

# ASX Announcement

## Metallurgical Drilling Commences at Gabanintha Vanadium Project

### Highlights:

- Metallurgical diamond drilling program has commenced
- Program will provide oxide, transitional and fresh core for Pilot Plant metallurgical testwork
- Program to incorporate:
  - Large tonnage collection to simulate and refine processing circuit
  - Increased resolution of high-grade material types
  - Improved geotechnical information
  - Detailed analysis using new spectral and XRF core scanning technologies
- Drilling program to focus on proposed pit area
- Engineering studies and environmental work programs to continue in parallel to drilling

Australian Vanadium Limited (ASX: AVL, “the Company” or AVL”) is pleased to advise the commencement of metallurgical and resource drilling at its Gabanintha vanadium project near Meekatharra in Western Australia.

### 2019 Pilot Plant Drill Campaign

The current drill program will collect large diameter diamond core as test material for pilot scale studies using blends of oxide, transitional and fresh material from the high-grade massive magnetite layer within the proposed open pit at Gabanintha.

The drill program will provide AVL with:

- Approximately 30 tonnes of oxide, transitional and fresh core samples required to run a robust pilot plant testwork program for the Crushing, Milling and Beneficiation (CMB) circuit;
- Concentrate products from the CMB pilot plant testwork program for use in salt-roast leach and hydrometallurgical tests that will produce samples of refined Vanadium Pentoxide (V<sub>2</sub>O<sub>5</sub>); and
- Information from these tests to be used to refine the results of the Pre-Feasibility Study (PFS) released in December 2018.

21 January 2019

### ASX ANNOUNCEMENT

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#### Projects:

Gabanintha - Vanadium  
Blesberg, South Africa - Lithium/Tantalum  
Northanna Hill – Uranium/Vanadium  
Coates - Vanadium



The Company will also use this drilling program to:

- Update the current Mineral Resource by drilling a number of holes to test for mineralisation at depth below the existing Mineral Resource shell;
- Trial new spectral and XRF core scanning techniques through specialised laboratory services; and
- Gather further geotechnical data, through survey of the drillholes with Televiwer®, to identify any structures not intersected by the orthogonal-to-deposit resource drillholes.



*Plate 1 - Diamond drill rig on site at Gabanintha Project*

The Company has appointed an experienced drilling contractor to carry out the drilling (see Plate 1).

Diamond holes will be drilled into the designed pit shell within Mining Lease Application MLA51/878 (see Figure 1), to extract approximately 30 tonnes of oxide, transitional and fresh core samples for the metallurgical work. The Company will be using some innovative drilling procedures to specifically reduce costs and drilling time and maximise tonnage and information per hole during the program.

Additionally, geotechnical structures will be measured using downhole Televiwer® technology to provide additional information for pit design. Drilling is designed to intersect the mineralisation and provide key geo-metallurgical information and data on pit wall angles, plus free-dig boundaries in the waste rock.

AVL looks forward to reporting progress on the drilling activities as they are completed.

Managing Director Vincent Algar comments, “We are pleased to be back on the ground so early in the new year. The 30 tonnes of material from this program are essential to confirm the performance of the circuit we have already defined in the PFS. As we complete the detailed design of the plant, it is essential we move from bench scale tests to larger scale tests using anticipated blends of ore that will be mined. A detailed pilot metallurgical programme allows us to test and refine the circuit ensuring no surprises during actual mine production. The AVL team is focusing on quality as it advances through the work ahead. This quality will assist us in securing project funding partners and bringing Gabanintha into production.”

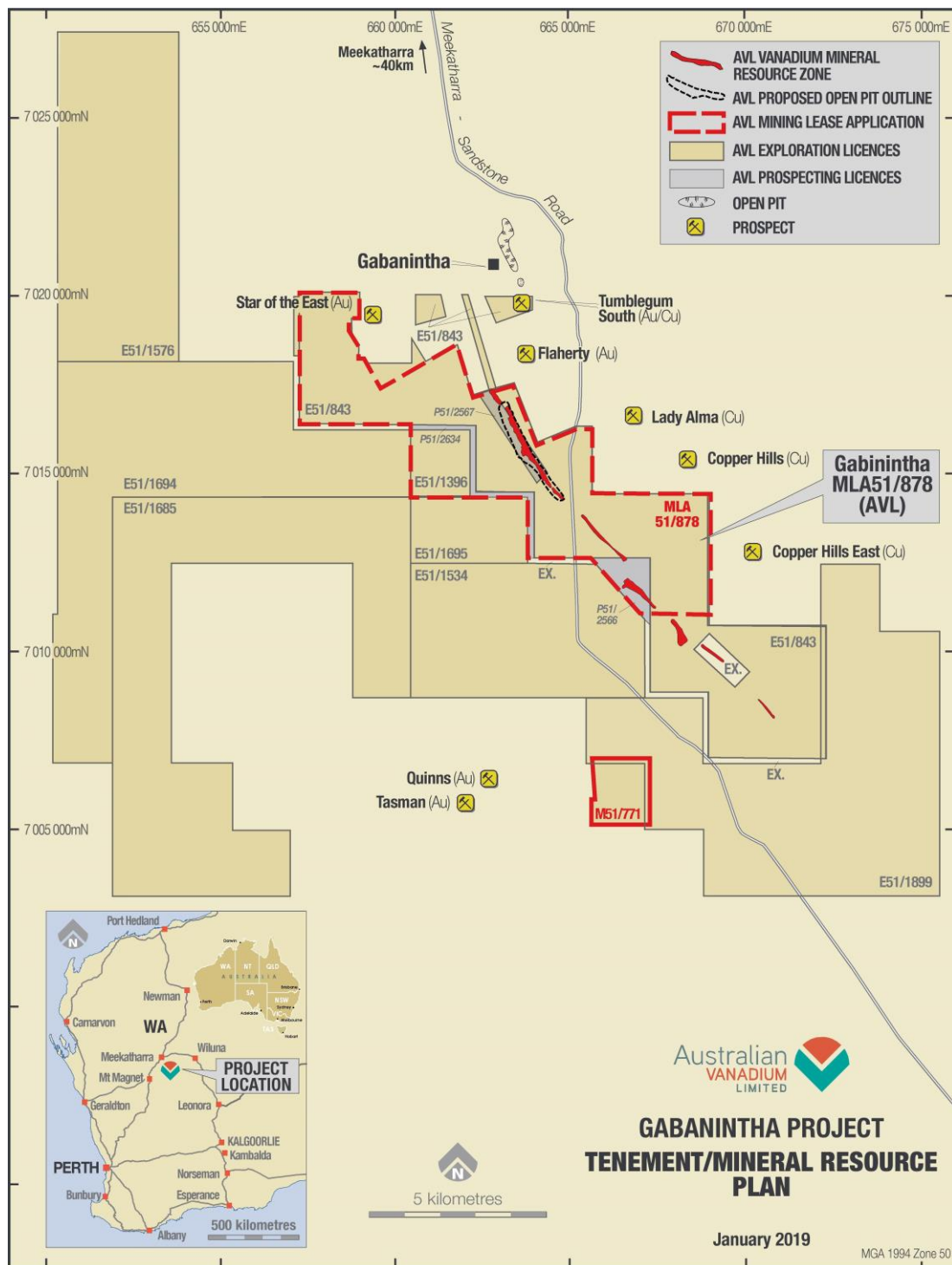


Figure 1 - Location Diagram of the Gabanintha Project

For further information, please contact:

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**Table 1 - Gabanintha Project – Mineral Resource estimate at November 2018 by domain and resource classification 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)**

Zone	Classification	Mt	V <sub>2</sub> O <sub>5</sub> %	Fe %	TiO <sub>2</sub> %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	LOI %
HG 10	Measured	10.2	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
	<b>Sub-total</b>	<b>96.7</b>	<b>1.00</b>	<b>42.4</b>	<b>11.4</b>	<b>11.3</b>	<b>7.7</b>	<b>3.5</b>
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
	<b>Sub-total</b>	<b>82.5</b>	<b>0.49</b>	<b>25.1</b>	<b>6.8</b>	<b>27.5</b>	<b>16.9</b>	<b>7.7</b>
Transported 6-8	Measured	-	-	-	-	-	-	-
	Indicated	-	-	-	-	-	-	-
	Inferred	4.4	0.65	28.2	7.2	24.7	16.7	8.5
	<b>Sub-total</b>	<b>4.4</b>	<b>0.65</b>	<b>28.2</b>	<b>7.2</b>	<b>24.7</b>	<b>16.7</b>	<b>8.5</b>
Total	Measured	10.2	1.11	42.7	12.6	10.2	8.0	3.9
	Indicated	40.7	0.66	30.3	8.3	22.5	14.8	7.1
	Inferred	132.7	0.77	34.8	9.2	18.5	11.5	5.1
	<b>Sub-total</b>	<b>183.6</b>	<b>0.76</b>	<b>34.3</b>	<b>9.2</b>	<b>18.9</b>	<b>12.1</b>	<b>5.5</b>

**Table 2 - Ore Reserve Statement as at November 2018, at a cut-off grade of 0.8% V<sub>2</sub>O<sub>5</sub>**

Reserve classification	t	V <sub>2</sub> O <sub>5</sub> %	Co ppm	Ni ppm	Cu ppm	S %	SiO <sub>2</sub> %	Fe <sub>2</sub> O <sub>3</sub> %	V <sub>2</sub> O <sub>5</sub> produced 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
<b>Total</b>	<b>18,240,000</b>	<b>1.04</b>	<b>173</b>	<b>597</b>	<b>222</b>	<b>0.07</b>	<b>9.75</b>	<b>59.1</b>	<b>121,000</b>

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

### Competent Person Statement — 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.