ASX Announcement



Quarterly Activities Report for period ending 31st December 2018

Highlights:

Gabanintha Vanadium Project

- Maiden Ore Reserve of 18.2 Mt at 1.04% V₂O₅ (Vanadium Pentoxide).
- Pre-feasibility Study released supporting plan for initial 17 year mine life project to producing 22.5 Mlbs V₂O₅ per annum.
- Global resource updated to 183.6Mt at 0.76% V₂O₅ with a geologically distinct high-grade component of 96.7Mt at 1.00% V₂O₅.
- Pilot scale metallurgical study sample collection (diamond drilling) and processing test work commenced in January 2019.

Energy Storage

- AVL indicates Future Batteries Industry Cooperative Research Centre (FBI CRC) involvement.
- Increasing global installations of VRFB systems prompting increased interest in local opportunity for sales from VSUN Energy, AVL's vanadium energy storage focused subsidiary.

Corporate

- Conversion of 280,468,128 listed Options @ \$0.02/share generated \$5,609,362 for the Company during the quarter.
- Subsequent to the end of the quarter, a further 62,750,000 underwritten listed Options were exercised @ \$0.02/share, generating a further \$1,255,000 before costs.
- AVL cash position of \$9.5 M as at 31 December 2018.
- Use of funds to focus on Gabanintha Vanadium Project Definitive Feasibility Study (DFS) deliverables.
- Corporate presentations to vanadium investors ongoing through attendance at mining conferences and roadshow presentations
- Minor project work ongoing at Blesberg (Feldspar), Coates (Vanadium), and Nowthanna Hill (Uranium, Vanadium) focused on monetising investment in these projects.

31.01.2019

ASX ANNOUNCEMENT

Australian Vanadium Limited

ASX: AVL FRA: JT7.F

ABN: 90 116 221 740

T: +61 8 9321 5594 F: +61 8 6268 2699 E: info@australianvanadium.com.au W: australianvanadium.com.au

Street Address:

Level 1, 85 Havelock Street West Perth, WA 6005

Postal Address:

Level 1, 85 Havelock Street West Perth, WA 6005

Projects:

Gabanintha – Vanadium Coates - Vanadium Blesberg –Feldspar Nowthanna Hill - Uranium/Vanadium





Activities for the quarter ended 31st December 2018 for Australian Vanadium Limited ("AVL" or "the Company") are as follows:

GABANINTHA VANADIUM PROJECT

On 19 December 2018, AVL announced the Pre-Feasibility Study (PFS) results and the release of a Maiden Ore Reserve for its 100% owned Gabanintha vanadium deposit in Western Australia ("the Project"). The results of the PFS build upon the initial base case (see ASX announcement 26 September 2018) and indicate a Project with a well-defined resource base, robust economics and utilising an industry standard, low-risk method of beneficiation and refining to produce a vanadium pentoxide (V_2O_5) flake product. Capital and operating cost estimates have been developed to the level of accuracy of ±25% and include mine and processing circuit designs, a detailed financial model and supporting bodies of work. The additional PFS work identified a reduction in capital costs and confirmed the low, industry comparative, C1 operating costs with further opportunities identified.

Maiden Ore Reserve

On 19th December 2018 AVL announced a maiden Ore Reserve of 18.24Mt at 1.04% V_2O_5 which is comprised of a Proved Reserve of 9.82Mt at 1.07% V_2O_5 and a Probable Reserve of 8.42Mt at 1.01% V_2O_5 .

2	Reserve	tonnes	V2O5 %	Co ppm	Ni ppm	Cu ppm	S %	SiO ₂ %	Fe ₂ O ₃ %	V ₂ O ₅ produced
	classification									t
	Proved	9, 820 ,000	1.07	172	571	230	0.06	9.47	58.7	65,000
_	Probable	8 ,420, 000	1.01	175	628	212	0.08	10.07	59.5	56,000
	Total	18, 240, 000	1.04	173	597	222	0.07	9.75	59.1	121,000

Table 1 Ore Reserve Statement as at December 2018, at a cut-off grade of 0.8% V_2O_5

Pre-Feasibility Study

In conjunction with the maiden Ore Reserve, the Company released the results of a PFS which demonstrated the strong economic viability of the Project.

The Project is based on a proposed open pit mine; crushing, milling and beneficiation plant (CMB) and refining plant for final conversion and sale of high-quality vanadium pentoxide (V_2O_5) for use in steel, specialty alloys and energy storage markets. The PFS results highlight AVL's potential to become a new low-cost vanadium producer.

The body of work completed in the PFS will feed into the Definitive Feasibility Study (DFS). Due to the level of detail of many study aspects undertaken in the PFS, several areas are now at an advanced stage and work in 2019 will focus on optimisation and further refinement.

The PFS report itself comprises 18 sections, each with an appendix, and contains intellectual property owned by AVL and sensitive information. The PFS was purposefully developed to the high standard required for rigorous external scrutiny by future Project investors and financiers. The announcement provided the market with a summary of the full PFS.

For material assumptions please see the ASX announcement dated 19th December 2018.

Financial outcomes

Results from the PFS highlighted average C1 operating expenses estimated at US\$4.15/lb V₂O₅ equivalent (±25%), which is competitive with the world's lowest quartile producers and provides a robust price to weather vanadium price cycles.

Capital costs are approximately US\$354 million (±25%). This figure includes owner's costs, contingencies and a partial gas pipeline investment.

The ungeared post-tax NPV_{8%} for the Project ranges between US\$125 million and US\$1.41 billion, depending on the pricing assumption. Conservative long-term average V₂O₅ product pricing at US\$8.67/lb was used for financial modeling. Medium term price assumptions of US\$13/lb and US\$20/lb were also considered and presented in Table 2.



		V₂O₅ Product Pricing Scenarios							
Pricing Year 1-5		\$8.67/lb V2O5	\$13/lb V2O5	\$13/lb V2O5	\$20/lb V₂O₅				
	Pricing Year 6-17	\$8.67/lb V₂O₅	\$8.67/lb V₂O₅	\$13/lb V2O5	\$20/lb V₂O₅				
	pre-tax NPV _{8%}	\$230M	\$444M	\$912M	\$2,013M				
	post-tax NPV _{8%}	\$125M	\$280M	\$616M	\$1,410M				
\int	IRR	12.4%	19.7%	27.2%	47.5%				
2	pre-tax UDCF	\$1,232M	\$1,634M	\$3,166M	\$6,292M				
	post tax UDCF	\$867M	\$1,148M	\$2,221M	\$4,409M				

Geology and Mineral Resources

The overall geology of the Gabanintha formation is a layered sequence of granitoids, ultramafic rocks, gabbros and dolerites/amphibolites, felsic tuffs and banded iron and cherts.

The mineral deposit consists of a basal massive magnetite zone (10m - 15m in drilled thickness, >0.7% V₂O₅), overlain by up to five magnetite bearing banded gabbro units between 5 and 30m thick, separated by thin very low-grade mineralisation (<0.3% V₂O₅) waste zones. The westerly dipping sequence is overlain in places by a lateritic domain, a transported domain (occasionally mineralised) and a thin barren surface cover domain. The deposit is affected by a number of regional scale faults which break the deposit into a series of kilometre scale blocks. The larger blocks show relatively little sign of internal deformation, with strong consistency in the layering being visible in drilling and over long distances between drillholes.

Mining and Scheduling

Mining at the Project will be from an open pit that extends for 3,250m along strike. The mining sequence will include a first stage that extends 1,100m along strike. Due to the length of the pit, mining will be divided into 200 m wide benches along strike which are aimed at delivering a reasonable blend of oxidised, transitional and fresh ore to the processing plant.

The rate of mining will build up to about 550,000 Bank Cubic Metres (BCM)/month, equivalent to two or three excavators working on double shift depending on the size of the excavators. From year 1 to year 9 the mining rate will vary from around 480,000 BCM/month to 580,000 BCM/month, and then gradually reduce to the end of planned mining in year 14. The current estimated production schedule is 17 years, with mining taking place for the first 14 years.

The pit designs contain approximately 23.0Mt of ore at an average grade of 1.03% V₂O₅ and is expected to be mined along with 149Mt of waste for an overall strip ratio of 6.5. The optimisation of the pit shells uses a base vanadium price of US\$8/lb. The pit design on which the base case is considered contains 43% Measured Resources, 37% Indicated Resources and 21% Inferred Resources. Mining of Inferred Material does not take place in the current schedule until year 4.





Figure 1 Mining Sequence Year 0-14



Mineral Processing

The Gabanintha mineral process facility is designed to treat 1.45 Mt/a of 1.03% V₂O₅ grade ore to generate 10,115 dry metric tonnes of V₂O₅ fused flake (>98.5% w/w) per annum, for export via the Port of Fremantle. The PFS process facility is located directly west of the proposed Gabanintha open pit mine (the mine site).



Figure 2 Plant Layout (Aerial view looking east. Processing plant in the foreground, IWL to the left (north). The ROM blending stockpiles are visible behind the plant and the Gabanintha open cut (3.2 km long) is in the background. A second waste dump is located east of the pit.

The PFS flowsheet is based on standard industry proven processes and includes a magnetic beneficiation flowsheet (concentrator) and an alkaline roast leach and ammonium vanadate extract refinery flowsheet. A notable difference for the Gabanintha PFS flowsheet design to other similar global vanadium projects is that the average LOM vanadium ore grade to the concentrator ($1.03\% V_2O_5$) is high relative to the concentrate grade ($1.4\% V_2O_5$), thereby realising a high concentrate mass yield; possibly the highest of all current operations worldwide.

Average vanadium yield to concentrate over the mine schedule is 79.8%. Average refinery recovery of V_2O_5 from concentrate is 80.4%, giving an overall average LOM recovery of 64.1%. The other unique features are the elevated base metals sulphides associated with the main titaniferous magnetite horizon.

Infrastructure

The remote and greenfields nature of the Project requires all infrastructure will need to be constructed. The major non-process infrastructure required for the Project includes:

- Natural gas supply via pipeline
- Power supply and distribution via island power station
- Water supply via a borefield
- Regional road access
- Personnel accommodation



Social and Environmental Sustainability, Community, Heritage & External Relations

AVL is proactively managing sustainability of the Project through the feasibility phase, with consideration of potential risks and benefits relating to people (social), planet (environmental) and profit (economic) aspects.

Outcomes from the study show that the proposed Project has a low likelihood of significant impacts to the social surroundings.

The proposed Project area is subject to the Yugunga-Nya native title claim (WC1999/46). A draft mining agreement has been developed between AVL and the Yugunga-Nya Native Title Claim Group and discussions are ongoing.

Key environmental baseline studies have been undertaken for the Project, including two-season detailed ecological surveys. There were no conservation-significant flora or vertebrate fauna species detected in the proposed Project area. Locations of potential short-range endemic (SRE) terrestrial invertebrates will be avoided by selective placement of infrastructure.

Project Funding

The Company has funding in place to start the DFS. Funding for pilot plant test work and initial stages of the DFS is expected to be provided by existing working capital and through the funds that were raised by the exercise of listed options.

The Board believes that there are "reasonable grounds" to assume that future funding will be available for the completion of the DFS, including pilot scale testwork and pre-production capital as envisaged and supported in the PFS announcement.

Next steps and Project timelines

The Project has now moved into a DFS phase. The PFS highlighted significant opportunities to improve the economics of the Project, requiring further testwork, with other sections requiring more refinement prior to detailed DFS engineering and costing commences. As such, the final Project timeline is being continuously revised. AVL remains focused on the most rapid development timeline possible for a project of this size.

Work across the various disciplines includes:

- Further refinement and optimisation of the mine schedule
- Further metallurgical testwork
- Investigations into the risks and opportunities outlined in the PFS
- The use of renewable energy options for the camp and water pumps
- Drilling and testing to confirm dewatering estimates and confirm groundwater source
- Ongoing work to identify and assess any environmental impacts and ensure environmental approvals are achieved by the project
- Ongoing social and heritage works to meet the Project timeline

During January 2019 a diamond drilling program commenced to provide material for pilot scale testwork to support the DFS, with the objectives of the pilot testwork being:

- To validate the flowsheet and optimise where practical;
- To provide greater confidence in the process mass balance and design criteria;
- To provide a firm basis to support process prediction (recovery and opex) relative to a process feed schedule;
- To update the process parameters used as inputs for mine optimisation;
- And to provide product samples of V₂O₅, calcine, evaporation feed solution and concentrator tails for marketing samples and downstream testwork/design.

Drilling will involve extracting ≥1,400m of core taken from several holes along the strike of the deposit, amounting to ≥30 tonnes of material. A program of works (POW) has been approved by the Department of Mines Industry Regulation and Safety (DMIRS) and drilling work commenced in January 2019. (See ASX Announcement 21 January 2019 : Metallurgical Drilling Commences at Gabanintha Vanadium Project)



Resource Update

A Mineral Resource update was provided to the market on 28th November 2018. The update brought the total Mineral Resource to 183.6Mt at 0.76% vanadium pentoxide (V_2O_5) from massive and disseminated zones consisting of:

- Measured Mineral Resource of 10.2Mt at 1.11% V₂O₅,
- Indicated Mineral Resource of 40.7Mt at 0.66% $V_2O_5,$ and
- Inferred Mineral Resource of 132.7Mt at 0.77% V₂O₅.

The revised Gabanintha Mineral Resource includes a distinct massive magnetite high-grade zone of 96.7Mt at 1.00% V₂O₅ consisting of:

- Measured Mineral Resource of 10.2Mt at 1.11% V₂O₅,
- Indicated Mineral Resource of 12.1Mt at 1.05% V₂O₅, and
- Inferred Mineral Resource of 74.5Mt at 0.97% V₂O₅.

The massive magnetite high-grade zone in the Measured and Indicated Resource category now extends over 2.7km. AVL's total strike length extends over 11km. Further conversion of Inferred resources to lower-risk categories will continue in 2019.

Included in the Resource update was an estimation of cobalt, nickel and copper following drilling of diamond hole 18GEDH003, which successfully intersected a deep high-grade V_2O_5 and base metals intercept showing 18.6m at 1.10% V_2O_5 , 220 ppm Co, 757 ppm Ni and 173 ppm Cu, from 168.5 metres down hole. The updated base metals Inferred Mineral Resource is 14.3Mt at 208 ppm Co, 666 ppm Ni and 217 ppm Cu.

The Resource update further demonstrated that AVL's massive magnetite vanadium zone continues strongly at depth. Results of the revised Mineral Resource were incorporated into the maiden Ore Reserve statement and PFS which was released in December 2018.

The updated Mineral Resource had a minor impact on the overall tonnage and Measured category and resulted in a conversion of just over 7 million tonnes of Inferred material to the Indicated Mineral Resource category.

FUTURE BATTERY CRC

On 20th November 2018 AVL announced that the Company and its 100% owned subsidiary, VSUN Energy, had signed an agreement to offer in-kind services to the Future Batteries Industry Cooperative Research Centre (FBI CRC).

The FBI CRC's mission is 'to create capacity and capability in Australia to support the development of hubs and precincts of globally competitive battery industries whilst ensuring security of supply in battery metals to meet the global demand in the transition to new energy systems.'

AVL's expertise in the extraction and processing of vanadium will help the group to leverage Australia's vast vanadium mineral resources. Having successfully produced vanadium electrolyte in Australia, the Company's pilot plant resource will be of great use should the FBI CRC application be successful.

VSUN Energy's role will revolve around its vanadium redox flow battery expertise and connections.

The FBI CRC aims to create and build a battery industry in Australia, for the economic benefit of the country. The process is being driven by Curtin University, with help from partners such as Tianqi Lithium, the State Government of Western Australia, BHP Limited, Pilbara Minerals Limited, the University of Western Australia and Murdoch University.



OTHER PROJECTS

The Company has interests in a number of other projects aside from its flagship Gabanintha Vanadium Project. The Company's objective with these other projects is to seek to monetise AVL's past investment in acquiring these projects, such that they provide additional funds or equity for the Company. These projects include:

An interest in the Blesberg Feldspar project with the opportunity to acquire up to 26% of Southern African Lithium and Tantalum Pty Ltd through the completion of a Mineral Resource Estimate.

A 100% interest in the Nowthanna Hill uranium/vanadium deposit located on the granted Mining Lease M51/771 and surrounding tenements, which includes a completed Native Title agreement.

A 100% interest in the Coates vanadium project, a titaniferous magnetite located East of metropolitan Perth

Project Information Memoranda are being prepared for interested parties.

BLESBERG

The Blesberg Project is located approximately 80km north of Springbok in the remote Northern Cape Province of South Africa. It lies at the western end of the Northern Cape Pegmatite Belt. This belt extends from Vioolsdrif in the west for about 450 km towards the east. The deposit is one of the largest known economically mineralised and exploited pegmatite deposits in the Pegmatite Belt. Mining at Blesberg commenced in 1925. The main products from later mining were beryl, bismuth, tantalite-columbite, spodumene, feldspar and mica. Feldspar production from the mine was reported to be of very high quality, with the feldspar being pure white and unstained by iron oxide.

Drilling by AVL in 2017 at Blesberg identified extensive pegmatite development containing a high quality and proportion of glass/ceramic quality feldspar.

Under the agreed terms AVL was required to spend up to A\$50,000 to complete earning a 26% equity position in SALT, the holding company of the Blesberg project, by funding:

Metallurgical test work to determine feldspar product recovery and mineralogy, and Calculating and reporting a mineral resource estimate for potassium feldspar in accordance with JORC 2012 for the Blesberg deposit.

The work referred to above and the subsequent completion of the equity acquisition is nearing completion.

AVL and SALT will then work together to promote the Blesberg asset for sale globally to feldspar users and interested investors.

NOWTHANNA HILL

AVL's Nowthanna Hill project contains both uranium and vanadium on tenements M51/771 and E51/1899 which are south and west of the Company's Gabanintha vanadium-titanium-iron mineral resource. The Nowthanna Hill resource is contiguous with Toro's Nowthanna Uranium Deposit as shown on the map on Figure 4.

The Nowthanna Hill uranium-vanadium deposit is located 55km south of the town of Meekatharra in Western Australia and is hosted within calcrete and clay deposit formed within the inland drainage as a result of the weathering of granites that contain high background radiation.

The deposit is similar to the Cogla Downs and Yeelirrie uranium deposits of the lake drainage systems of the Murchison and Northern Goldfields.



VANADIUM MINERAL Resource Zone

AVL PROPOSED OPEN PIT OUTLINE AVL MINING LEASE APPLICATION

AVL NOWTHANNA MINING LEASE AVL EXPLORATION LICENCES AVL PROSPECTING LICENCES MONUMENT MURCHISON TENEMENTS

TORO ENERGY TENEMENTS

Gabinintha

MLA51/878

(AVL)

E51/1899

Can a

X

Tumblegum South (Au/Cu)

🖄 Lady Alma (Cu)

X

OPEN PIT

PROSPECT

Copper Hills (Cu)

TENEMENT/MINERAL RESOURCE

PLAN

January 2019



500 kilometres

Albany



Figure 4 AVL's Gabanintha and Nowthanna Hill Project Tenements

MGA 1994 Zone 50



These uranium deposits consist of interbedded lacustrine clays and sands with calcrete horizons where calcrete hosts the minerals carnotite and autunite. Carnotite is a uranium-bearing potassium vanidate and autunite is a uranium-bearing calcium-phosphate. At Nowthanna Hill the mineralisation is hosted by carnotite and the sequence varies in thickness but is generally less than 3m thick and within 15m of the surface. Uranium and vanadium mineralisation occurs over an extensive surface area within palaeo-channels of the Quinn's Lake drainage.

The flat to gently dipping deposit shows strong consistency in the layering being visible in drilling and over long distances between drillholes. The total radiometric and uranium count geophysical images show clearly the trace of the higher grade uranium areas within the surface channels and some palaeo-channels. However, much of the deposit mineralisation is only apparent from chemical data and down-hole radiometric logs within drill holes and is not always reflected in the surface samples.

AVL is currently undertaking a Mineral Resource update on Nowthanna Hill and aims to monetise the project to provide further funds to advance the Gabanintha vanadium project.

A Mining Lease has been granted on this tenement, and a full Native Title agreement completed that allow for the extraction of Uranium, but due to the State Government of Western Australia's current policy to not allow any new unapproved uranium mining in the State at this time, the project is currently on hold.

Globally, uranium and nuclear energy are being more closely investigated as complimentary to the growth of renewable energy, as the global energy mix shifts from away from coal and other fossil fuel based generation.

COATES

Exploration Licence E70/4924-I was acquired by AVL in July 2017 and is located about 65kms to the east of Perth on the Great Eastern Highway (See Figure 5). The site is a lateritic iron-vanadium historical resource at Coates. The geology of the area is unique and shows that titaniferous vanadiferous magnetite (TVM) is developed from the weathering profile of an underlying gabbro in a laterite outcrop on a ridge.

Previous metallurgical test results indicate that a 58% recovery of vanadium at an approximate grade of 1.4% V_2O_5 , 3% TiO₂, 67% Fe grade with 8% SiO₂ is achievable from an ore assaying 0.54% V_2O_5 , 4.75% TiO₂, 25% Fe and 29% SiO₂. See ASX announcement dated 18th July 2017 for further information.



Figure 5 Coates tenement location

Mine and open pit plans previously produced by Agnew Clough Ltd on the Coates deposit confirm that a resource area exists through the Vacant Crown Land (VCL) portion of the lease.



The only area open for future development is the VCL which covers the eastern portion of the original Coates iron-vanadium deposit. This would be immediately amenable to access for drilling, trial mining or bulk sampling. Most of the tenement is open for access along selected well-used tracks and the old pit and dump areas are easily accessed by vehicle.

Rock Chip assays suggest that the laterite caprock previously excavated in the pit has significant vanadium, low silica and moderate to low aluminium content.

AVL will continue minor work on sampling and metallurgical test work on the project and is open to investment offers on the project.

CORPORATE

Vanadium Price

The dramatic rise in the vanadium price during the second half of 2018 has been attributed to a variety of market pressures including the closure of China's stone coal production due to the Chinese government's drive to reduce emissions; enforced changes to specific consumption of vanadium in the Chinese ferroalloy market; stockpiling of vanadium rebar in China prior to winter; growth in demand globally and no significant increases in supply from existing producers.

Prices for V_2O_5 rose to an all time high of US\$33/lb, but have subsequently began to stabilise and currently sit around US\$16/lb. These prices support the Company's view that low-cost production is the key to long-term success in the vanadium market.

Presentations were made at the International Mining and Resources Conference (IMARC) in Melbourne and the Low Emission and Technology Metals Conference in Perth. Both of which resulted in strong media coverage for the Company.

Annual General Meeting

^CThe Company's Annual General Meeting was held on 16th November 2018 with all resolutions passed. The meeting was followed by a presentation by managing director Vincent Algar.

Capital Raising

During the quarter, the Company and its share registry received a total of \$5,609,362 through the exercise of 280,468,128 listed Options at 2.0 cents per share. A total of 94,790,643 options were not exercised prior to their expiry on 31st December 2018. Of these expired options, a total of 62,750,000 were underwritten by Westar Capital Limited (see ASX announcement dated 28 December 2018) and subsequent to the quarter exercised, raising a further \$1,225,000 before costs.

Cash Position

As at the 31st December 2018, the Company had \$9.5 million in cash and cash equivalents.

For further information, please contact:

Vincent Algar, Managing Director





Table 3 Gabanintha Project – Mineral Resource estimate at November 2018 by domain and resource classification using a nominal 0.4% V_2O_5 wireframed cut-off for low grade and nominal 0.7% V_2O_5 wireframed cut-off for high grade (total numbers may not add up due to rounding)

-									
2	Zone	Classification	Mt	V2O5 %	Fe %	TiO₂ %	SiO ₂ %	Al2O3 %	LOI %
	HG 10	Measured	10.2	1.11	42.7	12.6	10.2	8.0	3.9
		Indicated	12.1	1.05	43.8	11.9	10.6	7.6	3.5
		Inferred	74.5	0.97	42.1	11.2	11.6	7.6	3.4
)		Sub-total	96.7	1.00	42.4	11.4	11.3	7.7	3.5
	LG 2-5	Measured	-	-	-	-	-	-	-
		Indicated	28.6	0.50	24.6	6.9	27.5	17.9	8.6
))	Inferred	53.9	0.49	25.3	6.7	27.5	16.4	7.3
~		Sub-total	82.5	0.49	25.1	6.8	27.5	16.9	7.7
2	Transported	Measured	-	-	-	-	-	-	-
~	6-8	Indicated	-	-	-	-	-	-	-
2	2	Inferred	4.4	0.65	28.2	7.2	24.7	16.7	8.5
		Sub-total	4.4	0.65	28.2	7.2	24.7	16.7	8.5
	Total	Measured	10.2	1.11	42.7	12.6	10.2	8.0	3.9
1	5	Indicated	40.7	0.66	30.3	8.3	22.5	14.8	7.1
2	2	Inferred	132.7	0.77	34.8	9.2	18.5	11.5	5.1
		Sub-total	183.6	0.76	34.3	9.2	18.9	12.1	5.5

Table 44 Ore Reserve Statement as at December 2018, at a cut-off grade of 0.8% V_2O_5

2	Reserve	tonnes	V2O5%	Co ppm	Ni ppm	Cu ppm	S %	SiO₂ %	Fe ₂ O ₃ %	V ₂ O ₅ produced
C	classification									t
	Proved	9, 820 ,000	1.07	172	571	230	0.06	9.47	58.7	65,000
_	Probable	8 ,420, 000	1.01	175	628	212	0.08	10.07	59.5	56,000
5	Total	18, 240, 000	1.04	173	597	222	0.07	9.75	59.1	121,000

About Australian Vanadium Limited

AVL is a resource company with an integrated strategy with respect to 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 100%-owned, world-class Gabanintha vanadium project. The Gabanintha vanadium project is currently one of the highest-grade vanadium projects being advanced globally with existing Mineral Resource of 183.6Mt at 0.76% vanadium pentoxide (V_2O_5), made up of a Measured Mineral Resource of 10.2Mt at 1.11% V_2O_5 , an Indicated Mineral Resource of 40.7Mt at 0.66% V_2O_5 , and an Inferred Mineral Resource of 132.7Mt at 0.77% V_2O_5 , reported in compliance with the JORC Code 2012 (see AVL ASX Announcement 28th November 2018).

The Mineral Resource includes a distinct massive magnetite high-grade zone of 96.7 Mt at 1.00% V_2O_5 consisting of Measured Mineral Resource of 10.2Mt at 1.11% V_2O_5 , Indicated Mineral Resource of 12.1Mt at 1.05% V_2O_5 , and Inferred Mineral Resource of 74.5Mt at 0.97% V_2O_5 .

AVL is aiming to develop a local commercial production capacity for high-purity vanadium electrolyte, which forms a key component of vanadium redox flow batteries (VRFB). AVL, through its 100%-owned subsidiary VSUN Energy Pty Ltd, is also actively marketing VRFB in Australia.



	Tenen	nent Information as I For the Quarter En	Required by Listing Rule 5 ded 31 December 2018	.3.3	
Project	Location	Tenements	Economic Interest	Notes	Change in Quarter %
Western Australia	Gabanintha	E51/843	100% Granted ¹	•	Nil
		E51/1396	100% Granted ¹		Nil
		E51/1534	100% Granted ¹		Nil
		E51/1576	100% Granted ¹		Nil
		E51/1685	100% Granted ¹		Nil
		E51/1694	100% Granted ¹		Nil
		E51/1695	100% Granted ¹		Nil
		P51/2566	100% Granted ¹		Nil
		P51/2567	100% Granted ¹		Nil
		P51/2634	100% Granted ¹		Nil
		MLA51/878		100% On application	Nil
		E51/1899		100% On Application	Nil
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
South Africa	Blesberg	(NC) 940 PR	5%	Earning up to 26%	5%

Tenement Schedule

Note 1: Australian Vanadium Limited retains 100% rights in V/U/Co/Cr/Ti/Li/Ta/Mn & iron ore on the Gabanintha 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.



Competent Person Statement — Gabanintha Mineral Resource Estimation

The information in this report 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 Davis is a shareholder of Australian Vanadium Limited. Mr Barnes is a member of the Australasian Institute of Mining and Metallurgy and Mr Davis is a member of the Australian Institute of Geoscientists and 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 report of the matters based on their information in the form and context in which they appear.

competent Person Statement — Gabanintha Ore Reserves

The scientific and technical information in this report that relates to ore reserves estimates for the Project is based on information compiled by Mr Roselt Croeser, an independent consultant to AVL. Mr Croeser is a member of the Australasian Institute of Mining and Metallurgy. Mr Croeser 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 Croeser consents to the inclusion in this report of the matters related to the ore reserve estimate in the form and context in which it appears.

Competent Person Statement – Gabanintha Metallurgical Results

The information in this report 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 The Australasian Institute of Mining and Metallurgy. 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr McNab consents to the inclusion in this report of the matters based on the information made available to him, in the form and context in which it appears.

Competent Person Statement – Blesberg Exploration Program

The information relating to the Blesberg Feldspar-Lithium-Tantalum Project exploration program reported in this announcement is based on information compiled by Mr Vincent Algar. Mr Algar is a Member of The Australian Institute of Mining and Metallurgy (AusIMM) and a full-time employee of the Company. Mr Algar has more than 25 years' experience in the field of mineral exploration. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration 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. Algar consents to the inclusion in the report of the matters based on the information made available to him, in the form and context in which it appears.

Competent Person Statement – Coates and Nowthanna Exploration Results

The information relating to the Coates Vanadium Project and the Nowthanna Hill Uranium Project exploration results reported in this announcement is based on information compiled by Mr Brian Davis (Consultant with Geologica Pty Ltd). Mr Davis is a Member of Australian Institute of Geoscientists and a consultant to the Company. Mr Davis is a shareholder of Australian Vanadium Limited. Mr Davis has more than 25 years' experience in the field of mineral exploration. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration 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. Davis consents to the inclusion in the report of the matters based on the information made available to him, in the form and context in which it appears.

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, in the case of estimates of Mineral Resource or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements 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 has not been materially modified from the original market announcements.