

Quarterly Activities Report for period ending 30th September 2017

Highlights:

Gabanintha Vanadium Project resource upgrade:

- Updated resource resulted in a 96% increase in Mineral Resource tonnes at the Gabanintha vanadium project, strengthening its position as a globally significant high-grade vanadium deposit.
- Updated Mineral Resource is now 179.6Mt at 0.75% vanadium pentoxide (V_2O_5) consisting of Measured Mineral Resource of 10.2Mt at 1.06% V_2O_5 , Indicated Mineral Resource of 25.4Mt at 0.62% V_2O_5 and Inferred Mineral Resource of 144.1Mt at 0.75% V_2O_5 .
- Appointment of metallurgical consultants to manage detailed metallurgical test work and processing circuit design leading to a Pre-Feasibility Study on a concentration plant.

VSUN Energy:

- Residential vanadium energy storage system review completed, Company to focus on sale of imported systems while evaluating advances in component technology.
- Residential flow battery from Schmid Energy Systems (Germany) for off-grid sites now available for order.
- Exclusive Dealership Agreement with Gildemeister terminated allowing VSUN Energy to market full range of VRB systems from multiple vendors.

Blesberg

- Drilling completed at Blesberg, results indicate localised development of low-grade LCT mineralisation.
- Extensive pegmatite development containing high quality and proportion of glass/ceramic quality microcline feldspar identified from drilling.
- AVL has suspended further spending at Blesberg and is re-negotiating the terms of the Joint Venture agreement.

Corporate

- AVL raised \$2.5m during the period from Sophisticated and Professional investors. Funding showed strong support for the rising vanadium price market and vanadium energy storage potential.
- Appointment of China focused commodity and marketing consultant Mastermines concluded post end of period.

31.10.2017

ASX ANNOUNCEMENT

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Projects:

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



Activities for the September 2017 quarter for Australian Vanadium Limited (“AVL” or “the Company”) are as follows:

GABANINTHA VANADIUM PROJECT

Mineral Resource Update

On 5th September 2017, AVL announced a significant resource upgrade for its Gabanintha Vanadium Project near Meekatharra in Western Australia. The upgrade resulted in a 96% increase in Mineral Resource tonnes which further strengthens the economic viability of the project and its global significance.

The resource upgrade included consideration of additional bulk density results, revised lithology-based ore zone interpretations and revised weathering profiles. The larger and more robust Mineral Resource supports investigating early start-up low capital cost operations producing vanadium concentrate, ahead of construction of a full-scale production plant.

The Mineral Resource includes a distinct massive magnetite high-grade zone of 92.8 Mt at 0.96% V₂O₅ consisting of Measured Mineral Resource of 10.2Mt at 1.06% V₂O₅, Indicated Mineral Resource of 4.8Mt at 1.04% V₂O₅, and Inferred Mineral Resource of 77.8Mt at 0.94% V₂O₅. The distinct high-grade zone Mineral Resource increased 63% from 56.8Mt to 92.8Mt and the high-grade zone Measured and Indicated Resource categories by 33% from 11.3Mt to 15.0Mt.

The total Mineral Resource stands at 179.6Mt at 0.75% vanadium pentoxide (V₂O₅), made up of a Measured Mineral Resource of 10.2Mt at 1.06% V₂O₅, an Indicated Mineral Resource of 25.4Mt at 0.62% V₂O₅, and an Inferred Mineral Resource of 144Mt at 0.75% V₂O₅. The upgraded Mineral Resource increases overall tonnage by 96% from 91.4Mt to 179.6Mt and Measured and Indicated Resource categories by 44% from 24.8Mt to 35.5Mt from the 2015 results. There is extensive potential to convert Inferred Resources to the Measured and Indicated categories at Gabanintha with additional targeted drilling. (see Table 1 for further detail).

Zone	Classification	Mt	V ₂ O ₅ %	Fe %	TiO ₂ %	SiO ₂ %	Al ₂ O ₃ %	LOI %
HG	Measured	10.2	1.06	41.6	12.0	11.6	8.6	4.2
	Indicated	4.8	1.04	41.9	11.5	12.0	8.0	3.6
	Inferred	77.8	0.94	41.2	10.7	12.7	7.9	3.3
	Sub-total	92.8	0.96	41.3	10.9	12.6	8.0	3.4
LG 2-5	Measured	-	-	-	-	-	-	-
	Indicated	20.5	0.52	24.3	7.1	27.9	17.6	8.4
	Inferred	61.8	0.50	26.2	7.0	26.9	16.1	7.2
	Sub-total	82.4	0.51	25.7	7.0	27.2	16.5	7.5
Trans 6-8	Measured	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-
	Inferred	4.5	0.66	28.4	7.2	24.5	16.6	8.4
	Sub-total	4.5	0.66	28.4	7.2	24.5	16.6	8.4
Total	Measured	10.2	1.06	41.6	12.0	11.6	8.6	4.2
	Indicated	25.4	0.62	27.7	7.9	24.9	15.8	7.5
	Inferred	144.1	0.75	34.4	9.0	19.2	11.7	5.2
	Sub-total	179.6	0.75	33.8	9.0	19.6	12.1	5.4

Table 1 .Gabanintha Project – Mineral Resource estimate by domain and resource classification using a nominal 0.4% V₂O₅ wireframed cut-off for low grade and nominal 0.7% V₂O₅ wireframed cut-off for high grade (total numbers may not add up due to rounding)

Metallurgical Test Work

Internationally recognised consultants Wood Group (formerly AMEC Foster Wheeler) were appointed to commence detailed follow up test work (see ASX announcement dated 4 October 2017). This work will include geometallurgical characterisation, comminution, gravity and magnetic separation test work.

Following the completion of the test work program, Wood Group consultants will analyse flowsheet concepts and determine a preferred option enabling the Company to commence preliminary project cost modelling and timeframes to development.

On completion of the flowsheet definition phase the Company will commence;

- A mining study, including pit optimisation and a preliminary economic assessment of an initial mine schedule.
- Incorporation of metallurgical test results and mining study results into a pre-feasibility study of a concentrate plant development at Gabanintha.
- Completion of a scoping study review of a full-scale vanadium processing facility.

Neomet Hydrometallurgical Mineral Recovery Test work update

Sample materials collected from Gabanintha's high-grade oxide zone (approx. grade 1.3% V_2O_5) and low-grade oxide zone (approx. grade 0.6% V_2O_5) were sent to Sedgman in Canada to be initially tested through a standard Neomet bench scale testing facility in the Montreal laboratory. The initial tests have commenced and are being conducted free-of-charge to AVL.

The proprietary process developed by Neomet has demonstrated its ability to extract and recover over 95% of secondary metals at a commercial grade, with a metal purity of over 99.5%. The process enables the extraction of V_2O_5 , TiO_2 and Fe_3O_2 from TVM (titaniferous vanadiferous magnetite) ores such as Gabanintha. The process seeks to generate maximum value of in-situ metal credits. A unique closed Hydrochloric acid (HCl) leaching circuit for acid regeneration and reuse/recycle is used in the process.

Initial test work will focus on Gabanintha's high-grade and low-grade oxide ROM (run of mine) ore. Oxidised TVM ores generally show lower magnetic recovery to the concentrate than transitional or fresh ore and therefore are not as economic to process using a traditional salt-roast pyrometallurgical process. AVL is evaluating both traditional and non-traditional processing routes as it looks to maximise the value of its world class TVM resource at Gabanintha.

Cobalt and other base metal metallurgical test work

The company has identified the concentration of base metals, cobalt, zinc and nickel in mainly sulphide minerals in the non-magnetic fraction of previous metallurgical test work.

A new round of sighter test work was commissioned, but only a single (H_2SO_4) acid leach on material provided was conducted. The initial test work undertaken was incomplete and results inconclusive as a result. The laboratory has agreed to re-do the test work using a wider range of acid leach techniques.

New material from the current round of detailed work on the vanadium ore will also be set aside and considered for the recovery of any sulphide minerals accumulating in the non-magnetic material.

Environmental Studies

During the past six months and covering both autumn and spring seasons, AVL and its environmental consultant Biologic, have completed Flora, Fauna and sub-terranean fauna baseline studies over the Gabanintha resource area and surrounding environments most likely to be affected by future mining and processing activity.

At present the final sub-terranean fauna field survey is underway. This is the second part of a two-season study and involves collection of traps set in the previous survey. The goal of this survey is to establish whether or not stygofauna and/or troglifauna communities are present. Pastoral bores and wells will be investigated as part of this survey.

Work on hydrology has commenced but more intense activity is envisaged as the details of the planned operation emerge from project feasibility work.

On completion of all the baseline work on the environment factors affecting Gabanintha, the Company will be able to prepare and submit an Environmental Impact Assessment (EIA) alongside a development proposal.

Native Title

Discussions have been held with the relevant native title parties over the Gabanintha mining licence application area M51/878. These discussions were conducted in Meekatharra and will continue through to the negotiation of a mining agreement early in 2018.

COATES VANADIUM PROJECT

The Coates vanadium deposit is situated approximately 35km east of metropolitan Perth in the Shire of Wundowie. Exploration at Coates was undertaken in the 1970s after its discovery in the early 1960s. Mining plans have previously been produced by Agnew Clough Ltd on the Coates vanadium deposit, although no significant mining was undertaken. Previous metallurgical testwork produced favourable results and the Company will investigate the viability of developing the site. During the period, AVL's exploration licence over the Coates vanadium deposit was granted.

VSUN ENERGY

Australian Vanadium Limited's 100% owned subsidiary, VSUN Energy was launched in early 2016, (see ASX announcement dated 10 March 2016), with a remit to advance the profile of vanadium energy storage in Australia.

VSUN Energy continues to market commercial vanadium energy storage systems suitable for business and stand-alone microgrids through to utility scale opportunities. During the period the Company continued its marketing activity and advanced a number of leads to proposals and detailed review prior to approval.

Increasing energy prices and policy uncertainty with respect to future renewable energy policy throughout Australia make the landscape for energy storage deployment complex, as many potential customers delay purchase or investment decisions.

The unique characteristics of vanadium redox flow batteries (VRB) lend themselves to strong business cases emerging in off-grid and certain high-cost on-grid environments. These collectively support the current focus and activities of VSUN Energy.

Residential VRB

During the period, VSUN commissioned a strategic analysis of the residential battery market. The results highlighted that the VRB has significant points of difference from other forms of residential energy storage, including number of hours of energy stored, cycling robustness and non-flammability.

VSUN Energy has been working with Schmid Energy Systems in Germany on the supply of a domestic scale VRB system. Work is ongoing to ensure compliance with Australian standards for grid attached installations. This mainly involves integration of the BMS (Battery Management System) with Australian approved inverters. Systems for installation in off-grid settings are available for order now.

The base model Everflow VRB system is a 5kW/15kWh unit, which supplies 5kW of power with 15kWh of energy storage, providing 3 hours at a constant load of 5kW. In typical Australian residential environments, this system will provide 4-8 hours of energy.

Laboratory Scale Vanadium Flow Cell under Construction

The VSUN Energy engineer is currently constructing a laboratory scale vanadium flow cell for electrolyte testing and demonstration purposes. This work will allow VSUN Energy to easily verify the quality and performance of electrolyte prepared in its pilot plant. Once operational, the Company will scale up the test to use a larger commercial stack configuration. The aim being to build a working small-scale battery and developing experience in battery construction.

Exclusivity Agreement

In order to advance its domestic scale VRB strategy, the Company terminated its exclusive dealership agreement with GILDEMEISTER. The dealership imposed a requirement that VSUN Energy could only sell GILDEMEISTER storage systems and only within Australia. VSUN Energy is now marketing batteries from a variety of manufacturers, fitting the correct solution to each prospective client's requirements.

BLESBERG FELDSPAR-LITHIUM-TANTALUM PROJECT

Project Background

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. Historical information about mine production quantities and quality is very limited, however a sample analysis of a 150 ton shipment of feldspar from the 1960s assayed 1.74% Li₂O (Schutte, I. Memoir 60 Geological Survey of South Africa, 1972).

As part of a Joint Venture earn-in agreement with the vendors of Blesberg, SALT Pty Ltd, the Company has completed 41 holes (3128m) of Reverse Circulation (RC) drilling, which will allow the Company to calculate and report a mineral resource estimate in accordance with the 2012 JORC Code. The programme achieved a drill intersection spacing of 50m, providing good resolution of the pegmatite geometry and mineral distribution. AVL, as an exploration company, had the objective to assess the potential of the Lithium-Caesium-Tantalum (LCT)

pegmatites at Blesberg, including the volume of ceramic grade feldspar and of high value by-products of spodumene, beryl and tantalite.

Drilling of trenched pegmatite exposure has increased the known strike length of the Main Noumas 1 zone to circa 1km in length with significant width of pegmatite intersected.

While lithium, beryl and tantalum minerals have been identified in drill cuttings. Assays of these minerals in drilling to date have not been significant overall. Final interpretation of assay and pegmatite geometry is progressing, following lengthy laboratory delays.

The Company is currently in discussions relating to the high quality and high-volume opportunity presented by the feldspar mineralisation.

Due to the results and distribution of results analysed to date, the Company is re-negotiating with the vendors of Blesberg to cancel all future cash payments relating to the earn-in and modifying the terms of the earlier agreement.

CORPORATE

Capital Raising

During the period, AVL raised a total of \$2.5m in three separate placements to Sophisticated Investors. The details of the raisings are summarised below;

- on 26 July the Company announced the placement of 50,000,000 shares at 1.5c and a free attaching option exercisable at 2c before 31 December 2018 to raise \$750,000 before costs. The shares and options were issued under the Company's available placement capacity under ASX Listing Rule 7.1;
- on 7 August the Company announced the placement of 50,000,000 shares at 1.5c and a free attaching listed option exercisable at 2c before 31 December 2018 to raise \$750,000 before costs. 25,000,000 of the options are to be issued following shareholder approval, with the balance issued under the Company's available placement capacity under ASX Listing Rule 7.1;
- on 18 September the Company announced the placement of 67,000,000 shares at 1.5c and a free attaching listed option exercisable at 2c before 31 December 2018 to raise \$1,005,000 before costs. The options are to be issued following shareholder approval and the shares issued under the Company's available placement capacity under ASX Listing Rule 7.1A.

Bryah Resources Ltd

In January 2017, AVL announced that it had agreed to sell the precious and base metal rights in the Gabanintha Project, as well as its 100% equity in Peak Hill tenement (E52/3349) to Bryah Resources Limited (Bryah).

The consideration for the sale comprises:

- 5,000,000 ordinary shares in Bryah; and
- a 0.75% net smelter return royalty upon commencement of production.

Bryah listed on the ASX under ticker code BYH on 17th October 2017. On completion of the IPO, AVL held a relevant interest in Bryah of 13.4% having subscribed for a further 2,500,000 shares and 1,250,000 free listed options (exercise price \$0.30 and expiry 31/10/2020) at a cost of \$500,000, increasing its equity position to 7,500,000 shares.

AVL retains all mineral rights to vanadium, titanium, chromium, uranium, lithium, tantalum, iron ore manganese and cobalt within the Gabanintha Project area and retains primary title over the licenses.

Mastermines

At the end of October 2017, the Company appointed China focused marketing company Mastermines to assist AVL with developing relationships in Asia with steel and battery market participants, (see ASX announcement dated 23rd October 2017). Mastermines is a mining materials promotion and marketing consultancy with an experienced China-focused team. The consultancy will provide AVL with a more focused approach towards Chinese investment in the future, as the Company seeks to develop interest in Gabanintha and markets for its potential products, as a steel additive and for an ever-widening range of energy storage related applications.

Nowthanna Hill M51/771

The Nowthanna uranium vanadium project is situated approximately 47 kilometres south east of Meekatharra. The project consists of mining lease M51/771 which covers a portion of the calcrete palaeochannel near the Quinn's Lake inland drainage. This same palaeochannel and lake contains the calcrete hosted uranium deposits at Nowthanna and Nowthanna South. The Company has held the mining lease under application since listing in 2007. The project is immediately adjacent to and contiguous with the Nowthanna Hill uranium deposit owned by Toro Energy, located on retention licence application R51/3 and containing an Inferred Resource of 11.9 Mt at 399ppm U₃O₈, containing 10.5Mlbs U₃O₈ reported to JORC 2012 standards and using a 200ppm U₃O₈ cutoff (Toro Energy Annual Report 2015, p13). In 2016, AVL successfully negotiated a mining project agreement with the Yugunga-Nya people.

The mining lease was granted by the Government on 1st August 2017.

Cash Position

As at the 30 September 2017, the Company had \$3.1 million in cash and cash equivalents.

For further information, please contact:

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About Australian Vanadium Limited

AVL is a diversified 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 179.6Mt at 0.75% vanadium pentoxide (V₂O₅), made up of a Measured Mineral Resource of 10.2Mt at 1.06% V₂O₅, an Indicated Mineral Resource of 25.4Mt at 0.62% V₂O₅, and an Inferred Mineral Resource of 144Mt at 0.75% V₂O₅, reported in compliance with the JORC Code 2012 (see AVL ASX Announcement 5 September 2017).

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 (VRB).

AVL, through its 100%-owned subsidiary VSUN Energy Pty Ltd, is actively marketing VRB in Australia.

Tenement Schedule

Tenement Information as Required by Listing Rule 5.3.3 For the Quarter Ended 30 September 2017					
Project	Location	Tenements	Economic Interest	Notes	Change in Quarter %
Western Australia	Gabarintha	E51/843	100% Granted		Nil
		E51/1396	100% Granted		Nil
		E51/1534	100% Granted		Nil
		E51/1576	100% Granted		Nil
		E51/1685	100% Granted		Nil
		E51/1694	100% Granted		Nil
		E51/1695	100% Granted		Nil
		P51/2566	100% Granted		Nil
		P51/2567	100% Granted		Nil
		P51/2634	100% Granted		Nil
		P51/2635	100% Granted		Nil
		P51/2636	100% Granted		Nil
		MLA51/878			100% On application
Western Australia	Nowthanna	M51/771	100% Granted		100%
Western Australia	Peak Hill	E52/3349	0.75% NSR Production Royalty		Nil
Western Australia	Coates	E70-4924-I	100% Granted		100%
South Africa	Blesberg	(NC) 940 PR		Earning 50.03%	Nil

Concept Study Parameters – Cautionary Statement

The Concept Study in this report (nominal +/- 50% accuracy) is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the current conclusions of the Concept Study will be realised. There is a moderate level of geological confidence associated with Measured Indicated and Inferred Mineral Resources and there is no certainty that further exploration and development work will result in the estimation of Ore Reserves or that the production target itself will be realised. The Company advises the Concept Study results and production targets reflected in this announcement are highly preliminary in nature as conclusions are drawn from the average grade of Measured, Indicated and Inferred Resources. A generic mining cost per tonne of material moved and an average resource grade has been used to determine overall mining and processing costs as opposed to a detailed mining block model evaluation to produce a detailed mining schedule.

Competent Person Statements – Gabarintha Project

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 shareholder of Australian Vanadium Limited. 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.

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 and Mr Davis are members of the Australasian Institute of Mining and Metallurgy and 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.

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 Resource 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 has not been materially modified from the original market announcement.

Competent Person Statement – Blesberg Exploration Program

The information relating to the Blesberg 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.

Forward Looking Statements

This announcement may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to Resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes. For more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Companies other filings. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publicly any revisions to any "forward looking statement" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.