

# QUARTERLY ACTIVITIES REPORT

*Period ending 31<sup>st</sup> March 2021*

## HIGHLIGHTS

- Submission of vanadium processing patent application.
- Federal Government manufacturing grant application for downstream vanadium processing submitted.
- Final pyrometallurgical results confirm world leading vanadium extraction of up to 94.9%.
- Co-operative Research Centre Project delivers key project milestones to support BFS.
- Environment Protection Authority referral submitted.
- EIS drilling grant funding awarded for Coates V-Ni-Cu-PGE-Au project SE of Chalice Mining's Julimar discovery
- Company set to complete externally reviewed Bankable Feasibility Study (BFS) focusing on dedicated vanadium pentoxide production for steel and battery industries.

## VSUN Energy

- Residential vanadium redox flow battery development underway with local design content.
- Increase in global VRFB uptake driving increased demand and new enquiries.

## Corporate

- Advisian appointed to undertake ESG gap analysis.
- \$973,000 R&D refund received.
- Cash at bank on 31<sup>st</sup> March 2021 was \$6.15 million.

## Management comment

During the March quarter, the Company confirmed its world-leading vanadium extraction achievement, as testwork at the Metso facilities in the US was completed. Establishing a processing flowsheet that can be scaled up successfully is a key method of de-risking the Australian Vanadium Project (the Project). Due to the quality of the Company's work, a patent application for vanadium processing was submitted to protect Intellectual Property that AVL has developed as part of its successful pilot results.

The Company’s environment, social and governance (ESG) practises and plans are a key focus as the Project is advanced towards production. AVL has appointed globally recognised consultancy Advisian to undertake an ESG gap analysis which will inform the Company’s roadmap to strengthen and consolidate this area of its business. The Company is committed to the development and implementation of sustainable mining operations reflecting the attributes required for modern supply chains.

The vanadium redox flow battery (VRFB) market continues to attract growing interest as the recognition of sustainable, long-duration energy storage solutions develops. Through AVL’s 100% owned subsidiary VSUN Energy, plans for the development of a residential VRFB for the Australian market are progressing, with Western Australian based CADDIS Group appointed to undertake design and prototyping work.

The key focus for the Company remains the completion of the BFS and consolidation of offtake agreements. Approvals progress during the quarter further support the aims of the Company in securing funding and commencing the Project’s delivery. AVL is focused on becoming a vanadium producer with fully integrated value addition in Western Australia.

Activities for the quarter ended 31<sup>st</sup> March 2021 for Australian Vanadium Limited (“AVL” or “the Company”) are as follows:

## THE AUSTRALIAN VANADIUM PROJECT



Figure 1 Project Location Map

## Submission of vanadium processing circuit patent application

See ASX announcement dated 12<sup>th</sup> April 2021 'AVL Lodges Patent Application for Vanadium Processing Circuit'

In April, AVL submitted a unique vanadium processing flowsheet provisional patent application. The application relates to a specific method of preparing high purity vanadium pentoxide and preparing a marketable titanium and iron coproduct from vanadium bearing titanomagnetite (VTM), in a cost effective and environmentally sustainable manner. AVL's unique combination of physical beneficiation, pyrometallurgical and hydrometallurgical steps combine to underline the patent application. The processing circuit is at the core of AVL's ongoing BFS engineering study as part of the Company's plans to develop the Project.

AVL's patent application is concerned with the recovery of high-purity vanadium from run-of-mine VTM ores using an updated and enhanced version of the salt-roast process.

Innovative aspects are particularly concerned with each of the following major stages:

- Physical beneficiation
- Pelletisation of a  $V_2O_5$  concentrate
- Drying and hardening of pellets
- Salt roasting of a pelletised concentrate
- Leaching of a roasted product via various options, including combined ball milling/leaching, resin-in-leach, combined drum/spiral leach and heap leaching
- Recovery of a high-grade vanadium containing solid prior to conversion to  $V_2O_5$
- Recovery of marketable titanium and iron containing coproduct(s)

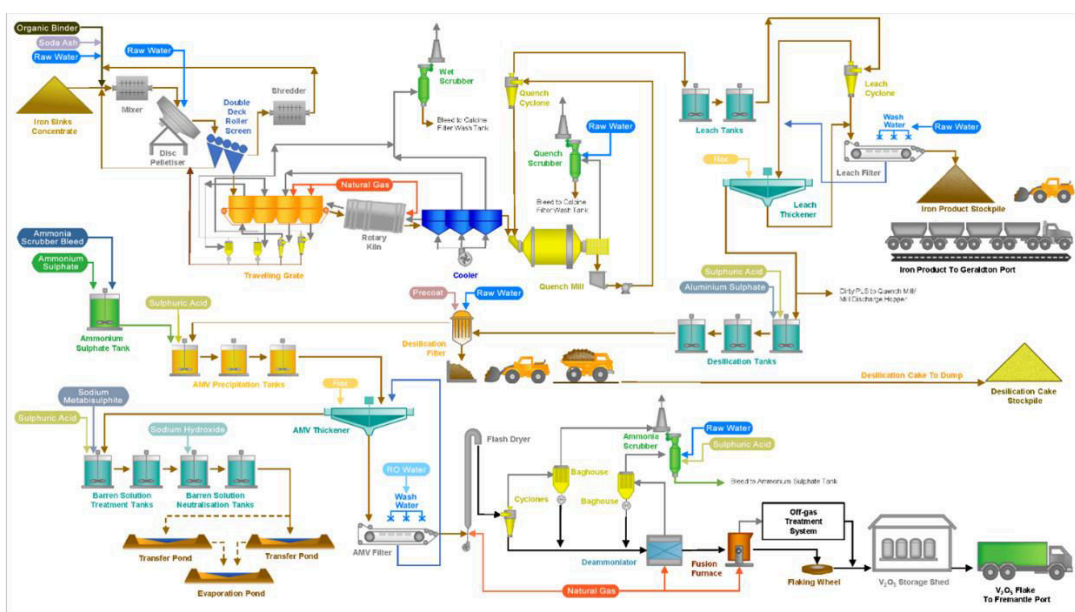


Figure 2 Processing Flowsheet Overview

## Application for Federal Government manufacturing grant

*See ASX announcement dated 7<sup>th</sup> April 2021 'AVL Lodges Application for Federal Government Manufacturing Grant'*

AVL has submitted an application for a matched funding grant under the Australian Government's Resources Technology and Critical Minerals Processing National Manufacturing Priority roadmap. The roadmap sets out plans for government support of manufacturing in Australia, with six key areas of focus. Downstream processing of critical minerals such as vanadium is one of the opportunities being encouraged through this grant funding. The total project cost is \$7.9M, with matched funding of \$3.95M being applied for by AVL.

The application is for matched funding to support AVL's plan to:

- Include a high-purity vanadium pentoxide processing circuit to produce battery, chemical and master-alloy grade from the Australian Vanadium Project.
- Build and operate a commercial vanadium electrolyte plant based in WA, to support the rollout of vanadium redox flow batteries (VRFBs) in Australia.
- Assemble and manufacture prototype/demonstration residential and Stand-Alone Power Systems (SPS) based on VRFB technology for distribution in Australian energy markets.

## World leading vanadium extraction

*See ASX announcement dated 10<sup>th</sup> March 2021 'Final Pyrometallurgy Results Confirm World Leading Vanadium Extraction'*

In March, the Company announced the final test results of the roast-leach pilot testwork that was undertaken at Metso's testing facilities in the US. The pilot scale testwork applied a well-established Grate Kiln technology which demonstrated energy efficiency and adaptability for vanadium roasting. Process optimisation by roasting a concentrate representative of average early years mine production, resulted in vanadium roast/leach extractions up to 94.9%. Roasting testwork conducted on concentrate representative of the average forecast for later years of processing produced optimum vanadium roast/leach extraction at 92.2%. Both results provided significant improvements compared to a traditional rotary kiln flowsheet which is typically applied in vanadium processing.

Completion of the pilot scale roasting program enables the BFS engineering design for the concentrate preparation and grate kiln areas to be updated.

The testwork was partly funded by the Australian Government's Cooperative Research Centre – Project scheme entitled: "Production of 99.95% Pure Vanadium Pentoxide and Vanadium Electrolytes".



*Figure 3 Kiln feed being prepared in pelletising pan*

### **CRC-P update**

*See ASX announcement dated 28<sup>th</sup> April 2021 ‘Co-operative Research Centre Vanadium Project Update’*

A Co-operative Research Centre – Projects grant of \$1.25 million was awarded to AVL by the Australian Government in February 2020<sup>1</sup>. This formed part of a \$4.9 million project to complement the BFS for the Project. Up to the end of February 2021, AVL has received \$823,370 in grant payments. Partner and in-kind AVL expenditures reported to 31 December 2020 and as forecast to 31 March 2021 are \$2,042,461.

Work conducted during the March quarter focused on activities which are directly contributing to the BFS. AVL’s CRC-P is organised into six sub-projects, or milestones.

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<sup>1</sup> See ASX announcement dated 10<sup>th</sup> February 2020 ‘AVL awarded \$1.25 million vanadium research and development grant’

Milestone 1 involved a pilot-scale optimisation of the salt-roast process for AVL's concentrate with vanadium extractions of up to 94.9% achieved<sup>2</sup>. The work was conducted at Metso's pyrometallurgical facilities in the USA and demonstrated the applicability of the Grate Kiln process for vanadium titano-magnetite (VTM) ores. In this process, a VTM concentrate is initially pelletised with reagents, allowing for improved mass transfer during roasting and substantially reducing overall energy requirements. The pellets are fed to a travelling grate furnace where they are progressively dried and heated, before directly entering the rotary kiln. The work demonstrated the effectiveness of established commercial heating profiles.

Milestone 2 is an ongoing study focusing on the hydrometallurgical aspects of producing a high purity vanadium product. The work has established the feasibility of the ammonium polyvanadate (APV) precipitation process over the ammonium metavanadate process (AMV). Although both routes are currently in operation at existing facilities, AVL has shown that APV offers a high purity, low-cost precipitation alternative that matches its goal of minimising waste products.

Milestone 3 is a benchscale investigation of the downstream production of vanadium electrolyte for batteries. This milestone will provide further data as a lead-in to AVL's proposed electrolyte pilot plant.

Milestone 4 concerns the recovery of vanadium from low-grade ore. This represents significant potential upside for the overall Project, by assessing ways to efficiently recover additional vanadium units hosted in the Project's low-grade Resources<sup>3</sup> which are currently excluded from the Project's processing schedule.

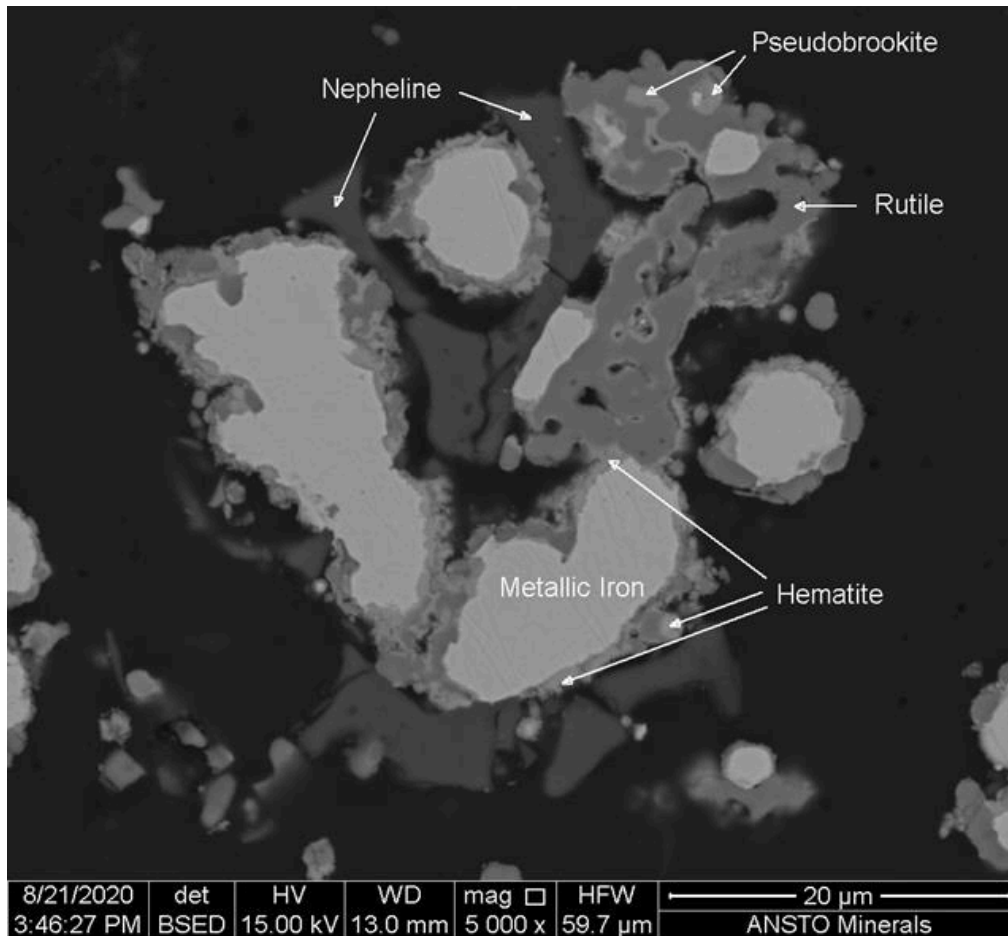
Milestone 5 is an exciting study of the viability of processes that add value to co-product and waste streams. The main co-product stream for AVL's process is the iron-titanium concentrate which remains after high-value vanadium extraction. The FeTi concentrate has an average grade of Fe 55%, TiO<sub>2</sub> 14% over the life of mine. Approximately 900,000 tonnes will be generated per year as per the updated PFS released by the Company<sup>4</sup> and is suitable for direct sale to blast furnace customers. Benchscale testwork as part of this CRC-P has shown that Fe grades of up to 66% can be achieved using coal as a reductant<sup>5</sup>. An example of the product generated is shown in Figure 4. Further work is underway to investigate alternative reductants such as green hydrogen and the subsequent separation of iron and titanium.

<sup>2</sup> See ASX announcement dated 10<sup>th</sup> March 2021 '*Final pyrometallurgy results confirm world leading vanadium extraction*'

<sup>3</sup> See Appendix 1, Mineral Resources, Zones LG 2-5, 104Mt at 0.49% V<sub>2</sub>O<sub>5</sub>, Zones TRANS 6-8, 15.6 Mt at 0.65% V<sub>2</sub>O<sub>5</sub>, Indicated and Inferred Resources

<sup>4</sup> See ASX announcement dated 22<sup>nd</sup> December 2020 '*Technical and Financial PFS Update*'

<sup>5</sup> See ASX announcement dated 20<sup>th</sup> August 2020 '*Iron-Titanium Co-Product Sale Opportunities to Differentiate AVL*'



**Figure 4. Scanning electron micrograph showing metallisation of iron after reduction roasting.**

Milestone 6 is an ongoing investigation of the change in the metallurgical response to variations in ore character. The key factors investigated are the degree of oxidation (classed as fresh, transitional and oxide ore), magnetic susceptibility, the grade of iron, vanadium and silica. It is anticipated that this work will aid in mine scheduling and the selection of ore to optimise mine to mill operation over the life of the Project.

#### **EPA referral lodged**

An Environmental Impact Assessment application was lodged with the Environmental Protection Authority (EPA) during the first quarter of 2021. The submission focuses on the mine site and concentration plant (CMB) only, which are to be located on the Gabanintha mine site. The EPA has set the level of referral as ‘assessment on referral information’, with a two-week public review. The Company’s environmental consultants will provide the additional requested information for the EPA to finalise its review.

#### **EIS grant funding awarded**

*See ASX announcement dated 23<sup>rd</sup> April 2021 ‘Grant Funding for Nickel-Copper-PGE-Gold Drilling at Coates Project’*

AVL has been successful in Round 23 of the Government of Western Australia's Exploration Incentive Scheme (EIS) program for the 2021/22 Financial Year. The program is designed to test for Ni-Cu-PGE-Au mineralisation at AVL's Coates Project, south east of the Julimar PGE discoveries in Western Australia.

The Company will receive grant funding of up to \$112,500 from the Department of Mines, Industry Regulation and Safety (DMIRS) as a contribution towards drilling costs at the Coates Ni-Cu-PGE-Au Project which is located north east of Perth.

Under the co-funded drilling program, the Company will drill eleven drill holes across the intrusion with Reverse Circulation (RC) to 60 - 75 metres depth, followed by diamond drilling of NQ core to maximum total hole depths of between 120 and 300 metres. Holes are planned to achieve full stratigraphic coverage of the gabbro sequence. Downhole ElectroMagnetics (EM) will be used to evaluate the rocks around the drill holes for conductors.

Recent soil sampling has been undertaken at the Coates Project as part of the ongoing program of evaluation. Soil sampling programs will continue to outline geochemical targets in tandem with the EIS program. The Company has drilling locations approved for the proposed program and the EIS drilling will commence when internal resources are available. The program timetable must be concluded and reported within one year of grant.

The program will include downhole EM surveys to identify nearby conductors. This technique has been highly successful in the identification of mineralised bodies in recent exploration in this region. Airborne or ground based EM surveys are also planned for the project, but are not part of the EIS project funding.

## VANADIUM IN ENERGY STORAGE

### Residential VRFB developments

*See ASX announcement dated 6<sup>th</sup> January 2021 'VSUN Energy Residential VRFB Development'*

In January, VSUN Energy received delivery of a grid-connect ready 5kW/30kWh residential VRFB from CEC VRFB in China. Local Western Australian design and consultancy group CADDIS Group was appointed to undertake work on the residential VRFB design and prototyping. Testing of the battery is underway at a facility in Bibra Lake in WA, with assistance from local electrical company CDI Electrics and an engineering student from Curtin University.

Initial concept designs have been received and the project is progressing well. It has now moved into the prototyping phase. See Figure 5 for an example of the proposed design.





**Figure 5 Concept design for the 5kW/30kWh residential VRFB**

VSUN Energy has also recently ordered a 5kW/30kWh VRFB from V-Flow Tech in Singapore for a regional residential customer in Western Australia<sup>6</sup> and a 5kW/30kWh VRFB from V-Flow Tech for the Beverley Caravan Park in Western Australia.

#### VRFB Market

During the quarter Brazilian vanadium producer Largo Resources announced that it had bought Vionx Energy's VRFB technology and launched Largo Clean Energy to grow the VRFB market.

Singaporean V-Flow Tech, a key partner to VSUN Energy and AVL, announced that it had installed a VRFB in a microgrid in Singapore for logistics and supply chain giant Vopak.

Korean VRFB manufacturer H2 deployed a 1.1MWh VRFB for EWP, one of six state-run generation companies in Korea.

Sumitomo's 2MW/8MWh VRFB which started operation in 2017 had its scope widened to add a microgrid set up to its existing role providing grid services, demonstrating the VRFB's capability as

<sup>6</sup> See ASX announcement dated 1<sup>st</sup> December 2020 'Vanadium Offtake, Electrolyte Supply and Battery Sales MOU'

a dual-use asset. Also in California, the California Energy Commission awarded \$5m for a hybrid energy storage demonstration project including VRFBs.

The US Department of Energy has committed up to \$20 million for research and development which will advance the manufacturability of mid-sized flow battery systems. System sizes of 10kWh through to 100kWh have been targeted.

US Vanadium successfully demonstrated the technical and economic feasibility of recycling vanadium electrolyte. This is one of the characteristics that makes the VRFB a truly sustainable energy storage medium.

Work is underway to use VRFBs to help shipping decarbonise. The tanks can provide ballast and the electrolyte can be pumped in as charged electrolyte at the port. This work is being undertaken through a group comprised of Canadian, Dutch and German companies.

Meanwhile, in India IIT Delhi has deployed VRFBs to provide charging stations for electronic devices. Indian VRFB manufacturer Delectrik Systems installed a VRFB in Dayalbagh, the city of the Taj Mahal, for a mixed land use farm and dairy.

China continues to lead the VRFB market growth story, through a 100MW/500MWh project with an initial installation of 40MW/200MWh to start construction by May this year and a 50MW per annum manufacturing facility, both announced by VRB Energy.

Spanish VRFB manufacturer E22 announced the installation of a 50kW/150kWh VRFB for the Technical University of Denmark. The project involved the refurbishment of a VRFB installed in 2008, with the electrolyte being conditioned, treated and reused in the new battery. The battery has a response time of 100ms.

## CORPORATE

### Appendix 5B – Quarterly cash flow report

The cash position of AVL as at 31<sup>st</sup> March 2021 was \$6.15 million.

The aggregate amount of payments to related parties and their associates included in the current quarter cash flows from operating activities were \$184k, comprising Directors' fees, staff salaries and superannuation.

During the quarter \$1k was expensed for exploration and evaluation which related to tenement rents and rates. Of the \$1,324k exploration and evaluation expenditure capitalised, \$152k was spent on activities related to the Cooperative Research Centre Project. A further \$1,113k was spent on the BFS update including engineering work (\$547k), environmental/hydrology work (\$180k), mining studies (\$85k), drilling (\$120k), testwork (\$23k) and geotechnical work (\$45k). The balance of exploration and evaluation expenditure comprised of other consultants and labour, and tenement expenses.

No production and development activities were undertaken during the quarter.

### ESG

As detailed in the Project overview, an Environmental Impact Assessment application was lodged during Q1 of 2021. The submission focuses on the mine site and concentration plant (CMB) only, which are to be located at the Gabanintha mine site. A separate industrial assessment will be lodged for the planned processing plant at Tenindewa.

AVL has a strong ESG focus and will be further developing its strategies throughout 2021, with the appointment of Advisian<sup>7</sup> to undertake a gap analysis being the first step.

The Company's green hydrogen strategy and use of renewable energy for mining operations contribute to the environmental strategies of the Company. In addition, the creation and support of renewable energy focused subsidiary VSUN Energy adds to AVL's positive environmental impact.

AVL continues to support the Stephen Michael Foundation in its endeavours to provide opportunities for the children of Meekatharra and the wider Mid-West community. The Company is also engaged with the Meekatharra Community Resource Centre and the Meekatharra community. In the Geraldton region, AVL's Community Relations Advisor is building relationships and establishing ways that AVL can make a difference in the community as the Company moves towards construction and production.

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<sup>7</sup> See ASX announcement dated 22<sup>nd</sup> March 2021 'ESG Consultant Appointed to Map Sustainability Pathway for AVL'

During the quarter, a 5-day heritage survey was undertaken at the Project to clear areas required for drilling and infrastructure building. The survey was managed by Big Island Research.

### **Market engagement**

As the Company moves rapidly towards completion of its BFS, a key activity for the executive team is the identification and conversion of offtake agreements for the vanadium and iron-titanium co-product streams from the Project.

Engagement is ongoing with existing vanadium MOU partners including US Vanadium (speciality vanadium chemical producer), V-Flow Tech (Singaporean VRFB company), CEC VRFB (Chinese VRFB company), CellCube (European VRFB company) and HBIS (Chinese steelmaker and the world's 2<sup>nd</sup> largest vanadium producer). The primary focus for AVL on vanadium offtake is high quality, strong balance sheet counterparties with a wide geographic focus. As the Company approaches technical and financial completion, the emphasis on securing offtake agreements on good terms for the Company become vital. AVL's strong technical focus on quality pilot work and key market relationships place the Company in a strong position relative to its competitors.

Market development activities on the Company's iron-titanium co-product have continued, with AVL's Beijing consultant facilitating fundamental technical analysis of the iron product with the Chinese CISRI organisation. These analyses are essential for steel mills to assess the feedstock and its behaviour. Presentations have commenced for steel mills in China, with a view to specific MOU and end user offtake agreements for the product. The iron-titanium co-product differentiates AVL from all other non-Chinese primary producers and developing projects. It is produced after the extraction of high value vanadium within Australia and is readily saleable by export from the nearby Port of Geraldton, 60km away from the planned processing plant. Sales of the co-product will add additional revenue streams to the Project and remove the need for indefinite storage of the material as a waste product.

### **Marketing**

During the March quarter AVL attended or presented at:

- RIU Explorers Conference in Fremantle (attended)
- Mining Journal Select Virtual Conference (presented)
- APAC 121 Mining Investor Virtual Forum (presented)
- Geraldton Economic Summit (presented)
- Vanitec Energy Storage Committee (attended)

AVL will be attending the following events during the June quarter:

- 100<sup>th</sup> Vanitec Meeting (attended)
- EMEA 121 Mining Investor Virtual Forum (presenting)

- Paydirt Battery Minerals Conference, Perth (presenting)
- Connecting Industry Conference WA, Perth (presenting)

The Company maintains a strong presence on social media platforms and through its mailing list, summarising Company and vanadium related news and developments. The Company is promoted under Australian Vanadium, AVL and VSUN Energy brand names.

For further information, please contact:

**Vincent Algar, Managing Director** +61 8 9321 5594

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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.*

## MINERAL RESOURCE

**Table 1 - The Australian Vanadium Project Mineral Resource Estimate at February 2020 by Domain and Resource Classification<sup>8</sup>**

Zone	Classification	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 10	Measured	10.1	1.14	43.9	13.0	9.2	7.5	3.7
	Indicated	25.1	1.10	45.4	12.5	8.5	6.5	2.9
	Inferred	52.7	1.04	44.6	11.9	9.4	6.9	3.3
	<b>Subtotal</b>	<b>87.9</b>	<b>1.06</b>	<b>44.7</b>	<b>12.2</b>	<b>9.2</b>	<b>6.8</b>	<b>3.2</b>
LG 2-5	Measured	-	-	-	-	-	-	-
	Indicated	44.5	0.51	25.0	6.8	27.4	17.0	7.9
	Inferred	60.3	0.48	25.2	6.5	28.5	15.3	6.7
	<b>Subtotal</b>	<b>104.8</b>	<b>0.49</b>	<b>25.1</b>	<b>6.6</b>	<b>28.0</b>	<b>16.1</b>	<b>7.2</b>
Transported 6-8	Measured	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-
	Inferred	15.6	0.65	28.4	7.7	24.9	15.4	7.9
	<b>Subtotal</b>	<b>15.6</b>	<b>0.65</b>	<b>28.4</b>	<b>7.7</b>	<b>24.9</b>	<b>15.4</b>	<b>7.9</b>
Total	Measured	10.1	1.14	43.9	13.0	9.2	7.5	3.7
	Indicated	69.6	0.72	32.4	8.9	20.6	13.2	6.1
	Inferred	128.5	0.73	33.5	8.8	20.2	11.9	5.4
	<b>Total</b>	<b>208.2</b>	<b>0.74</b>	<b>33.6</b>	<b>9.0</b>	<b>19.8</b>	<b>12.1</b>	<b>5.6</b>

**Table 2 Ore Reserve Statement as at December 2020, 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 <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	SiO <sub>2</sub> %	LOI%	V <sub>2</sub> O <sub>5</sub> production kt	Ore Reserve	Mt
Proved	9.8	1.08	59.9	12.4	8.7	3.5	63.2	Waste	244.5
Probable	22.4	1.04	61.7	11.8	8.3	2.8	158.9	Total Material	276.7
<b>Total Ore</b>	<b>32.1</b>	<b>1.05</b>	<b>61.2</b>	<b>12.0</b>	<b>8.4</b>	<b>3.0</b>	<b>222.1</b>	Strip Ratio	7.6

<sup>8</sup> 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).

**Table 3 - Tenement Schedule**

Tenement information as required by Listing Rule 5.3.3 for the quarter ended 31 March 2021.

Project	Location	Tenements	Economic Interest	Notes	Change in Quarter %
Western Australia	The Australian Vanadium Project	E51/843	100% Granted <sup>1</sup>		Nil
		E51/1534	100% Granted <sup>1</sup>		Nil
		E51/1685	100% Granted <sup>1</sup>		Nil
		E51/1694	100% Granted <sup>1</sup>		Nil
		E51/1695	100% Granted <sup>1</sup>		Nil
		E51/1899	100% Granted <sup>1</sup>		Nil
		E51/1943	100% Granted <sup>1</sup>		Nil
		E51/1944	100% Granted <sup>1</sup>		Nil
		P51/3073	100% Granted		Nil
		P51/3074	100% Granted		Nil
		P51/3075	100% Granted		Nil
		P51/3076	100% Granted		Nil
		M51/878	100% Granted		Nil
		MLA51/888	100% Granted <sup>1</sup>		Nil
		MLA51/890			100% <sup>1</sup> on Application
Western Australia	Nowthanna	M51/771	100% Granted		Nil
Western Australia	Peak Hill	E52/3349	0.75% NSR Production Royalty		Nil
Western Australia	Coates	E70-4924-I	100% Granted		Nil
		ELA70/5588	100% Granted		100%
		ELA70/5589			100% on Application
South Africa	Blesberg	(NC) 940 PR	10%		Nil

Note 1: Australian Vanadium Limited retains 100% rights in V/U/Co/Cr/Ti/Li/Ta/Mn & iron ore on The Australian Vanadium Project. Bryah Resources Limited holds the Mineral Rights for all minerals except V/U/Co/Cr/Ti/Li/Ta/Mn & iron ore only.

## FORWARD LOOKING STATEMENTS

Some of the statements contained in this report are forward looking statements. Forward looking statements include, but are not limited to, statements concerning estimates of tonnages, expected costs, statements relating to the continued advancement of Australian Vanadium Limited's projects and other statements that are not historical facts. When used in this report, and on other published information of Australian Vanadium Limited, the words such as 'aim', 'could', 'estimate', 'expect', 'intend', 'may', 'potential', 'should' and similar expressions are forward looking statements.

Although Australian Vanadium Limited believes that the expectations reflected in the forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that the actual results will be consistent with these forward-looking statements. Various factors could cause actual results to differ from these forward-looking statements including the potential that Australian Vanadium Limited's project may experience technical, geological, metallurgical and mechanical problems, changes in vanadium price and other risks not anticipated by Australian Vanadium Limited.

Australian Vanadium Limited is pleased to report this information in a fair and balanced way and believes that it has a reasonable basis for making the forward-looking statements in this report, including with respect to any mining of mineralised material, modifying factors, production targets and operating cost estimates.

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, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant 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.

## COMPETENT PERSON STATEMENT – EXPLORATION RESULTS AND TARGETS

The information in this report that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Mr Brian Davis (Consultant with Geologica Pty Ltd). Mr Davis is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Davis consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.



## COMPETENT PERSON STATEMENT — MINERAL RESOURCE ESTIMATION

The information in this announcement that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes, (Consultant with Trepanier Pty Ltd) and Mr Brian Davis (Consultant with Geologica Pty Ltd). Mr Barnes and Mr Davis are members of the Australasian Institute of Mining and Metallurgy (AusIMM) and Mr Davis is a member of the Australian Institute of Geoscientists, both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Barnes is the Competent Person for the estimation and Mr Davis is the Competent Person for the database, geological model and site visits. Mr Barnes and Mr Davis consent to the inclusion in this announcement of the matters based on their information in the form and context in which they appear.

## COMPETENT PERSON STATEMENT – METALLURGICAL RESULTS

The information in this announcement that relates to Metallurgical Results is based on information compiled by independent consulting metallurgist Brian McNab (CP. B.Sc Extractive Metallurgy), Mr McNab is a Member of AusIMM. Brian McNab is employed by Wood Mining and Metals. Mr McNab has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is undertaken, to qualify as a Competent Person as defined in the JORC 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr McNab consents to the inclusion in the announcement of the matters based on the information made available to him, in the form and context in which it appears.

## COMPETENT PERSON STATEMENT – ORE RESERVES

The technical information in this announcement that relates to the Ore Reserve estimate for the Project is based on information compiled by Mr Ross Cheyne, an independent consultant to AVL. Mr Cheyne is a Fellow of the Australasian Institute of Mining and Metallurgy. He is an employee and Director of Orelogy Mine Consulting Pty Ltd. Mr Cheyne has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a competent person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Cheyne consents to the inclusion in the announcement of the matters related to the Ore Reserve estimate in the form and context in which it appears.