



22 January 2021



Neometals
All the right elements

QUARTERLY ACTIVITIES REPORT

For the quarter ended 31 December 2020

HIGHLIGHTS

CORPORATE

- Cash A\$72.6 million, receivables and investments of A\$7.2 million and no debt; and
- Delivery of inaugural sustainability report highlighting long-term commitment to ESG principles and reporting.

CORE DEVELOPMENT ACTIVITIES

Lithium-ion Battery (“LIB”) Recycling Project

- Strong technical and commercial progress towards trialling and building Europe’s largest sustainable LIB recycling operation with partner SMS group GmbH (via Primobius JV);
- Procurement activities materially complete and construction activities have commenced for German showcase demonstration plant following permitting;
- Multiple product evaluation agreements in place with end users / potential off-takers and battery feed for the demonstration trials secured from the automotive industry; and
- Primobius entered MoU with Slovakian LIB manufacturer, InoBat j.s.a., to evaluate development of a jointly owned operation in the territory of Slovakia and Hungary, highlighting potential for growth.

Vanadium Recovery Project (“VRP”)

- Mini-pilot metallurgical test-work significantly increases confidence in proprietary vanadium recovery technology with exceptional purity (>99.5% V₂O₅), high recoveries (75%) and reduced leach residence times being achieved;
- Hatch Engineering appointed to manage a pre-feasibility study; and
- Australian pilot plant design underway and industrial land adjacent to the Port of Pori, in Finland chosen as location for commercial VRP.

Lithium Refinery Project (“LR”)

- Jointly funded Class 3 feasibility study for proposed Indian lithium refinery JV, utilising Neometals’ Mt Marion concentrate rights, in final stages with completion targeted in the June Q 2021.

Barrambie Titanium and Vanadium Project (“Barrambie”)

- Metallurgical breakthrough generates separate, marketable ilmenite (titanium) and iron-vanadium concentrates triggering early contractor engagement with potential mine-to-port service providers; and
- Neometals Chinese partner (IMUMR*) confirming breakthrough using 1 tonne gravity concentrate sample. Chinese validation is key in securing potential product off-take agreements.

EXPLORATION ACTIVITIES

- Mt Edwards global Mineral Resources increased to 8.74 million tonnes at 1.7% nickel for 147,000 tonnes of contained nickel, courtesy of new estimates for the 132N and Zabel deposits**; and
- The location, prospectivity and proximity to essential infrastructure and processing facilities provides outstanding leverage to the strengthening prices and long-term fundamentals of the nickel market. Neometals continues to evaluate strategic opportunities to realise and return value for shareholders.

*The Institute of Multipurpose Utilisation of Mineral Resources

**ASX Announcement entitled “Zabel Nickel Mineral Resource Update at Mt Edwards” – released on 23rd December 2020

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 span the battery value chain:

Recycling and Resource Recovery:

- 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 50:50 JV partner SMS group, working towards a development decision in early 2022; and
- Vanadium Recovery – sole funding the evaluation of a potential 50:50 joint venture with Critical Metals Ltd to recover vanadium from processing by-products (“Slag”) from leading Scandinavian Steel maker SSAB. Underpinned by a 10-year Slag supply agreement, a decision to develop sustainable European production of high-purity vanadium pentoxide is targeted for December 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 development decision in 2022.

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 mid-2021 with potential 50:50 JV partner IMUMR.



Figure 1 – Location map of Neometals Projects

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 2019 scoping study, based on earlier bench scale test-work, highlighted robust project economics. Data from the successfully concluded pilot trial (“**Pilot**”) is guiding current demonstration trials as well as engineering and feasibility studies.

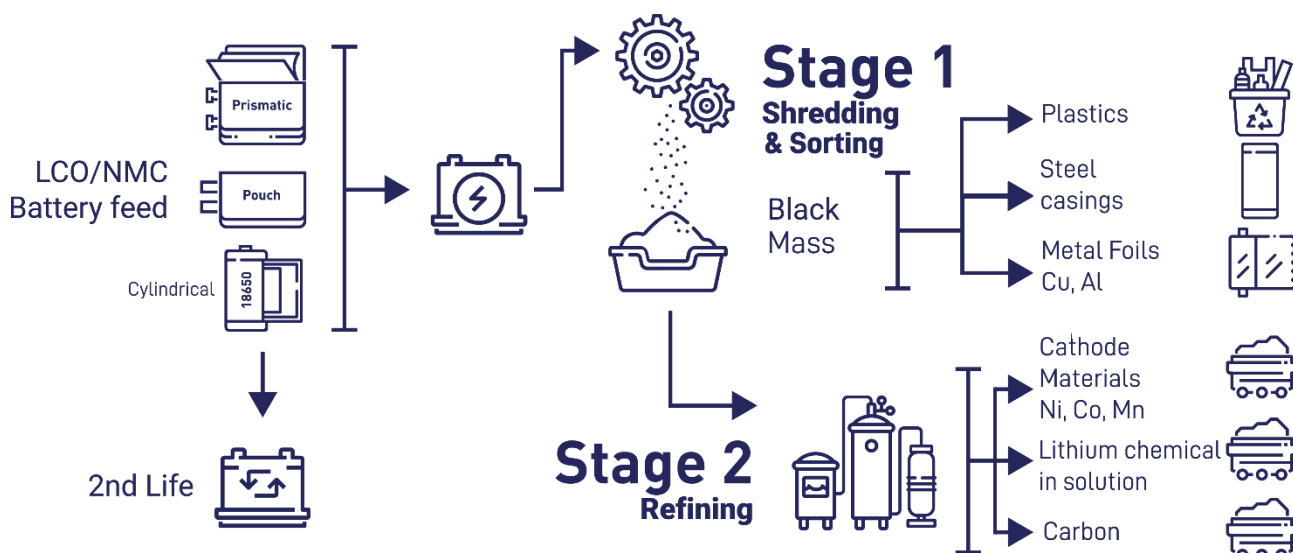


Figure 2 - High level flowsheet showing the materials generated from ‘Shredding and Sorting’ and ‘Refining’ stages of the LIB Recycling Technology

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 before the parties jointly commercialise the LIB Recycling Technology.

Should the JV decide to commence construction of a commercial plant, a positive financial investment decision would involve Neometals contributing technical and commercial know how to the JV and SMS contributing to the engineering design, fabrication, operation and maintenance of future recycling plants. SMS will also, on a best endeavour’s basis, procure debt financing for no less than 50% of the capital expenditure.

Project Development Progress

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

Demonstration Plant

The JV has completed the design and procurement phases of its recycling demonstration plant (“**DP**”) located within the SMS manufacturing centre in Hilchenbach, Germany. Primobius has received permits for construction of the DP which will process spent and scrap LIBs at a rate of 1t per day. All equipment other than a crystalliser is now located in Germany and preparations are underway for installation on site.

The DP trial schedule sees commissioning and operation of the shredding and beneficiation circuit first, followed by the hydrometallurgical refining circuit commencing in Q2 2021. Scrap LIBs and partially processed ‘black mass’ has been secured from potential automotive industry partners. The DP will serve as a showcase where product outputs can be evaluated by potential customers, partners and off-takers. Specifically, 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.

As it relates to product offtake, Primobius goes into its DP trial with confidence from pilot trial data that the key payables (nickel and cobalt sulphate) are higher purity than required by Chinese national specifications for cathode use. Each product generated during DP trials, low and high value, will be used for evaluation trials with potential off-takers. Multiple dialogues are being progressed concurrently and several product evaluation programs are in place with industry participants.

Feasibility and Site Studies

Preparatory activities for the Class 3 feasibility study (“**FS**”) were undertaken during the quarter. Comprehensive FS activities will occur in January 2021 with the engineering cost study scheduled to provide operational and capital cost estimates, based on data generated during DP operations, by October 2021.

Primobius has been progressing its site selection study for future commercial operations with several possible locations shortlisted in and around the Germany. The central part of Europe offers compelling advantages in terms of proximity to vehicle and LIB manufacturing plants and product off-takers. Site selection developments will advance hand in hand with commercial/partner development activities and the FS will be based on the recommended site. See ‘Next Steps’ below for an indicative project development timeline.



Figure 3 – SMS group engineering competence centre in Hilchenbach



Figure 4 – Render of demonstration plant in Hilchenbach showing battery shredding (left, foreground) and hydrometallurgical refining circuits (right, background)

Commercial Activities

Running in parallel to DP and feasibility development activities are a number of Primobius feedstock and offtake dialogues with industry participants. Securing feed for the DP and for future commercial plants is a high priority. With feed for the DP now secured from automotive sources, the focus swings 100% to scrap and end of life LIB cell sourcing for commercial activities.

Specific to this objective, Primobius recently entered into a memorandum of understanding (“**MoU**”) with Slovakian LIB cell manufacturing company, InoBat Auto j.s.a. (“**InoBat**”), for joint recycling activities using feed sourced from InoBat pilot and commercial cell production activities. The MoU provides an evaluation framework towards a potential Primobius-InoBat commercial operation that will run a commercial LIB recycling facility in Central/Eastern Europe.

InoBat is a member of the IPM Group of companies, focusing mainly on infrastructure and technology related investments in Europe, primarily in Slovakia, where it is establishing LIB demonstration and production lines with applications in the electric vehicle sector.

Initial processing of InoBat pilot battery production scrap would occur in a recycling ‘spoke’ facility. This is anticipated to be followed by hydrometallurgical refining of the spoke output (“**Black Mass**”) in a ‘hub’ facility to generate battery cathode raw materials.

The InoBat MoU is a significant step towards commercial operations for Primobius and represents the first of many pathways to near-term cashflow. Reaching preliminary development terms with a battery producer so quickly after Primobius’ establishment is a very positive endorsement on the status of the project and the industrial scalability of the Primobius recycling solution.

Market Tailwinds

Europe is presently leading the world in electric vehicle value chain investment. The European Commission is focused on building resilience as it looks to deliver on its ‘Green Deal’ objective with net zero greenhouse gas emissions targeted in the EU by 2050. Also supporting the timing of the Primobius industrial recycling solution are new EU Battery regulations providing further commercial tailwinds with sustainability, recycled content, circularity and ethical domestic sourcing in focus.

The battery regulations aim to:

- Harmonise product requirements for batteries;
- Minimise environmental impact of batteries;
- “Close the loop” by improving battery collection and sustainable recycling of materials; and
- Provide legal certainty to promote investments and boost the production capacity of sustainable batteries in Europe and beyond.

The Primobius recycling technology and business model is very closely aligned with the EU’s decarbonisation and clean energy objectives. Importantly, the regulation will help underpin strong growth in supply of scrap and end of life LIB cells (feed). The key terms relevant to Primobius / Neometals can be seen below:

- Mandatory recycling of industrial and EV batteries within 12 months of adoption by EU Parliament (expected Q4CY2021);
- Mandatory CO₂ life-cycle disclosure on all batteries by 2024;
- Increased recycling efficiency and collection targets;
- Minimum use of recycled materials in batteries by 2027; and
- Compliance labelling via the ‘Battery Passport’ to include traceability and provenance disclosure.

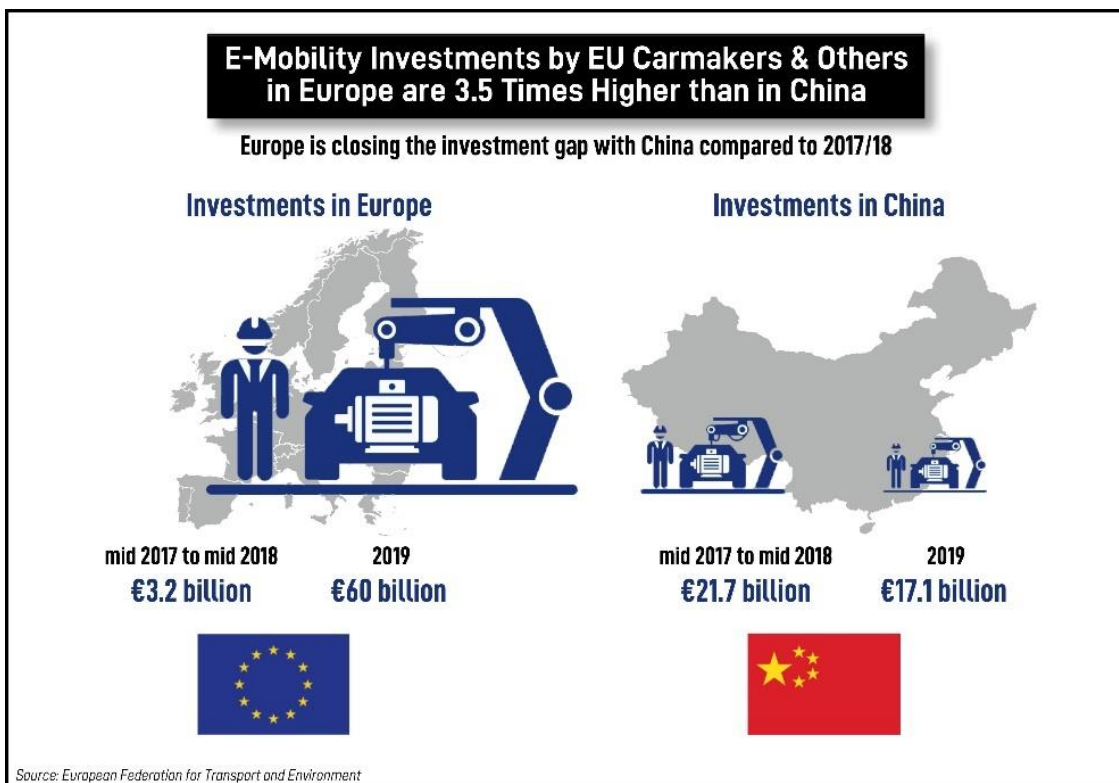


Figure 5 – Image highlighting world leading battery value chain investments being made in Europe

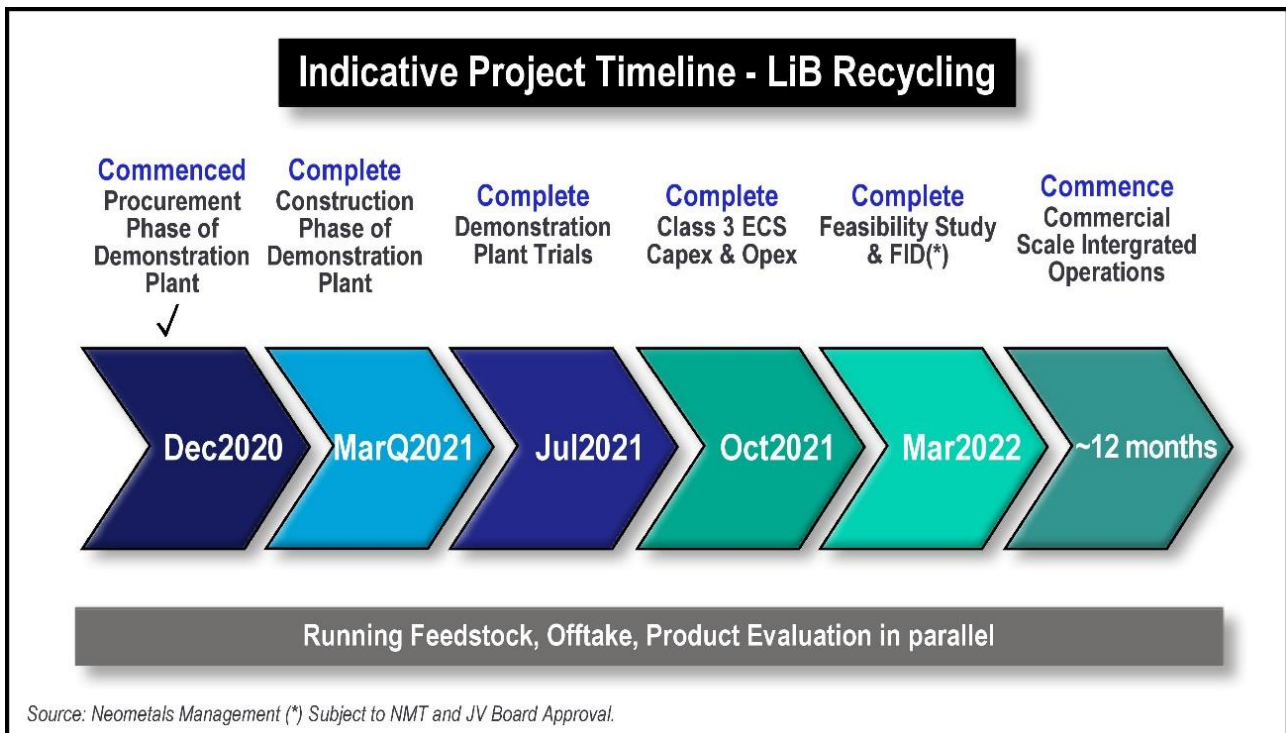


Figure 6 - Indicative LiB recycling timeline



**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 products 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 joint venture (“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 dated 6th April 2020). Slag is a by-product of SSAB’s steel making operations. The Slag Supply Agreement 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.

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

1. Exceptional grade (reference grade of 3.93% V₂O₅ 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 sequestration of CO₂.

Key activities under the evaluation program comprise hydrometallurgical flowsheet optimisation including pilot plant trials to recover vanadium from the Slag, feasibility studies, site selection, market evaluation and grade confirmation.

Process Metallurgical Test-work

During the quarter, Neometals successfully demonstrated its proprietary vanadium recovery flowsheet in a continuous mini-pilot (“Mini Pilot”) test-work campaign. The trial was designed to determine leach feed recovery, vanadium chemical purity and residence time to provide inputs into the Class 4 prefeasibility study. The Mini-Pilot was run for ~100 hours during the first week of September 2020 using samples from SSABs Luleå and Oxelösund stockpiles.

Results confirmed excellent vanadium chemical product purity (>99.5% V₂O₅ (chemical grade)), good recoveries (>75%) and low residence time for Neometals’ patent pending hydrometallurgical process for recovering vanadium from Slag. The Mini-Pilot confirmed earlier bench scale findings including vanadium recovery from leach through to solvent extraction (SX) strip liquor, demonstrated a successful process control strategy and has given invaluable insights into minor impurity deportment and their control through the circuit.

Neometals now shifts its attention to the design phase of the larger proposed pilot plant which will leach material from three of SSAB’s steel operations. 30 tonnes of Slag samples from SSAB’s operations at Lulea (Sweden) and Raahe (Finland) have been collected and despatched to enable the pilot plant campaign to be conducted in mid-2021 (Figure 8).



Figure 7 – Images of Neometals vanadium mini-pilot operated at a commercial laboratory in Perth



Figure 8 - Image of Bulk Samples from Raahe prior to loading in sea containers bound for Fremantle

Studies

The successful results of the Mini-Pilot campaign have substantially de-risked the Neometals processing flowsheet and has given the Company confidence to commence a pre-feasibility study. During the period Neometals announced that global engineering consultancy, Hatch, was appointed as lead engineering study manager for the AACE Class 4 pre-feasibility study for VRP and this is expected to be completed by the end of June 2021.

Site Selection

During the quarter Neometals and Critical successfully completed their European site selection study for demonstration (as required) and commercial activities. The City of Pori in Finland was chosen as the preferred location for sustainable vanadium recovery and production. Commitments by Critical and the City of Pori have been formalised in a memorandum of understanding (“**MOU**”). The MOU 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 9 - Location of Pori relative to the SSAB steel operations in Finland and Sweden



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



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 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 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 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 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.

December quarter activities associated with the Manikaran MOU included:

- Ongoing evaluation under the location study of recommended project site within the Mundra port in the State of Gujarat;
- AACE Class 3 Feasibility Study on track for completion by Primero Group in June Q 2021:
 - Specification sheets have been developed for all products, by-products and reagents
 - Non-Process Infrastructure design has been finalised;
- Progress on the capital cost estimate and process modelling;
- Process design criteria advanced in preparation for input from pyrometallurgy and hydrometallurgy technology vendors, SCT and Veolia respectively;
- SCT delivered the estimate for pyrometallurgical package of the refinery;
- Veolia has completed process design work package and delivered its estimate for the hydrometallurgical component of plant;
- Mass energy balance and basis for key financial model inputs progressed; and
- Commercial discussions ongoing with potential providers of additional spodumene feed for the LR.



Figure 11– Proposed Project Location adjacent to Mundra Port, the largest port in India

THIS SPACE IS LEFT INTENTIONALLY BLANK



**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 title '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 has a granted mining lease covering its mineral resource.

IMUMR MOU

In October 2019, Neometals entered a memorandum of understanding (“**MOU**”) with Chinese research organisation, IMUMR, to jointly advance development of Barrambie. The MOU outlines a potential pathway towards a 50:50 joint venture to advance Barrambie’s commercial exploitation.

Developing Barrambie with a partner 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.

Project Activities

Metallurgy and Marketing

Historically, Neometals has evaluated the production of either vanadium or titanium products from Barrambie in isolation using different flowsheets. Vanadium and titanium are industrial minerals which require significant proof of ‘value-in-use’ when negotiating with potential off-takers. This being the case, Neometals has run an exhaustive and iterative metallurgical and marketing process to determine the most appropriate product mix and the most effective flowsheet. IMUMR and other industrial partners have been testing Neometals samples (mixed concentrates, titanium concentrates, vanadium concentrates, iron/vanadium intermediate chemicals and titanium intermediate chemicals) generated from the above work.

Despite encouraging Australian hydrometallurgical pilot trial outcomes in 2020 that generated a high purity titanium intermediate chemical (hydrolysate) for the pigment market, Neometals had further breakthrough success with the production of concentrate products using reduction roasting and magnetic separation program (beneficiation) that generated commercial specification samples of both ilmenite and vanadium rich magnetite products.

The beneficiation test work program was conducted on three bulk samples (20 tonnes) of Barrambie Eastern band (high titanium zone) mineralised material which generated 11 tonnes of mixed heavy mineral concentrate (containing titanium, vanadium and iron) from traditional gravity spirals used by the mineral sands industry. Low-temperature reduction roasting and subsequent magnetic separation produced a high-quality ilmenite (> 52 % TiO₂ content) at high recoveries (> 87% TiO₂ recovery) with a mass yield of 60% and a marketable magnetite by-product concentrate (with grades equivalent to 58.7% Fe and 1.58% V₂O₅).

Strategy

The Barrambie development strategy seeks to realise value from both the titanium and vanadium in the deposit and the results generated during the quarter indicate that this should be done via the generation of clean concentrates from an initial capital-light mining and beneficiation operation for export to end-users. The reductive roast-magnetic separation work is a breakthrough for the Company as it can, with confidence, produce two separate products that meet market ready specifications. Further, it represents a development option that will reduce start-up capital and complexity of processing. The reductive roast flowsheet is shown in Figure 12 below.

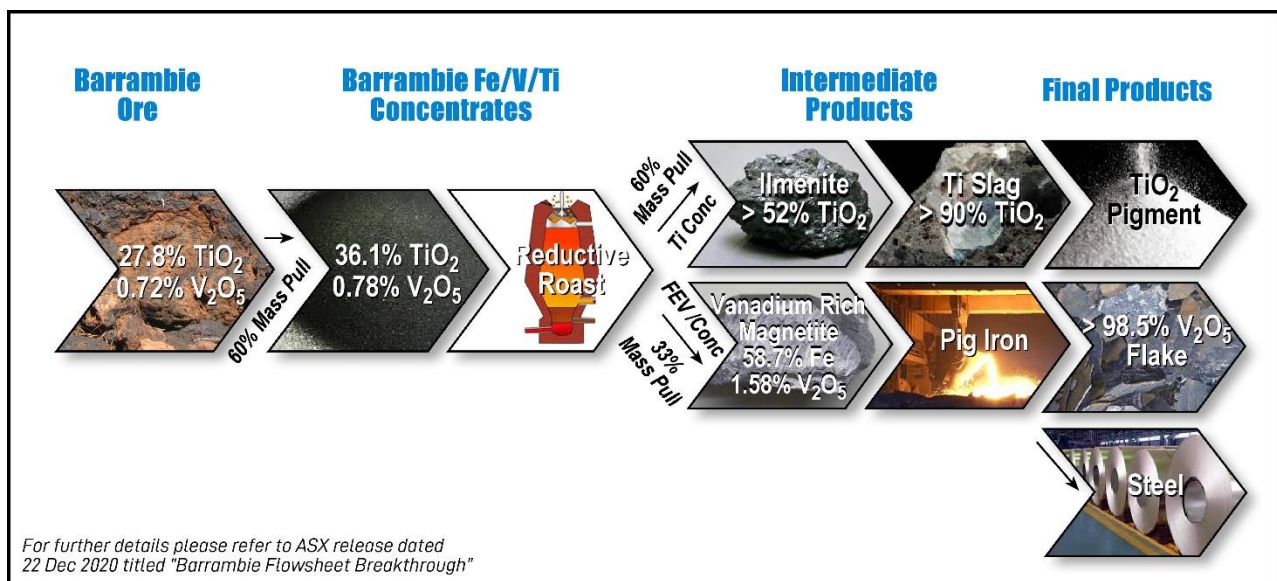


Figure 12 – Image showing potential Barrambie process flowsheet under a capital-light concentrate export operation

The preferred development strategy anticipates 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.

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 away from environmental challenges with sulfate pigment production. The vanadium-rich iron (magnetite) concentrate is targeted for blending by steelmakers to obtain vanadium and iron units.

Next Steps

Neometals' Chinese partner, IMUMR, is due to take delivery of a 1 tonne sample of the mixed concentrate material to allow replication of the Neometals reductive roast results and further downstream processing of the products. Validation of Australian test-work results using Chinese laboratories is standard practice in China and will support ongoing product offtake dialogues.

Given the extensive geological, metallurgical and evaluation study data on Barrambie, together with management preference for capital-light build-own-operate-transfer arrangements, Neometals is progressing discussions with specialist mining and processing contractors under an early contractor involvement model.

THIS SPACE IS LEFT INTENTIONALLY BLANK

EXPLORATION PROJECTS



Mt Edwards Lithium and Nickel Project (Neometals 100%)

Since acquisition in 2018, drill programs at Mt Edwards 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 being evaluated and undergoing 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 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*).

Table 2 – Mt Edwards Project Nickel Mineral Resources

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

During the quarter, exploration activities advanced with updates to the nickel sulphide Mineral Resources at the 132N and Zabel deposits. A soil sampling campaign continued with areas in the western dome assayed for a 48 multi-elements suite. In addition, mining studies continued on four of the Mt Edwards short lead time deposits, being Armstrong, Widgie Townsite and Gillett and now 132N. Exploration planning using geological and geophysical interpretation has been undertaken across the Mt Edwards tenure.

Exploration Activities

132N Mineral Resource estimate

Using historical and new assay data, a reinterpreted Mineral Resource was estimated for 132N in accordance with the 2012 JORC Code. The amount of contained nickel at 132N has more than doubled from 4,070 to 9,050 tonnes.

The updated estimate used information from a diamond core drillhole and daughter wedge which was undertaken at 132N in June 2018 to test for strike extensions of the historical Mineral Resource. Drilling generated a significant intercept of 15.6 metres at 1.24% nickel, and the logging of structural information from the core has improved the understanding of the interpreted geology.

Table 3 – 132N Indicated and Inferred Mineral Resource Estimate at a 1% nickel grade cut-off

Mineral Resource Classification	Tonnes	Ni %	Contained Ni tonnes
Indicated	34,000	2.9	1,010
Inferred	426,000	1.9	8,030
TOTAL	460,000	2.0	9,050

Zabel Mineral Resource estimate

A reinterpreted Mineral Resource was estimated for the Zabel deposit using historical and new assay data, in accordance with the JORC Code (2012). The Zabel Mineral Resource now totals 351,000 tonnes at 1.9% nickel for 6,800 tonnes of contained nickel, up 17% from 5,780 tonnes.

RC drilling undertaken at Zabel in June 2019 hit massive nickel sulphide, with intercepts of 11 metres @ 2.6% nickel including 4 metres @ 6.3% nickel from 108 metres down drill-hole (for full details refer to ASX announcement entitled “Mt Edwards Nickel - Drill Results” released on 5 August 2019). This was the first nickel exploration drilling at Zabel since 2007.

Table 4 – Zabel Indicated and Inferred Mineral Resource Estimate at a 1% nickel grade cut-off

Mineral Resource Classification	Cut-off Ni%	Tonnes	Ni %	Contained Ni tonnes
Indicated	1	296,000	1.9	5,600
Inferred	1	55,000	2.1	1,200
TOTAL	1	351,000	1.9	6,800

Future Work

The re-estimation of the 132N and Zabel Mineral Resources follows a major review of the Mt Edwards project undertaken by Neometals since mid-2019, which has included an audit of the drill database and the historical exploration and mining literature. In parallel to the review, drill programs have defined high grade massive nickel mineralisation and several Mineral Resources (including 132N and Zabel) have been reviewed with estimates updated. The growing Mt Edwards global Mineral Resources currently sits at to 8.74 million tonnes at 1.7% nickel for 147,000 tonnes of contained nickel. Neometals is actively looking to grow the size and grade of its nickel deposits, while discovering new ones.

Further updated estimates of other Mineral Resources are expected in the coming quarter as the review of the Mt Edwards project, including the updating of the drill database and improving the understanding of the historical exploration.

132N & Zabel

Planned activities specific to 132N and Zabel include RC and Diamond Core drilling to further test for extension of mineralisation. Future work will also include infill drilling to increase confidence sufficient to ‘upgrade’ the Mineral Resource classification. The drilling and sampling will be used to further improve the understanding of the mineralogy and metallurgical characteristics of the deposits to pave the way for advanced mining studies at both 132N and Zabel.

At the Zabel deposit off hole conductor plates interpreted from DHEM surveys adjacent to the known mineralisation will be tested with a view to increase the scale of the deposit.

Approvals

Government approvals are in place for planned exploration activities at prospects across Mt Edwards including Lake Eaton and Lake Eaton South, Armstrong, Widgie Townsite, McEwen, Cipollini, 132N and Zabel.

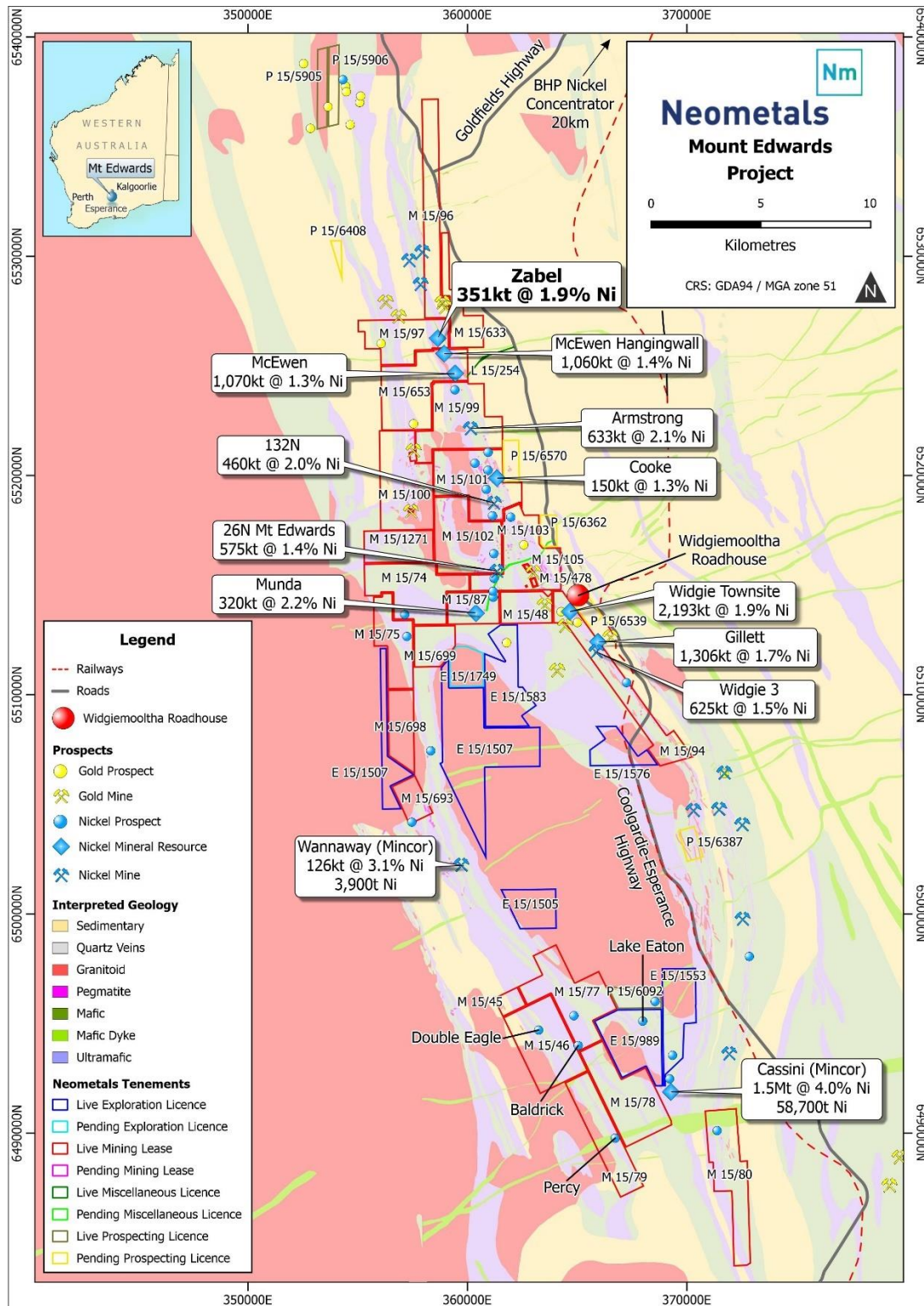


Figure 13 - Mt Edwards Project tenure over geology, with the Zabel and 132N locations shown on Mining Leases M15/97 and M15/101 respectively. Other Mineral Resources are also shown. Neometals holds 100% nickel mineral rights for all live tenements shown above.

CORPORATE

Commercial / Corporate

During the quarter, Neometals released its inaugural ESG and sustainability report which can be found on the the Company's website. Fulsome disclosure and goal setting as it relates to environmental, social and governance performance is critical to Neometals. ESG stewardship is firmly embedded into the Company's core business. Neometals is committed to optimising finite resources with circular practices to benefit society and the environment for a sustainable future.

Renewed interest has been shown over the period by potential partners interested in licensing arrangements for Neometals' 70%-owned lithium processing technology, 'ELi®' (see the Neometals website for further details on the technology). Future forecast battery raw material supply deficits (including lithium), together with mineral extraction sustainability demands are driving industry to look for means to secure supply chain certainty combined with reduced CO₂ emissions.

Financial

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

As at 31 December 2020 Neometals held 799,164,028 ordinary fully paid shares (34% of the issued capital) in Hannans on an undiluted basis. At 31 December 2020, Hannans' shares closed at 0.5c implying a value of \$4.0M.

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

Neometals holds 16.4% 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 December 2020 totalled \$2.6M.

Finances (unaudited)

Cash and term deposits on hand as of 31 December 2020 totalled A\$72.6 million, including \$4.2 million in restricted use term deposits supporting performance bonds and other contractual obligations. The Company has net receivables and securities totalling approximately \$7.2 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 December 2020 was 545,351,266.

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

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
31/01/2020	Mt Edwards Nickel – High-grade massive nickel sulphide at Mt Edwards
11/12/2019	Mt Edwards Nickel – Drill Results from Widgie South Trend
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 December 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	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%	Pending
Mt Edwards	P15/6612	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
Mt Edwards	P15/6612	Applications Pending

Interests in mining tenements relinquished, reduced or lapsed

Project Name	Licence Name	Relinquished, Reduced or Lapsed
Mt Edwards	E15/1711	Withdrawn