ASX ANNOUNCEMENT

2ND JANUARY 2020

# COATES VANADIUM DRILLING PROGRAMME

*Update on AVL's Joint Venture with Ultra Power Systems Pty Ltd*

## KEY POINTS

- **Coates Vanadium deposit is situated approximately 35km east of Perth in the Shire of Northam near Wundowie.**
- **Surface sampling in 2018 and 2019 confirms significant vanadium content with values up to 1.59% $V_2O_5$.**
- **Programme of Works application for exploration drilling over the Coates Vanadium deposit approved.**
- **Up to 15 diamond core holes to be drilled to obtain samples for geological modelling and metallurgical testwork.**

## PLANNED DRILLING PROGRAMME

Australian Vanadium Limited (ASX:AVL, "the Company" or AVL") is pleased to announce that its recent application for a Programme of Works (PoW) on E70/4924-I over the Coates vanadium deposit, has been approved by the Western Australian Department of Mines, Industry Regulation and Safety.

The application is for drilling up to 15 diamond core holes at the Coates deposit, concentrating on the Vacant Crown Land (VCL) portion of the tenement. The intention is to prepare the diamond drill cores at a laboratory in Perth and then ship them to Montreal for metallurgical testing.

The Coates deposit is situated in the Shire of Northam approximately 35km east of Perth (see Figure 1). AVL has signed a joint venture agreement with private company Ultra Power Systems (UPS), to develop the deposit[1].

Under the terms of the joint venture agreement UPS will spend $50,000 on exploration on the tenement within the first 12 months of the agreement and $150,000 during the first 24 months.

The drill programme intends to determine the deposit's suitability as a low-cost feed for a full commercial scale processing plant which UPS proposes to build in Kwinana, Western Australia. The

[1] See ASX announcement dated 13th May 2019 '*AVL Signs Joint Venture with Ultra Power Systems on Coates Vanadium Project*'

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drilling will also enable a resource estimation of the Coates mineralisation to JORC standards to be produced by the AVL/UPS joint venture in 2020.

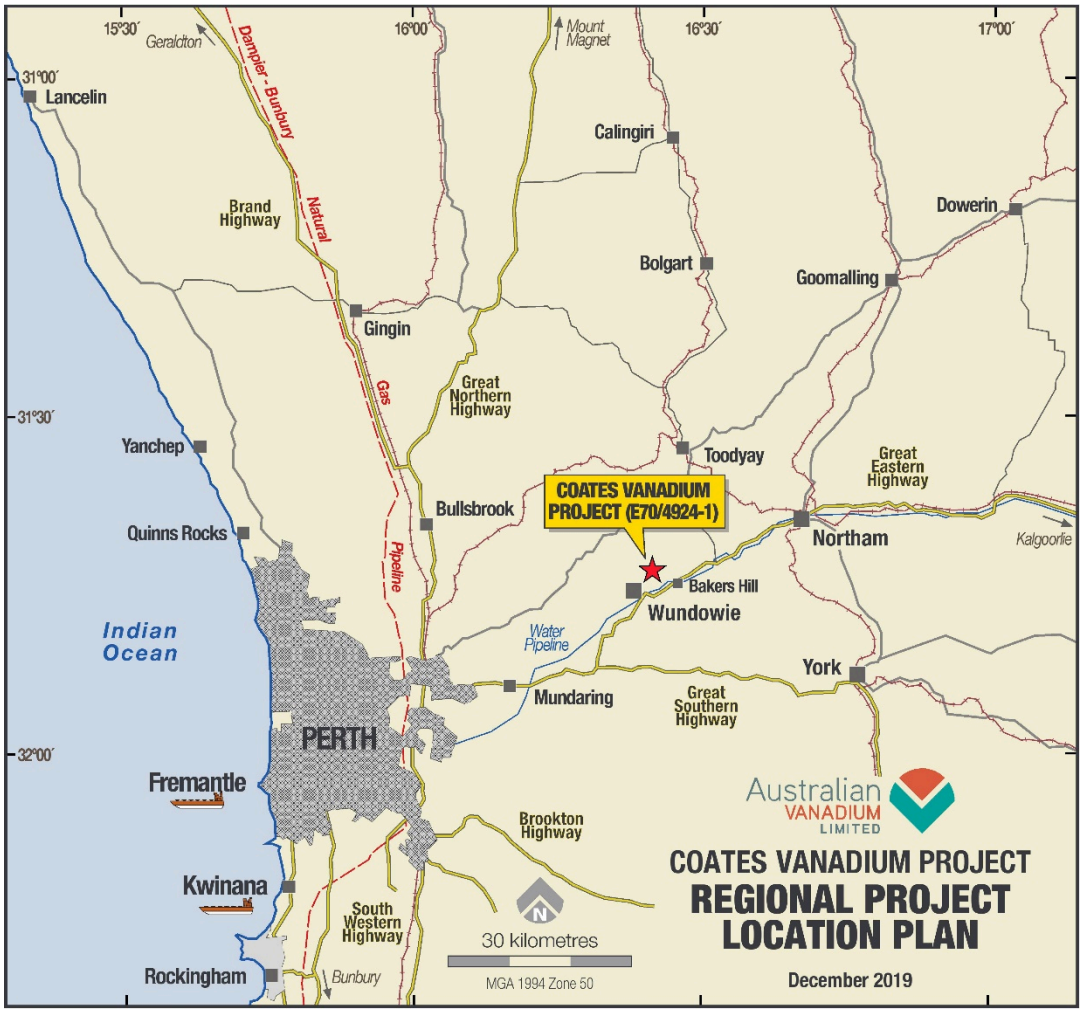


**Figure 1 Location of Coates Vanadium Tenement**

The VCL area is easily accessed and minimal clearing is required for the drill programme, much of which is on existing tracks (see Figure 2).

The exploration Diamond drilling will use PQ or HQ core and it will therefore be possible to obtain enough bulk sample for metallurgical testing. The drilling of vertical holes and larger diameter core will ensure good sample recoveries in the laterite cap-rock, as well as the weathered gabbro.

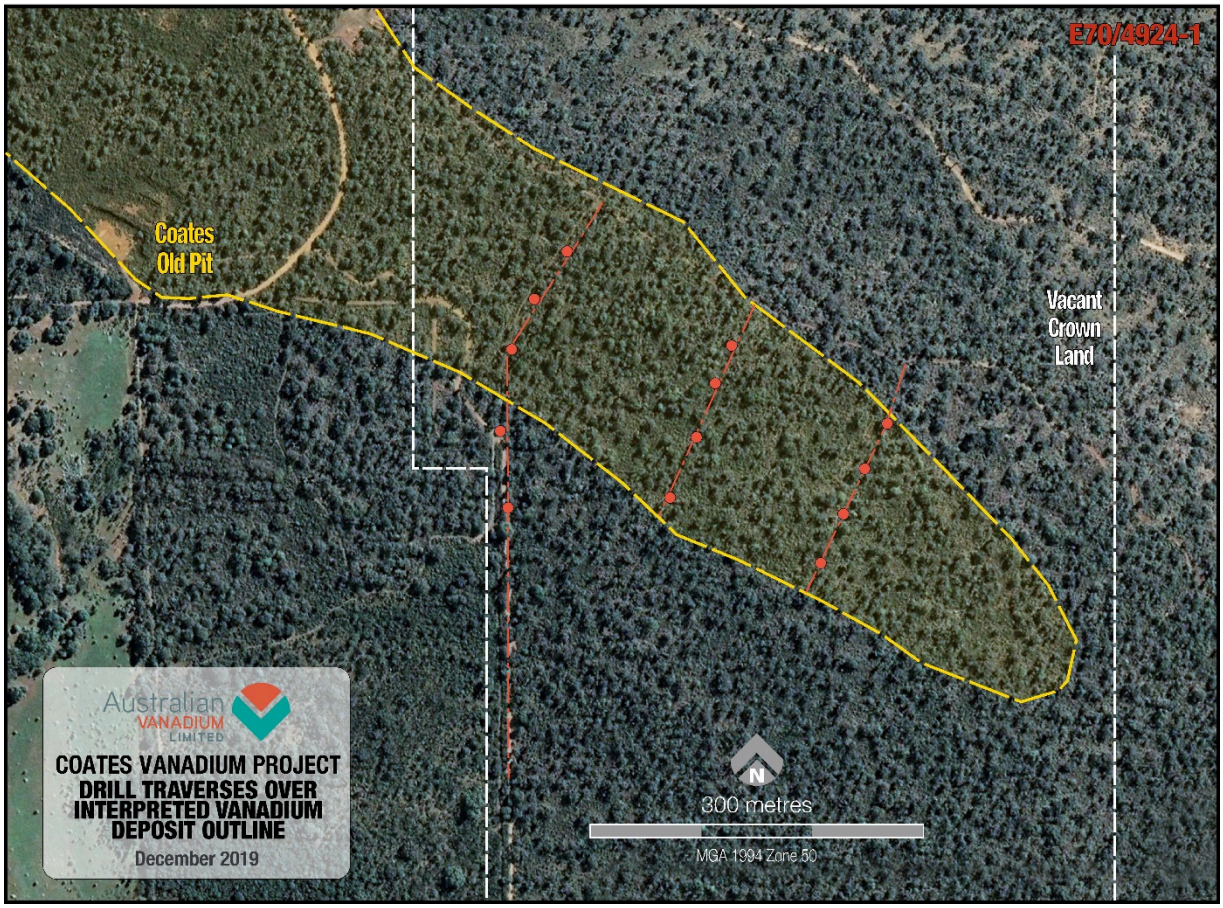


**Figure 2 Location of Proposed Drill Collars on VCL at Coates**

Drill holes are planned to be no more than 50m deep and the programme totals 750 metres as outlined in Table 1 below:

**Table 1 Proposed Drill Hole Collars**

| Collar | Easting | Northing | mRL | Comment | Az/dip | Depth |
|---|---|---|---|---|---|---|
| PH1 | 444899.39 | 6487541.26 | 441 | On track | -90 | 50 |
| PH2 | 444869.80 | 6487498.68 | 436 | On track | -90 | 50 |
| PH3 | 444837.79 | 6487456.22 | 429 | On track | -90 | 50 |
| PH4 | 444817.34 | 6487411.07 | 424 | On track | -90 | 50 |
| PH5 | 444807.00 | 6487337.00 | 413 | On track | -90 | 50 |
| PH6 | 444814.00 | 6487269.00 | 403 | On track | -90 | 50 |
| PH7 | 445037.00 | 6487450.00 | 443 | On track | -90 | 50 |
| PH8 | 445015.00 | 6487413.00 | 441 | No track | -90 | 50 |
| PH9 | 445006.00 | 6487377.00 | 438 | No track | -90 | 50 |
| PH10 | 444981.00 | 6487333.00 | 431 | No track | -90 | 50 |
| PH11 | 444958.00 | 6487276.00 | 423 | No track | -90 | 50 |
| PH12 | 445155.00 | 6487343.00 | 443 | No track | -90 | 50 |

| Collar | Easting | Northing | mRL | Comment | Az/dip | Depth |
|---|---|---|---|---|---|---|
| PH13 | 445132.00 | 6487303.00 | 440 | No track | -90 | 50 |
| PH14 | 445113.00 | 6487263.00 | 436 | No track | -90 | 50 |
| PH15 | 445093.00 | 6487215.00 | 432 | No track | -90 | 50 |

*Total metres = 750*

The geology of the Coates deposit is unique and shows that vanadiferous magnetite is developed from the weathering profile of an underlying gabbro in a laterite outcrop on a ridge. The Coates vanadium deposit occurs in magnetite lenses at the core of the layered Coates Gabbro. The gabbro is poorly exposed in an area of extensive laterite formation, but appears to be between two granitic bodies (see Figure 3). The Coates Gabbro is about 1km long and up to 600m wide.

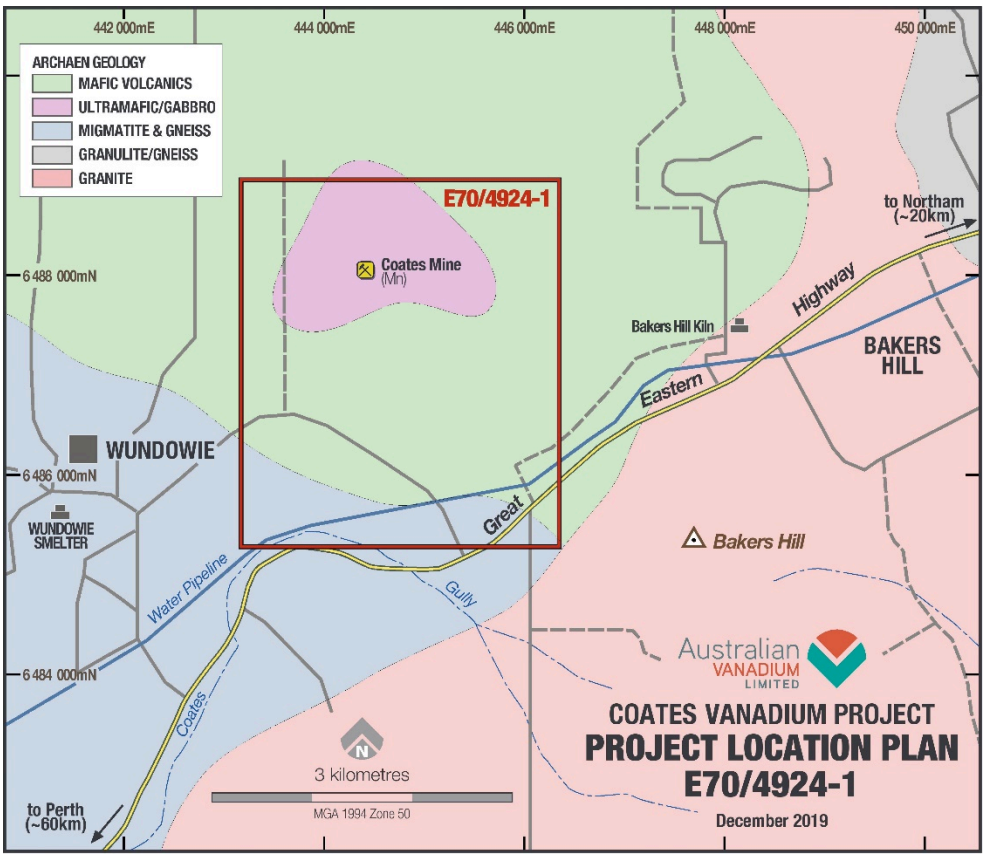


**Figure 3 Geology of the Coates Vanadium Tenement**

## SAMPLING

Surface sampling in 2018 and 2019 has confirmed that there is significant vanadium content in the pisolite caprock, with values up to 1.59% $V_2O_5$. Samples C1 to C11 were taken from surface outcrops, historical mine stockpiles and dumps in November 2018. The rock outcrop samples of pisolitic ferricrete cap-rock were numbered C1, C2, C7, C9, C10 and C11. All except C11 returned vanadium values exceeding 0.7% $V_2O_5$. Sample C11 was obtained from a pisolite cap over granite and was not related to the gabbro host rock. Sample C11 has a notably higher aluminium content.

The remainder of the C series samples listed were taken from fine and coarse dumps and stockpiles. Some of the dumps are mineralised with vanadium up to 0.9% $V_2O_5$.

Samples U1 to U4 were follow up samples collected in May 2019. Samples U1 and U2 were taken to check similar locations to C9 and C10 and confirmed vanadium content from 0.7% to 0.9% $V_2O_5$ in the historical pit area, in a horizon at the base of the pisolitic ferricrete. C9 and C10 were from the top of the pisolitic ferricrete cap (see Table 2 and Figure 4).

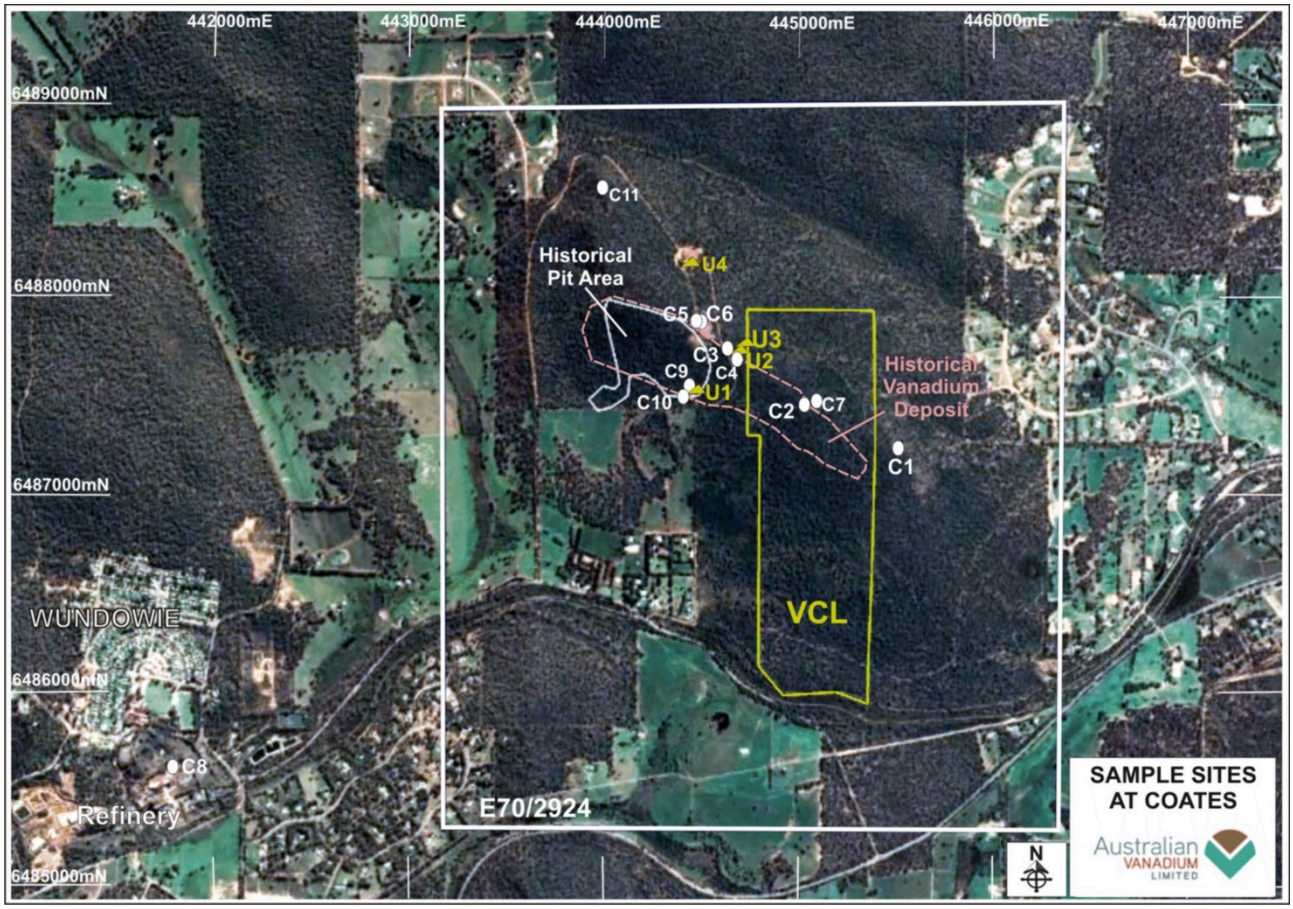


**Figure 4 Sample Locations on the Coates Vanadium Tenement**

## CONCLUSIONS FROM SAMPLING

- The latest results corroborate those samples previously taken and the historical data.
- The open pit material (and potentially the resource area) shows good vanadium grades. For C9, C10, U1 and U2 the average grade is 1.15% $V_2O_5$.
- Variability of vanadium grade in the historical pit area ranges from 0.74% to 1.58% $V_2O_5$ from 4 samples, suggesting that all material is well above a mineable cutoff grade for most vanadium deposits (which is about 0.4% $V_2O_5$).
- The crushed fines dump previously sampled at 0.26% $V_2O_5$ (C6) and recently at 0.23% $V_2O_5$ (U3) confirms potentially recoverable and accessible low-grade material.

- Titanium values range from 8.75% to above 20% in previous samples and 5.13% to 9.71% $TiO_2$ in the latest samples. This underlines the value of titanium in this orebody.
- Aluminium is consistently high in all samples at over 20% suggesting that it is a true bauxite and source of aluminium.
- Historical dumps and pits look as if they contain sufficient material for significant resources of vanadium, titanium and other elements.
- The laterite cap-rock samples represent a good source of vanadium, titanium, iron and aluminium.

**Table 2 Surface Rock Chip and Grab Samples from Coates Vanadium Deposit**

| ID | East | North | mRL | Fe% | $SiO_2$% | $Al_2O_3$ | $TiO_2$% | CaO% | MgO% | Cu% | $V_2O_5$% | Co% | $Na_2O$% |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C1 | 445476 | 6487238 | 446.8 | 30.77 | 5.31 | 28.66 | 6.49 | 0.015 | 0.02 | 0.017 | 0.747 | 0.001 | 0.007 |
| C2 | 445051 | 6487451 | 437.7 | 36.13 | 16.87 | 17.29 | 8.71 | 0.045 | 0.04 | 0.007 | 0.743 | 0.001 | 0.028 |
| C3 | 444681 | 6487703 | 430.3 | 40.52 | 3.84 | 25.09 | 10.1 | 0.023 | 0.03 | 0.010 | 0.573 | 0.001 | 0.937 |
| C4 | 444627 | 6487732 | 456.0 | 40.88 | 9.25 | 16.02 | 8.62 | 0.027 | 0.04 | 0.022 | 0.898 | 0.004 | 0.009 |
| C5 | 444499 | 6487860 | 434.4 | 33.38 | 3.66 | 36.41 | 8.83 | 0.143 | 0.04 | 0.013 | 0.175 | 0.001 | 2.199 |
| C6 | 444501 | 6487855 | 434.2 | 41.23 | 3.46 | 22.8 | 11.9 | 0.015 | 0.02 | 0.009 | 0.265 | 0.001 | 1.864 |
| C7 | 445013 | 6487452 | 442.5 | 43.23 | 1.56 | 22.7 | 8.75 | 0.046 | 0.03 | 0.008 | 0.975 | 0.003 | 0.001 |
| C8 | 441762 | 6485598 | 279.0 | 5.46 | 1.4 | 2.87 | 0.15 | 0.054 | 0.06 | 0.007 | 0.013 | 0.046 | 0.24 |
| C9 | 444478 | 6487541 | 387.0 | 37.87 | 2.27 | 10.44 | 20.6 | 0.014 | 0.01 | 0.004 | 1.589 | 0.001 | 0.001 |
| C10 | 444432 | 6487536 | 389.5 | 40.62 | 1.6 | 14.76 | 11.7 | 0.01 | 0.01 | 0.003 | 1.379 | 0.001 | 0.025 |
| C11 | 443995 | 6488551 | 363.5 | 21.15 | 1.47 | 41.68 | 2.72 | 0.027 | 0.01 | 0.004 | 0.163 | 0.001 | 0.023 |
| U1 | 444475 | 6487509 | 389.0 | 37.21 | 1.66 | 21.47 | 5.13 | 0.002 | 0.01 | 0.003 | 0.909 | 0.010 | 0.001 |
| U2 | 444462 | 6487506 | 437.7 | 32.71 | 4.54 | 22.56 | 9.67 | 0.002 | 0.01 | 0.008 | 0.740 | 0.019 | 0.001 |
| U3 | 444706 | 6487751 | 430.0 | 43.28 | 3.89 | 22.64 | 8.75 | 0.021 | 0.03 | 0.012 | 0.226 | 0.022 | 1.568 |
| U4 | 444468 | 6488183 | 406.0 | 34.31 | 3.33 | 21.54 | 9.71 | 0.003 | 0.01 | 0.014 | 1.290 | 0.024 | 0.006 |

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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.*

## ABOUT AUSTRALIAN VANADIUM

AVL is an Australian owned resource company focused on production of high value vanadium products in Australia. AVL is 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 and intends to produce a value added vanadium product in Australia prior to sale to steel, battery and specialty chemical customers.

The Australian Vanadium Project is currently one of the highest-grade vanadium projects being advanced globally with 183.6Mt at 0.76% vanadium pentoxide ($V_2O_5$), containing a high-grade zone of 96.7Mt at 1% V2O5 with an Ore Reserve of 18.24Mt at 1.04% V2O5 comprised of a Proved Reserve of 9.82Mt at 1.07% V2O5 and a Probable Reserve of 8.42Mt at 1.01% V2O5, reported in compliance with the JORC Code 2012 (see ASX announcement dated 19 December 2018 'Gabanintha Pre-Feasibility Study and Maiden Ore Reserve').

The Australian Federal Government awarded the Australian Vanadium Project 'Major Project Status' in September 2019.

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.

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

## ABOUT THE AVL JOINT VENTURE WITH UPS

The joint venture agreement between AVL and UPS allows UPS the exclusive right to earn a 49% legal and beneficial interest in the tenement on a $5,000 signing fee, followed by $50,000 being spent on exploration on the tenement within the first 12 months of the agreement and $150,000 being spent during the first 24 months. When the obligations outlined above have been fulfilled, the agreement allows for UPS to acquire AVL's Joint Venture interest for a sum of $500,000 or shares in UPS, at the election of AVL.

Ultra Power Systems Limited is a private company which was formed for the purpose of offering next generation power and storage system solutions to capital conscious clients. The company intends to provide brand and generation agnostic solutions according to a customer's needs, but with the core provision of a third-generation VRFB, which represents a transformational catalyst to enable the vision of blended power supply inputs on micro- and mega-grids. UPS has secured a licence to Pacific Northwest National Laboratory's (PNNL) generation 3 vanadium electrolyte production. In addition, it holds the exclusive Australian option to license the VanadiumCorp Electrochem Processing Technology (VEPT). VEPT enables the recovery of valuable by-products during the vanadium processing route with minimal carbon production and minimal waste.

## 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 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 Company's 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.

## APPENDIX 1

*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.* | Rock and dump samples were collected with sample sizes ranging between 2 and 3kg. All sample locations were recorded and the rocks described. All samples should be considered as "rock chip" or "grab" surface random samples. The rock chip samples were hand-generated chips by geological hammer or large rock pieces up to 100mm diameter. The grab samples were mixed material from dumps which included fines as well as sand, cobble and pebble sized rock fragments. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | No instruments were used for sample collection other than hammer and scoop. Sample representation is considered to be "spot" or "grab" rather than totally representative of the volume of outcrop or dump presented. |
| | *Aspects of the determination of mineralization that are Material to the Public Report.* | No drilling was completed on this tenement. Rock samples were collected in labelled calico sample bags. The sample was dried, crushed and pulverised to produce a sub sample (~200g) for laboratory analysis using XRF and total LOI by thermo-gravimetric analysis. |
| 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.).* | No drilling was completed on this tenement. |
| Drill Sample Recovery | *Method of recording and assessing core and chip sample recoveries and results assessed.* | No drilling was completed. |
| | *Measures taken to maximize sample recovery and ensure representative nature of the samples.* | No drilling was completed. |
| | *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.* | Not applicable. |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| 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.* | No Core or Drill Chip samples were taken |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* | Rock samples were collected and only general lithology information was recorded in the field along with locational data from GPS readings. |
| | *The total length and percentage of the relevant intersections logged.* | Not Applicable |
| Sub-Sampling Techniques and Sample Preparation | *If core, whether cut or sawn and whether quarter, half or all core taken.* | No core was produced. |
| | *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* | Rock and dump samples were obtained dry and no processing or splitting was done before sample preparation and assay in the laboratory. |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | All samples were pulverised to a nominal 90% passing 75 micron mesh and sub sampled for assaying and LOI determination tests. The remaining pulps are stored at an AVL facility and at the laboratory, Bureau Veritas (BV) in Canning Vale<br>The sample preparation techniques are of industry standard and are appropriate for the sample types and proposed assaying methods. |
| | *Quality control procedures adopted for all sub-sampling stages to maximize representivity of samples.* | The quality control procedures in place for these samples related to the assay laboratory internal controls by check samples, standards and blanks with the batch of samples assayed. |
| | *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.* | There were no measures taken to ensure representation of the sample to the volumes of surface material available. Each sample location was designed to evaluate a specific lithology (for rock samples) or a specific dump site (for grab samples) for the approximation of whole rock element abundances. This is particularly with reference to iron, vanadium, titanium, aluminium and silica abundances in the potential vanadium ore. |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | As all of the variables being tested occur as moderate to high percentage values and generally have very low variances, the chosen sample sizes are deemed appropriate |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| 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.* | All samples for Coates were assayed for the iron ore suite by XRF (20 elements) and for total LOI by thermo-gravimetric technique. The method used is designed to measure the total amount of each element in the sample. The laboratory procedures appear to be in line with industry standards and are appropriate for iron ore and vanadium deposits, and the commercial laboratories have been industry recognized and certified<br>Samples are dried at 105$^{O}$C in gas fired ovens for 18-24 hours before RC samples being split 50:50. One portion is retained for future testing, while the other is then<br>crushed and pulverised. Sub-samples are collected to produce a 66g sample that is used to produce a fused bead for XRF based analysing and reporting.<br>The BV XRF machine calibrations are checked once per shift using calibration beads made using exact weights and they performed repeat analyses of sample pulps at a rate of 1:20 (5% of all samples). The lab repeats compare very closely with the original analysis for all elements. |
| | *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.* | No geophysical readings were taken. |
| | *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.* | QAQC results from the assay laboratory show no material issues with the main variables of interest for the recent assaying programmes. |
| Verification of Sampling and Assaying | *The verification of significant intersections by either independent or alternative company personnel.* | Not applicable to intersections – just rocks. Rock sample series C1-C11 are directly related, by location and lithology, to samples U1 to U4. Samples C9, C10, U1 and U2 show a high degree of similarity as do samples C6 and U3. These assays and lithologies can be therefore considered to be verified. |
| | *The use of twinned holes.* | Not applicable |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | All primary geological data has been collected using paper logs and transferred into Excel spreadsheets and ultimately an Access Database. The data was checked on transfer by the database administrator, MRG. Assay results were returned from the laboratory as electronic data (Excel spreadsheets and PDF files). Sample location data was received as electronic data and stored as spreadsheet files. |
| | *Discuss any adjustment to assay data.* | No adjustments or calibrations were made to any assay data. |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| 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.* | There was no mineral resource estimation, no drill holes completed and no surveys other than GPS locations for surface samples. |
| | *Specification of the grid system used.* | The grid projection used for Coates is MGA_GDA94, Zone 50. All reported coordinates are referenced to this grid. |
| | *Quality and adequacy of topographic control.* | No work has been completed on topographic control. |
| Data Spacing and Distribution | *Data spacing for reporting of Exploration Results.* | Sample locations were chosen to assess the nature of the mineralized cap-rock of the Coates Vanadium Deposit and to test historical dump material. |
| | *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 compositing has been completed. |
| Orientation of Data in Relation to Geological Structure | *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* | The rock samples were located at places likely to represent mineralized cap-rock horizons |
| | *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.* | Not applicable |
| Sample Security | *The measures taken to ensure sample security.* | Samples were collected onsite by a responsible geologist. The calico sample bags were zip-tied in plastic bags before being transported by road to the BV core shed in Perth. Sample despatch sheets were compared against received samples and any discrepancies reported and corrected. |
| Audits or Reviews | *The results of any audits or reviews of sampling techniques and data.* | No reviews of the sampling techniques and data have yet been completed. |

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.<br>A JV agreement between AVL and UPS is now operating on the tenement with UPS having an earn-in arrangement after initial expenditure on exploration programs exceeding $50,000.<br>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). Therefore the Mines Department statutory regulations and processes apply. There are no outstanding Native Title issues.<br>The following restricted access areas occur on the tenement:<br>Woondowing Nature Reserve Category 1A (code 29702)<br>Extension of Nature Reserve (code 29046)<br>Area reserved for Railway Purposes (code 23746)<br>Recreation Area (code 11619) |
| | *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.<br>The nature of the vanadium source was confirmed by shaft sinking and trenching in 1962 (report A1885). A processing plant was constructed within the ground held by Wundowie Charcoal Iron and mining and processing operations, albeit short-lived commenced in the 1970s.<br>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.<br>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. |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | | 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.<br>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% $V_2O_5$.<br>***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 deposit is a magnetite-bearing gabbro intrusion into granitic rocks containing vanadium. The bedrock geology consists of gabbros and anorthosites contained within Archaean mafic volcanics surrounded by gneisses and granitic rocks. Vanadium occurs within a titaniferous magnetite hosted by the gabbro-anorthosite unit.<br>The Coates vanadium deposit occurs in magnetite lenses at the core of the layered Coates Gabbro. The gabbro is poorly exposed in an area of extensive lateritization, but appears to be between two granitic bodies. It has a general strike of 120° dipping southwest a t 70°.<br>The Coates Gabbro is about 1 km long and up to 600 m wide. It consists of three layers: a Footwall leucogabbro, a Central magnetite gabbro, and a Hangingwall gabbro.<br>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:*<br>*easting and northing of the drillhole collar*<br>*elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar*<br>*dip and azimuth of the hole*<br>*down hole length and interception depth hole length.* | There is no drill hole information to report. This section is not relevant. |
| 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 exploration drilling results have been reported in this release, therefore there is no drill hole intercepts to report. This section is not relevant. |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| | *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.* | Not applicable |
| | *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | Not applicable |
| 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.* | Not applicable for this announcement on surface sampling. |
| 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.* | Not applicable |
| 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 assay results from surface samples have been reported as received (both high and low grades) and there is no relationship implied about estimating volumes or tonnes. |
| 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:<br>A1884 Exploration Progress Report. Mangore Australia Pty Ltd. HE Abendroth. 1962.<br>A1885 Economic Evaluation of Vanadiferous Magnetite deposits of WA. AW Heuck.1962<br>A1886 Quarterly Progress Report on Metallurgical Tests. Mangore Pty Ltd. June 1962<br>A5698 Coates Siding Polysius Metallurgy Test Report. 1974<br>A6071 Coates Vanadium Project. Diamond Drill Logs. Mt Dempster Mining Pty Ltd.?1974<br>A6977 Vanadiferous Magnetite material from Coates. AMDEL met test report. 1975<br>A6978 Sodium Removal from Vanadium Leach Residue Pellets. Government Chemical Laboratories for Agnew Clough Ltd. March 1977<br>A81303 Annual Report 2008 for E70/2230. Mercator Metals Pty Ltd. January 2009<br>A85887 Annual Report Wundowie Project 2008-2009. Mercator Metals Pty Ltd. Jan 2009<br>A102789 Partial Surrender Report E70/2230 Wundowie Project. Bauxite Resources Ltd /Mercator Metals Pty Ltd. July 2014<br>A102790 Partial Surrender Report for E70/2230. Mercator Metals Pty Ltd. July 2014<br>A102864 Final Surrender Report Wundowie Project. Aurum West Pty Ltd. July 2014 |

| Criteria | JORC Code Explanation | Commentary |
|---|---|---|
| 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).* | Programme of Works number 81653 has been granted. Up to 15 diamond core holes are planned to evaluate the caprock and near-surface vanadium ore and provide bulk samples for metallurgical testing using the VEPT licensed process. |
| | *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | Included in this announcement. |