

# QUARTERLY ACTIVITIES REPORT

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

## HIGHLIGHTS

### Australian Vanadium Project, Meekatharra, WA

- Total vanadium Mineral Resource updated to 239 million tonnes (Mt) at 0.73% V<sub>2</sub>O<sub>5</sub>.
- Combined Measured and Indicated high-grade vanadium resource increased to 38.8Mt at 1.11% V<sub>2</sub>O<sub>5</sub>
  - 11.3Mt at 1.14% V<sub>2</sub>O<sub>5</sub> Measured Resources
  - 27.5Mt at 1.10% V<sub>2</sub>O<sub>5</sub> Indicated Resources
- First Letter of Intent for iron titanium coproduct offtake sales signed with Chinese Steel producer.
- Progress underway at the Geraldton region processing plant site, including completion of water drilling and site rezoning applications.
- Bankable Feasibility Study progressing towards completion.

### Vanadium in Energy Storage

- MOU for offtake of vanadium pentoxide, vanadium electrolyte and battery sales signed with Spanish vanadium redox flow battery (VRFB) manufacturer E22.
- IGO's Nova Nickel Operation to trial VSUN Energy's VRFB-based standalone power system.
- Water Corporation to trial VRFB for water purification and pumping applications.
- Electric vehicle charging test and demonstration successfully conducted using VRFB with Tesla and Mini EVs.

### Coates Ni PGE Project, Northam District, WA

- Airborne electromagnetic surveys completed at Coates in preparation for drilling using pre-approved EIS (WA Government Exploration Incentive Scheme) funding.
- Three significant new conductors identified, including 1,900m long coherent bedrock anomaly corresponding with topographic low and magnetic high zones, factors considered highly conducive to further searches for Ni-PGE mineralisation based on regional activity
- Drilling as part of EIS and CSIRO Research project to commence H1 2022.

### Corporate

- Cash at bank on 31<sup>st</sup> December 2021 was \$5.79M.

## Management Comment

AVL is progressing towards new vanadium production at a key time globally for the metal. The highly capable and experienced vanadium production team is focused on moving the Australian Vanadium Project (the Project) towards final engineering validation, approval, funding and development.

The Company is currently finalising a Bankable Feasibility Study (BFS) with its consultants, for the Project mine and concentrator at Gabanintha and the strategically located Tenindewa vanadium processing plant. With final processing designs completed, the Company is navigating the current complex global supply chain through to the final engineering and cost estimation step.

The Project's recently updated Mineral Resource Estimate is being integrated into the detailed mine schedule, study feed modelling and financial modelling. Additional drilling for sterilisation work has been completed to gain a full understanding of the characteristics of the mining and waste storage facility areas. Later in 2022, additional drilling will take place to increase the mining reserves and resources of the Project in areas currently excluded from the 25-year life of mine design.

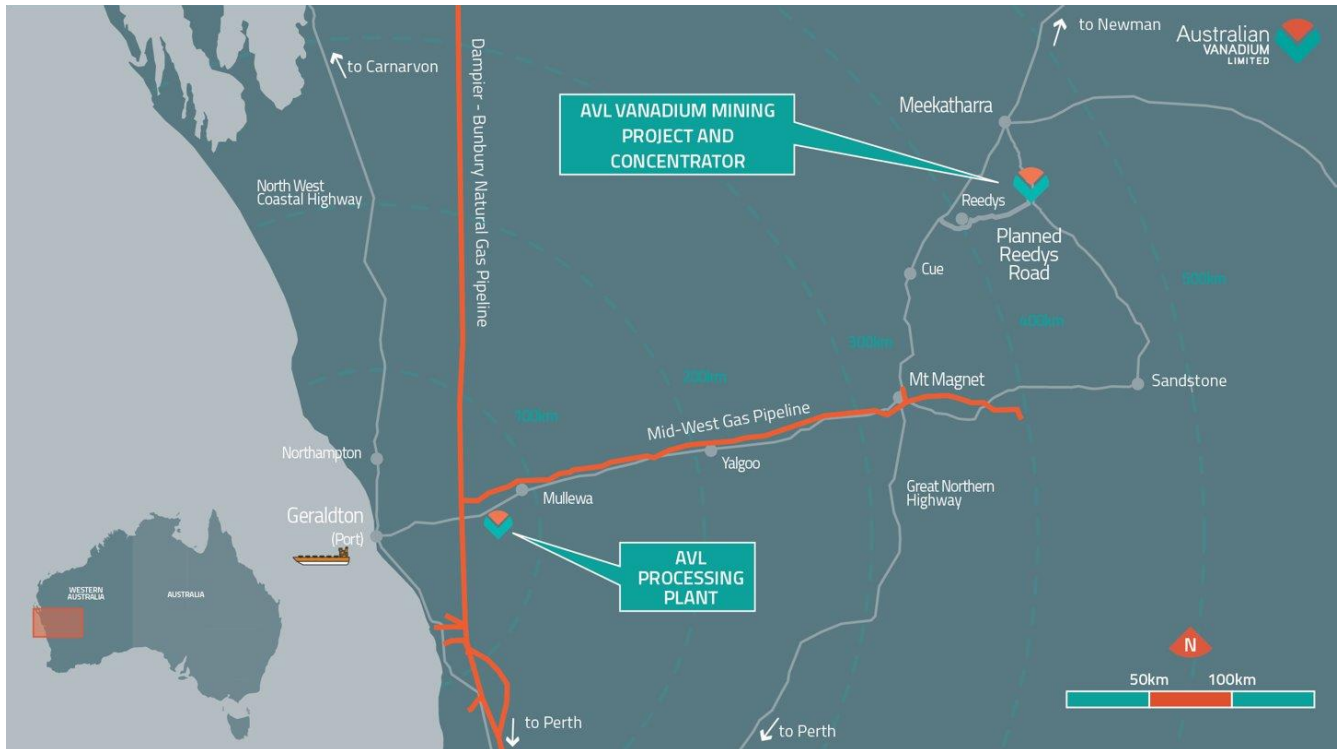
The vanadium redox flow battery (VRFB) market is showing exceptional signs of growth in 2022, with increased installations reported globally as the technology becomes more widely accepted. AVL, through its 100% owned subsidiary VSUN Energy, is a leader in Australian deployment and marketing of VRFBs, working with a range of global vendors. Exciting new agreements and demonstrations were reported during the quarter.

AVL continues to maintain a strong Environmental, Social and Corporate Governance (ESG) approach to its work. The meaningful integration of ESG standards and objectives into the Company's culture and business are critically important as it seeks to attract global project investors. The Company recently received an ESG gap analysis report from global consultancy Advisian, part of the Worley Group, to guide long term ESG performance implementation.



**Figure 1** Federal MP Patrick Gorman and AVL's MD Vincent Algar at EV charging trial

## THE AUSTRALIAN VANADIUM PROJECT



**Figure 2 Project Location Map in Western Australia**

The Project is an open pit mining and mineral processing project on a high-grade vanadium titanium iron (V-Ti-Fe) deposit in Western Australia. It is located in the Murchison Province, approximately 43kms south of the mining town of Meekatharra in Western Australia and 740km north-east of Perth, where the minesite and associated crushing, milling and beneficiation plant will be located. The processing plant will be located west of Mullewa in the City of Greater Geraldton, close to Geraldton Port, with beneficiated ore transported by road to the plant to be processed to final vanadium products.

The Project consists of 11 tenements covering approximately 260 sq km and is held 100% by Australian Vanadium Limited. Mining Lease M51/878 has been granted for a period of 21 years and covers approximately 70% of the Mineral Resource, with the balance of the Inferred Mineral Resource located on E51/843, owned 100% by AVL.

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

## Mineral Resource update brings total Resource to 239Mt at 0.73% V<sub>2</sub>O<sub>5</sub>

See ASX announcement dated 1<sup>st</sup> November 2021 'Mineral Resource Update at the Australian Vanadium Project'

The Company updated the Measured, Indicated and Inferred Mineral Resource contained within a massive magnetite high-grade (HG) horizon and overlying lower grade (LG) disseminated magnetite horizons for a total of 239 million tonnes (Mt) at 0.73% V<sub>2</sub>O<sub>5</sub>. This updated figure includes an 8.6% increase in the HG massive magnetite portion of the Mineral Resource from that previously reported in March 2020<sup>1</sup>. The Project economics are driven by the extraction and processing of the HG resources. See Table 1 for full details.

The revised Mineral Resource includes a geologically distinct, massive vanadium-bearing magnetite HG zone which is the focus of current economic studies. The Measured, Indicated and Inferred Mineral Resource estimate for this massive magnetite HG portion is 95.6Mt at 1.07% V<sub>2</sub>O<sub>5</sub>, which includes:

- Measured: 11.3Mt at 1.14% V<sub>2</sub>O<sub>5</sub>;
- Indicated: 27.5Mt at 1.10% V<sub>2</sub>O<sub>5</sub>; and
- Inferred: 56.8Mt at 1.04% V<sub>2</sub>O<sub>5</sub>.

Overall, the total Mineral Resource has increased by 30.8Mt (14.8%), as a result of additional studies and increased understanding of the density of rocks within the deposit. The deposit remains open at depth and if required in the future, there is potential to convert further Inferred Resources located along the Company's 11.5km of strike length to the Measured and Indicated categories (See Figure 3).

AVL is continuously seeking to improve its understanding of the Mineral Resource as it moves the Project towards production. Vanadium Titanium Magnetite deposits display a clear correlation between iron content and density. New information that was captured and analysed by AVL was used to upgrade and increase the vanadium resources at the Project. Density measurement and analysis is a critical and key component of mineral resource estimation and is used to de-risk mining and processing. As such, further understanding of density, geological and metallurgical parameters will be gained as the Project develops.

<sup>1</sup> See ASX announcement dated 5 March 2020, 'Total Vanadium Resource Rises to 208 Million Tonnes'



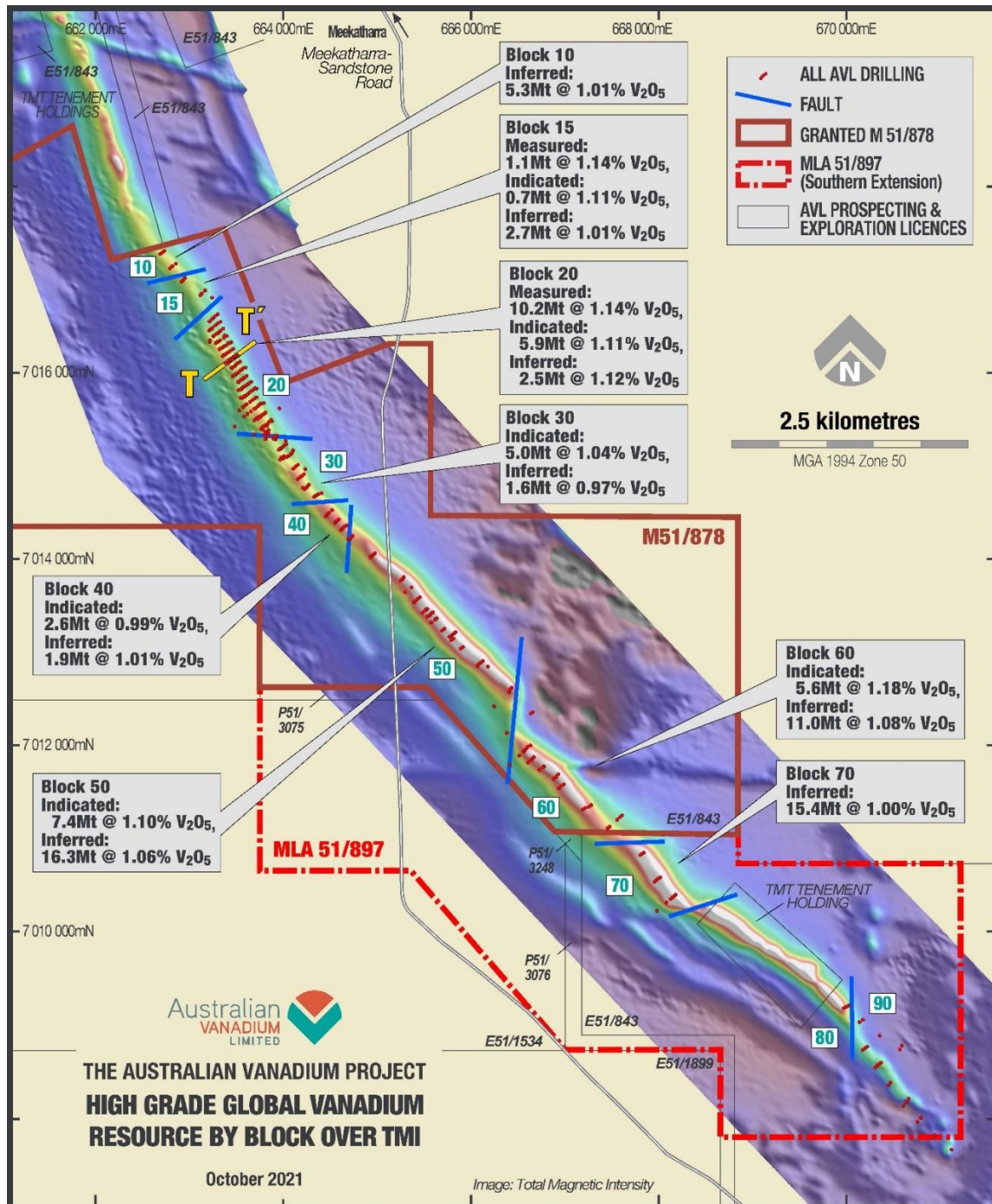


Figure 3 TMI of the Project and October 2021 high-grade Mineral Resource by fault block

## First Letter of Intent for iron titanium coproduct offtake sales signed

See ASX announcement dated 9<sup>th</sup> November 2021 'First Letter of Intent for Iron Titanium Coproduct Offtake Sales'

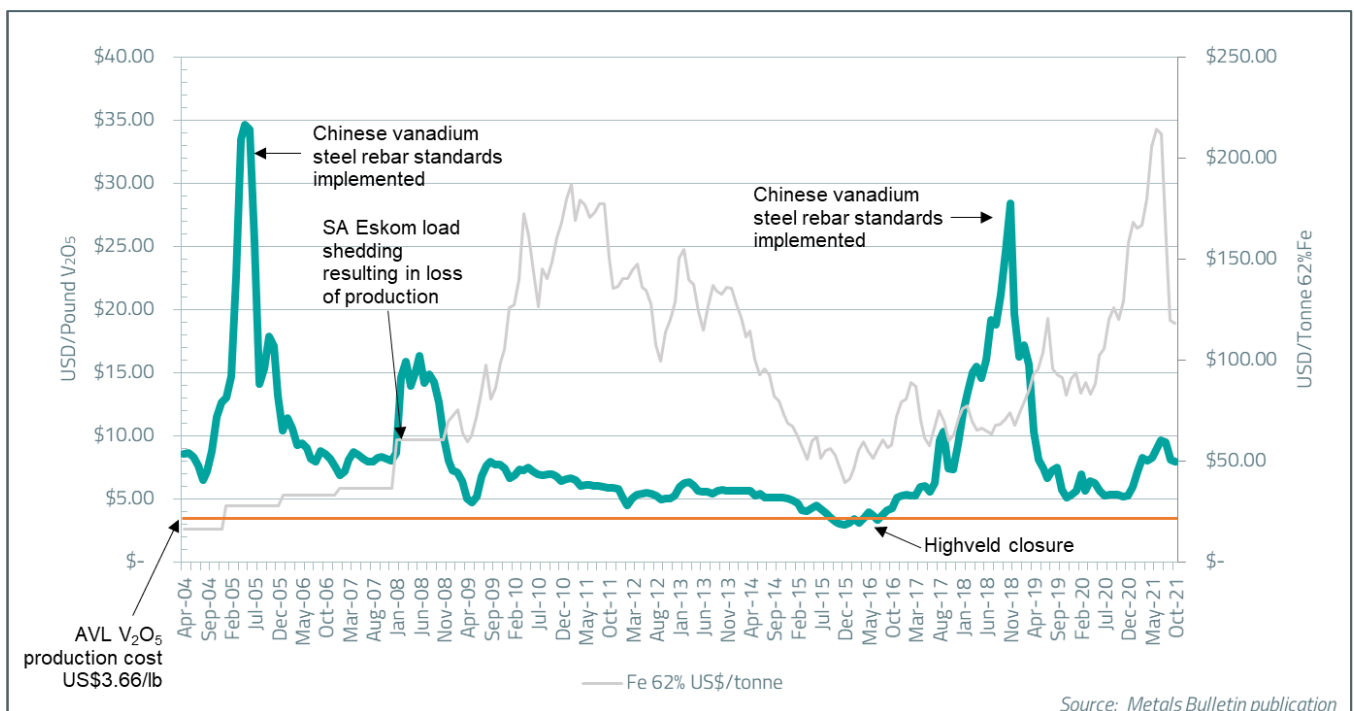
AVL has signed a Letter of Intent (LOI) with Guangxi Shenglong Metallurgy International Pte Limited, the commercial arm of Shenglong Metallurgy Co. Ltd, for the supply of its iron titanium (FeTi)

coproduct. Shenglong Metallurgy is a privately owned steel enterprise, with a steel mill located in China's southern Guangxi province at Fangchenggang port area, which produced 12.06Mtpa of steel in 2020. Shenglong Metallurgy mainly imports its iron ore raw material from overseas due to its proximity to one of the largest iron ore ports in China.

Work is well underway on additional LOIs which will lead to binding agreements.

AVL plans to produce approximately 900,000 tpa of FeTi coproduct, along with 24.3Mlbs of  $V_2O_5$  per annum from its operations in Western Australia. AVL's strategic location for its vanadium processing facility near Geraldton will enable the sale of the FeTi coproduct, enhancing the Project's economic resilience through the addition of a secondary revenue stream.

The price of AVL's FeTi coproduct will be tied to the Platts62 Fines Index Price (See Figure 1). The FeTi coproduct is ideally suited for use in iron sintering feeds, providing a low-cost titanium source and additional low-cost iron units to steel producers. Blast furnace operators often add titanium to sintering blends to improve furnace refractory protection and to minimise maintenance costs associated with furnace relines. AVL's FeTi coproduct will enter the market as a stable alternative to existing reliable and unreliable sources of similar material.



**Figure 4 Metal Bulletin  $V_2O_5$  Monthly Midpoint Average Price (Inflated May 2020 US\$/lb) and Market Index Iron Ore Spot Price Fe 62% (US\$/tonne)**

Sale of the FeTi coproduct is part of the AVL strategy to reduce overall project risk. The iron ore and vanadium price have historically not performed synchronously, offering unique opportunities for AVL

to mitigate vanadium price risk and provide a secondary revenue source for the Project. Figure 4 shows the historical pricing for 62% iron ore and  $V_2O_5$  pricing.

### **Progress underway at the Australian Vanadium Project processing plant site**

*See ASX announcement dated 19<sup>th</sup> November 2021 'Geraldton Region Vanadium Process Plant Development Update'*

The Company signed a one-year extension to its land purchase option agreement with the landowner of the location for its strategically located vanadium processing plant near Geraldton in Western Australia. The Company has also made applications to the City of Greater Geraldton and the State Development Assessment Unit (SDAU) for the rezoning of Agricultural land, to allow the development of the project there.

The physical and infrastructure benefits of the processing plant's location include:

- Access to cheaper natural gas due to closer location to major existing pipelines.
- Capital cost reduction by removing the need to build a new gas pipeline to the remote mine site.
- The opportunity for power at the sites to have a large component of renewable energy and hydrogen, a strength of the mid-west region and includes deployment of vanadium redox flow batteries.
- Two independent sites result in significantly reduced water requirements at each location, reducing impact on local water sources.
- A smaller mine site camp due to reduced numbers of personnel required at the mine site and the ability for processing plant employees to live locally in the City of Greater Geraldton.
- Reduced construction costs for the processing plant and lower transportation costs of reagents due to shorter transportation distance from the convenient port of Geraldton.
- Port of Geraldton allows strategic sale of FeTi concentrate to supplement Project cash flows, a unique attribute of the Australian Vanadium Project.

### **High purity $V_2O_5$ averaging 99.5% produced as an end-product**

*See ASX announcement dated 13<sup>th</sup> December 2021 'High Purity 99.5%  $V_2O_5$  Produced in Final Phase of Metallurgical Work for BFS'*

AVL has produced high-purity 99.5%  $V_2O_5$  marketing samples in the final stage of metallurgical testing for the BFS.



**Figure 5 Sample of  $V_2O_5$  precipitate generated from pilot program alongside roasted pellets and a vanadium ore sample.**

The  $V_2O_5$  was recovered from leach solutions generated in AVL's recent hydrometallurgy pilot program<sup>2</sup> via the ammonium metavanadate (AMV) process. This work in turn followed the pyrometallurgy pilot runs conducted at Metso Outotec's Dansville facilities in the USA<sup>3</sup> and the beneficiation pilot program conducted at ALS Metallurgy in Perth<sup>4</sup>. The feed materials for this sequence of pilot programs comprised two composites of drill core, designed to be indicative of the average first five years of production and life of mine production<sup>5</sup>. A sample of  $V_2O_5$ , alongside AVL's pelletised vanadium concentrate and a sample of ore is shown in Figure 5.

The  $V_2O_5$  generated in this pilot program meets market specifications for the production of high-strength steel alloys. The high purity achieved for this product simplifies continuing work with AVL's research partners in the CRC-P to further increase the product purity for the battery industry. This

<sup>2</sup> See ASX announcement dated 8<sup>th</sup> June 2021 "High Vanadium Extractions Confirmed in Pellet Leach Pilot as BFS Progresses"

<sup>3</sup> See ASX announcement dated 10<sup>th</sup> March 2021 "Final Pyrometallurgy Results Confirm World Leading Vanadium Extraction"

<sup>4</sup> See ASX announcement dated 17<sup>th</sup> March 2020 "Pilot Study Programme Confirms High Vanadium Recoveries and Concentrate Quality"

<sup>5</sup> See ASX announcement dated 21<sup>st</sup> January 2019 "Metallurgical Drilling Commences at Gabanintha Vanadium Project."



will lead to the design of an ultra-high purity process to feed AVL's future electrolyte plant, for which a grant was awarded through the Federal Government's Modern Manufacturing Initiative<sup>6</sup>.

Supply and quality of  $V_2O_5$  are critical for the development of the VRFB market which is expected to grow rapidly in coming years. Estimates vary between 27,000 tonnes  $V_2O_5$  per annum by 2030 from Roskill and 44,000 tonnes  $V_2O_5$  per annum by 2025 from TTP Squared, the latter being approximately 15% of the expected global vanadium market in 2025. AVL intends to produce 11,000 tonnes of  $V_2O_5$  per annum, with a portion dedicated to the battery market. AVL has signed MOUs for vanadium supply with a number of VRFB manufacturers including CellCube, E22 and VFlow Tech to help meet demand.

## BANKABLE FEASIBILITY STUDY UPDATE

AVL and its engineering team at Wood Group have completed the final processing designs required for the BFS. The team is currently finalising key capital equipment cost estimates from a variety of global vendors. Delays in the supply of detailed quotations have been experienced, partly due to the global impact on supply and logistics of the ongoing COVID-19 pandemic.

Importantly, the overall Project timeline remains on track, as AVL and its consultants continue to undertake critical work in parallel with the technical study. The focus of the team's work has shifted towards Project delivery of the world's next primary vanadium production:

- Formal appointment of debt advisers HCF International and Grant Thornton.
- Finalisation of an implementation plan, including contracting strategy for the processing plant, CMB, mine, logistics and power.
- Progression of environmental approvals towards final approval.
- Engagement with partners in the region, such as ATCO, for proposed hydrogen supply to reduce greenhouse gas emissions from the processing plant.
- Ongoing advancement of vanadium offtake agreements for the steel and battery markets as recently announced with US Vanadium<sup>7</sup>.
- Confirmation of strategic value generation by way of further Letters of Intent for sale of FeTi coproduct after vanadium production through the Port of Geraldton.

<sup>6</sup> See ASX announcement dated 21<sup>st</sup> July 2021 "AVL Awarded \$3.69M Federal Government Manufacturing Grant"

<sup>7</sup> See ASX Announcement 11<sup>th</sup> September 2021 "AVL Secures Vanadium Electrolyte Manufacturing Technology"

- The appointment of Primero<sup>8</sup> to build Australia's first commercial vanadium electrolyte manufacturing plant as part of downstream processing opportunities and early cash flows being pursued by AVL.
- Ongoing support of 100% owned renewable and vanadium battery subsidiary VSUN Energy and the active development of the vanadium redox flow battery market in Australia.

## VANADIUM IN ENERGY STORAGE

### MOU signed with Spanish VRFB manufacturer E22 for offtake of vanadium pentoxide, vanadium electrolyte and battery sales

*See ASX announcement dated 10<sup>th</sup> November 2021 'Vanadium MOU Signed with Spanish VRFB Manufacturer E22'*

AVL, in conjunction with 100% owned subsidiary VSUN Energy, signed a Memorandum of Understanding (MOU) with Spanish vanadium redox flow battery (VRFB) manufacturer E22.

The MOU provides a basis for opportunities relating to VRFBs, including:

- Vanadium products ( $V_2O_5$ ) offtake to E22 in Spain to support global battery sales.
- Vanadium electrolyte manufacture and supply in Australia for E22 VRFBs.
- Sales agreement with AVL's 100% owned subsidiary VSUN Energy for VRFB sales in Australia.



**Figure 6 E22 250kW/675kWh VRFB installed in Zamora, Spain**

<sup>8</sup> See ASX announcement 27<sup>th</sup> September 2021 'Vanadium Electrolyte Manufacturing Plant Build Awarded to Primero'

E22 manufactures small to large-size VRFBs, with the smaller VCUBE50 being a size that is well suited to the development of VSUN Energy's standalone power system (SPS). The SPS forms part of the project partly funded through the Modern Manufacturing Initiative (MMI) Australian Government grant that AVL was awarded in July 2021<sup>9</sup>.

The VCUBE50 provides 4 hours of power in a 20' container which includes all monitoring. The system provides at least 20 years of operation with full depth of discharge and no restrictions on cycling.

### **IGO's Nova Nickel Operation to trial VSUN Energy VRFB based SPS**

*See ASX announcement dated 11<sup>th</sup> November 2021 'IGO's Nova Nickel Operation to Trial VSUN Energy Vanadium Battery Standalone Power System'*

AVL, in conjunction with its 100% owned subsidiary VSUN Energy, signed an agreement with ASX 100 listed mining company IGO Limited ("IGO") for a project utilising an SPS based on VRFB energy storage technology. An SPS supplies power independently to the electricity grid and typically comprises a combination of solar, wind, battery and backup generation from diesel or gas.

The SPS being installed at IGO's nickel operation will be based around a 300kWh VRFB from E22. The system has been designed to provide a 100% renewable energy supply for much of the year, with periods of long cloud cover being supported by a diesel genset. Total renewable penetration of 85-90% is being targeted for the trial of the VRFB based SPS system. The SPS can be redeployed for use on multiple mines sites and locations over its 20+ year service life. The target of long periods with diesel-off will not only significantly reduce the carbon emissions of diesel generator powered bore fields, but also offer substantial reductions in operating hours for service personnel. These two significant benefits indicate a potentially rapid growth market segment for this robust technology.

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<sup>9</sup> See ASX announcement dated 21<sup>st</sup> July 2021 'AVL Awarded \$3.69M Federal Government Manufacturing Grant'



**Figure 7 SPS for IGO under construction**

### **100% renewable energy stored in VRFB used to charge Tesla EV.**

*See ASX announcement dated 25<sup>th</sup> November 2021 'VSUN Energy Targets Electric Vehicle Charging with Vanadium Redox Flow Battery'*

VSUN Energy undertook a successful test of an electric vehicle (EV) battery charge using renewable energy provided via a VRFB.

The test involved the use of a 5kW-30kWh VRFB powered solely by solar energy. The project opens the way for VRFB based standalone EV charging stations anywhere in Australia.



**Figure 8 EV charging underway with Patrick Gorman MP and AVL's Managing Director Vincent Algar**

VSUN Energy partnered with EV charging hardware and software provider Gemtek Group for the test. The companies were joined by Perth-based Federal Labor MP Patrick Gorman who brought his Tesla EV to be charged, with Gemtek bringing its Mini EV.

Utilising a VRFB to power an EV charging station means that even the most remote EV charging location can be powered using renewable energy.



## **Water Corporation to trial VRFB for water purification and pumping applications**

*See ASX announcement dated 29<sup>th</sup> December 2021 'VSUN Energy to Install VRFB at Water Corporation Site'*

VSUN Energy will be installing a 5kW/30kWh VRFB for use on a trial basis at Water Corporation's innovation hub in Shenton Park, WA at its Water, Research and Innovation Precinct. The VRFB will initially be trialled for use on a mobile water purification unit and will provide 100% renewable power to the system via a solar PV and VRFB SPS.

VSUN Energy will be working with Water Corporation to test, collect data and provide suitable options for potential future use cases for VRFBs throughout Water Corporation's operations. Of particular interest are remote pumping applications and for supplying power to remote offgrid energy loads, currently powered by diesel generators.

Water Corporation is the principal supplier of water, wastewater, drainage and bulk irrigation services in Western Australia and is owned by the Western Australian Government. Water Corporation manages almost 35,000km of water mains across an area greater than 2.6 million kilometres. Water Corporation has a commitment to reducing its environmental footprint, with the use of renewable energy being one of the solutions for doing this.

## **COATES PROJECT**

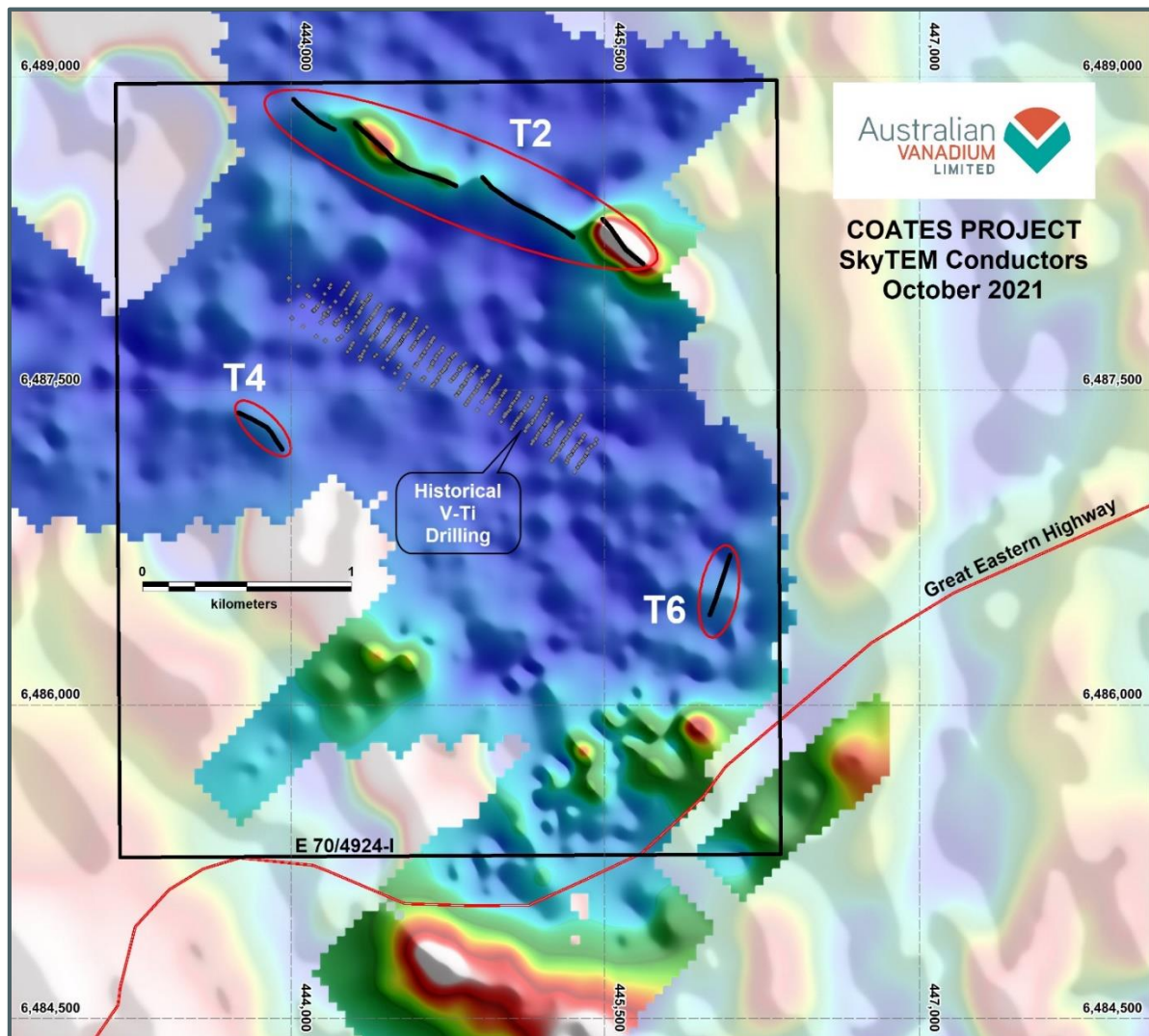
### **Significant 1,900 metre long electromagnetic conductor at Coates highlights exploration potential**

*See ASX announcement dated 14<sup>th</sup> October 2021 'Electromagnetic Conductors at Coates Nickel-Copper-PGE-Project'*

Three conductors have been identified by a SkyTEM Airborne Electromagnetics (AEM) survey at Coates, with the largest having a strike length of 1,900 metres. This coherent 1,900m long bedrock conductor (T2) is present to the northeast and parallel to the Coates magnetite gabbro. The AEM results are highly encouraging considering the success of the method in other discoveries in the area. The new data supports the matching geological setting for Ni-PGE bearing host rocks.

No drilling has been completed in the T2 area, along a magnetic high and topographic low interpreted by AVL to be a serpentinised ultramafic unit, an ideal host for Ni-PGE mineralisation. Two additional lower tenor bedrock conductors (T4 and T6) have also been identified in the south of the tenement area.

EIS co-funded Reverse Circulation (RC) pre-collar and diamond tail drilling is currently planned for Q1 2022<sup>10</sup>. The grant is for up to \$112,500, half of the cost of an 11 hole drill program. The drilling will provide a stratigraphic section through the Coates Mafic Intrusion within AVL tenure, allowing for lithological and geochemical studies, focussing on nickel-copper-PGE prospectivity. The results from the SkyTEM survey strongly support the validity of the existing drill program design to test mafic – ultramafic stratigraphy.



**Figure 9 SkyTEM results (Channel 30) with bedrock conductors T2, T4 and T6 in AVL tenement E 70/4924-I**

An application for approval to conduct non-ground disturbing works (soil sampling and ground geophysics) will be submitted to the Department of Biodiversity, Conservation and Attractions

<sup>10</sup> See AVL ASX announcement dated 23<sup>rd</sup> April 2021 "Grant Funding for Nickel-Copper-PGE-Gold Drilling at Coates Project"

(DBCA) as part of the approvals process to work on a wider area of E70/4924-I and within Woondowing Reserve.

Further soil surveys including a detailed size fraction orientation survey will be completed to cover the main intrusive area with Vacant Crown Land. Future works, post orientation survey, will be on extending sampling out from the areas showing anomalous Cu, Pt, Ni, Cr soil geochemistry identified in the 2021 survey, pending approval by DBCA.

## **CORPORATE**

### **Appendix 5B – Quarterly cash flow report**

The cash position of AVL at 31st December 2021 was \$5.79M.

The aggregate amount of payments to related parties and their associates included in the current quarter cash flows from operating activities were \$182k, comprising Directors' fees, salaries and superannuation.

During the quarter \$35k was expensed for exploration and evaluation which related to tenement management. Of the \$2,211k exploration and evaluation expenditure capitalised, \$36k was spent on activities related to the Cooperative Research Centre Project, and \$164k was spent on aircore drilling for the Australian Vanadium Project which related to work under the EIS (WA Government Exploration Incentive Scheme) project. A further \$2M was spent on the BFS update including engineering work (\$1.2M), environmental work (\$205k), hydrogeology (\$115k), drilling (\$190k), mine study and reserve schedule (\$107k), laboratory work (\$71k), and other consultants (\$112k). The balance of exploration and evaluation expenditure comprised of other consultants and labour, transportation costs and tenement expenses.

No production and development activities were undertaken during the quarter.

For further information, please contact:

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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 as at October 2021 by Domain and Resource Classification<sup>11</sup>*

| Domains      | 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 10        | 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 2-5       | Measured        | -            | -                               | -           | -                  | -                  | -                                | -          |
|              | 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> |
|              |                 |              |                                 |             |                    |                    |                                  |            |
| Trans 6-8    | Measured        | -            | -                               | -           | -                  | -                  | -                                | -          |
|              | Indicated       | -            | -                               | -           | -                  | -                  | -                                | -          |
|              | 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> |
|              |                 |              |                                 |             |                    |                    |                                  |            |
| <b>Total</b> | 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> |

<sup>11</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 2 - Tenement Schedule**

Tenement information as required by Listing Rule 5.3.3 for the quarter ended 31<sup>st</sup> December 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                 |
|                   |                                 | E51/1899    | 100% Granted <sup>1</sup>       |                                  | Nil                 |
|                   |                                 | E51/1943    | 100% Granted <sup>1</sup>       |                                  | Nil                 |
|                   |                                 | E51/1944    | 100% Granted <sup>1</sup>       |                                  | Nil                 |
|                   |                                 | L51/116     |                                 | 100% on Application              | Nil                 |
|                   |                                 | P51/3073    | 100% Granted                    |                                  | Nil                 |
|                   |                                 | P51/3074    | 100% Granted                    |                                  | Nil                 |
|                   |                                 | P51/3075    | 100% Granted                    |                                  | Nil                 |
|                   |                                 | P51/3076    | 100% Granted                    |                                  | Nil                 |
|                   |                                 | PLA51/3248  |                                 | 100% <sup>1</sup> on Application | Nil                 |
|                   |                                 | M51/878     | 100% Granted                    |                                  | Nil                 |
|                   |                                 | M51/888     | 100% Granted <sup>1</sup>       |                                  | Nil                 |
|                   |                                 | MLA51/890   |                                 | Application Withdrawn            | 100%                |
|                   |                                 | MLA51/897   |                                 | 100% <sup>1</sup> on Application | Nil                 |
|                   |                                 | L51/119     |                                 | 100% <sup>1</sup> on Application | Nil                 |
|                   |                                 | ELA51/2067  |                                 | 100% <sup>1</sup> on Application | Nil                 |
| Western Australia | Nowthanna                       | M51/771     | 100% Granted                    |                                  | Nil                 |
| Western Australia | Peak Hill                       | E52/3349    | 0.75% NSR<br>Production Royalty |                                  | Nil                 |
| Western Australia | Coates                          | E70/4924-I  | 100% Granted                    |                                  | Nil                 |
|                   |                                 | E70/5588    | 100% Granted                    |                                  | Nil                 |
|                   |                                 | ELA70/5589  |                                 | 100% on Application              | Nil                 |
| 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) and Ms Gemma Lee who is employed by Australian Vanadium Ltd as a Resource Geologist. Mr Davis is a member of the Australasian Institute of Mining and Metallurgy and Ms Lee is a member of the Australian Institute of Geoscientists. Both Mr Davis and Ms Lee 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 Davis and Ms Lee

consent to the inclusion in this report of the matters based on their 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.