



ASX ANNOUNCEMENT

31<sup>ST</sup> JULY 2020

# **QUARTERLY ACTIVITIES REPORT**

Period ending 30<sup>th</sup> June 2020

# HIGHLIGHTS

- Vanadium pellet roast leaching achieved a 93.3% average extraction, an 8% relative improvement on the PFS<sup>1</sup> basis.
- New Mining Licence application extended AVL's footprint at Gabanintha, covering the southern Mineral Resource fault blocks.
- Mine water access agreement signed with Westgold Resources Limited.
- The Australian Vanadium Project awarded Lead Agency Status by the Western Australian Government.
- Heritage negotiations relating to the Mining Agreement continue to progress.
- Vanadium redox flow battery subsidiary VSUN Energy included in the Queensland Farmers' Federation recipient group for a grant from the Federal Government's Regional and Remote Communities Reliability Fund.

# **Coates Project**

- Coates vanadium project demonstrated potential for palladium, nickel and copper.
- Strategic alliance formed with Lithium Australia NL and Mercator Metals Pty Ltd to collaborate to advance exploration of the Coates Mafic Intrusive Complex.

# Corporate

- AVL received a \$1.83m Research & Development Tax Incentive Scheme refund for the 2018/19 tax year.
- Cash at bank on 30<sup>th</sup> June 2020 was \$5.5 million.

# Management Comment

With Western Australia in a strong position in relation to the global pandemic, AVL has been able to make solid progress during the past quarter on the advancement of the world class Australian Vanadium Project at Gabanintha, near Meekatharra. Vanadium is regarded as both a critical and battery metal and through the course of the current pandemic, supply chains around the world are being examined to ensure security of supply. AVL's Project sits in the Tier 1 mining jurisdiction of

<sup>&</sup>lt;sup>1</sup> See ASX announcement dated 19<sup>th</sup> December 2018 *'Gabanintha Pre-Feasibility Study and Maiden Ore Reserve'* 



WA and with the Company's intention to undertake vanadium processing close to the coast near Geraldton, AVL represents a unique opportunity in the global future of vanadium supply.

During the quarter AVL has been able to demonstrate improved vanadium extraction through the application of a tried-and-tested pelletisation process. This is expected to flow through to the overall process recovery, operating cost and project value. The AVL team is focused on improvements that can be made to further de-risk the Project. The agreement with Westgold Resources to access quality available surface water is a prime example of this strategy. The Company applied for an additional Mining Licence for the high-quality southern resource blocks which will provide flexibility for future infrastructure works and further optimisation of the Project's mine lifespan.

AVL continues to make good progress developing the vanadium redox flow battery market in Australia through its subsidiary VSUN Energy. The Company has also developed a strategic alliance with Lithium Australia and Mercator Metals at its Coates vanadium and base metal project as the companies work together to explore the potential for platinum group elements, nickel and copper. AVL holds a 10% stake in ASX listed Bryah Resources Limited (ASX:BYH) which is developing its manganese assets in a joint venture with manganese producer OM Holdings Ltd (ASX:OMH) and having considerable exploration success drilling for gold and copper on its extensive ground holdings in the western Bryah Basin and at the Gabanintha site.

Activities for the quarter ended 30<sup>th</sup> June 2020 for Australian Vanadium Limited ("AVL" or "the Company") are as follows:

# THE AUSTRALIAN VANADIUM PROJECT

# Exceptional Vanadium Leach Extraction of up to 94.7%

See ASX announcement dated 1<sup>st</sup> July 2020 'Pellet Roast Pilot Testing Delivers Uplift in Vanadium Extraction'

As part of the ongoing and detailed pilot scale testing underway at the Metso pyrometallurgical testing facilities in the US, roast/leach test work using a pelletised concentrate has achieved an average of 93.3% leach extraction. After allowing for scaling up, this is estimated to deliver an 8% relative improvement on the basis applied in the PFS and represent a significant unique advantage for the Company. These test outcomes relate to the processing of concentrate, designed to represent the average of the first five years of forecast production<sup>2</sup> and build on results from previous

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<sup>&</sup>lt;sup>2</sup> See ASX announcement dated 16<sup>th</sup> March 2020 '*Pilot Study Programme Confirms High Vanadium Recoveries and Concentrate Quality*'



AVL bench scale tests, where 587kg of concentrate was roasted in batches and similar vanadium leach extractions were observed<sup>3</sup>.

Testing has demonstrated that the Australian Vanadium Project's roasting requirements are well within standard grate kiln operating parameters. With the optimised roast conditions now well understood, the final bulk production phase of the pyrometallurgical testwork program is being executed. This work will also confirm the grate kiln performance in treating the average life of mine (LOM) concentrate generated in AVL's previously reported crushing, milling and beneficiation (CMB) pilot testwork.



Figure 1 AVL pellets cooling after thermal treatment

The CMB pilot concentrates were exceptionally low in silica for a vanadium titanium magnetite (VTM) project. The Y0-5 concentrate having 1.83% SiO<sub>2</sub> (0.86% Si) and the LOM concentrate 1.68% SiO<sub>2</sub> (0.79% Si). Roast leach results on the Y0-5 concentrate also confirm a low extraction of silicon (an impurity) into the leach solution, presenting the opportunity to further simplify downstream hydrometallurgical processing. Silicon leach extraction averaged 4.2%, while almost no aluminium was leached.

# Mining Licence Application over Southern Fault Blocks

See ASX announcement dated 17<sup>th</sup> July 2020 'New Mining Licence Application Extends the Australian Vanadium Project'

<sup>&</sup>lt;sup>3</sup> See ASX announcement dated 5<sup>th</sup> February 2020 '*High Vanadium Extraction Confirmed as Pyrometallurgical Pilot Begins*'



Subsequent to quarter end, AVL extended its footprint and the future of the Australian Vanadium Project at Gabanintha with a Mining Licence application (MLA 51/890) covering the southern Mineral Resource fault blocks. MLA 51/890 contains Inferred Resources with a total Mineral Resource of 27.5Mt at 0.76% V<sub>2</sub>O<sub>5</sub>, including a high-grade massive magnetite zone of 14.8Mt at 0.99% V<sub>2</sub>O<sub>5</sub>.



Figure 2 The Australian Vanadium Project Location and Tenure with Mining Lease Application MLA 51/890 Southern Extension

The southern areas at the Australian Vanadium Project were not initially a priority, due to early focus on the northern part of the deposit. Subsequent work has revealed the importance of the magnetic



response of ore during beneficiation. 3D magnetic inversion modelling during 2019 highlights the quality of the deposit in the southern fault blocks where the response is found to be stronger and shallower, indicating potential for increased recovery through the magnetic separation circuit<sup>4</sup>.

The area under application is immediately south of and contiguous with AVL's MLA 51/878 application and covers the remaining strike of the Project. The Mineral Resources within MLA 51/878 will continue to be the primary basis for the Bankable Feasibility Studies.

Infrastructure in the new MLA, covering E51/843, E51/1534, P51/3075 and P51/3076, is planned to support two open pits as well as containing waste dumps, topsoil stockpiles, haulage roads and a mining service area. This area forms the contiguous southern extension of the Australian Vanadium Project under MLA 51/878 and will be optimised, developed and mined as part of the overall schedule of operations by AVL.

# Water Access Agreement with Westgold Resources

See ASX announcement dated 20<sup>th</sup> May 2020 'AVL Signs Water Access Agreement with Westgold'

During the quarter, AVL signed a letter of agreement for co-operation and assistance for water access for the Project with Australian gold miner Westgold Resources Limited. Westgold's Meekatharra gold operation comprises several active and inactive mines south of Meekatharra (see Figure 3**Error! Reference source not found.**) located 25km to the west of the Project. Continuous inflows into a number of these active and inactive pits and underground mines lead to the generation of significant amounts of water, surplus to Westgold's requirements, which can be utilised in processing AVL's vanadium ore.

In addition to the water access, the agreement provides a platform for friendly collaboration over site access and the use of new and existing roads to move ore, materials and products within the companies' tenements.

<sup>&</sup>lt;sup>4</sup> See ASX announcement dated 4<sup>th</sup> March 2020 'Total Vanadium Resource at the Australian Vanadium Project Rises to 208 Million Tonnes'





Figure 3 Westgold Resources and AVL, Meekatharra Region Tenement Locations

Securing access to sufficient quality water resources to use in the mining and CMB plant planned for the Project helps de-risk operations. WA has limited high quality water resources, so innovative collaborations such as this agreement with Westgold can assist both the EPA and DWER with their water management and environmental custodianship, whilst allowing the Project to progress.

Building strong relationships within both the mining and local communities is a key AVL strategy. The Company has been working with Westgold through the Meekatharra Industry Group and through the mutual sponsorship of the Stephen Michael Foundation, for which the companies and the Foundation received the inaugural AMEC (Association of Mining and Exploration Companies) Community Award in December 2019.

# Western Australian Government Awarded AVL Lead Agency Status

See ASX announcement dated 21<sup>st</sup> April 2020 'Australian Vanadium Project Awarded Lead Agency Recognition in WA'





AVL was awarded Lead Agency Status by the Department of Mines, Industry Regulation and Safety (DMIRS) for the Project during this quarter. The award provides State recognition in addition to the Major Project Status awarded by the Federal Government in September 2019<sup>5</sup>.

DMIRS, Western Australia's lead agency for the regulation of the resources sector, offers a Lead Agency Framework which provides a single point of contact within the State Government to give assistance and coordinate the government's approvals process. Regular meetings are being held between DMIRS and AVL. The first multi-agency project briefing was held at the beginning of June, enabling the Company to ensure that all relevant agencies were fully aware of the Project's progress.

# Australian Vanadium Project Path Forward

# Pilot Study and Testwork

The final phase of the pyrometallurgical testwork program being undertake at Metso's testing facilities in Danville, Pennsylvania, USA is now being executed. Modifications to the workload at the facility have had to be undertaken due to the impact of the global pandemic. This work will also confirm the grate kiln performance in treating the average life of mine (LOM) concentrate generated in AVL's previously reported CMB pilot testwork.

AVL has now also commenced testing of the downstream hydrometallurgical circuit which will ultimately purify the leach liquor and generate final vanadium product. Various programs are underway with CRC-P<sup>6</sup> partners Wood, ANSTO and ALS Metallurgy, aimed at further innovating the flowsheet to assure a competitive low-cost, low-risk outcome. Roasted concentrate already generated from the pilot program is being utilised for current CRC-P work.

# Environmental Studies

Meetings were held during the quarter with the Environmental Protection Authority and environmental representatives from DMIRS. A submission is being prepared under the guidance of the authorities and external environmental consultant Umwelt.

# Mining Agreement

Native Title negotiations in relation to the Mining Agreement and grant of the Mining Licence continue to progress. Negotiations have advanced to discussions around key commercial and heritage

<sup>&</sup>lt;sup>5</sup> See ASX announcement dated 6th September 2019 'Major Project Status Awarded to the Australian Vanadium Project' 6 See ASX announcement dated 10<sup>th</sup> February 2020 'AVL Awarded \$1.25 Million Vanadium Research and Development Grant'



protection terms in the final agreement draft. Further meetings with the Yugunga-Nya claim group are planned for the current quarter.

# **ENERGY STORAGE**

# VSUN Energy Included in Queensland Farmers' Federation Grant Group

See ASX announcement dated 17<sup>th</sup> June 2020 'VSUN Energy Included in Microgrid Grant Recipient Group'

The Queensland Farmers' Federation (QFF) received a grant from the Federal Government's Regional and Remote Communities Reliability Fund. VSUN Energy was included in the recipient group to provide energy analysis and modelling for vanadium redox flow batteries (VRFBs) as a potential battery storage solution. Other members of the group include Cotton Australia, ReAqua and Constructive Energy.

VSUN Energy will receive payment for the modelling work it undertakes, with a portion of in-kind contribution to assist the project.

VSUN Energy and ReAqua built a relationship through the inaugural National Renewables in Agriculture Conference and Expo held in Wagga Wagga, NSW last year. The agricultural sector was a perfect fit for the Federal Government's grants to assess microgrid capability and VSUN Energy provided a letter of support to the project for the grant application.

VSUN Energy has seen a significant increase in enquiries and interest for microgrids and standalone power systems (SPS) in agricultural settings and in the mining sector in 2020.

# VRFB Market

# Vanadium Flowing in 2020

An article by VSUN Energy in the May edition of the Australian Energy Storage Alliance newsletter showcased the most recent installation of a VRFB in Australia, a 150kW/600kWh system on Heron Island in Queensland for the Heron Island Research Station. The battery type was specifically chosen for its safety credentials. The University of Adelaide in South Australia is in the final stages of its solar farm project for the Roseworthy campus. The project includes a hybrid VRFB/lithium-ion system, with a total size of 420kW/1200kWh.



This year has seen the merger of two VRFB manufacturers, Avalon Battery from the US and the UK's redT Energy, with the new company being called Invinity Energy Systems. Invinity has backing from South African vanadium miner Bushveld Energy.

Saudi Arabia is to be the home of a 3GWh capacity VRFB factory being built by petrochemical company SABIC in conjunction with German VRFB manufacturer SCHMID. AVL and VSUN Energy signed letters of intent with SCHMID for supply of vanadium and vanadium electrolyte in addition to SCHMID's VRFBs being offered to VSUN Energy's clients.<sup>7</sup>

Sumitomo Electric has recently announced a 17MW/51MWh VRFB to be installed in Hokkaido, Japan where its 60MWh VRFB is in operation.

Strong growth in VRFB uptake has been predicted by a wide range of industry analysts including the World Bank Group<sup>8</sup>.

# COATES

# Palladium, Nickel and Copper Potential at Coates Project

See ASX announcement dated 1<sup>st</sup> May 2020 'Palladium – Nickel – Copper Potential at Coates Project'

In May the Company announced the potential for nickel, copper and platinum group elements (PGE) at the Coates project, which is located in the Shire of Northam, approximately 60km east of Perth. The project sits in the Jimperding Metamorphic Belt and is situated SE of the Chalice Gold Mines (ASX: CHN) Julimar project. PGEs are among the rarest metals on earth and comprise ruthenium, rhodium, palladium, osmium, iridium, and platinum, which are elements with high melting points, corrosion resistance and catalytic qualities.

The Company has applied for and received permission from DMIRS to undertake a drilling program to evaluate the vanadium resource at the Coates project. The program allows for immediate exploration drilling of up to 15 diamond core holes. Considering the new base metal and PGE discoveries elsewhere in the greenstone belt, AVL is reviewing the historical Coates project drilling and will target base metals and PGE, as well as vanadium, in its planned drilling.

<sup>&</sup>lt;sup>7</sup> See ASX announcement dated 28<sup>th</sup> August 2018 '*Letters of Intent signed with VRFB manufacturer SCHMID*'

<sup>&</sup>lt;sup>8</sup> World Bank Group report '*Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition*' dated 2020



The 2019 joint venture term sheet entered into with Ultra Power Systems Ltd (UPS) has been terminated.



Figure 4 Location of Coates Project alongside known Base Metal, VTM and PGE Projects

# Strategic Alliance Formed with Lithium Australia NL and Mercator Metals Pty Ltd

See ASX announcement dated 27<sup>th</sup> May 2020 'Strategic Alliance Formed to Explore the Coates Mafic Intrusion for Nickel Sulphides'

At the end of May AVL announced that it had formed a strategic alliance with Lithium Australia (ASX: LIT) and Mercator Metals Pty Ltd to explore the combined contiguous tenement package of the three companies. A Letter of Understanding signed by the three parties envisages attracting a senior



partner for the project. The tenements are open to either joint venture development or combined sale.



Figure 5 Tenements and TMI Aeromagnetic Targets

The collaboration agreement has commenced with compilation and data sharing of historical information which can assist in targeting potential hosts for base metal-PGE mineralisation. The objective is the construction and maintenance of a single modern dataset for use with digital modelling systems.

Following this initial phase, a laterite sampling and geological mapping field exercise will be completed to develop an up to date geochemical and geological map.

The companies are evaluating use of ground EM geophysical surveys to delineate any sulphide-rich horizons at the Coates Project prior to drilling.

The expected timeframe for the initial base metal exploration is dependent on permitting. Historical data compilation are nearing completion, with new geochemical sampling to be completed in the current quarter. EM surveys will follow geochemical targeting, with drilling to follow.



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# CORPORATE

#### **Feasibility Studies**

AVL has used the COVID-19 period to review its feasibility study and funding pathway, with a gap analysis having been undertaken by a recognised external consultant. Advice is being summarised into an action plan that is being finalised for Board approval. The focus is on the delivery of an externally reviewed Bankable Feasibility Study that is finance ready. The Company will release more details on the report findings, as well as key 3<sup>rd</sup> party appointments, in due course.

# **R&D Rebate**

See ASX announcement dated 3<sup>rd</sup> June 2020 'AVL Receives \$1.8 Million R&D Refund In June AVL announced that it had received \$1,834,184 from the Australian Federal Government's Research and Development (R&D) Tax Incentive Scheme for the 2018/19 tax year.

AVL's R&D work for the period was focused on development of processing techniques to produce vanadium for a poly-metallic ore for VRFB and steel applications.

The Company is in the process of compiling a claim for the 2019/20 period which covers further work on these R&D activities and additional processing work related to the recovery of vanadium products from the Project.

# Appendix 5B – Quarterly Cash Flow Report

The cash position of AVL at 30<sup>th</sup> June 2020 was \$5.5 million.

The aggregate amount of payments to related parties and their associates included in the current quarter cash flows from operating activities were \$118k, comprising Directors' fees, salaries and superannuation.

During the quarter the \$48,000 expensed for exploration and evaluation expenditure was comprised of \$14,000 for native title management, with the balance being for tenement rents and management.

The \$422,000 amount of exploration and evaluation expenditure capitalised was comprised of pilot testwork (\$48,000), environmental work (\$38,000), laboratory analysis (\$65,000) and resource modelling (\$26,000) with the balance being other consultants and labour.

No production and development activities were undertaken during the quarter.



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# Marketing

In April 2020, Vincent Algar took part as a panellist at the Mining Beacon Webinar, 'How can juniors adapt to the new normal?'. Vincent also attended two 121 Mining conferences where a series of meetings were arranged throughout Europe, the Middle East, Africa and the Asia Pacific region. Meetings were held with financiers, investors and trading houses. Vincent also presented the Australian Vanadium Project at Gabanintha at the Mining & Energy Services Council of Australia (MESCA) Project Briefing.

In June Vincent Algar and Todd Richardson, Chief Operating Officer, presented on the re-use of vanadium electrolyte at the Vanitec Energy Storage Committee meeting.

Samantha McGahan, Stakeholder Engagement Manager, presented at the Future Battery Industries Co-operative Research Centre (FBICRC) battery-supported mine electrification workshop on the use of electrification in vanadium mining and the use of vanadium redox flow batteries in mining.

For further information, please contact: Vincent Algar, Managing Director +61 8 9321 5594

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



# MINERAL RESOURCE AND ORE RESERVE

Table 1 - The Australian Vanadium Project Mineral	Resource Estimate at February 2020 by Domain
and Resource Classification <sup>9</sup>	

Zone	Classification	МТ	V <sub>2</sub> O <sub>5</sub> %	Fe%	TiO <sub>2</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI%
HG 10	Measured	10.1	1.14	43.9	13.0	9.2	7.5	3.7
	Indicated	25.1	1.10	45.4	12.5	8.5	6.5	2.9
	Inferred	52.7	1.04	44.6	11.9	9.4	6.9	3.3
	Subtotal	87.9	1.06	44.7	12.2	9.2	6.8	3.2
LG 2-5	Measured	-	-	-	-	-	-	-
	Indicated	44.5	0.51	25.0	6.8	27.4	17.0	7.9
	Inferred	60.3	0.48	25.2	6.5	28.5	15.3	6.7
	Subtotal	104.8	0.49	25.1	6.6	28.0	16.1	7.2
Transported 6-8	Measured	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-
	Inferred	15.6	0.65	28.4	7.7	24.9	15.4	7.9
	Subtotal	15.6	0.65	28.4	7.7	24.9	15.4	7.9
Total	Measured	10.1	1.14	43.9	13.0	9.2	7.5	3.7
	Indicated	69.6	0.72	32.4	8.9	20.6	13.2	6.1
	Inferred	128.5	0.73	33.5	8.8	20.2	11.9	5.4
	Subtotal	208.2	0.74	33.6	9.0	19.8	12.1	5.6



 $<sup>^{9}</sup>$  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 30 June 2020.

Project	Location	Tenements	Economic Interest	Notes	Change in Quarter %
Western Australia	The Australian	E51/843	100% Granted <sup>1</sup>		Nil
	Vanadium	E51/1396	100% Granted <sup>1</sup>		Nil
	Project	E51/1534	100% Granted <sup>1</sup>		Nil
	_	E51/1685	100% Granted <sup>1</sup>		Nil
	_	E51/1694	100% Granted <sup>1</sup>		Nil
	_	E51/1695	100% Granted <sup>1</sup>		Nil
	_	E51/1899	100% Granted <sup>1</sup>		Nil
	-	ELA51/1943		100% on application	Nil
	_	ELA51/1944		100% on application	Nil
	_	P51/2566	100% Granted <sup>1</sup>		Nil
	_	P51/2567	100% Granted <sup>1</sup>		Nil
		P51/2634	100% Granted <sup>1</sup>		Nil
		P51/3073	100% Granted		100%
		P51/3074	100% Granted		100%
		P51/3075	100% Granted		100%
		P51/3076	100% Granted		100%
		MLA51/878		100% <sup>1</sup> on Application	Nil
		MLA51/888		100% <sup>1</sup> on Application	100%
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%	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

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#### FORWARD LOOKING STATEMENTS

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

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

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

The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

# **COMPETENT PERSON STATEMENT – EXPLORATION RESULTS AND TARGETS**

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



consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

#### **COMPETENT PERSON STATEMENT — MINERAL RESOURCE ESTIMATION**

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

The scientific and technical information in this announcement 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 AusIMM. 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 JORC 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Croeser 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.

#### **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.