$1.3M.

#### **Finances (unaudited)**

Cash and term deposits on hand as of 31 March 2020 totalled A\$94.9 million, including \$4.2 million in restricted use term deposits supporting performance bonds and other contractual obligations. The Company has net receivables and listed securities totalling approximately \$6.0 million.

#### **Capital Management**

On 20 March 2020, the Company declared a Special Dividend of 2 cents per share partially franked to 7% which was paid on Friday, 3 April 2020. Neometals has delivered cash returns of approximately A\$56 million to shareholders progressively over the previous five financial years.

#### **Issued Capital**

During the quarter 78,696 shares were issued following vesting and exercise of performance rights under a salary sacrifice equity scheme for the Company’s non-executive directors.

The total number of shares on issue at 31 March 2020 was 544,516,913.



**ENDS**

Authorised on behalf of Neometals by Christopher Reed, Managing Director

For further information, please contact:

**Chris Reed**

Managing Director  
Neometals Ltd  
T: +61 8 9322 1182  
E: info@neometals.com.au

**Jeremy Mcmanus**

General Manager - Commercial and IR  
Neometals Ltd  
T: +61 8 9322 1182  
E: jmcmanus@neometals.com.au

**Compliance Statement**

*The information in this report that relates to Mineral Resource and Ore Reserve Estimates and updated DFS Results for the Barrambie Vanadium/Titanium Project and Mineral Resource Estimates and Nickel drill results for the Mt Edwards Project are extracted from the ASX Announcements listed in the table below, which are also available on the Company's website at [www.neometals.com.au](http://www.neometals.com.au)*

16/04/2020	Mt Edwards Nickel – 60% Increase in Armstrong Mineral Resource
26/03/2020	MT Edwards Nickel – Drill Results From Cassini-Wannaway Trend
11/12/2019	Mt Edwards Nickel – Drill Results from Widgie South Trend
17/04/2018	Updated Barrambie Mineral Resource Estimate

*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.*

## APPENDIX 1: TENEMENT INTERESTS

As at 31 March 2020 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	L20/81	100%	Pending
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	L15/397	50%	Pending

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%	Live
Mt Edwards	E77/2397	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
Mt Edwards	P15/6387	100%	Pending
Mt Edwards	E15/1665	100%	Pending
Mt Edwards	E15/1711	100%	Pending
Mt Edwards	P15/6408	100%	Pending
Mt Edwards	P15/6539	100%	Pending
Mt Edwards	P15/6092	100%	Live
Mt Edwards	E15/1553	100%	Live
Mt Edwards	E15/1749	100%	Pending

^Nickel Mineral rights only

\*\*Lithium and Nickel Mineral 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

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

Project Name	Licence Name	Relinquished, Reduced or Lapsed

There was not any change in interests in mining tenements during the quarter.