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ASX ANNOUNCEMENT 15 SEPTEMBER 2022

DRILL RESULTS AT COATES NICKEL-COPPER-PGE PROJECT CONFIRM PROSPECTIVITY

Assay results from RC drilling of stratigraphic drill section include highly anomalous copper and visual observations of sulphide in diamond core tails

KEY POINTS

- **Results received for 840.6m of Reverse Circulation (RC) drilling completed at Coates Project in May 2022 show co-incident elevated Copper, Nickel, Palladium and/or Platinum over a 200m wide zone within the Coates Mafic Layered Intrusion.**
- **Highlights from the returned assays include down hole intersections:**
  - **22CRC007 – 10 m at 0.13% Cu, 493ppm Ni, 39ppb Pd and 21ppb Pt from 64m**
    - ***Including 7m at 0.14% Cu, 544ppm Ni, 43ppb Pd and 23ppb Pt from 67m***
  - **22CRC007 – 1m at 700ppm Ni, 40ppb Pd and 40ppb Pt from 55m**
  - **22CRD008 – 6m at 358ppm Ni, 54ppb Pd and 41ppb Pt from 11m**
  - **22CRC009 – 6m at 0.12% Cu and 525ppm Ni from 38m**
  - **22CRD011 – 1m at 45ppb Pd and 45ppb Pt from 66m**
  - **22CRD011 – 1m at 60ppb Pd and 55ppb Pt from 81m**
- **Visual sulphide observations in the diamond drillhole 22CRD008 identify net textured pyrrhotite within pyroxenite units and up to 5% chalcopyrite on the selvedge of sheared contacts between gabbro and melanocratic phases.**
- **Core from the program being used in CSIRO Nickel Indicator Study.**
- **Vanadium results in the RC drilling confirm the historical dataset in the Magnetite Gabbro portion of the layered intrusion.**
- **The project covers similar geology to the sequence that is host to the Chalice Gold Mines' nickel-copper-PGE Julimar Project (ASX: CHN) 29 km NNW of Coates.**
- **Option agreement signed with Mining Green Metals Limited (MGM) to acquire the project, subject to its listing on the ASX[1]. AVL will remain a shareholder upon listing.**

[1] See ASX announcement dated 11th May 2022 *'Sale of Coates Nickel-Copper-PGE and Nowthanna Hill Uranium Projects'*

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Australian Vanadium Limited (ASX: AVL, "the Company" or "AVL") is pleased to announce assay results from the RC component of the April - May 2022 drill program at the Coates Mafic Intrusive Complex near Wundowie, 80km NE of Perth in Western Australia. Drilling followed a successful SkyTEM Airborne Electromagnetic (AEM) survey which identified three conductors, with the largest having a strike length of 1,900 metres[2] located parallel to a magnetic high, topographic low on the Project. Figure 1 shows the location of the AVL Coates Mafic Intrusive Complex Project within the emerging Western Yilgarn Nickel-Copper-PGE province.

An 11-hole program of Reverse Circulation (RC) pre-collar and diamond tail drilling was undertaken, with all pre-collars completed for 840.6 metres of RC. Partial completion of the diamond drilling portion of the project was achieved, with 169.6 metres of diamond coring over three holes. Two diamond tails were finished and one abandoned before the full planned depth, due to drilling equipment issues. An additional nine diamond tails are required to complete the stratigraphic fence, including re-drilling of the hole that was abandoned. The drill line remains open and the Programme of Work (PoW) approval remains active. Drilling of the diamond tail portion of the program will be completed pending sale of the project to MGM, subject to its successful listing on the Australian Securities Exchange (ASX)[3]. AVL will maintain a significant shareholding in MGM. The MGM prospectus is undergoing final due diligence before being lodged with the ASX.

Managing Director, Vincent Algar comments, *"AVL's focus is firmly on the development of the Australian Vanadium Project at Gabanintha and we are pleased to have completed this first important phase of discovery at Coates. The AVL team with the support of the CSIRO Nickel Indicator team are processing the diamond core and based on the visual and RC findings, are strongly encouraged by the first pass anomalism identified. Upon MGM's successful listing, AVL shareholders will continue to hold a stake in further discovery in this very exciting region heralded by the identification of Julimar and other projects. The incoming MGM team will be able to dedicate significant focus and resources to the project. The suite of minerals discovered at Coates are currently in high and growing demand."*

The drilling at Coates Project was co-funded through the WA Government's Exploration Incentive Scheme (EIS)[4]. The grant was for up to $112,500, representing half of the cost of the program. The drill program is designed to provide a stratigraphic section through the Coates Mafic Intrusion within AVL's tenure, allowing for lithological and geochemical studies and focussing on nickel-copper-PGE prospectivity. The results from the SkyTEM survey and now RC assay results strongly supports the validity of completing the drill program designed to test mafic – ultramafic stratigraphy.

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[2] See ASX announcement dated 14th October 2021 *'Electromagnetic Conductors at Coates Nickel-Copper-PGE-Project'*
[3] See ASX announcement dated 11th May 2022 *'Sale of Coates Nickel-Copper-PGE and Nowthanna Hill Uranium Projects'*
[4] See ASX announcement dated 23rd April 2021 *"Grant Funding for Nickel-Copper-PGE-Gold Drilling at Coates Project"*

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Despite being stopped early due to technical drilling issues, the program as completed to date provides a significant section of geochemical samples from the RC components of the drill holes. Importantly, the diamond core available to the CSIRO Nickel Indicator Study of the Coates Mafic Complex extends information 350 to 500 metres further northeast into the intrusion than any previous historical drilling[5] ,approaching the zone of the SkyTEM conductors and surface Ni, Pt and Cr anomalism previously identified[6]. Samples of core from these 2022 drill holes are currently with CSIRO to facilitate this study. Other historical diamond core from the 1970s being utilised for the CSIRO study is restricted to the magnetite gabbro portion of the deposit which was drilled extensively for vanadium mineralisation by Garrick Agnew Pty Ltd and Mt Dempster Mining.

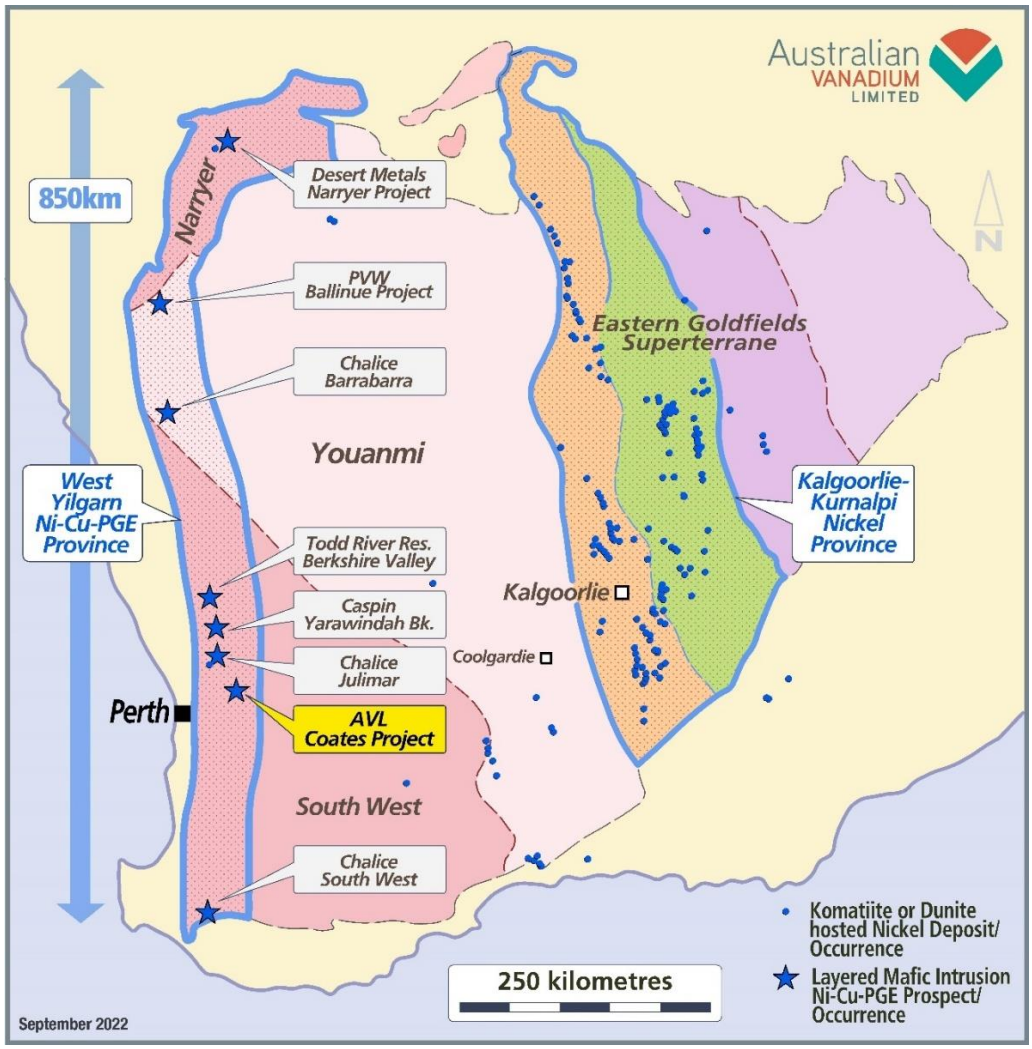

Figure 1: Schematic of the Yilgarn Craton showing Nickel Provinces with the location of AVL Coates Project

[5] See ASX announcement dated 17 September 2020 "Historical Data at Coates Project supports PGE exploration"

[6] See ASX announcement dated 5th August 2021 *"Nickel Chrome Copper PGE anomalies identified at Coates Project"*

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DRILL RESULTS

Reverse Circulation Results

Assays for the eleven pre-collars were submitted in June 2022 for analysis. The results have now been returned and loaded to the Company database. The location of the drill collars relative to the magnetite gabbro (modelled from the historical dataset) and the conductors defined in the SkyTEM survey completed in 2021 are shown in Figure 2 below. Elevated copper, nickel and/or palladium and platinum was intersected in four of the RC pre-collars, holes being 22CRC007, 22CRD008, 22CRC009 and 22CRD011. Most anomalous results are:

- 22CRC007 – 10 m @ 0.13% Cu, 493ppm Ni, 39ppb Pd and 21ppb Pt from 64m
  - Including 7m @ 0.14% Cu, 544ppm Ni, 43ppb Pd and 23ppb Pt from 67m
- 22CRC007 – 1m @ 700ppm Ni, 40ppb Pd and 40ppb Pt from 55m
- 22CRD008 – 6m @ 358ppm Ni, 54ppb Pd and 41ppb Pt from 11m
- 22CRC009 – 6m @ 0.12% Cu and 525ppm Ni from 38m
- 22CRD011 – 1m @ 45ppb Pd and 45ppb Pt from 66m
- 22CRD011 – 1m @ 60ppb Pd and 55ppb Pt from 81m

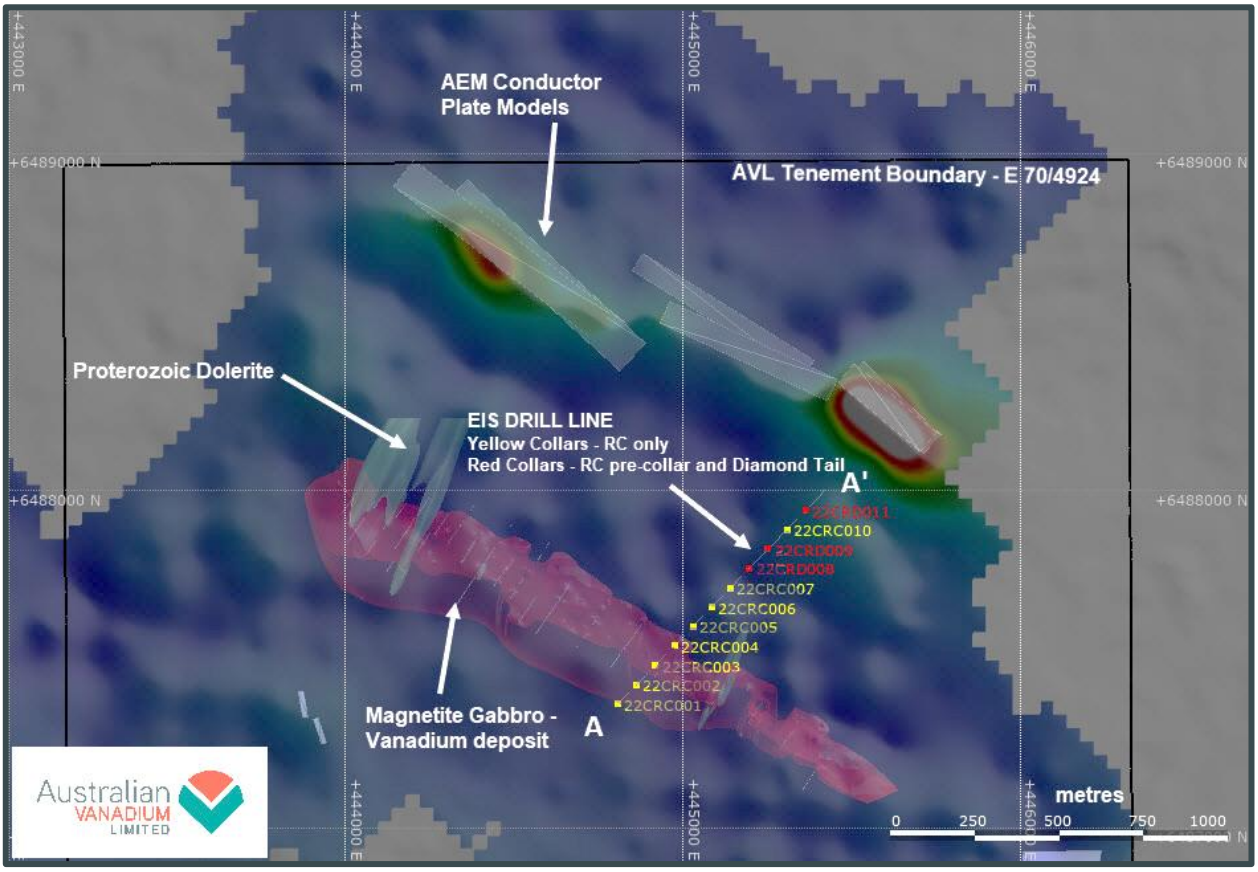

Figure 2: Plan view of EIS Drill Line with AEM imagery background and Plate Models

The location of these holes and the downhole results listed above are shown in Figure 3 below that is a section view of the drill line. This section shows the position of the above results relative to the

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base of oxidation, which has a sharp transition from completely weathered to fresh, generally over a few metres.

Copper greater than 0.1% is considered highly anomalous and the section in Figure 3 below outlines a 200m wide zone with significant copper anomalism, with associated elevated nickel and some palladium and platinum values greater than 30ppb each. By contrast, drill holes 22CRC001 to 22CRC005 which cross the magnetite gabbro and into the footwall (northern) leuconorite unit did not intersect any palladium or platinum above detection limit.

The presence of increasing palladium and platinum content from the southwest towards the northeast further demonstrates distinct zonation within the layered intrusion, with chemistry and lithology observations indicating the layered intrusion has more ultramafic composition towards the northeast.

The highest individual combined RC values for Pd +Pt being in the northernmost hole, 22CRC011, being 1m at 45ppb Pd and 45ppb Pt from 66m and 1m at 60ppb Pd and 55ppb Pt from 81m, the closest sampled downhole position to the SkyTEM anomaly.

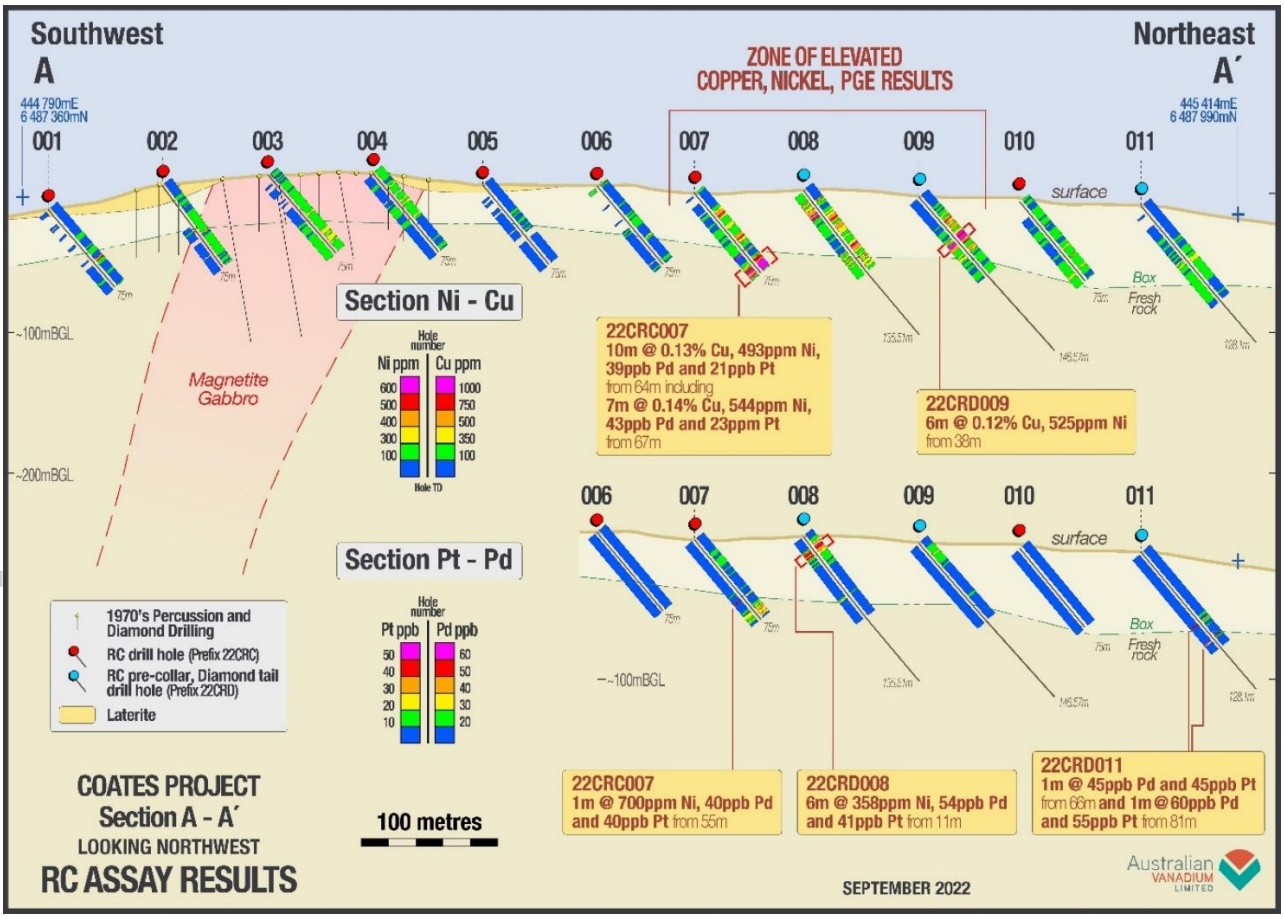

Figure 3: Section view of EIS Drill Line with Copper, Nickel, Palladium and Platinum Results

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The RC assay results for the magnetite gabbro portion of the layered intrusion also strongly support the historical dataset, drilled to define a historical (non JORC 2012 compliant) vanadium-titanium resource in the 1970s. The drilling validates the existing interpretation of the extent of the vanadium mineralisation within the magnetite gabbro and extends the vanadium-bearing laterite unit from hole 22CRC001 through to 22CRC006, a section width of 360 metres. Best vanadium – titanium intercepts from the recent drilling include:

- 22CRC001 – 11m at 0.90% V_2O_5 and 9.6% TiO_2 from 0m – Laterite
- 22CRC002 – 6m at 0.86% V_2O_5 and 15.1% TiO_2 from 0m – Laterite
- 22CRC002 – 33m at 0.49% V_2O_5 and 8.4% TiO_2 from 6m – Laterite
- 22CRC002 – 34m at 0.43% V_2O_5 and 5.9% TiO_2 from 41m – Fresh Rock
- 22CRC005 - 9m at 1.11% V_2O_5 and 8.5% TiO_2 from 0m – Laterite

A full intercept table for vanadium and titanium results is included in Appendix 2.

Visual Sulphide Observations in Diamond Core

Diamond core drilled on 22CRD008 has multiple zones of sulphide. The mineral species identifiable by hand specimen examination are pyrrhotite and chalcopyrite presenting together. Textures of the sulphides range from blebby masses to network interstitial textures, and intergrowth between pyrrhotite and chalcopyrite is common. The main lithology these minerals are associated with are pyroxenite and melano-gabbro phases. One instance of chalcopyrite and pyrrhotite is a semi-massive, laminated accumulation along the sheared contact of a gabbro phase and melanocratic phase of the intrusion.

Figure 4 below is a geology section showing the location of two of the sulphide occurrences, with description. The estimated total sulphide content of the rock is annotated along the left-hand side of the trace, as percentage intervals. A full description of all logged sulphides is provided in Table 1 below.

Figure 5 below shows the core trays of the intervals noted on the section in Figure 4 below.

Cautionary note: Sulphide species and percentages provided in Figure 4 and Table 1 below are estimates based on visual logs and do not substitute for assay data. Core is pending assay with results likely around November 2022, to be released as soon as they are received and interpreted. Until that time there is no certainty as to width and grade of any sulphide and associated metal. The presence of sulphide in core does not necessarily imply the presence of economic mineralisation or that there is sufficient quality or quantity to constitute a mineral resource.

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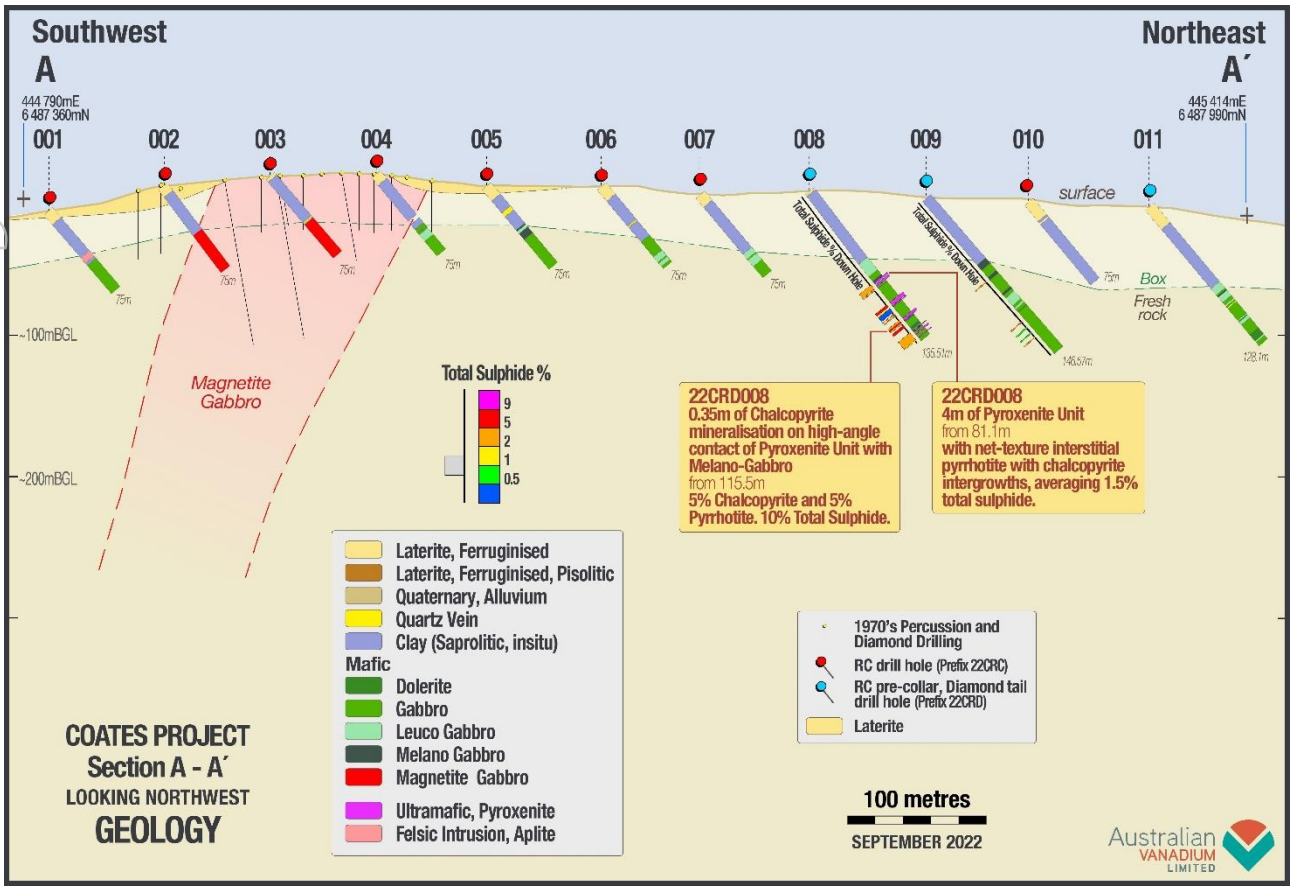

Figure 4: Section view of EIS Drill Line with Geology and Total Percent of Logged Sulphides down hole in Diamond Tails

Table 1 – Sulphide Logs for 2022 Diamond Core at Coates Project

Hole ID	From	To	Interval	Rock Type	Pyrrhotite % (Po)	Chalcopyrite % (Cp)	Total S %	Comments
22CRD008	81.15	82.75	1.6	Pyroxenite	1	0.5	1.5	Sulphides in interstitial matrix magnetite is generally anhedral forming in interstitial matrix - Pyroxenite Phase
22CRD008	82.75	83.3	0.55	Pyroxenite	1	0.5	1.5	Sulphides in interstitial matrix within Pyroxenite Phase
22CRD008	83.3	85.2	1.9	Pyroxenite	1	0.5	1.5	Sulphides in interstitial matrix. magnetite is generally anhedral forming in interstitial matrix - Pyroxenite Phase
22CRD008	85.5	86.4	0.9	Gabbro	1	1	2	Matrix/disseminated sulphides. increase in Cp concentration - Gabbro Phase, some Melano-Gabbro
22CRD008	99.85	101.8	1.9	Pyroxenite	2	1	3	Sulphides are mostly stringer although there are still some matrix/disseminated sulphides present.
22CRD008	101.8	103.3	1.55	Gabbro Pyroxenite	0.5	0.5	1	Reduction in sulphide %. Stringers become much less frequent. Restricted to disseminated / matrix
22CRD008	103.3	106.9	3.6	Gabbro	0.1		0.1	Very trace Po. Concentration increase in small band of Pyroxenite/Gabbro at 105.8m (5%)
22CRD008	108.2	108.4	0.25	Gabbro	2	0.5	2.5	Minor disseminated sulphides in altered Gabbro

Hole ID	From	To	Interval	Rock Type	Pyrrhotite % (Po)	Chalcopyrite % (Cp)	Total S %	Comments
22CRD008	109.3	110.1	0.8	Gabbro	1	1	2	Disseminated/patchy matrix sulphide through altered gabbro. Increased concentration of Po at 109.9m
22CRD008	114.1	115.5	1.4	Pyroxenite	1	1	2	
22CRD008	**115.5**	**115.9**	**0.35**	**Gabbro Pyroxenite**	**5**	**5**	**10**	**Substantial Po-Cp stringer at low alpha angle (approx. 25 degrees) to core marking sheared contact between Pyroxenite and Gabbro. Sulphide stringers also in Pyroxenite that are at high alpha angle to core and truncated by the sheared contact.**
22CRD008	115.9	116.4	0.55	Pyroxenite	2	1	3	Sulphide mineralisation predominantly Po-Cp stringers. Some minor blebs of sulphide
22CRD008	116.4	117.6	1.2	Melano Gabbro	2	0.5	2.5	Predominantly blebby Sulphides. Chalcopyrite dropping out. Mostly Pyrrhotite
22CRD008	119	120.9	1.9	Gabbro	2	1	3	Metallic violet-grey sulphide mineral (not magnetic although has similar appearance to magnetite earlier in hole). This is often intergrown with Po and Cp and appears to be mostly restricted to interstitial matrix. Increased concentration of sulphide centred on 120.75 (30cm interval @ 10% Sulphide)
22CRD008	126.2	127.3	1.15	Pyroxenite Gabbro	1	1	2	Dominantly stringer sulphide likely related to sheared Pyroxenite in the centre of this interval. Minor blebby/matrix sulphide.
22CRD008	127.3	127.8	0.45	Melano Gabbro	1	1	2	Interstitial purple-grey anhedral magnetite.
22CRD008	127.8	132.8	5	Pyroxenite Melano Gabbro	1	1	2	Blebby sulphides in interstitial matrix
22CRD008	132.8	132.9	0.15	Pyroxenite	1	1	2	Interstitial purple-grey anhedral magnetite.
22CRD008	132.9	133.5	0.6	Gabbro	0.5	0.5	1	Blebby sulphides in interstitial matrix. Concentration of sulphide really dropping off towards end of interval
22CRD009	75.5	75.55	0.05	Gabbro	2		2	Very small interval with Po.
22CRD009	114.6	114.7	0.15	Gabbro	1		1	Small concentration of blebby Po in chloritic structure.
22CRD009	119.4	120.4	0.95	Gabbro	0.5	0.1	0.6	Very low concentration sulphides in Gabbro. Final 15cm show increased level of Po (up to 2%)
22CRD009	124.5	125.1	0.65	Gabbro	0.5	0.1	0.6	Very low concentration trace sulphides.
22CRD009	128.8	129.5	0.7	Gabbro	0.5	0.5	1	Trace blebby sulphides. Some Cp and Po intergrown

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Figure 5: Core photos of significant visual sulphide occurrences, Top – 22CRD008 at 81.15m Bottom 22CRD008 at 115.5m

Proposed Divestment via proposed listing of Mining Green Metals (MGM)

AVL signed an option agreement[7] with MGM in May for MGM to acquire a 100% interest in the Coates Project. MGM is aiming to list on the ASX in 2022. The option agreement includes the Company's Nowthanna Hill uranium project and provides AVL with 6,500,000 fully paid ordinary shares in MGM, a 0.75% net smelter return royalty from the value of the minerals mined (Coates Project) and a cash payment of $190,000. The option is conditional on MGM completing due diligence on the tenements and listing on the ASX.

For further information, please contact:

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

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[7] See ASX announcement dated 11th May 2022 *'Sale of Coates Nickel-Copper-PGE and Nowthanna Hill Uranium Projects'*

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APPENDIX 1

Collar Locations

HoleID	MGA94 East	MGA94 North	RL	RC Depth m	DDH Length m	TD m	Dip	Azimuth
22CRD011	445,364	6,487,942	420	89.9	38.2	128.1	-50	044
22CRC010	445,308	6,487,884	424	75		75	-50	044
22CRD009	445,252	6,487,827	427	75.4	71.17	146.57	-50	044
22CRD008	445,197	6,487,769	432	75.3	60.21	135.51	-50	044
22CRC007	445,141	6,487,712	429	75		75	-50	044
22CRC006	445,085	6,487,655	435	75		75	-50	044
22CRC005	445,030	6,487,597	435	75		75	-50	044
22CRC004	444,974	6,487,540	444	75		75	-50	044
22CRC003	444,918	6,487,482	443	75		75	-50	044
22CRC002	444,862	6,487,425	435	75		75	-50	044
22CRC001	444,807	6,487,368	417	75		75	-50	044

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APPENDIX 2

Assay Results – RC Samples

Copper, Nickel, Palladium and Platinum Intercepts – 0.1% Cu cut-off and/or > 500 ppm Ni and/or > 20ppb Pd or Pt

Hole ID	From (m)	To (m)	Interval (m)	Cu %	Ni ppm	Pd ppb	Pt ppb
22CRC001	NSI						
22CRC002	NSI						
22CRC003	NSI						
22CRC004	NSI						
22CRC005	NSI						
22CRC006	NSI						
22CRC007	55	56	1	0.07	720	40	40
22CRC007	64	74	10	0.13	493	40	20
including	*67*	*74*	*7*	*0.14*	*544*	*40*	*20*
22CRD008	11	17	6	0.03	358	54	41
22CRD008	18	22	4	0.02	542	19	15
22CRD008	53	55	2	0.11	325	12	22
22CRD009	38	44	6	0.12	525	BDL	BDL
22CRC010	NSI						
22CRD011	66	67	1	0.03	250	45	45
22CRD011	81	82	1	0.01	180	60	55

BDL = Below detection limit of 5 ppb
NSI = No Significant Intercept

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Vanadium Intercepts - 0.3% V_2O_5 cut-off

Hole ID	From (m)	To (m)	Interval (m)	Type	V_2O_5 %	TiO_2 %
22CRC001	0	11	11	Laterite	0.90	9.6
22CRC002	0	6	6	Laterite	0.86	15.1
22CRC002	6	39	33	Oxide	0.49	8.4
22CRC002	41	75	34	Fresh Rock	0.43	5.9
22CRC003	0	23	23	Laterite	0.60	7.5
22CRC003	23	43	20	Oxide	0.46	5.2
22CRC003	43	75	32	Fresh Rock	0.53	5.4
22CRC004	0	9	9	Laterite	0.74	6.5
22CRC004	13	34	21	Oxide	0.58	5.8
22CRC005	0	9	9	Laterite	1.11	8.5
22CRC006	0	12	12	Laterite	0.66	5.9
22CRC007	NSI					
22CRD008	NSI					
22CRD009	NSI					
22CRC010	NSI					
22CRD011	NSI					

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ABOUT AUSTRALIAN VANADIUM LTD

AVL is a resource company focused on 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 world-class Australian Vanadium Project at Gabanintha. The Australian Vanadium Project is one of the most advanced vanadium projects being developed globally, with 239Mt at 0.73% vanadium pentoxide (V_2O_5), containing a high-grade zone of 95.6Mt at 1.07% V_2O_5 and an Ore Reserve of 30.9Mt at 1.09% V_2O_5 comprised of a Proved Reserve of 5Mt at 1.11% V_2O_5 and a Probable Reserve of 20.4Mt at 1.07% V_2O_5, reported in compliance with the JORC Code 2012 (see ASX announcement dated 1st November 2021 *'Mineral Resource Update at the Australian Vanadium Project'* and ASX announcement dated 6th April 2022 *'Bankable Feasibility Study for the Australian Vanadium Project'*).

VSUN Energy is AVL's 100% owned subsidiary which is focused on developing the market for vanadium redox flow batteries for energy storage. The companies are also working together to produce and supply vanadium electrolyte for the batteries.

The Coates Project is a secondary project for AVL, initially demonstrating interest for its vanadium potential, but now being examined for nickel, base metals, gold and platinum group elements.

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

The information in this statement that relates to Exploration Results is based on information compiled by independent consulting geologist Brian Davis BSc DipEd who is a Member of The Australian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists and is employed by Geologica Pty Ltd. Brian Davis 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 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.

FORWARD LOOKING STATEMENTS

This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of AVL and certain of the plans and objectives of AVL with respect to these items.

These forward-looking statements are not historical facts but rather are based on AVL's current expectations, estimates and projections about the industry in which AVL operates and its beliefs and assumptions.

Words such as "anticipates," "considers," "expects," "intends," "plans," "believes," "seeks," "estimates", "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the industry in which AVL operates.

These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and other factors, some of which are beyond the control of AVL, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the 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 Company's other filings.

AVL cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of AVL only as of the date of this release.

The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made.

AVL will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.

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APPENDIX 2

JORC Code, 2012 Edition, Table 1 Exploration Results

Section 1 – Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	1m reverse circulation (RC) samples were collected from a chute on the cone splitter of the rig, collecting about 3kg of material per metre.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Duplicate RC samples were collected every 50th metre to check representivity of the cyclone rotary cone split.
	Aspects of the determination of mineralization that are Material to the Public Report.	Sulphide observations are based on a subjective estimation of percentage of rock, and mineral species, although identified by a professional geologist, has not been confirmed by empirical testwork. Assays of diamond core are required for an accurate measure of the amount of sulphide and associated metal endowment in the rock. Assays reported here for the RC samples are empirical, being measured by an Internationally Accredited laboratory with acceptable QAQC checks both internal to the laboratory, and through QAQC samples submitted by AVL.
Drilling Techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	11 RC holes were drilled to between 75 and 91m depth using a 140mm face hammer bit. NQ2 tails were drilled on three of the RC holes, with total hole depth of the RC precollar, diamond tail holes being between 128 and 147m. No core orientations were done as the contractor was unable to source an orientation tool.
Drill Sample Recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Sample quality and recovery was noted during sampling of the RC calicos. Any core loss was noted during mark up and logging of the diamond drill core.
	Measures taken to maximize sample recovery and ensure representative nature of the samples.	RC samples were collected from a rotary cone splitter attached to the cyclone to ensure representivity of the drill metre.

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Criteria	JORC Code Explanation	Commentary
		There were no issues noted with sample recovery during the drilling.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No relationship between sample recovery and grade is seen to exist. No studies have been completed on sample bias to date, due to the small amount of drilling completed at the Project by AVL.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.*	RC chip intervals and core have all been geologically logged. Limited drilling to date preclude Mineral Resource estimation, mining studies or metallurgy studies.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging is qualitative and quantitative.
	The total length and percentage of the relevant intersections logged.	All drilled metres have been logged.
Sub-Sampling Techniques and Sample Preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Core is pending assay and has been cut in half with an automated Almonte saw for sampling, and sampled into calicos, awaiting submission to the laboratory (to be completed during September 2022).
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Rotary cone splitter on the cyclone was used to split the 1m RC samples. Most samples were dry, with an occasional moist sample. Wet samples were not an issue during drilling.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation included drying, crushing, rotary splitting and pulverisation, at an internationally accredited laboratory in Perth. Fraction passing <75um was measured on some samples by the lab to verify full pulverisation as part of their internal QAQC.
	Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.	Laboratory check samples were analysed and verified the appropriateness of the crushing, pulverisation and splitting for assay.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Field duplicates were collected from the second chute on the cone splitter on the cyclone every 50th metre.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The RC samples were around 3 to 4 kg for each metre, which is adequate for gaining a representative split sample for each metre.
Quality of Assay Data and Laboratory Tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	The samples were analysed by fused bead XRF for an extended iron ore suite of oxide and base metals elements, and Loss on Ignition was measured. Fire assay (40 gram charge) with AES finish for Au, Pt, Pd was completed.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Magnetic susceptibility data was collected using a KT-10 unit. No calibration factors were required.

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	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	CRM (standards) was inserted at a frequency of 1 per 50 samples for the RC sample submissions. Field Duplicates were also inserted at a frequency of 1 per 50 samples for the RC drilling. No issues are apparent with results returned for QAQC samples.
Verification of Sampling and Assaying	*The verification of significant intersections by either independent or alternative company personnel.*	RC results have been reviewed for accuracy and completeness by several AVL geologists and the database managers.
	The use of twinned holes.	No twinned holes have been completed at the Project.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Drill logs were captured directly into LogChief software then loaded to the Company SQL database. Sample details were recorded into a paper book, then entered to LogChief before being loaded to the Company SQL database. LogChief software has point of entry validation protocols.
	Discuss any adjustment to assay data.	No adjustments to assay data have been made, except replacing below detection limit values with half of detection limit values.
Location of Data Points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	Drill holes were marked out with a handheld GPS prior to drilling, then picked up with a DGPS (accuracy on the horizontal approximately 20 - 30 cm) after drilling. Downhole surveys were collected for holes 22CRC001, 22CRC002 and 22CRC003, plus 22CRD009 and 22CRD008. The other holes were 75m pre-collars that currently do not have down hole survey. 22CRD011 is not down hole surveyed as rods were bogged in the hole and it was abandoned. At completion of the program all collar locations will be picked up with RTK DGPS. Any further drilling will be done with gyro down hole surveys.
	Specification of the grid system used.	The grid projection used for Coates is MGA_GDA94, Zone 50. All maps included in this report are referenced to this grid.
	Quality and adequacy of topographic control.	No work has been completed on topographic control. Topography used for 3D modelling is based on publicly available NASA 30 m centred SRTM data and collars have been draped on this surface.
Data Spacing and Distribution	*Data spacing for reporting of Exploration Results.*	Holes are spaced at 80m intervals on a single section line across the layered intrusion. Assays reported in this release are all 1m RC samples.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	No Mineral Resource or Ore Reserve estimations have been applied.
	Whether sample compositing has been applied.	No Mineral Resource or Ore Reserve estimations have been applied.

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	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The drilling is oriented -50 degrees towards 044. This orientation is about perpendicular to the attitude of the magnetite gabbro contacts, which is the best defined differentiated unit within the layered sequence to date.
	If the relationship between the drilling orientation and the orientation of key mineralized structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Chalcopyrite intersected in hole 22CRD022 is along a contact at high angle to the core, intersecting the mineralisation at an oblique angle (25 degree alpha angle). Pyroxenite phases within the core (considered more prospective for nickel mineralisation than other units) are at a lower angle but still oblique to the core orientation. True widths for intercepts are not known yet and all results are down hole widths.
Sample Security	*The measures taken to ensure sample security.*	Samples were collected into polyweave bags soon after drilling and taken back to the Company shed where they were loaded into bulka bags. From there, AVL personnel transported the bulka bags to the laboratory.
Audits or Reviews	*The results of any audits or reviews of sampling techniques and data.*	No reviews or audits of sampling techniques have been completed to date.

Section 2 – Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Tenure Status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	Exploration is located wholly within Lease E70/4924-I. The tenement is 100% owned by AVL. The area comes under the ILUA legislation and the claimants are the Whadjuk people (Indigenous Land Use Agreement claim no. WC2011/009 in File Notation Area 11507). The Mines Department Native Title statutory regulations and processes apply. There are no outstanding Native Title issues. The following restricted access areas occur on the tenement, requiring Minister for Mines approval prior to works: Woondowing Nature Reserve Category 1A ((R14275 Freehold lot 29702) Extension of Nature Reserve (R14275 Freehold lot 29046) Area reserved for Railway Purposes (R23746 freehold lot 27520) Recreation Area (R11619 Freehold lot 28581)

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	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	At the time of reporting, there are no known impediments to obtaining a licence to operate in the area and the tenement is in good standing.
Exploration Done by Other Parties	*Acknowledgment and appraisal of exploration by other parties.*	The Coates deposit was identified in the 1960's by Mangore P/L and investigated with shallow drilling, surface sampling and mapping. Mangore WAMEX Report A1884 identified low grade vanadium bedrock mineralization (0.5 – 0.6% V_2O_5) below 30 – 50m of laterite cover. Regional exploration for gold was undertaken by Swan Gold P/L in the 1980's and extensive low-grade gold mineralization was identified in laterites in an area a few kilometres east of the current tenement. Vanadium exploration saw a resurgence in 2008 by Mercator Metals Pty Ltd and Orientation surveys, laterite morphology studies, surface geochemical surveys along roads, tracks and public land with a field portable XRF. Mining started in 1980, but the high silica content limited the production of vanadium pentoxide to approximately 500 pounds, and a year later production stopped. Historical Measured and Indicated Resources in 1968 were recorded as 39 Mt at 0.51% V_2O_5. Indicated Resources from the laterite deposit are reported as 1.5 Mt at 0.6% V_2O_5. ***NOTE: These resources do not comply with the JORC 2012 Mineral Resource Guidelines and are only included here for reference.***
Geology	*Deposit type, geological setting and style of mineralization.*	The Coates vanadium deposit is part of a magnetite-bearing gabbro phase in a larger layered intrusion into meta-sediment and basaltic rocks. There are some later granite batholiths in the region and Proterozoic dolerite dykes, both younger than the Coates Mafic Complex Intrusion. Vanadium occurs within a titaniferous magnetite hosted by the gabbro-anorthosite unit. The Layered Intrusion is now understood to have melano-gabbro and pyroxenite phases in addition to the magnetite gabbro and anorthosite units that were previously

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		identified. The Coates vanadium deposit occurs in magnetite lenses at the core of the layered Coates Gabbro within a Magnetite Gabbro that is about 2 km long and up to 500 m thick. The gabbro is poorly exposed in an area of extensive lateritisation but appears to be between two granitic bodies. It has a general strike of 120° dipping southwest at 70°. The hangingwall unit to the southwest is a meso-gabbro and the immediate footwall unit to the northeast is a leuco-gabbro/anorthosite, then gabbro with Pyroxenite phases. The character of the layered intrusion further northeast is yet to be defined. Granite intrudes the southeast corner of the magnetite gabbro, and all other rocks are intruded by late (Proterozoic?) dolerites that are relatively thin and striking about north – northwest. The oxidized pisolitic ferricrete caprock extends 10m to 20m below surface and contains vanadium associated with magnetite and other iron minerals. .
Drillhole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* *easting and northing of the drillhole collar* *elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar* *dip and azimuth of the hole* *down hole length and interception depth hole length.*	Collar and direction details are included in Appendix 1 of this report. All material intercepts are included in Appendix 2 of this report.
Data Aggregation Methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	No grade cuts have been applied.
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.	Copper cut-offs of 0.1% or greater have been reported. Nickel above 500ppm has been reported. Palladium and Platinum have been reported where values are significantly above background value. Palladium and Platinum are generally below detection limit of 5ppb during assay to date at the Coates Mafic Complex, so 20ppb and above is considered anomalous.

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	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been used.
Relationship Between Mineralisation Widths and Intercept Lengths	*If the geometry of the mineralization with respect to the drillhole angle is known, its nature should be reported.*	The high angle of the melano-gabbro phase with chalcopyrite on the selvedge has been measured at 25 degrees on the alpha angle. No core orientations were done, so the true width of visual sulphide intercepts are unknown. Due to the early stage of exploration, the true widths of copper, nickel, palladium and platinum anomalism in the RC portions of the drill holes is unknown.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.*	Maps and sections have been included in the body of this report.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results have been reported, shown on the cross sections and within the intercept table provided in Appendix 2.
Other Substantive Exploration Data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	Historical exploration only is available in WAMEX reports: A1884 Exploration Progress Report. Mangore Australia Pty Ltd. HE Abendroth. 1962. A1885 Economic Evaluation of Vanadiferous Magnetite deposits of WA. AW Heuck.1962 A1886 Quarterly Progress Report on Metallurgical Tests. Mangore Pty Ltd. June 1962 A1694 Progress Report on Temporary Reserve 2755H South West Mineral Field for the year 26/3/1970 – 25/3/1971. Garrick Agnew Pty Ltd. 1971. A3142 Final Report on Temporary Reserve 2755^{H} South West Mineral Field, Western Australia, Vol. III. Coates Drill Logs. XRF Assay Data. A5698 Coates Siding Polysius Metallurgy Test Report. 1974 A6071 Coates Vanadium Project. Diamond Drill Logs. Mt Dempster Mining Pty Ltd.1974 A6977 Vanadiferous Magnetite material from Coates. AMDEL Metallurgy test report. Prepared for Agnew Clough Ltd. June 1975. A6978 Sodium Removal from Vanadium Leach Residue Pellets. Government Chemical Laboratories for Agnew Clough Ltd. March 1977 A81303 Annual Report 2008 for E70/2230. Mercator Metals Pty Ltd. January 2009 A85887 Annual Report Wundowie Project 2008-2009. Mercator Metals Pty Ltd. Jan 2009 A102789 Partial Surrender Report E70/2230 Wundowie Project. Bauxite Resources Ltd /Mercator Metals Pty Ltd. July 2014

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		A102790 Partial Surrender Report for E70/2230. Mercator Metals Pty Ltd. July 2014 A102864 Final Surrender Report Wundowie Project. Aurum West Pty Ltd. July 2014 Work by CRC LEME: Cornelius M, Morris PA, Cornelius AJ; 2006; "Laterite Geochemical Database for the Southwest Yilgarn Craton, Western Australia"; CRC LEME Open File Report 201 / CSIRO Report P2006/75; Perth, Western Australia
Further Work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Completion of the drilling of the stratigraphic section is planned in late 2022 or early 2023 by Mining Green Metals pending their successful listing on the ASX and purchase of the Project from AVL.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	A collar location image is included in this release which shows the strike of the units within the differentiated layered gabbro, and therefore potential extension of the zones of anomalous copper, nickel, palladium and platinum. Due to the preliminary nature of the work, it is not yet appropriate to draw conclusions regarding potential strike extensions of any anomalism.