Neometals
All the right elements

QUARTERLY ACTIVITIES REPORT
For the quarter ended 31 December 2021

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HIGHLIGHTS

CORPORATE

- Cash balance A$72.8 million, receivables and investments of A$47.9 million and no debt;
- David Reed retired from Board and Chris Reed's contract extended until 2024; and
- Ongoing preparations for Neometals' dual listing on AIM market of the London Stock Exchange in MarQ 22.

DOWNSTREAM - MATERIALS PROCESSING

*Lithium-ion Battery ("**LIB**") Recycling Project (50% NMT via Primobius GmbH, an incorporated JV with SMS group GmbH)*

- Demonstration Plant Trials - hydrometallurgical refining circuit successfully commissioned with Stage 1 Shredding trials subsequently completed and Stage 2 Refining trials ongoing;
- Successful commissioning of modifications to the Stage 1 Shredding circuit of Demonstration Plant to enable 10tpd commercial disposal operations commencing late MarQ 22: and
- MoU with steel producer/recycler, Stelco, advanced with formal agreements to commercialise the recycling technology in North America. Stelco has licensed the recycling technology to fast-track feedstock supply arrangements and Primobius has an option to acquire up to 50% of the Stelco recycling entity.

*Vanadium Recovery Project ("**VRP**") (earning into 50:50 JV with Critical Metals Ltd)*

- Engineering process data prepared for SSAB project (VRP1) feasibility study which has been awarded to Nordic focused engineering firm Sweco Industry Oy; and
- Offtake, environmental permitting, CO_2 capture and additional project business development activities advanced.

*ELi® Lithium Process Project ("**ELi®**") (70% NMT / 30% Mineral Resources)*

- Neometals sustainable battery materials portfolio enhanced with commercialisation opportunity over proprietary electrolysis process to produce lithium chemicals from lithium salt, ELi®; and
- Portugese chemical company, Bondalti Chemicals S.A to co-fund and construct an electrolysis pilot plant at the Bondalti chemical complex in Estarreja as part of evaluation towards a proposed 25,000tpa lithium refinery.

UPSTREAM – MINERAL EXTRACTION

*Barrambie Titanium and Vanadium Project ("**Barrambie**") (100% NMT)*

- Preparation of Barrambie mixed gravity concentrate sample for Jiuxing commercial smelting trials in China continued in parallel with Pre-feasibility study targeted for MarQ 22 completion;
- Leading mining service providers progressing due diligence to provide "Build-Own-Operate" proposals for the development of Barrambie on a capital-light basis with Australian mining and beneficiation operation coupled to Chinese refining activities; and
- Ongoing evaluation of strategic options to deliver Barrambie value to shareholders.

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COMPANY OVERVIEW

Neometals innovatively develops opportunities in minerals and advanced materials essential for a sustainable future. We leverage our proprietary, green process technologies to build battery materials projects with unparalleled exposure to commodities most impacted by the energy storage megatrend.

We build value, de-risk and develop these long-life projects with strong partners having a strategic focus on increasing margins through integration down the value chain. We have a growing suite of sustainable downstream, recovery and recycling projects, supporting the global transition to more circular supply chains and cleaner energy. Our core projects are:

Downstream Recycling and Materials Processing:

- Lithium-ion Battery Recycling – commercialising a proprietary process for recovering lithium, nickel, cobalt and other valuable materials from spent and scrap lithium-ion batteries through a 50:50 incorporated JV with SMS group called Primobius GmbH. Primobius is targeting commencement of 10tpd commercial operation as principal in Germany during the MarQ 2022. Development decision on larger 50tpd plants in SepQ 22;
- Vanadium Recovery – sole funding evaluation studies for a 50:50 incorporated joint venture with Critical Metals Ltd to produce high-purity vanadium pentoxide from processing steelmaking 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; and
- ELi® Lithium Process - commercialising a proprietary process to produce lithium hydroxide from lithium chloride solutions (salar or rock) using electrolysis to avoid costly and carbon-intensive reagents used in the traditional chemical conversion. Technology 70:30% owned by NMT and Mineral Resources Limited. Bondalti Chemicals S.A is co-funding and piloting the process in Portugal. Development decision in SepQ 2023.

Upstream Mineral Extraction:

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

Figure 1 – *Location map of Neometals' Core Projects together with partner developments*

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DOWNSTREAM – MATERIALS PROCESSING

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. A demonstration scale trials commenced in DecQ 21 which will generate data for the Company's Feasibility Study.

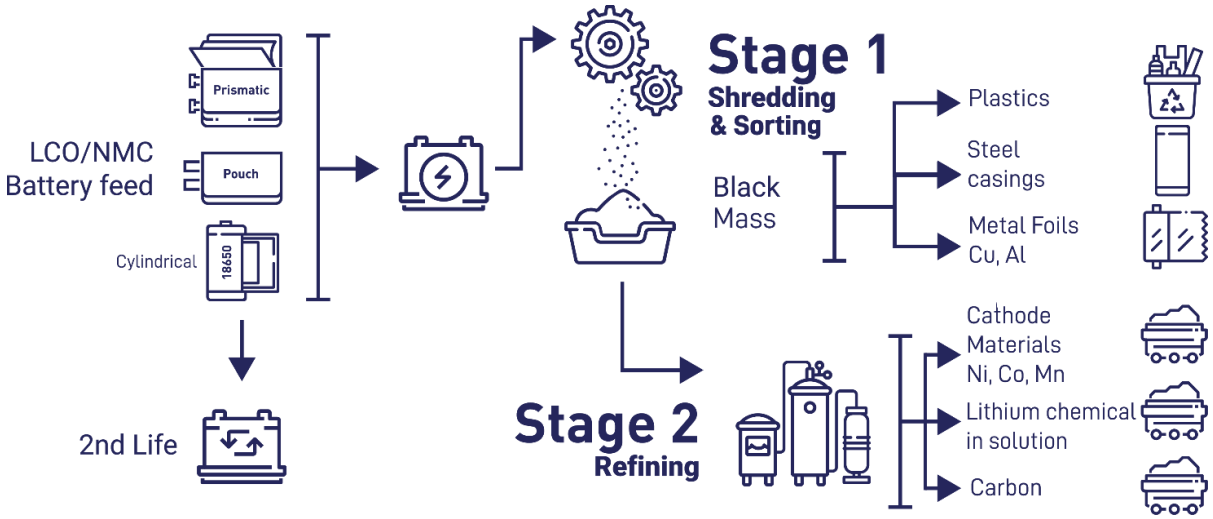

Figure 2 - *High level flowsheet showing the materials generated from 'Shredding and Beneficiation' and 'Refining' stages of the LIB Recycling Technology*

The LIB Recycling Technology, comprises two stages:

1. Shredding and beneficiation to physically separate components and remove metal casings, electrode foils and plastics from the active materials ("**Shredding Circuit**"); and
2. Leaching, purification and precipitation to produce predominantly refined chemical products via the hydrometallurgical processing facility ("**Refining Circuit**").

JV with SMS

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

Any positive financial investment decisions to construct commercial plants, will involve Neometals contributing its share of funding, technical and commercial know-how to the JV. SMS will perform 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 endeavours 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*).

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Project Activities

During the quarter, Primobius made strong progress towards technical and commercial validation of its sustainable LIB Recycling Technology.

*Demonstration Plant ("**DP**")*

The DP serves as a showcase for validating earlier pilot plant results and will generate evaluation products for potential customers, partners and off-takers. The fully-integrated continuous DP trials constitute the main evaluation activity required for the JV shareholders to consider an investment decision relating to commercial recycling plants with throughput capacity at 50tpd (~20ktpa). Significant progress was made during the quarter with:

- DP Shredding and Refining Circuits commissioned;
- DP Shredding Circuit trials successfully completed;
- Upgrades and commissioning of Shredding circuit equipment to facilitate 10tpd commercial shredding operations during 2022; and

The DP is located in a dedicated building leased from SMS group within its engineering competence centre at Hilchenbach. LIB feedstocks for the DP trials have been secured from electric vehicle and energy storage system manufacturers. The DP will continue to provide potential partners with the ability to verify Primobius' capability to safely, sustainably and ethically dispose of their hazardous LIBs.

Figure 3 - *Shredder and beneficiation processing EV cells*

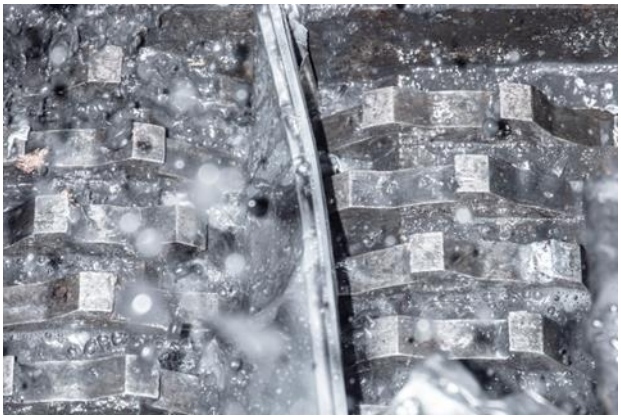

Figure 4 – *Shredding of EV cell*

Figure 5 – *Recovered Copper and Aluminium foil*

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Evaluation Studies

During the quarter, Neometals advanced its AACE Class 3 Engineering Cost ("**ECS**") and Feasibility Study ("**FS**") that will incorporate the data and learnings from the DP trials. Outcomes from the FS will inform the Primobius evaluation processes for 50tpd (~20,000tpa) LIB shredding and or hydrometallurgical refining plants ("**50tpd Plant/s**").

Primobius initially planned to evaluate the construction and operation of its first plant as principal, in Germany, as a single integrated shredding and refining operation. It has become apparent from commercial discussions that the market requires a network of shredding "spokes" in the short term. This coupled with the improved economics from refining at larger scale in a centralised "hub" has led Primobius to separate the engineering cost studies for the separate plants. This will enable the Class 3 ECS and detailed design phase for the shredding plants to be expedited and for SMS group to reach "product readiness", i.e. to offer plant supply contracts to Primobius, its potential JV partners and licencees. Concurrent Refinery Circuit test work will optimise and finalise the process flowsheet for the Class 3 ECS which remains on schedule for completion in June 2022.

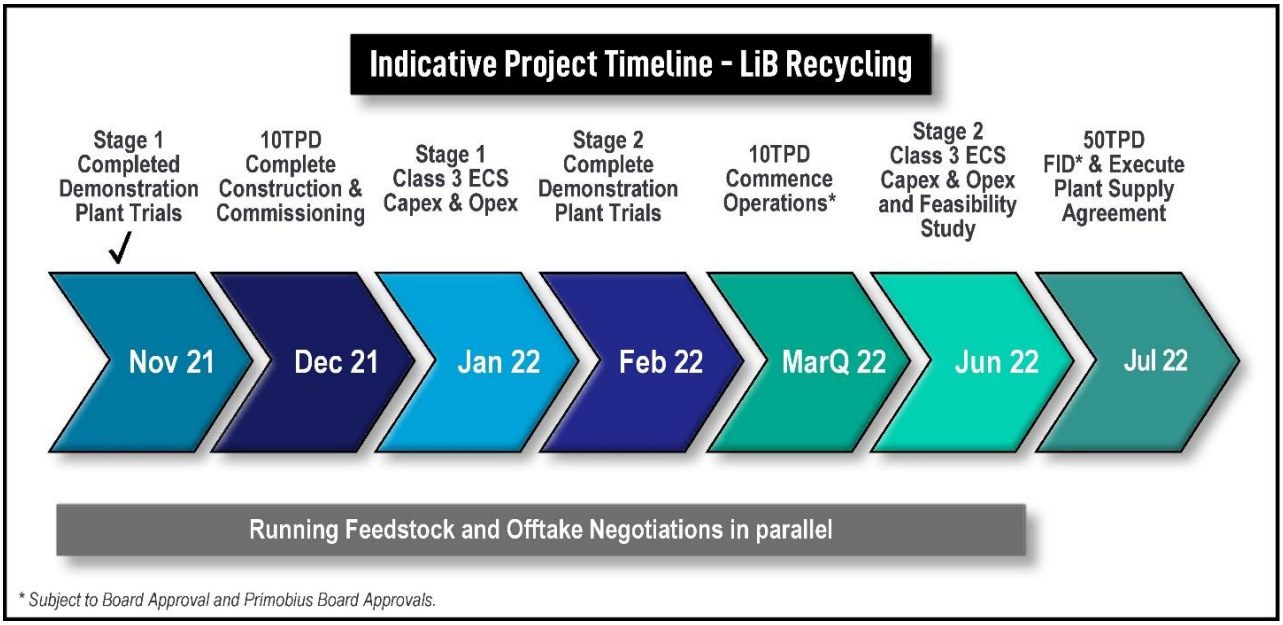

Figure 6 - *LIB Recycling Indicative Timeline*

Commercial Activities

Primobius as Principal

During the quarter, Primobius completed and commissioned modifications to the DP in order to accelerate commercialisation activities and establish market share. The Shredding Circuit capacity has been increased to enable the provision of small-scale commercial battery disposal services to European cell and EV makers in Hilchenbach. Primobius is awaiting the imminent receipt of a federal emission permit (BImSchG) which will enable the Shredding Plant to be operated at a rate of 10 tonnes per day of batteries. The disposal service will generate near-term revenue as well as prove the efficacy and operability of the Shredding Circuit at a scale that will be 1/5th of the commercial plants which are being evaluated at present.

Stelco Licence and Option

The Primobius commercial strategy is designed to foster multiple partnerships. The relationship with Stelco Holdings Inc ("**Stelco**") is the first example. During the quarter, Primobius progressed its MoU with Stelco into formal agreements for commercialising the LIB Recycling Technology in North America. Stelco is a wholly-owned subsidiary of Stelco Holdings Inc., a Toronto Stock Exchange-listed steelmaking company headquartered in Hamilton, Ontario.

Stelco and Primobius entered into a MoU earlier in the year to evaluate future joint LIB recycling operations (*for full details refer to Neometals ASX announcement entitled "Primobius Enters MOU for North America with Stelco to Construct a Plant for Extraction and Recycling of Battery Metals" released on 27th May 2021*).

The parties worked together towards outlining a significant North American LIB recycling business plan and have now entered into binding formal arrangements that allow Stelco to accelerate its sourcing of feedstock ahead of battery processing operations. Primobius has an option to secure equity ownership of the Stelco battery recycling special purpose vehicle ("**Stelco SPV**").

Figure 7 – *Map showing the proposed location of Stelco SPV's initial recycling's hub and spoke in relation to the electric vehicle and LIB ecosystem in the USA*

Specifically, Primobius has exclusively licenced its LIB recycling technology to Stelco SPV ("**Licence**") in the field of end-of-life vehicle battery processing in North America to enable Stelco to advance commercial LIB feedstock sourcing agreements and advance its construction and operating permit approvals processes. Under the option agreement ("**Option**"), Primobius can elect to acquire between 25% and 50% equity in the Stelco SPV by contributing its pro-rata share of Stelco SPV's sunk evaluation and development costs as a condition of exercise. If the Option is not exercised by Primobius, the Licence conditions award Stelco the exclusive rights to utilise the Recycling Technology in North America to recycle LIBs removed from end-of-life electric vehicles and Primobius will be entitled to a gross revenue royalty.

The formal agreements contemplate Stelco SPV evaluating a 50tpd (18,250 tpa) integrated Shredding ("**Spoke**") and Hydrometallurgical Refinery ("**Hub**") located at its Lake Erie Works in Ontario, Canada. Primobius is capable of supplying Stelco SPV a network of 50tpd Shredding plants across the licenced territory (Canada, USA, Mexico) to feed a larger scale, centralised hydrometallurgical refining Hub as and when required. The formal Licence and Option Agreements with Stelco represent a significant milestone for Primobius and its strategy to become the leading LIB recycler through the establishment of a second operating base, in North America. The Stelco SPV will help meet the need for multiple large recycling facilities to manage significant anticipated volumes from end-of-life electric vehicle batteries originating from the World's fastest growing cell making jurisdiction.

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Stelco is now in a position to mature its feedstock targeting activities with direct access to a sustainable industrial scale recycling solution supplied by Primobius with support from globally recognized engineers and plant builders, SMS.

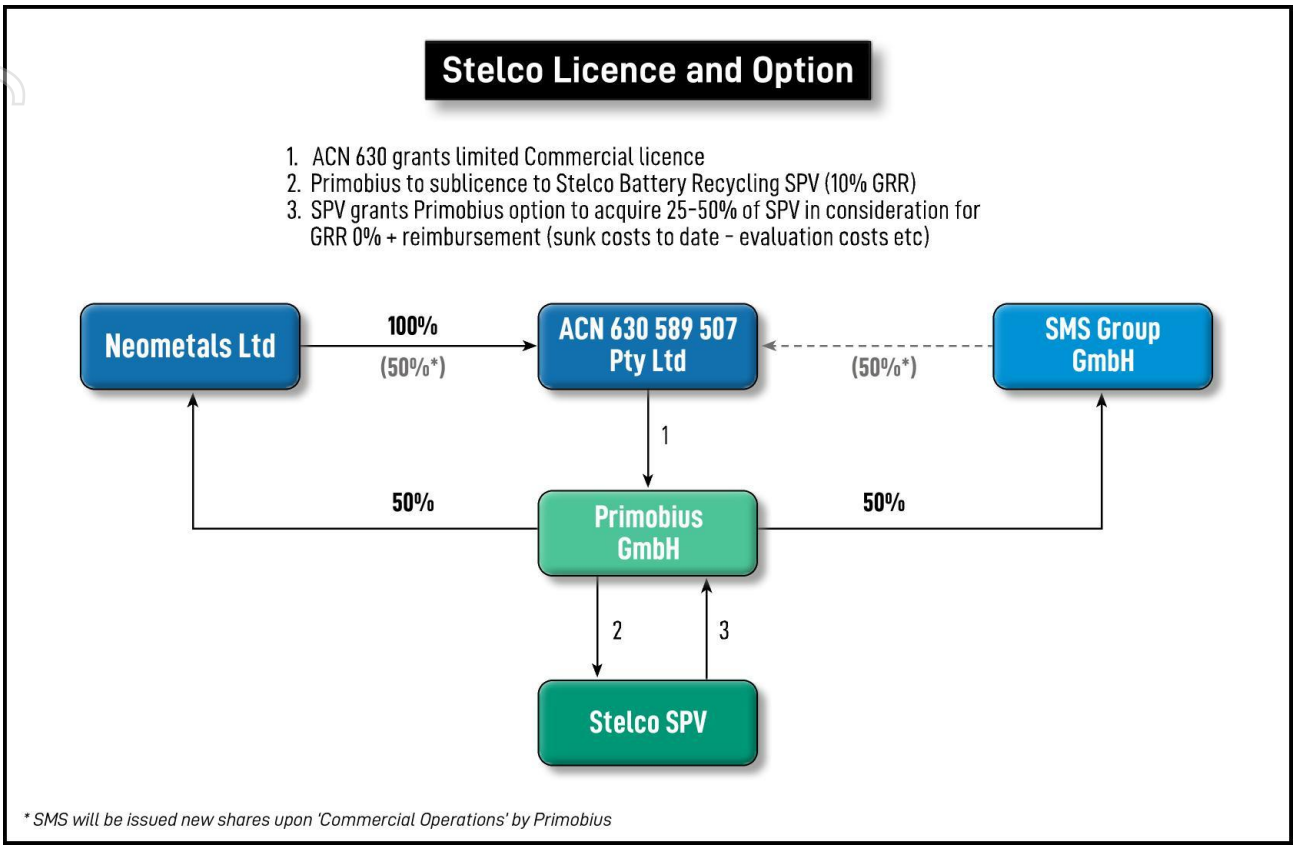

Figure 8 – *Image showing the License and Option relationship between the parties*

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

Neometals is exploring opportunities to commercially apply its sustainable proprietary vanadium recovery processing flowsheet on stockpiles of vanadium bearing steel manufacturing by-product. The project team is currently pursuing two distinct partnership opportunities in Scandinavia and has ambitions to build a pipeline of suitable feedstock sources to increase future production:

1. VRP 1 (SSAB feedstocks, Pori – Finland location); and
2. VRP 2 (H2GS feedstock, Boden – Sweden location).

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

- Access to very high-grade vanadium feedstocks without upstream mining costs/risk;
- Potentially robust economics (VRP1 AACE Class 4 (pre-feasibility) study ("**PFS**") outcomes highlighted a first quartile position on the cost curve (*for full details refer to ASX announcement entitled "Vanadium Recovery Project – Outstanding PFS Results" released on 4th May 2021*);
- Processing flowsheet utilises conventional equipment at atmospheric pressure mild temperatures and non-exotic materials of construction; and
- Likely very low or net zero greenhouse gas footprint given:
  a. the absence of mining and a processing route requiring the use and potential capture CO_2; and
  b. potentially saleable carbonate by-product which sequesters CO_2;

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Figure 9 - *Map showing potential Vanadium Recovery Plants (Pori (SSAB Feed) and Boden (H2GS Feed)) and SSAB Slag stockpiles*

The two current opportunities are outlined in further below:

VRP 1 (SSAB)

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.

Critical is responsible for advancing government and environmental approvals for the VRP and managing the SSAB and H2GS relationships.

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VRP 2 (H2GS)

In Q3 2021, Neometals announced its collaboration partner in the VRP, Critical (via its wholly owned subsidiary, Recycling Industries Scandinavia AB ("**RISAB**")), entered into a non-binding memorandum of understanding with H2 Green Steel AB ("**H2GS**")("**H2GS MoU**"). The H2GS MoU outlines an evaluation framework on a potential new source of vanadium bearing Slag that could underpin a second, larger vanadium production operation ("**VRP2**") capable of processing 400,000tpa of Slag. The H2GS MoU also outlines key commercial terms for a potential Slag supply agreement.

H2GS is a limited liability Swedish company planning a fully integrated and automated green steel manufacturing plant to be located at Boden in Northern Sweden (located 35km from Luleå). This opportunity compliments the existing agreement between Neometals and Critical for planned vanadium production in Finland to recycle Slag generated by SSAB ("**VRP1**"). The H2GS MoU is a significant opportunity as it represents another potential source of valuable feed and highlights the growth profile for application of the sustainable Neometals Vanadium Recovery Process.

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

Project Development Progress

Evaluation Studies

Being the most advanced opportunity, evaluation studies are currently focussed on VRP1. Positive Pre-feasibility study outcomes from 2021 supported the initiation of an AACE Class 3 Feasibility Study with expected accuracy of +/- 15% ("**FS"**).

Following a formal tendering process, the FS contract was awarded to Sweco Industry Oy ("**Sweco**"). Being a Nordic based engineering group, Sweco has significant domestic insights with project management activities to be run out of Pori and the study team split between Pori and Helsinki.

During the quarter, the VRP team developed an engineering process data package supporting the FS. The package was based on the results of an integrated continuous large scale Pilot Plant campaigns operating on the Slag in the 3rd quarter of 2021 ("**VRP1 Pilot**"). The Process Package and results from the VRP1 Pilot have been supplied to Sweco to support the process plant design

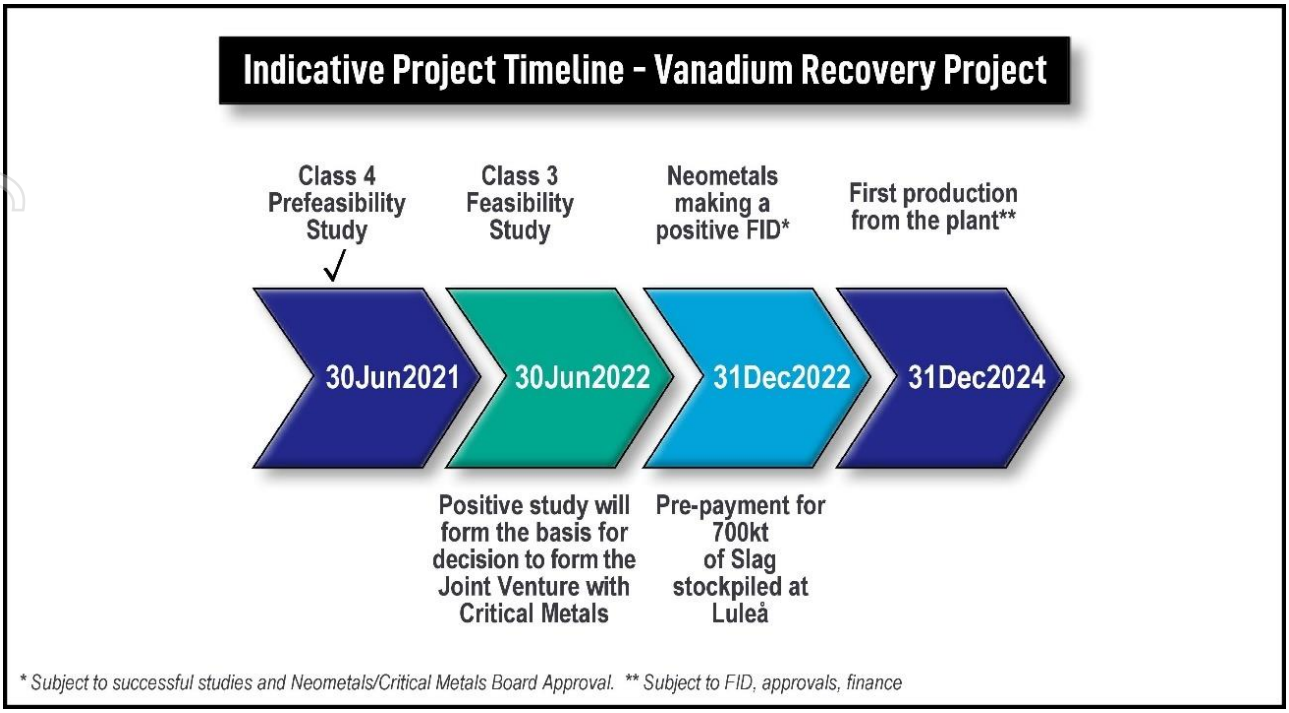

Figure 11 - *VRP Indicative Timeline*

Commercial Partnerships

The VRP1 Pilot significantly de-risked the project and generated samples for product evaluation which will enable the acceleration of commercial offtake discussions. Feedback on evaluation sample gives the Company confidence regarding process performance. Similar to the opportunity uncovered with H2GS, Neometals continues to pursue other growth opportunities where the VRP process could be applied.

Offtake

Multiple dialogues are maturing with potential offtake counterparties and a formal process will commence in Q2 2022 including sample delivery of chemicals generated in the VRP1 Pilot for evaluation by potential end users.

In addition to vanadium, several workstreams are targeting potential users of the by-products which will be generated via the VRP process. Of note, encouraging progress is being made on the stabilised slag material ("**SSM**") which is generated as part of the carbonate leach. This SSM is presently being investigated as a potentially useable material in various construction industry applications, as a paper filler and as a neutralizing agent for damaged soils.

CO2 capture and sequestration

Neometals technology relies upon carbon dioxide ("**CO_2**") as a reagent in the process. Neometals is currently evaluating a number of options for CO_2 supply and is also developing opportunities to qualify its SSM as a carbon removal media. Neometals technology seeks to utilise CO_2 captured from emission generators proximal to the VRP sites. As such, CO_2 is essentially neutralised via sequestration in the SSM and re-used in industrial applications. As a potential market participant in the voluntary carbon trading market, Neometals will investigate the steps required to register a methodology in order to generate valuable approved carbon offsets.

Permitting and Approvals

Permitting activities are being managed by Critical and its local team of consultants. The initial 'Environmental Impact Assessment' program is with the Finnish regulators with feedback expected Q1 2022. The separate 'Environmental Permit' was submitted to the authorities in late November 2021. Neometals provides ongoing support to Critical as it relates to environmental permitting activities.

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ELi® Lithium Process Project
(Neometals 70% / Mineral Resources 30%)

Neometals, through a 70% owned subsidiary, has developed a proprietary process to produce lithium hydroxide from lithium chloride solutions using electrolysis to avoid costly and carbon intensive reagents used by incumbents (ELi® Processing Technology ("**ELi®**")). The subsidiary, called Reed Advanced Materials Pty Ltd ("**RAM**"), is 30% owned by leading mining services provider Mineral Resources Limited (ASX: MIN) ("**MIN**" – via its wholly owned subsidiary Process Minerals International).

RAM developed the ELi® process from concept through to semi-pilot scale testing during the past 8 years with a view to having a competitive and reliable low carbon footprint method of large-scale lithium hydroxide and carbonate production to decarbonise lithium supply to the LIB supply chain. Sourcing lithium chemical units with a reduced CO_2 footprint is a high priority for the electric vehicle industry. ELi® has the potential to provide a sustainable long-term cost advantage for lithium chemical production with a reduced carbon footprint. The process has been tested on synthetic and actual lithium sources, both hard rock and brine. A number of sources from South American continental brines have generated promising technical results with strong potential economics highlighted in cost studies.

ELi® development aims include:

- Building sustainable long-term cost advantage for lithium hydroxide and lithium hydroxide production;
- Adapting conventional chlor-alkali process to produce high-purity lithium hydroxide as primary product with flexibility to produce high purity lithium carbonate at low additional cost;
- Reducing carbon footprint from processing at source with renewable electricity;
- Minimising use (and transport) of high manufacturing carbon footprint reagents; and
- Commercialise in Portugal in cooperation with Bondalti, and elsewhere as principal or with other partners, and generate revenue from either toll processing of lithium raw materials, sale of lithium chemicals and securing royalties from technology licensing arrangements

Technical Work to Date

ELi® is a process for purifying an aqueous lithium chloride solution to produce lithium hydroxide in conventional chlor-alkali (electrolysis) cells. ELi® uses commercially available chlor-alkali and purification process equipment and has been tested for reliability in 100 and 200hr duration continuous mini-pilot scale trials. The process has been tested on synthetic and actual lithium sources, both hard rock and brine. A pre-feasibility study was completed in 2012 and a feasibility study for the application of the ELi® technology in a Malaysian plant was completed in 2016 (*for further details see Neometals announcement titled "Positive Lithium Downstream Processing Feasibility Results" dated 11th July 2016*). Under the assumptions for both studies, the ELi® project was shown to be technically feasible and economically viable. The project and intellectual property surrounding it have been maintained and for a period ELi® has required an industrial partner to build pilot facilities and test the process under real world conditions.

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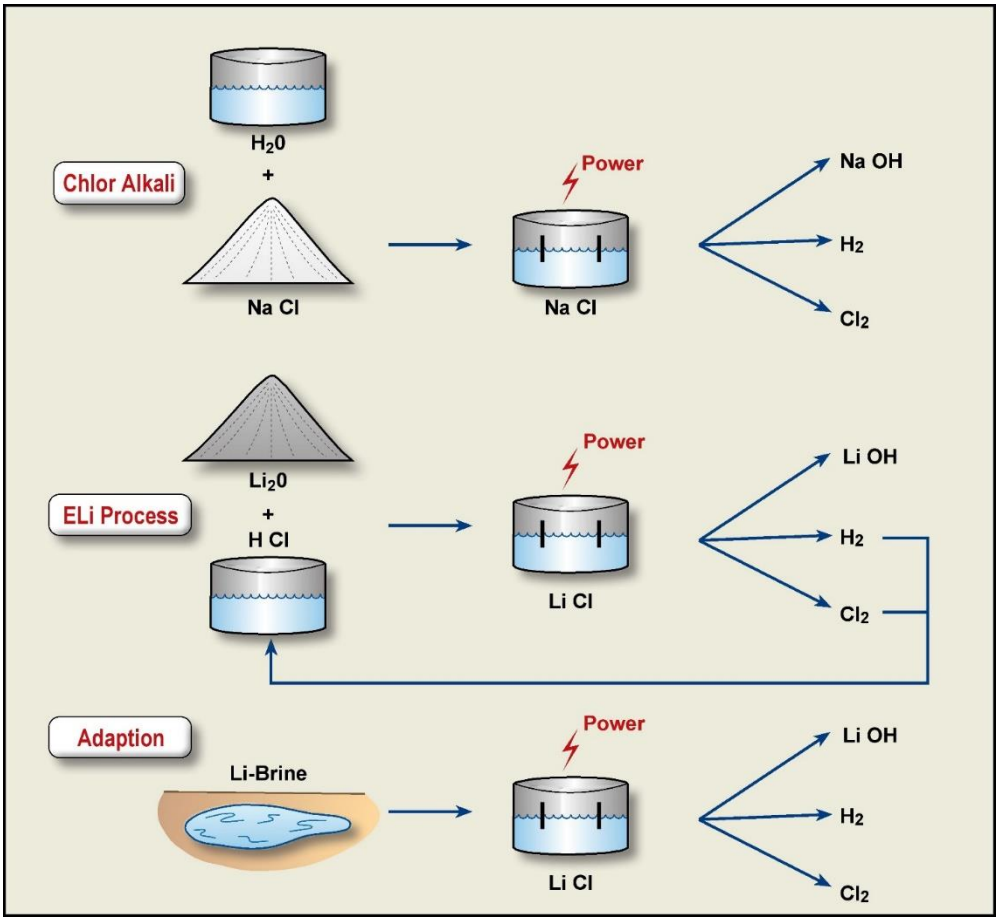

Figure 12 - *Schematic showing the similarities between Traditional Chlor-Alkali (Sodium Salt) electrolysis and ELi's Lithium Salt electrolysis and the ELi's adaption to directly convert salar lithium feedstocks into lithium hydroxide.*

Cooperation Agreement with Bondalti

During the quarter, RAM entered into a binding Co-operation Agreement ("**Co-operation**") with Portugal's largest chemical producer Bondalti Chemicals, S.A. ("**Bondalti**").

The Co-operation contemplates the co-funding of certain evaluation activities required for a decision to form a 50:50 incorporated joint venture ("**JVCo**") to construct and operate a lithium refinery ("**Refinery**") at Bondalti's extensive chlor-alkali operations in Estarreja, Portugal. The evaluation activities will include the construction and operation of a pilot plant in Portugal and completion of an AACE Class 2 Front End Engineering and Design Study ("**FEED Study**"). Completion is targeted for 30 June 2023 at a shared cost of approximately US$4 million. Under the Co-operation RAM and Bondalti have established a Steering Committee with equal representation from both parties to oversee the conduct of the evaluation activities and establishes a framework of terms for JVCo formation.

The proposed Refinery will be the first commercial operation to use RAM's ELi® Process, which has successfully produced battery-quality lithium hydroxide from operating spodumene and brine operations. This Co-operation is a significant step towards ELi® commercialisation with an industry-leading partner that operates similar equipment for producing sodium hydroxide at industrial scale. The technology, which radically reduces the requirement for (and transport of) reagents represents the opportunity for a step change in environmental sustainability, operating and capital costs for both spodumene and brine lithium projects. ELi® feedstock flexibility enables domestic production of lithium chemicals from the conversion of both European hard rock and imported brine concentrates ensuring an ethical and resilient local lithium supply chain for the EV battery industry.

Activities Undertaken During the Quarter

During the quarter, Neometals engaged Primero to complete a full independent process review and upgrade of the process mass balance model. Additionally, Neometals has recommend to Bondalti the areas of focus for the future test work during the pilot program.

Next Steps / Timeline

In the coming quarter Neometals aims to complete the following activities:

- SysCAD model to be updated for specific Brine feed for the Bondalti project
- Primero to develop PDC with focus on Bondalti project.
- Engage contractors for pilot tests

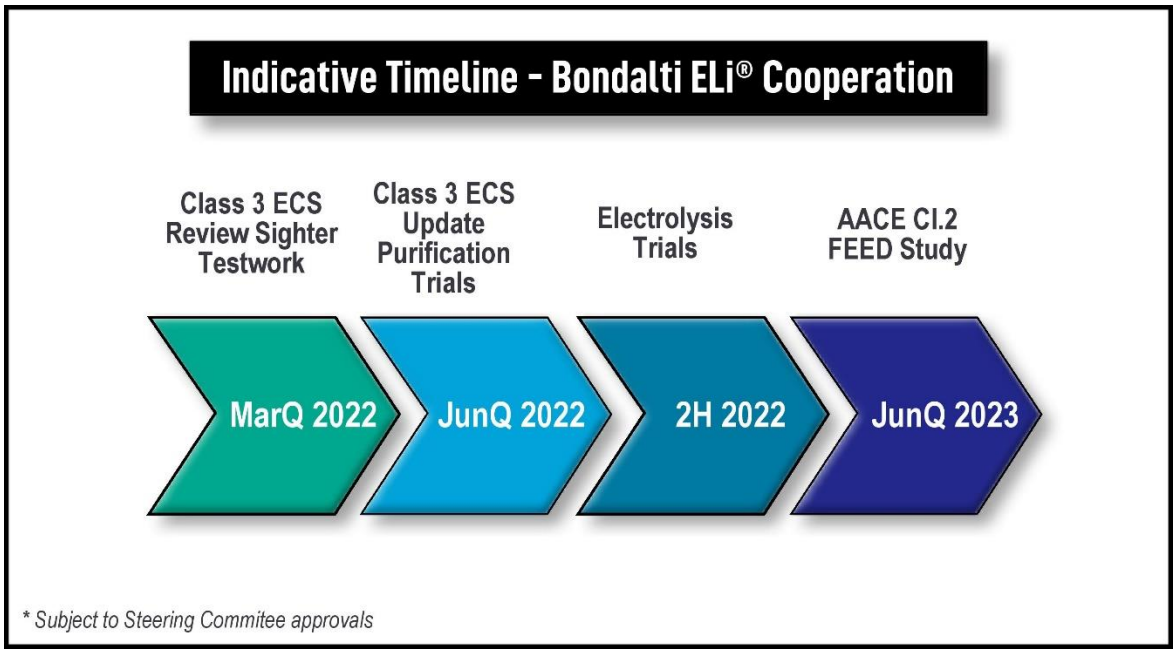

Figure 13 – *Bondalti Indicative Timeline*

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UPSTREAM – MINERAL EXTRACTION

Barrambie Titanium/Vanadium Project
(Neometals 100%)

The Barrambie Vanadium and Titanium Project in Western Australia ("**Barrambie**") is one of the largest vanadiferous-titanomagnetite ("**VTM**") Mineral Resources globally (280.1Mt at 9.18% TiO_2 and 0.44% V_2O_5)*, containing the world's second highest-grade hard rock titanium Mineral Resource (53.6Mt at 21.17% TiO_2 and 0.63% V_2O_5)* and high-grade vanadium resource (64.9Mt at 0.82% V_2O_5 and 16.9% TiO_2) 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_2O_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_2O_5 Resource (at 0.5% V_2O_5 cut-off)[2]

	Tonnes (M)	TiO_2 (%)	V_2O_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_2O_5 (%)
Indicated	39.3	21.18	0.65
Inferred	14.3	21.15	0.58
Total	53.6	21.17	0.63

Refer to Neometals ASX release dated 17 April 2018 titled "Updated Mineral Resource Estimate"

[1] Based on Cut-off grades of ≥0% TiO_2 or ≥2% V_2O_5
[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

Barrambie is located approximately 80km north-west of Sandstone in Western Australia and the Mineral Resource is secured under a granted mining lease. 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**"). Notwithstanding that the IMUMR MoU outlines a potential pathway towards a 50:50 operating joint venture to bring Barrambie into production (*for full details refer to ASX announcement entitled "MoU for JV to develop Barrambie" released on 4th October 2019*), it should be noted that IMUMR has a Chinese national mandate that includes development of upstream supply chains for industries of strategic relevance to China. Specifically, IMUMR will have the right, subject to Neometals approval, to assign its interests under the MoU to a commercial Chinese chemical processing partner.

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In addition to the relationship with IMUMR, Neometals also has a memorandum of understanding with Jiuxing Titanium Materials (Liaonging) Co. Ltd ("**Jiuxing MoU**") ("**Jiuxing**") (*for full details refer to ASX announcement entitled "Barrambie - MOU for Cornerstone 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* contemplates a path to a formal offtake agreement where Neometals supplies a mixed gravity concentrate or separate ilmenite and iron vanadium concentrate from Barrambie to Jiuxing. Specifically, the 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. Following satisfactory completion of testing and technical due diligence, the Jiuxing MoU contemplates the parties negotiating and entering into a binding formal offtake agreement for the supply of 800,000 dtpa of mixed gravity concentrate or 500,000 dtpa of ilmenite and 275,000 dtpa of iron-vanadium concentrate, on a take-or-pay basis for a period of 5 years from first production. If executed, it will potentially be the industry's largest individual offtake agreement.

The current business plan contemplates conventional open-cut mining, comminution and gravity concentration on site at Barrambie with a mixed titanium/vanadium/iron concentrate product being shipped to China for further processing.

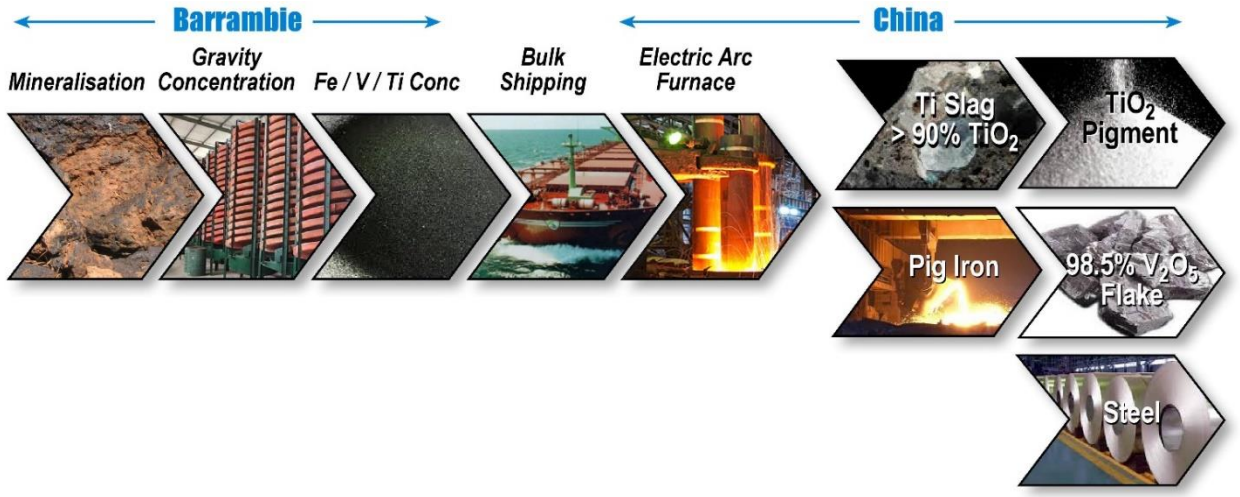

Figure 14– *Image showing potential for downstream processing of a Barrambie mixed gravity concentrate by smelting into separate ilmenite (titanium) and vanadium rich magnetite (iron) products*

Project Development Activities

Pilot Trial and Offtake

Historical pilot trials outcomes established that a simple Barrambie gravity concentrate can likely be roasted and separated into two 'upgraded' high-quality saleable products (ilmenite and iron/vanadium concentrates). This processing path supports Neometals' goal to develop Barrambie as a capital-light concentrate operation.

During the quarter, Neometals completed the construction of, and commissioned a pilot beneficiation plant at the former Menzies State Battery to prepare and despatch approximately 150t of gravity concentrates to China pursuant to the Jiuxing MoU. Jiuxing will run validation trials on 100 tonnes of material using its commercial titanium smelters as a final stage of offtake due diligence. The remaining concentrate will be used to advance evaluation by other potential third-party off-takers.

**The Jiuxing MoU is a memorandum of understanding to allow Jiuxing to conduct large scale test work and negotiate a binding offtake agreement. There is no guarantee that any binding formal agreement will result from the cooperation under the Jiuxing MoU or that any binding formal agreement will reflect the key commercial terms set out in the MOU given that these arrangements are subject to the testing and evaluation work to be completed under the Jiuxing MOU. This Jiuxing MoU is effective for 24 months*

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Figure 15– *Overview of the Beneficiation Plant*

Jiuxing and Neometals extended the term of the Jiuxing MoU and key milestone dates to reflect a more conservative and achievable timeline and are targeting execution of binding formal offtake agreements in October 2022. In parallel, evaluation activities are focussed on the completion of the PFS which is on schedule for completion in Q1 2022. These studies will provide a basis for the evaluation and negotiation of proposals for a complete mine-to-port solution under a 'build-own-operate' style arrangement for a mining and gravity concentration operation at Barrambie for export out of Geraldton. This is the same approach that was successfully adopted by Neometals and its partners to develop the Mt Marion Lithium Project in 2015.

Irrespective of whether Neometals supplies its offtake partners with a mixed gravity concentrate or separate ilmenite and iron vanadium concentrates from Barrambie, the purchasers will likely target contained ilmenite in a smelting process to produce a chloride-grade titanium slag as well as an iron vanadium product. Titanium slag is an intermediate product used 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.

Commercial

The Neometals Barrambie contractor engagement process continued during the quarter with leading service providers conducting due diligence to deliver proposals for the provision of a complete mine-to-port solution under a 'build-own-operate' style arrangement. Contractors have been engaged and are delivering a AACE Class 4 Engineering Cost Study ("**ECS**") that will precede the Barrambie Pre-feasibility Study ("**PFS**").

The Barrambie PFS will consider a capital light Australian mining and beneficiation operation with Chinese refining activities. The Barrambie PFS exercise will form a large component of the due diligence required by the successful 'build-own-operate' partner. This development model was used successfully by Neometals and its partners to advance 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 final equity position in the project in 2019 and its offtake right in 2021).

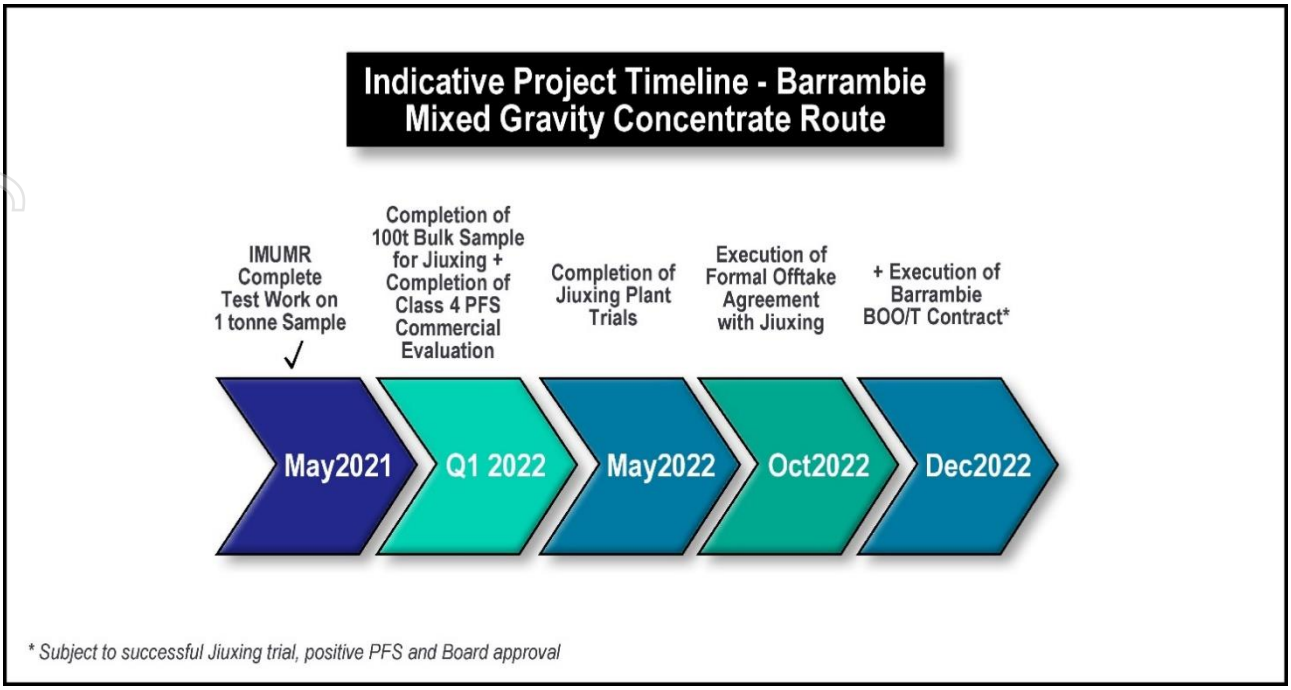

Figure 16 – *Barrambie Indicative Timeline*

CORPORATE

Commercial / Corporate

Neometals continues to make strong corporate progress. Notably, during the quarter the Company issued its second ESG and Sustainability Report which highlights a maturing stance on ESG reporting and target setting. Positive Neometals project developments sit alongside the company's desire to transition to ever more sustainable economic, environmental and social practices.

Neometals continues to grow its team and has embarked on a dedicated evaluation of its human capital as well as associated systems and processes. Relating to this subject in the quarter:

- The Company announced the retirement from the Board of non-executive director Mr David Reed. David founded Neometals (previously Reed Resources Ltd) in 2001 as Executive Chairman and has been instrumental in the Company's success. Given Neometals' current robust market position and strength of board composition, David chose to step aside at this time in order to focus on his family and his extensive involvement in charitable endeavours; and
- The term of Neometals' executive services agreement with its Managing Director, Mr Christopher Reed, was extended until 30 June 2024.

Neometals continued activity during the quarter preparing for admission of its shares to trading on the AIM market of the London Stock Exchange ("**LSE**"). Subject to the required regulatory approvals from the LSE, including publication of an Admission Document, Neometals anticipates that it will be admitted to AIM during MarQ 22.

Financial

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

As at 31 December 2021 Neometals held 845,086,264 ordinary fully paid shares (~32.4% of the issued capital) in Hannans on an undiluted basis. At 31 December 2021, Hannans' shares closed at 4c implying a value of $33.8 million.

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

Neometals holds 19% 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 2021 totalled $10.2 million.

Finances (unaudited)

Cash and term deposits on hand as of 31 December 2021 totalled A$72.8 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 $47.9 million.

Related Party payments for the quarter outlined in the ASX Appendix 5B released contemporaneously at section 6.1 total $236,500 and are made up of Director fees and superannuation.

Issued Capital

The total number of shares on issue at 31 December 2021 was 548,376,396.

Authorised on behalf of Neometals by Christopher Reed, Managing Director

ENDS

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Compliance Statement

The information in this report that relates to Mineral Resource Estimates for the Barrambie Vanadium/Titanium Project is extracted from the ASX Announcement listed below, which is also available on the Company's website at www.neometals.com.au

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 form the original market announcements.

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APPENDIX 1: TENEMENT INTERESTS

As at 31 December 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
Jilbadji	E77/2809	100%	Pending
Queen Victoria Rocks	E15/1416	100%	Live

Changes in interests in mining tenements

Interests in mining tenements acquired or increased

Project Name	Licence Name	Acquired or Increased
n/a	n/a	n/a

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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