



30 April 2021



Neometals
All the right elements

QUARTERLY ACTIVITIES REPORT

For the quarter ended 31 March 2021

HIGHLIGHTS

CORPORATE

- Cash A\$67.5 million, receivables and investments of A\$14.1 million and no debt.

CORE DEVELOPMENT ACTIVITIES

Lithium-ion Battery (“LIB”) Recycling Project (via 50:50 JV Primobius GmbH, with SMS Group GmbH)

- Demonstration Plant (“DP”) construction activities on track for commissioning phase in May and trials in July 2021;
- LIB feedstocks secured from electric vehicle and energy storage system manufacturers for DP. Multiple testing and evaluation agreements signed for key DP product output;
- Primobius GmbH entered into a Memorandum of Understanding (“MOU”) with Itochu Corporation of Japan to evaluate the recycling of end-of-life batteries from its stationary energy storage business; and
- Class 3 Engineering Cost and Site Selection Studies underway as part of the Feasibility Study for Primobius’ first commercial operation with a design throughput of 20,000tpa.

Vanadium Recovery Project (“VRP”) (earning into 50:50 JV with Critical Metals Ltd)

- Engineering Cost Study completed and Pre-feasibility Study on schedule for completion in JunQ 2021;
- Independent life cycle assessment highlights potential for zero carbon vanadium production;
- Pilot plant construction in Perth on schedule for JunQ 2021 commissioning and pilot trials in July; and
- Permitting activities for Finnish processing site well advanced with Environmental Impact Assessment Program submitted post the quarter.

Lithium Refinery Project (“LR”) (co-funding evaluation on 50:50 basis with Manikaran Power Ltd)

- Jointly funded Class 3 Feasibility Study for proposed Indian lithium refinery JV, utilising Neometals’ Mt Marion concentrate rights, on schedule for completion in JunQ 2021.

Barrambie Titanium and Vanadium Project (“Barrambie”) (100% NMT)

- Large-scale pilot trial on Barrambie mineral concentrates completed by Chinese MOU partner, IMUMR*;
- Subsequent to quarter end, Jiuxing Titanium Materials (Liaoning) Co. Ltd, signed an offtake MOU for titanium and iron-vanadium products; and
- Leading mining service providers have been requested to provide proposals for the development of a mine and concentrator on a capital-light “Build-Own-Operate” basis.

*The Institute of Multipurpose Utilisation of Mineral Resources

EXPLORATION ACTIVITIES

- Maiden flotation test work as part of Mt Edwards (100% NMT) Mining Study identified the presence of material palladium in both nickel ore and concentrates from the Armstrong deposit. Highlights the potential for significant co-product revenue;
- Mining Studies placed on hold pending review of palladium in the other 10 deposits, initial review of the drilling database indicates less than 10% of +420,000 samples were assayed for palladium: and
- Neometals is finalising its evaluation of strategic options to realise the inherent value of Mt Edwards and deliver returns Neometals’ shareholders.

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COMPANY OVERVIEW

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

Neometals has four core projects with large partners that support the global transition to clean energy and span the battery value chain:

Recycling and Resource Recovery:

- Lithium-ion Battery Recycling – a proprietary process for recovering nickel, cobalt and other valuable materials from spent and scrap lithium batteries. Completing construction of demonstration scale plant with 50:50 JV partner SMS group. Targeting a development decision in MarQ 2022; and
- Vanadium Recovery – sole funding evaluation studies to form a 50:50 joint venture with Critical Metals Ltd to recover high-purity vanadium pentoxide from processing by-products (“Slag”) from leading Scandinavian steelmaker SSAB. Underpinned by a 10-year Slag supply agreement, Neometals is targeting an investment decision to develop a 200,000tpa processing plant in DecQ 2022.

Downstream Advanced Materials:

- Lithium Refinery Project – evaluating the development of India’s first lithium refinery to supply the battery cathode industry with potential 50:50 JV partner Manikaran Power, underpinned by a binding life-of-mine annual offtake option for 57,000 tonnes per annum of Mt Marion 6% spodumene concentrate, working towards a final investment decision in 2023.

Upstream Industrial Minerals:

- Barrambie Titanium and Vanadium Project - one of the world's highest-grade hard-rock titanium-vanadium deposits, working towards a development decision in 2022 with potential operating JV partner IMUMR and potential cornerstone product off-taker, Jiuxing Titanium Materials (Liaoning) Co. Ltd.



Figure 1 – Location map of Neometals Projects

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CORE PROJECTS



Lithium Battery Recycling Project

(Neometals 100%, SMS earning into 50% through Primobius GmbH incorporated JV)

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 (“**LIB Recycling Technology**”) 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 LIB Recycling Technology is designed to recover cobalt, nickel, lithium, copper, iron, aluminium, carbon and manganese into saleable products that can be reused in the battery supply chain.

A pilot trial (“**Pilot**”) at SGS Lakefield, Canada in 2019/20 successfully produced cathode-grade nickel and cobalt sulphate products which collectively represent approximately 80% of the value of the basket of products recovered. The Pilot results confirmed the recovery assumptions from a scoping study, based on earlier bench scale test-work, highlighted robust project economics.

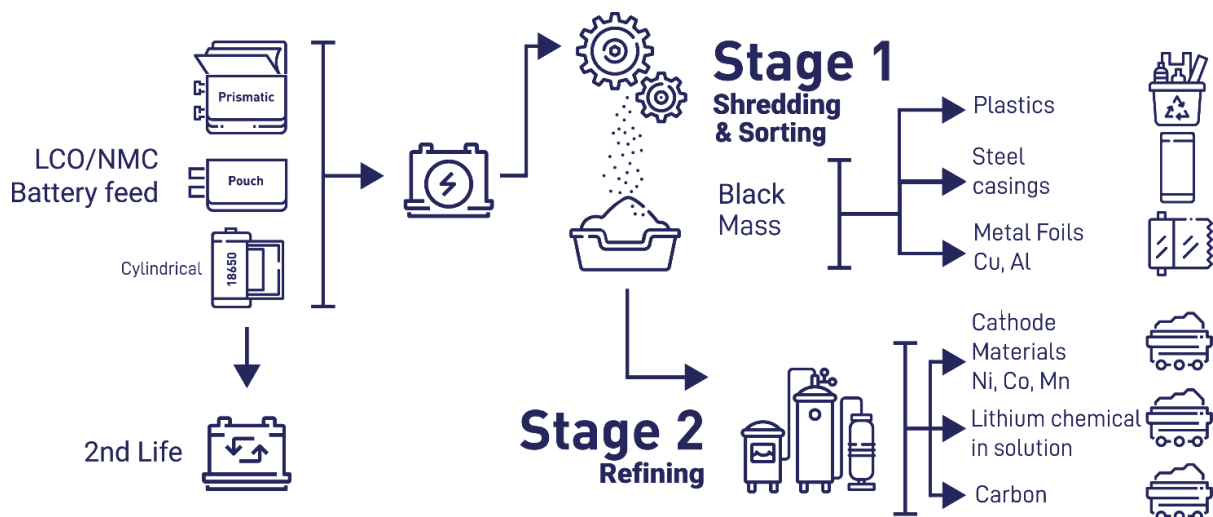


Figure 2 - High level flowsheet showing the materials generated from ‘Shredding and Sorting’ and ‘Refining’ stages of the LIB Recycling Technology

The LIB Recycling Technology, comprises two stages:

1. Shredding and beneficiation to physically separate components and remove metal casings, electrode foils and plastics (“**Shredding and Sorting**”); and
2. Leaching, purification and precipitation to deliver predominantly refined chemical products via the hydrometallurgical processing facility (“**Refining**”).

JV with SMS

Neometals has entered into an incorporated 50:50 joint venture (“**JV**”) with SMS group GmbH (“**SMS group**”), called Primobius GmbH (“**Primobius**”). Primobius has been incorporated to co-fund and complete final stage evaluation activities to consider commercialisation of the LIB Recycling Technology.

A positive financial investment decision to construct a commercial plant, will involve Neometals contributing its share of funding, technical and commercial know how to the JV and SMS responsible for the engineering design and cost studies in addition to its share of funding. SMS has the right of first offer to provide engineering, construction, operation and maintenance of each recycling plant Primobius undertakes. SMS will also, on a best endeavour’s basis, procure debt financing for no less than 50% of the capital expenditure (for full details refer to Neometals ASX announcement entitled “*Neometals and SMS create Lithium Battery Recycling JV*” released on 3rd August 2020).

Project Development Progress

During the quarter, Primobius made strong progress towards developing Europe’s largest sustainable LIB recycling plant.

Demonstration Plant (“DP”)

With design and procurement activities finalised and construction permits secured, Primobius commenced construction activities in its dedicated building. Assembly of the Stage 1 - Shredding and Beneficiation section is underway.

The DP trial schedule contemplates the commissioning and operation of the shredding and beneficiation circuit, followed by the commissioning of the Stage 2 - Refining circuit commencing in JunQ 2021. DP LIB feedstocks have been secured from electric vehicle and energy storage system manufacturers for the trials. The DP will serve as a showcase where product outputs will be evaluated by potential customers, partners and off-takers. Specifically, multiple testing and evaluation agreements are in place for all the product outputs generated by the DP. The DP will provide an opportunity for carmakers, consumer electronics and battery manufacturers to verify Primobius’ capability to safely, sustainably and ethically dispose of hazardous LIBs. In addition to ‘battery disposal’, the LIB Recycling Technology also re-generates materials for the production of new sustainable batteries and will satisfy all regulatory custody, carbon footprint, certification and stewardship obligations.



Figure 3 – DP construction activities in Hilchenbach



Figure 4 – DP Stage 1 Shredding and Sorting



Figure 5 – SMS group engineering competence centre in Hilchenbach



Figure 6 – Render of DP in Hilchenbach showing battery shredding (left, foreground) and hydrometallurgical refining circuits (right, background)

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Evaluation and Site Studies

During the quarter Neometals continued the update of its Association for the Advancement of Cost Engineering (“AACE”) Class 4 Engineering Cost Study (“Cost Study”) to reflect a German site location which is expected to be completed in JunQ 2021. Preparatory activities for the Feasibility Study (“FS”) commenced during the quarter. This included development of design parameters for a European location with flowsheet tailored to NMC and LCO battery chemistry. Comprehensive FS activities will commence in Q2 2021 with an AACE Class 3 Cost Study scheduled to provide operating and capital cost estimates, based on data generated during DP operations, in October 2021.

Primobius has been progressing its site selection study for future commercial operations with several locations shortlisted in and around Germany. With each commercial and marketing interaction, Primobius is narrowing the alternatives based on proximity to reagent and feedstock supply and to distance to end customers. The FS will be based on the recommended site. See below for an indicative project development timeline:

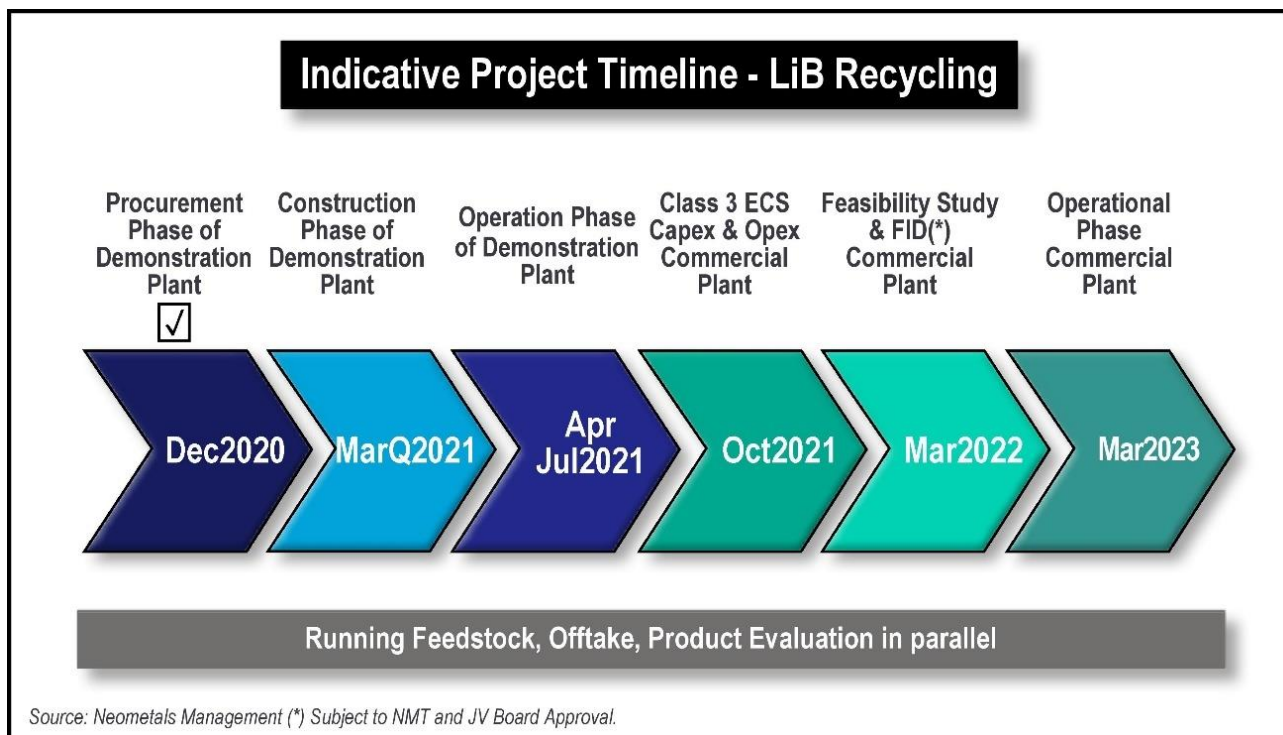


Figure 7 - Indicative LIB recycling timeline

Commercial Activities

In parallel with DP activities, there are a number of live Primobius feedstock and offtake dialogues with industry participants. Battery feed volumes for the DP have been secured from partners and additional volumes, above the Primobius trial requirements, will be allocated to test-work programs with other potential partners who seek a recycling disposal service only (as distinct from those who want to recycle and purchase back the chemical products for the manufacture of new batteries).

With feed for the DP secured, spent and end of life battery sourcing for future commercial plants is a high priority. Further to the previously announced memorandum of understanding with Slovakian LIB cell manufacturing company, InoBat Auto j.s.a. (“InoBat”) (“InoBat MoU”), during the quarter Primobius entered-into another MoU with Itochu Corporation of Japan (“Itochu MoU”). The Itochu MoU provides a framework towards establishing a joint business for battery recycling, under which Primobius would contribute its LIB material processing capabilities. Itochu is a Japanese multi-national trading company with a strong footprint along the entire battery value chain including supply of materials and equipment to battery manufacturers and stationary energy storage systems.

Under the Itochu MoU, Primobius and Itochu will enter-into good faith discussions with a view to executing formal long-term cooperation agreements. The formative steps of Itochu’s evaluation of the proprietary Primobius technology will include:

- Itochu will supply stationary energy storage batteries to Primobius’ DP; and
- Primobius will operate a DP trial campaign dedicated to the Itochu feed, to generate recycled products for analysis by Itochu and cathode makers in Itochu’s supply chain.

Primobius and Itochu have commenced business planning discussions and it is intended that future binding legal agreements will encapsulate sales of recycled product to establish a circular economy for Itochu (for full details refer to Neometals ASX announcement entitled “Lithium Battery Recycling - MOU with Itochu Corporation” released on 5th March 2021).

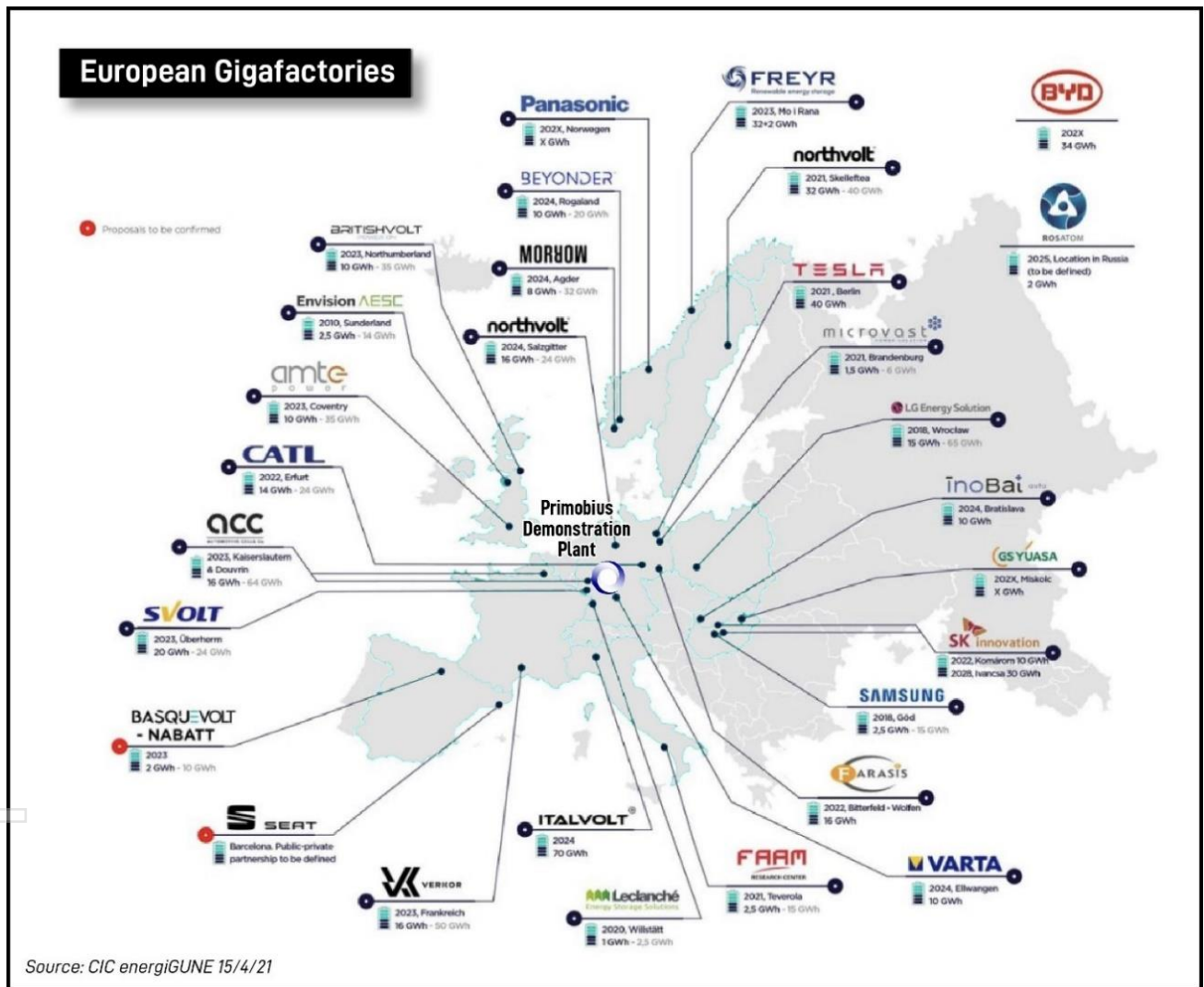


Figure 8 – Image showing the density of e-mobility investments by European cell manufacturers with Primobius’ DP located centrally. Regional market tailwinds continue to build, strengthening the Primobius European business case.

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Vanadium Recovery Project (“VRP”)
(Earning into 50:50 Joint Venture)

Neometals and unlisted Scandinavian-focused explorer, Critical Metals Ltd (“Critical”), are jointly evaluating the feasibility of recovering high-purity vanadium pentoxide (V_2O_5) from high-grade vanadium-bearing steel by-product (“Slag”) in Scandinavia. Under the formal collaboration agreement between the parties, Neometals is to fund and manage the evaluation activities, up to consideration of an investment decision. A positive investment decision will lead to a 50:50 incorporated JV with Critical.

Critical has executed a conditional agreement (“Slag Supply Agreement”) with SSAB EMEA AB and SSAB Europe Oy, subsidiaries of SSAB (“SSAB”), a steel producer that operates steel mills in Scandinavia (for full details refer to Neometals ASX announcement entitled “High-Grade Vanadium Recycling Agreement” released on 6th April 2020). Slag is a by-product of SSAB’s steel making operations. The Slag Supply Agreement is for 2 million tonnes of Slag and provides a secure basis for the evaluation of an operation capable of processing 200,000 tonnes of Slag per annum without the need to build a mine and concentrator like existing primary producers.



Figure 9 - Location of Pori relative to the SSAB steel operations in Finland and Sweden

The VRP offers a compelling business case for Neometals which is underpinned by:

1. Exceptional grade (purchase price reference grade of 3.93% V_2O_5 under the Slag Supply Agreement);
2. Robust economics (scoping study outcomes highlighted a first quartile position on the cost curve (for full details refer to ASX announcement entitled “Vanadium Recovery Project – Scoping Study Results” released on 24th June 2020);
3. Processing flowsheet utilises conventional equipment at atmospheric pressure and mild temperatures;
4. Potentially saleable by-product generation; and
5. Likely very low or net zero greenhouse gas footprint given the absence of mining and a processing route requiring the capture and sequestration of CO_2 .

Project Development Progress

Evaluation Studies

During the quarter, Neometals continued the AACE Class 4 Engineering Cost Study (“**Cost Study**”). Cost Study outcomes and an ISO compliant life cycle assessment (“**LCA**”) results were announced post the end of the quarter 1 (*for full details refer to ASX announcement entitled “Study Confirms Lowest Quartile Operating Cost Potential” released on 21st April 2021*) and form the key component of the pre-feasibility study (“**PFS**”). Pursuant to the Slag Supply Agreement between Critical and SSAB, the PFS is on budget and ahead of schedule) for delivery before the contractual milestone date of 30 June 2021. Preparations for the commencement of a Feasibility Study commenced during the quarter and will commence immediately upon successful completion of the Pilot Plant and be completed before the contractual milestone date of 30 June 2022.

Permitting and Approvals

Strong progress was made during the quarter with permitting activities. These were managed by Critical and its local team of consultants. The initial Environmental Impact Assessment program has been submitted to the Finnish regulators.

Critical is party to a Memorandum of Understanding (“**MOU**”) with the City of Pori, it sets out the framework under which the parties will work together for the granting of tenure and permits required for the successful establishment of the proposed vanadium processing plant (“**Vanadium Recovery Facility**” or “**VRF**”).

Tahkoluoto port in Pori is an excellent location. It is an ice-free harbour with capacity to receive Panamax sized ships. With Pori’s long history as a centre of hydrometallurgical excellence, the VRF will have access to ‘best-in-class’ logistics and infrastructure. Additionally, the Finnish government appears extremely motivated to provide significant support to align with EU targets for ‘Net Zero’ emissions and development of resilient supply chains for critical minerals.



Figure 10 - Aerial schematic showing location for the proposed VRF processing plant at Tahkoluoto port, Pori, Finland Pilot Plant

A 1:1000 scale VRP Pilot (feed rate 25kg/hr) is currently under construction at Strategic Metallurgy in Perth. The VRP Pilot is expected to start commissioning in the JunQ 2021 with results expected in the SepQ 2021. The VRP Pilot seeks to confirm the technical feasibility of Neometals’ proprietary process flowsheet at a scale 25 times larger than previous studies. The process flowsheet utilises a carbon-rich alkaline leach and conventional solvent extraction at atmospheric pressure and mild temperatures. In addition to successful proof-of-scale, the VRP Pilot will generate approximately 300 kilograms of vanadium pentoxide for marketing and product evaluation purposes.

In parallel with the VRP Pilot construction activities, sample collection and preparation of samples from the 3 SSAB locations has enabled valuable volume validation and grade confirmation data. Approximately 43 tonnes of SSAB sample material have been received from Scandinavia, being 13 tonnes from Luleå (Sweden), 14 tonnes from Raahе (Finland) and 15 tonnes from 3 locations in Oxelosund (Sweden).



Figure 11 – Solvent Extraction VRP Pilot circuit nearing completion in Perth

Commercial

As part of an offtake product evaluation program, Neometals has supplied samples of high-purity vanadium pentoxide to a European battery cell manufacturer. Samples were generated from the mini-pilot test work program that was previously completed in Perth (for full details refer to ASX announcement entitled “Successful Vanadium Recovery Mini-Pilot and Commencement of PFS” released on 4th November 2020). Feedback during the quarter confirmed very high product purity and battery cells using Neometals’ vanadium pentoxide cycle tested well.

The tailings product from the VRP process flowsheet, Stabilised Slag Material (“SSM”), sequesters carbon (i.e. in a carbonate form) and is potentially a saleable material for use in construction applications (i.e. concrete/bricks). Early customer evaluation is ongoing to determine the most appropriate end market for SSM in parallel with environmental test work to confirm its inert, non-soluble nature.

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Lithium Refinery Project
(Neometals 100%)

The key purpose of the lithium refinery project (“LR”) is to realise value from 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 which can be converted into battery grade lithium hydroxide (“**LiOH**”) for supply to LIB cathode and cell makers. The LR has been designed with a flexible capacity of nominally 20,000tpa of LiOH.

The LR represents a strategic option for downstream lithium chemical production when the lithium market returns to a position of consistent strength. Development timelines have been designed to align with projected supply deficits forecast from ~2025 onwards.

Pursuant to the MOU between Neometals and Manikaran Power Limited (“**Manikaran**”), the parties have continued their co-funded evaluation studies on the development of a LR in India. Upon completion of evaluation studies, and subject to agreement on terms, a final investment decision (“**FID**”) will be considered for a 50:50 JV to progress and develop the LR in India (for full details refer to ASX announcement entitled “*MOU – Lithium Refinery in India*” released on 20th June 2019).

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:

- Advancement of the AACE Class 3 ECS and its associated financial model components of the Feasibility Study which are expected to be completed in the JunQ 2021:
 - Reviews of the capital cost estimate and financial modelling completed;
 - Process design criteria completed;
 - Mass energy balance and basis for key financial model inputs completed; and
- Ongoing commercial discussions for the recommended project site within the Mundra port in the State of Gujarat;
- Commercial discussions ongoing with potential providers of additional spodumene feed for the LR.
- Planning for a planned Front-End Engineering and Design Study.



Figure 12 – Proposed Project Location adjacent to Mundra Port, the largest port in India



**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% TiO₂ and 0.44% V₂O₅)*, containing the world’s second highest-grade hard rock titanium resource (53.6Mt at 21.17% TiO₂ and 0.63% V₂O₅)* and high-grade vanadium resource (64.9Mt at 0.82% V₂O₅ and 16.9% TiO₂) 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

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

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

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

⁽¹⁾ Based on Cut-off grades of ≥0% TiO₂ or ≥2% V₂O₅
⁽²⁾ 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

Barrambie is located approximately 80km north-west of Sandstone in Western Australia (see Figure 1), and the mineral resource is secured under a granted mining lease covering its mineral resource. Neometals has a granted mining proposal to extract approximately 1.2Mtpa of ore and has Ministerial Approval to construct a 3.2Mtpa processing plant.

In October 2019, Neometals entered a memorandum of understanding with Chinese research organisation, IMUMR, to jointly evaluate the development of Barrambie (“**IMUMR MOU**”). The IMUMR MOU outlines a potential pathway towards a 50:50 operating joint venture to bring Barrambie’s into production (for full details refer to ASX announcement entitled “MOU for JV to develop Barrambie” released on 4th October 2019).

The current business plan contemplates conventional open-cut mining, comminution and gravity concentration on site at Barrambie with a mixed titanium/vanadium/iron concentrate being shipped to China for a reductive roast and magnetic separation. This will generate an ultra-clean titanium concentrate (Ilmenite) and a separate vanadium-iron (magnetite) concentrate.

Project Development Activities

Pilot Trials

During the quarter, IMUMR pilot scale (“**Pilot**”) trials commenced. The Pilot followed earlier pilot stage work conducted in Australia. More specifically, the Pilot test-work on Barrambie gravity concentrates followed successful Chinese confirmation test-work undertaken on Neometals’ breakthrough reductive roasting and magnetic separation flowsheet.

The Barrambie ilmenite product is targeted for smelting to produce a chloride-grade titanium slag to feed the fast-growing demands of the Chinese chloride pigment market as it switches towards this more environmentally sustainable product which requires high quality titanium feedstocks. The vanadium-rich iron (magnetite) concentrate is targeted for blending by steelmakers to obtain vanadium and iron units.

IMUMR managed and funded the Pilot to prove a simple gravity concentrate can be roasted and separated into two high-quality saleable products. The Pilot was successfully completed after the quarter end (for full details refer to ASX announcement entitled “*MOU for Barrambie Concentrate Offtake*” released on 16th April 2021). The Pilot confirmed that mixed gravity concentrate can be roasted and magnetically separated into two high-quality ilmenite and iron-vanadium concentrates. This outcome represents a significant step forward in realising Neometals’ goal to develop Barrambie as a capital-light concentrate operation.

Ilmenite and iron-vanadium concentrates from the Pilot trials have been used for evaluation purposes by Jiuxing and will be used by other potential offtake parties for the balance of Barrambie production.

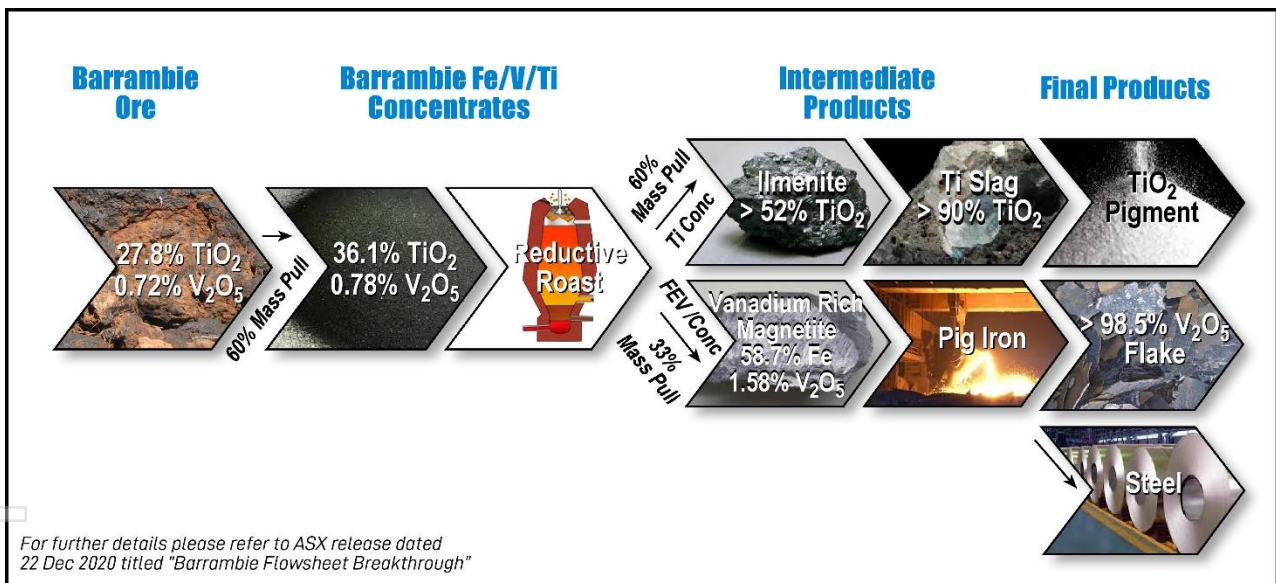


Figure 13 – Image showing potential the IMUMR Pilot Plant flowsheets from downstream processing of a Barrambie mixed gravity concentrate by reductive roasting and magnetic separation into separate ilmenite (titanium) and vanadium rich magnetite (iron) products

Commercial

In October 2019, Neometals entered the IMUMR MOU to evaluate a pathway for a potential 50:50 operating joint venture to commercially exploit Barrambie. An equal operating partnership will 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.

In addition to the relationship with IMUMR, Neometals announced (post quarter end) that it had entered into a Memorandum of Understanding with Jiuxing Titanium Materials (Liaoning) Co. Ltd, with (“**Jiuxing MoU**”) (“**Jiuxing**”) (for full details refer to ASX announcement entitled “MOU for Barrambie Concentrate Offtake” released on 16th April 2021). Jiuxing is one of the leading chloride-grade titanium slag producers and is the largest in north-eastern China. Importantly, the Jiuxing MOU builds on, and complements, the existing IMUMR MoU.

The Jiuxing MoU outlines a product evaluation regime and contains the key commercial terms for a formal offtake agreement (i.e. pricing, volumes, price floor etc.), subject to product evaluation. If executed, it will be potentially the industry’s largest individual offtake agreement. China has accelerated its transition from sulphate to chloride titanium pigment, so securing access to cleaner, higher grade chloride slag is a strategic imperative to achieve its ambitions. Chloride titanium pigment production is significantly more environmentally friendly and sustainable.

Neometals has advanced its early contractor engagement process, with leading service providers conducting due diligence in preparation of proposals for the provision of a complete mine-to-port solution under a ‘build-own-operate’ style arrangement. Below is a schematic of the scope of the mining and onsite gravity concentrate operation at Barrambie for export to end-users in China. This model was used successfully by Neometals and its partners to develop the Mt Marion Lithium Project in 2015, which is now the world’s second largest producer of spodumene (hard-rock lithium) concentrates (Neometals sold its equity in the project in 2019).

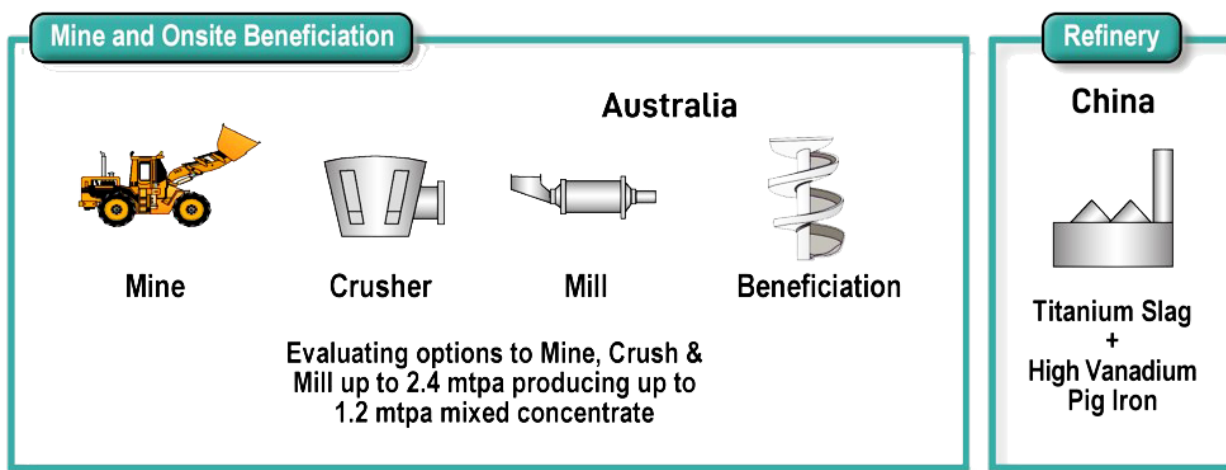


Figure 14 – Schematic of potential Barrambie development under a capital-light concentrate export operation.

Next Steps

Next steps include delivery of IMUMR Pilot test-work results for economic evaluation by Neometals and the provision of pilot trial product samples to for evaluation by third-party offtakers for the balance of Barrambie’s potential production. Approximately 400 kilograms of mixed gravity concentrate has been shipped to Jiuxing for blending and smelting directly into chloride-grade titanium slag. Results are expected in the JunQ 2021.

Neometals is planning the mining of a test pit (permitted) to extract approximately 250 tonnes of material for processing in a mobile gravity spiral plant and will transport the mixed concentrate to China. Approximately 100 tonnes of concentrate will be commercially trialled in Jiuxing’s titanium smelters as a final stage of due diligence. The remaining concentrate will be used to advance larger scale evaluation by other potential third-party offtakers. These activities are expected to be completed by the end of the DecQ 2021. Under the Jiuxing MOU the parties are targeting execution of a binding formal offtake agreement in the first quarter of 2022.

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EXPLORATION PROJECTS



Mt Edwards Lithium and Nickel Project (Neometals 100%)

Since acquisition in 2018, Neometals’ activities have focused on reviewing and re-estimation of its eleven separate Mineral Resources, where required, to provide a sound basis for mining studies to evaluate the development of a pipeline of short lead-time nickel sulphide deposits.

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 300km² across the Widgiemooltha Dome nickel sulphide belt and host 147,000 tonnes of contained nickel estimated across eleven nickel sulphide Mineral Resources (*for full details refer to ASX announcement entitled “Zabel Mineral Resource Update at Mt Edwards” released on 23rd December 2020*).

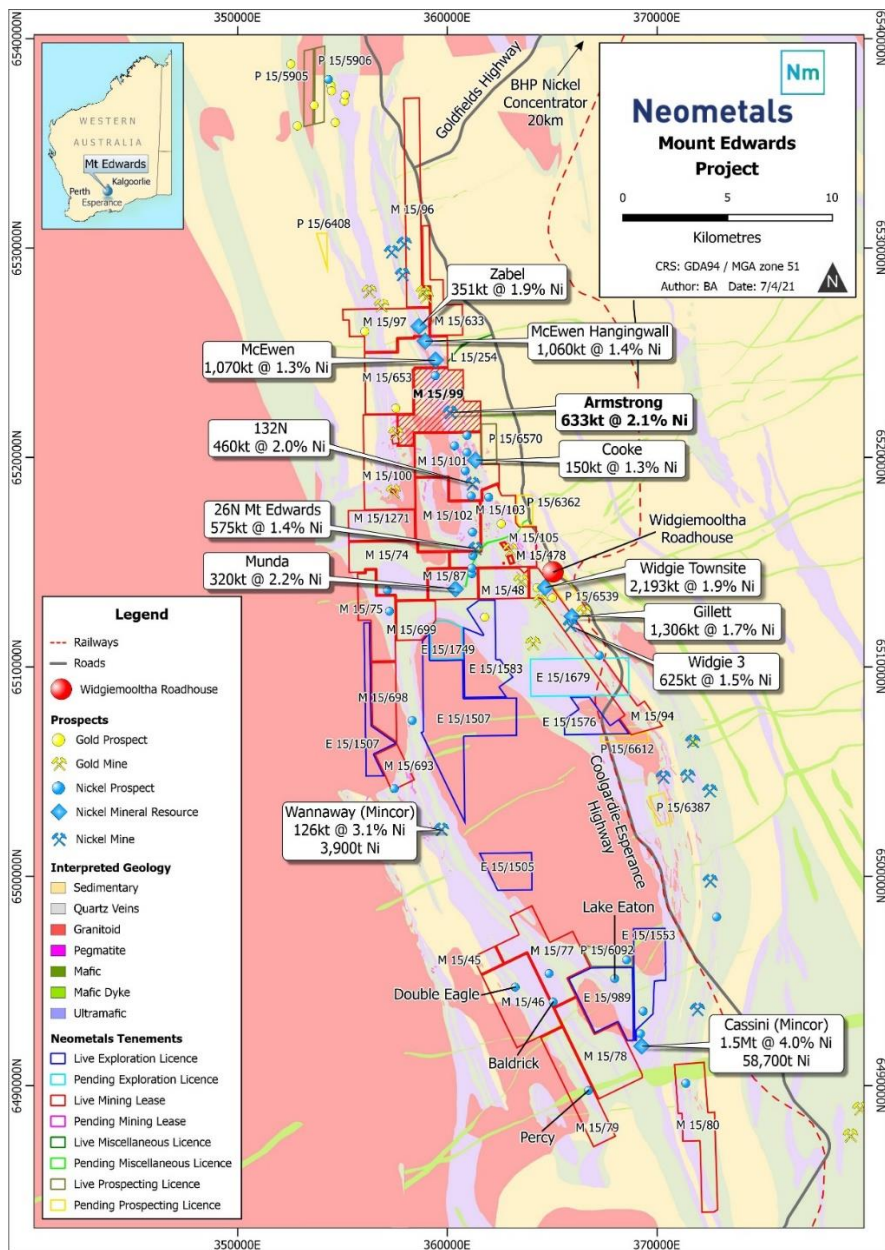


Figure 15 - Mining Tenements of the Mt Edwards Project Over Geology. The Armstrong deposit and Mining Lease M15/99 location are highlighted, and other Mineral Resources identified. Neometals holds 100% nickel rights for all live tenements shown above.

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Table 2 – Mt Edwards Project Nickel Mineral Resources (as at 31st March 2021)

Deposit	Indicated		Inferred		TOTAL Mineral Resources		
	Tonne (kt)	Nickel (%)	Tonne (kt)	Nickel (%)	Tonne (kt)	Nickel (%)	Nickel Tonnes
Widgie 3 ²			625	1.5	625	1.5	9,160
Gillett ⁵			1,306	1.7	1,306	1.7	22,500
Widgie Townsite ²	2,193	1.9			2,193	1.9	40,720
Munda ³			320	2.2	320	2.2	7,140
Mt Edwards 26N ²			575	1.4	575	1.4	8,210
132N ⁶	34	2.9	426	1.9	460	2.0	9,050
Cooke ¹			150	1.3	150	1.3	1,950
Armstrong ⁴	526	2.1	107	2.0	633	2.1	13,200
McEwen ¹			1,070	1.3	1,070	1.3	13,380
McEwen Hangingwall ¹			1,060	1.4	1,060	1.4	14,840
Zabel ⁷	296	1.9	55	2.1	351	1.9	6,800
TOTAL	3,049	1.9	5,694	1.6	8,743	1.7	147,000

Mineral Resources quoted using a 1% Ni block cut-off grade, except Munda at 1.5% Ni. Small discrepancies may occur due to rounding

Note 1. refer announcement on the ASX: NMT 19 April 2018 titled Mt Edwards JORC Code Mineral Resource 48,200 Nickel Tonnes

Note 2. refer announcement on the ASX: NMT 25 June 2018 titled Mt Edwards Project Mineral Resource Over 120,000 Nickel Tonnes

Note 3. refer announcement on the ASX: NMT 13 November 2019 titled Additional Nickel Mineral Resource at Mt Edwards

Note 4. refer announcement on the ASX: NMT 16 April 2020 titled 60% Increase in Armstrong Mineral Resource

Note 5. refer announcement on the ASX: NMT 26 May 2020 titled Increase in Mt Edwards Nickel Mineral Resource

Note 6. refer announcement on the ASX: NMT 6 October 2020 titled 132N Nickel Mineral Resource and Exploration Update at Mt Edwards

Note 7. refer announcement on the ASX: NMT 23 December 2020 titled Zabel Nickel Mineral Resource Update at Mt Edwards

Exploration Activities

During the quarter, mining studies were ongoing, with a particular focus on the most prospective nickel deposits at Mt Edwards, being Armstrong, Widgie Townsite, Gillett and 132N. These activities included a review of the metallurgy of the Mineral Resources. At the Armstrong deposit, metallurgical test-work was undertaken on chips from reverse circulation (“RC”) holes drilled in December 2019. This mineralised material was the subject of a metallurgical sighter test-work program to produce mineral concentrates to test for recovery and grade. The results from this program were announced post the end of the March quarter (for full details refer to ASX announcement entitled “High Grade Palladium in Nickel Concentrate Results from Armstrong Deposit” released on 9th April 2021).

The results of the concentrate test-work were significant and shape the future work programs. Investor highlights from the test-work results are as follows:

- Commercial grade nickel concentrate produced (12% Ni) at acceptable recovery rate;
- Material palladium grades seen in both sample (3 g/t) and in resultant concentrate (20 g/t);
- Sighter test-work based on RC chips – further work on drill core to follow;
- Few samples from +13k drill hole database at Mt Edwards historically assayed for palladium (less than 25% of samples with nickel assays greater than 1% have been checked for palladium); and
- Extremely strong palladium price suggests potential opportunity for significant nickel co-product revenue.

The Mount Edwards project database consists of assay and geological data from more than 13,000 drill holes. Platinum (Pt) and Palladium (Pd) have been sparingly assayed in work to date at Mount Edwards. While the majority of samples are assayed for nickel or lithium, only ~10% (42,468 of 422,129) of the total samples have been assayed for either Pt or Pd. Historically Pt and Pd assays were used as an indicator element in exploration activities helping to vector in on new discoveries.

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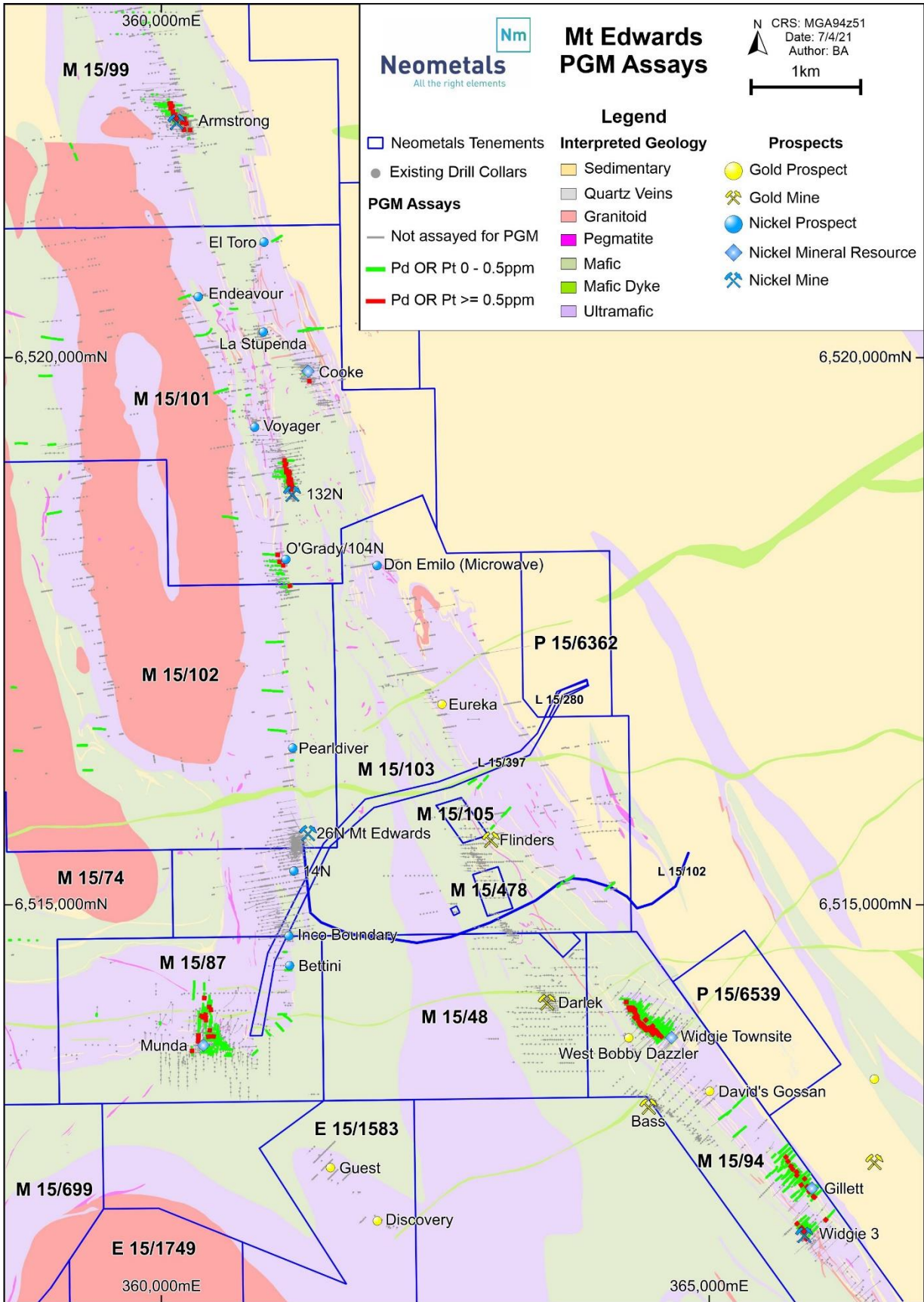


Figure 16 - Location of Drill Holes and Drill Traces with Pt and Pd Assays Across the Mt Edwards Project. Eight of the eleven nickel deposits are shown over the geology. Samples where Pd and / or Pt has been assayed are shown in green. Drilling samples with Pd or Pt assays returned greater than 0.5 ppm are shown in red. The figure shows a good correlation of elevated Pd grades near the nickel Mineral Resources.

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Future Work

As a consequence of the flotation test-work results from the Armstrong deposit, mining studies have been paused whilst the Company conducts a detailed geological and geometallurgical program to ascertain the potential for significant co-product revenue impacts on its eleven separately defined Mineral Resources at Mt Edwards and exploration potential within its > 300 square km tenure.

Neometals is building a dedicated team to accelerate its exploration and evaluation activities at Mt Edwards and build value in parallel with its strategic review of its options to best realise value for its shareholders.

CORPORATE

Commercial / Corporate

Neometals has made significant commercial progress during the quarter and several developments were also announced just post the end of the period. Specific details are outlined elsewhere in this activities statement however the key commercial developments for the three months ending 31 March 2021 warrant highlight:

- Significant battery feed volumes have been committed to the recycling DP trial with offtake evaluations in place for every product to be generated during trials. A recycling MoU with Japanese industrial giant Itochu Corporation was announced. Primobius is in discussions with several other industry participants with a view to enter into further collaboration arrangements.
- Market tailwinds are supporting both of the Company's European battery materials projects with some end users of battery chemicals being motivated to source domestic feedstocks to support the EU circular economy and lithium battery raw material resilience measures being put in place. As an example, the Vanadium Recovery Project already has a product evaluation program underway with a potential European off-taker for use in next generation lithium ion batteries. Neometals has supplied samples of high-purity V₂O₅ under an evaluation program and early feedback from characterization and cell cycling tests is promising.
- Forecast battery raw material supply deficits, together with mineral extraction sustainability demands, are driving industry to attain supply chain certainty combined with reduced CO₂ emissions. The timing has been good for Neometals' pivot away from reliance on upstream minerals and mining towards eco-friendly materials recovery.

In addition, potential partner dialogues continued through the quarter with parties interested in licensing arrangements for Neometals' 70%-owned lithium processing technology, 'ELi®' (see the Neometals website for further details on the technology).

Financial

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

As at 31 March 2021 Neometals held 749,164,028 ordinary fully paid shares (~32% of the issued capital) in Hannans on an undiluted basis. At 31 March 2021, Hannans' shares closed at 0.9c implying a value of \$6.7M.

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

Neometals holds 18% of unlisted public company Critical Metals Ltd, a company which now houses the Scandinavian mineral assets previously held by Hannans and is collaborating with Neometals on Scandinavian LIB recycling and vanadium recovery opportunities.

Other Investments

The market value of the Company's other investments as at 31 March 2021 totalled \$3.1M.

Finances (unaudited)

Cash and term deposits on hand as of 31 March 2021 totalled A\$67.5 million, including \$4.2 million in restricted use term deposits supporting performance bonds and other contractual obligations. The Company has net receivables and investments totalling approximately \$14.1 million.

Related Party payments for the quarter outlined in the ASX 5B at section 6.1 total \$241,500 and are made up of Director fees and superannuation.

Issued Capital

The total number of shares on issue at 31 March 2021 was 545,351,266.

ENDS

Authorised on behalf of Neometals by Christopher Reed, Managing Director

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Compliance Statement

The information in this report that relates to Mineral Resource and Ore Reserve Estimates 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

09/04/2021	Mt Edwards - High Grade Palladium in Nickel Concentrate
23/12/2020	Mt Edwards Nickel – Zabel Nickel Mineral Resource Update
05/10/2020	132N Nickel Mineral Resource and Exploration Update at Mt Edwards
26/05/2020	Mt Edwards Nickel – Increase in Mt Edwards Nickel Mineral Resource
16/04/2020	Mt Edwards Nickel – 60% Increase in Armstrong Mineral Resource
13/11/2019	Additional Nickel Mineral Resource at Mt Edwards
25/06/2018	Mt Edwards Nickel – Mineral Resource over 120,000 Nickel Tonnes
19/04/2018	Mt Edwards Nickel – Mineral Resource Estimate
17/04/2018	Barrambie – 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 2021, 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

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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	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
Mt Edwards	P15/6570	100%	Live
Mt Edwards	P15/6612	100%	Pending
Queen Victoria Rocks	E15/1416	100%	Live

^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
Mt Edwards	P15/6570	Granted
Queen Victoria Rocks	E15/1416	Acquired

Interests in mining tenements relinquished, reduced or lapsed

Project Name	Licence Name	Relinquished, Reduced or Lapsed
n/a	n/a	n/a

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