

## CRITICAL MINERALS COLLABORATION SIGNED WITH NEOMETALS

*Western Australian regional vanadium and titanium concentrate processing hub to unlock critical and battery mineral projects*

### KEY POINTS

- **AVL and ASX listed Neometals Ltd (ASX: NMT and AIM: NMT) have signed a Term Sheet to investigate opportunities for:**
  - **AVL to purchase and further process the co-product vanadium/iron concentrate generated from Neometals' Barrambie Project; and**
  - **AVL and Neometals to co-locate and/or share infrastructure near AVL's processing plant site.**
- **Significant vanadium, titanium and iron processing opportunities are expected to flow from the proposed collaboration.**
- **Development of AVL's Midwest regional concentrate processing hub is anticipated to help unlock critical and battery mineral projects in the region.**

Australian Vanadium Limited (ASX: AVL, "the Company" or "AVL") is pleased to announce that Neometals Ltd (ASX: NMT and AIM: NMT), through its wholly owned subsidiary Australian Titanium Pty Ltd (ATI), has signed a non-binding Term Sheet to explore opportunities for AVL to process co-product vanadium concentrate from Neometals' 100% owned Barrambie Project and to co-locate or share non-process infrastructure near AVL's proposed Tenindewa processing plant site.

Neometals recently announced the results of a pre-feasibility study (PFS) which assumes production of ilmenite as well as an iron/vanadium co-product.<sup>1</sup> Under the Term Sheet this co-product would be supplied to AVL for vanadium extraction.

Neometals' staged processing flowsheet will see a mixed gravity concentrate subject to further processing via a low temperature roast (LTR) to generate ilmenite and the separate iron/vanadium concentrate. The Term Sheet also sets out that the parties will work together to investigate

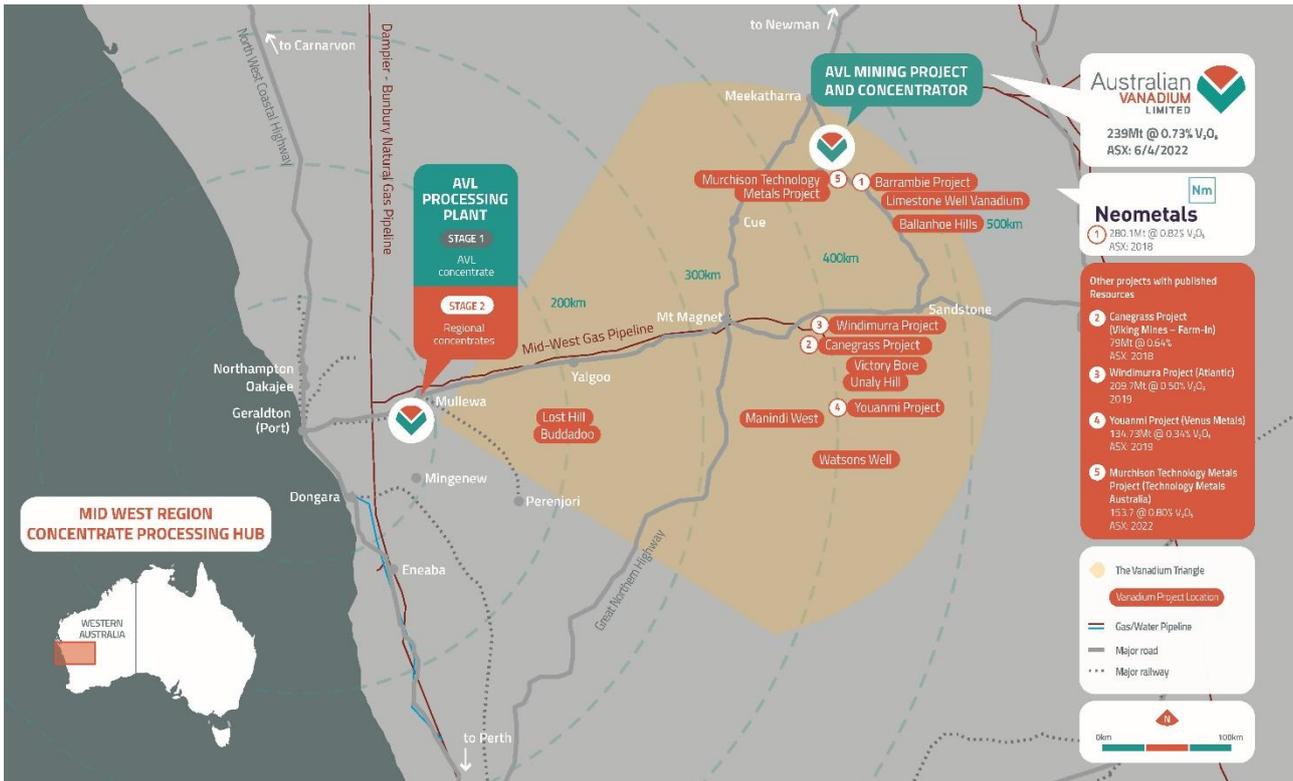
<sup>1</sup> See Neometals' ASX announcement dated 17<sup>th</sup> November 2022 'Robust Outcomes from Barrambie Titanium Project PFS'

opportunities for ATI to construct an LTR plant near AVL's processing plant site and to co-locate or share non-process infrastructure.

Managing Director, Vincent Algar comments, *"The Australian Vanadium Project and Barrambie Project are the most well understood and advanced vanadium titanium deposits in Australia. This collaboration will provide synergies, allowing the two projects to move forward even more confidently, using mutual understanding of the ores and processing. The Vanadium Triangle in the Midwest contains many remnants of the once massive Murchison Layered Intrusive Complex, a Bushveld Complex sized intrusion which hosts a number of potentially economic vanadium titanium magnetite (VTM) deposits. Being able to process our own concentrates and also offer processing infrastructure to other projects, will bring great benefit to the region and Australia as a whole and establish Australia as a cornerstone producer of vanadium products for green steel and energy storage applications. AVL welcomes discussions with other companies in the region that see benefit in the hub approach that AVL and Neometals are considering.*

*We have developed a good relationship with the team at Neometals and ATI and look forward to finalising the details of this opportunity with them. The projects are well aligned and the technical knowledge held between the two teams will generate further opportunities for cost optimisation for all parties."*

*Chris Reed, Neometals' Managing Director comments, "We welcome the opportunity with AVL to investigate co-location, infrastructure sharing and the potential to supply high-grade vanadium co-product from our proposed mineral separation plant. Barrambie is one of the highest-grade titanium deposits in the world and can produce both a chloride-grade ilmenite product and vanadium-iron co-product from low-temperature roasting and magnetic separation of Barrambie gravity concentrates."*



**Figure 1 Midwest Region Concentrate Processing Hub<sup>2</sup>**

The Barrambie titanium and vanadium project is located approximately 80km northwest of Sandstone in Western Australia (see Figure 1). It is a large VTM resource, containing high-grade hard rock titanium and vanadium resource subsets.<sup>3</sup> Barrambie has been the subject of a recent PFS, which considers the production of an ilmenite concentrate and an iron/vanadium concentrate co-product, ideal for processing by AVL.

The Australian Vanadium Project (“the Project”) is one of the most advanced vanadium projects being developed globally. It is based on a high-grade V-Ti-Fe Mineral Resource<sup>4</sup> located in the Murchison Province, approximately 43kms south of the mining town of Meekatharra in Western Australia and 740km north-east of Perth (see Figure 1).

Open cut mining and a crushing, milling and beneficiation plant will be located south of Meekatharra and a concentrate processing plant will be located near the port city of Geraldton. The Project will produce a vanadium concentrate at the resource site and complete production of a high purity vanadium for the steel, titanium master-alloy and energy storage markets, as well as an iron titanium (FeTi) coproduct for export through Geraldton, at its planned processing plant.

<sup>2</sup> See Appendix 2 for website locations of Resources listed in diagram

<sup>3</sup> See Neometals’ ASX announcement dated 17<sup>th</sup> April 2018 ‘Updated Barrambie Mineral Resource Estimate’

<sup>4</sup> See Appendix 1 for Mineral Resource details

## Key Terms

The Term Sheet is non-binding and has a term of 9 months, extendable in 6-month increments with mutual agreement, during which time AVL, Neometals and ATI will explore the potential to enter into a binding agreement or agreements. The parties will deal exclusively with each other in relation to this opportunity. Other opportunities which may emerge are open for exploration and the Term Sheet can be terminated by either party.

For further information, please contact:

**Vincent Algar, Managing Director**

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*This announcement has been produced in accordance with the Company's published continuous disclosure policy and has been approved by the Board.*

## ABOUT AUSTRALIAN VANADIUM LTD

AVL is a resource company focused on vanadium, seeking to offer investors a unique exposure to all aspects of the vanadium value chain – from resource through to steel and energy storage opportunities. AVL is advancing the development of its world-class Australian Vanadium Project at Gabanintha. The Australian Vanadium Project is one of the most advanced vanadium projects being developed globally, with 239Mt at 0.73% vanadium pentoxide ( $V_2O_5$ ), containing a high-grade zone of 95.6Mt at 1.07%  $V_2O_5$  and an Ore Reserve of 30.9Mt at 1.09%  $V_2O_5$  comprised of a Proved Reserve of 5Mt at 1.11%  $V_2O_5$  and a Probable Reserve of 20.4Mt at 1.07%  $V_2O_5$ , reported in compliance with the JORC Code 2012 (see ASX announcement dated 1<sup>st</sup> November 2021 ‘*Mineral Resource Update at the Australian Vanadium Project*’ and ASX announcement dated 6<sup>th</sup> April 2022 ‘*Bankable Feasibility Study for the Australian Vanadium Project*’).

VSUN Energy is AVL’s 100% owned renewable energy and energy storage subsidiary which is focused on developing the Australian market for vanadium redox flow batteries for long duration energy storage. VSUN Energy was set up in 2016 and has since become world-renowned for its VRFB expertise. AVL’s vertical integration strategy incorporates processing vanadium to high purity, manufacturing vanadium electrolyte and working with VSUN Energy as it develops projects based on renewable energy generation and VRFB energy storage.

## ABOUT NEOMETALS LTD

Neometals is an emerging, sustainable battery materials producer. The Company has developed a suite of green, battery materials processing technologies that reduce reliance on traditional mining and processing and support circular economic principles.

Neometals’ three core battery materials businesses, listed below, are commercialising these proprietary, low-cost, low-carbon process technologies:

- Lithium-ion Battery (“LIB”) Recycling (50% equity) – to produce nickel, cobalt and lithium from production scrap and end-of-life LIBs in an incorporated JV with leading global plant builder SMS group. The Primobius JV is operating a commercial disposal service at its 10tpd Shredding ‘Spoke’ in Germany and is the recycling technology partner to Mercedes Benz. Primobius’ first 50tpd operation, in partnership with Stelco in Canada, is expected to reach investment decision in H2 2023;
- Vanadium Recovery (earning 50% equity) – to produce high-purity vanadium pentoxide via processing of steelmaking by-product (“Slag”). Finalising evaluation studies on a 300,000tpa operation in Pori, Finland underpinned by a 10-year Slag supply agreement with leading Scandinavian steelmaker SSAB. Decision to form 50:50 JV with Critical Metals expected

Q12023 with project investment decision expected end June 2023. MOU with H2Green Steel for up to 4Mt of Slag underpins a potential second operation in Boden, Sweden; and

- Lithium Chemicals (earning 35% equity) – to produce battery-quality lithium hydroxide from brine and/or hard-rock feedstocks using patented ELi® electrolysis process owned by RAM (70% NMT, 30% Mineral Resources Ltd). Co-funding pilot plant and evaluation studies on a 20,000tpa operation in Estarreja, Portugal with Portugal’s largest chemical producer Bondalti Chemicals S.A. Decision to form 50:50 JV with Bondalti expected Mar 2023.

Additionally, Neometals also has an upstream mineral extraction business unit:

Barrambie Titanium and Vanadium Project (100% NMT) – one of the world’s highest-grade hard-rock titanium-vanadium deposits, working towards a development decision, with potential partner IMUMR and ilmenite off-taker, Jiuxing Titanium Minerals.

## APPENDIX 1

The Australian Vanadium Project – Mineral Resource estimate by domain and resource classification using a nominal 0.4% V<sub>2</sub>O<sub>5</sub> wireframed cut-off for low-grade and nominal 0.7% V<sub>2</sub>O<sub>5</sub> wireframed cut-off for high-grade (total numbers may not add up due to rounding).

Zone	Category	Mt	V <sub>2</sub> O <sub>5</sub> %	Fe %	TiO <sub>2</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI %
HG	Measured	11.3	1.14	43.8	13.0	9.2	7.5	3.7
	Indicated	27.5	1.10	45.4	12.5	8.5	6.5	2.9
	Inferred	56.8	1.04	44.6	11.9	9.4	6.9	3.3
	<b>Subtotal</b>	<b>95.6</b>	<b>1.07</b>	<b>44.7</b>	<b>12.2</b>	<b>9.1</b>	<b>6.8</b>	<b>3.2</b>
LG	Indicated	54.9	0.50	24.9	6.8	27.6	17.1	7.9
	Inferred	73.6	0.48	25.0	6.4	28.7	15.4	6.6
	<b>Subtotal</b>	<b>128.5</b>	<b>0.49</b>	<b>24.9</b>	<b>6.6</b>	<b>28.2</b>	<b>16.1</b>	<b>7.2</b>
Transported	Inferred	14.9	0.66	29.0	7.8	24.5	15.1	7.8
	<b>Subtotal</b>	<b>14.9</b>	<b>0.66</b>	<b>29.0</b>	<b>7.8</b>	<b>24.5</b>	<b>15.1</b>	<b>7.8</b>
Total	Measured	11.3	1.14	43.8	13.0	9.2	7.5	3.7
	Indicated	82.4	0.70	31.7	8.7	21.2	13.5	6.2
	Inferred	145.3	0.71	33.0	8.7	20.7	12.0	5.4
	<b>Subtotal</b>	<b>239.0</b>	<b>0.73</b>	<b>33.1</b>	<b>8.9</b>	<b>20.4</b>	<b>12.3</b>	<b>5.6</b>

The Australian Vanadium Project - Ore Reserve Statement as at April 2022, at a cut-off grade of 0.7% V<sub>2</sub>O<sub>5</sub>.

Ore Reserve	Mt	V <sub>2</sub> O <sub>5</sub> %	Fe%	TiO <sub>2</sub> %	SiO <sub>2</sub> %	LOI%	V <sub>2</sub> O <sub>5</sub> production kt	Ore Reserve	Mt
Proved	10.5	1.11	61.6	12.8	9.5	3.7	70.9	Waste	238.5
Probable	20.4	1.07	63.4	12.2	9.2	3.0	152.9	Total Material	269.4
<b>Total Ore</b>	<b>30.9</b>	<b>1.09</b>	<b>62.8</b>	<b>12.4</b>	<b>9.3</b>	<b>3.2</b>	<b>223.8</b>	Strip Ratio	7.7

## APPENDIX 2

Company	Project Name	Source	Website address
Neometals	Barrambie	ASX: 17/4/2018	<a href="https://wcsecure.weblink.com.au/pdf/NMT/01971759.pdf">https://wcsecure.weblink.com.au/pdf/NMT/01971759.pdf</a>
Viking Mines (Farm-In)	Canegrass	Flinders Mines ASX: 30/1/2018	<a href="https://flindersmines.com/wp-content/uploads/014_FMS_Canegrass_MRE-30-January-2018.pdf">https://flindersmines.com/wp-content/uploads/014_FMS_Canegrass_MRE-30-January-2018.pdf</a>
Atlantic	Windimurra	Website	<a href="https://atlanticptyltd.com.au/projects/windimurra/geology-reserves-resources">https://atlanticptyltd.com.au/projects/windimurra/geology-reserves-resources</a>
Venus Metals	Youanmi	ASX: 20/3/2019	<a href="https://www.venusmetals.com.au/investors-relations/announcements">https://www.venusmetals.com.au/investors-relations/announcements</a>
Technology Metals Australia	MTMP	ASX: 7/11/2022	<a href="https://www.investi.com.au/api/announcements/tmt/fad105df-454.pdf">https://www.investi.com.au/api/announcements/tmt/fad105df-454.pdf</a>

## ASX CHAPTER 5 COMPLIANCE AND CAUTIONARY AND FORWARD-LOOKING STATEMENTS

### **ASX Listing Rules 5.19 and 5.23**

#### **ASX Listing Rule 5.19**

The information in this announcement relating to production targets, or forecast financial information derived from a production target, is extracted from the announcement entitled 'Bankable Feasibility Study for the Australian Vanadium Project' released to the ASX on 6<sup>th</sup> April 2022 which is available on the Company's website [www.australianvanadium.com.au](http://www.australianvanadium.com.au).

The Company confirms that all material assumptions underpinning the production target, or the forecast financial information derived from a production target, in the original market announcement continue to apply and have not materially changed.

#### **ASX Listing Rule 5.23**

The information in this announcement relating to exploration results and mineral resource and ore reserve estimates for the Australian Vanadium Project is extracted from the announcement entitled 'Bankable Feasibility Study for the Australian Vanadium Project' released to the ASX on 6<sup>th</sup> April 2022 which is available on the Company's website [www.australianvanadium.com.au](http://www.australianvanadium.com.au).

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

### **Forward-Looking Statements**

This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of AVL and certain of the plans and objectives of AVL with respect to these items.

These forward-looking statements are not historical facts but rather are based on AVL's current expectations, estimates and projections about the industry in which AVL operates and its beliefs and assumptions.

Words such as "anticipates," "considers," "expects," "intends," "plans," "believes," "seeks," "estimates", "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the industry in which AVL operates.

These statements are not guarantees of future performance and are subject to known and unknown

risks, uncertainties, and other factors, some of which are beyond the control of AVL, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements. Such risks include, but are not limited to resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes. For more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings.

AVL cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of AVL only as of the date of this release.

The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made.

AVL will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.