

## ASX ANNOUNCEMENT

22 May 2019



## Lithium Australia establishes significant vanadium resource

Lithium Australia (ASX: LIT or 'the Company') has completed a Mineral Resource Estimate for a portion of the Youanmi Complex in the mid-west region of Western Australia. The Company has also outlined a strategy to use its vanadium assets to enhance value for shareholders.

### HIGHLIGHTS

- Maiden vanadium resource of 185 Mt at 0.33% V<sub>2</sub>O<sub>5</sub>
- Drilling for metallurgical tests planned
- Western Australian vanadium strategy defined

### Maiden Resource

The Inferred Mineral Resource at Youanmi has been estimated at 185 Mt at 0.33% V<sub>2</sub>O<sub>5</sub> using a cut-off grade of 0.2% V<sub>2</sub>O<sub>5</sub>. It comprises oxide resources of 96 Mt at 0.34% V<sub>2</sub>O<sub>5</sub> and fresh resources of 88 Mt at 0.33% V<sub>2</sub>O<sub>5</sub>. It is located within E57/978, held by Diversity Resources Pty Ltd, over which Lithium Australia has an option to purchase, as announced on [11 December 2018](#). The Mineral Resource estimate was completed by Company consultant John Doepel, based upon open file drilling data from 1999 (drill collars are shown within the blue outlined tenement boundary in Figure 1 below).

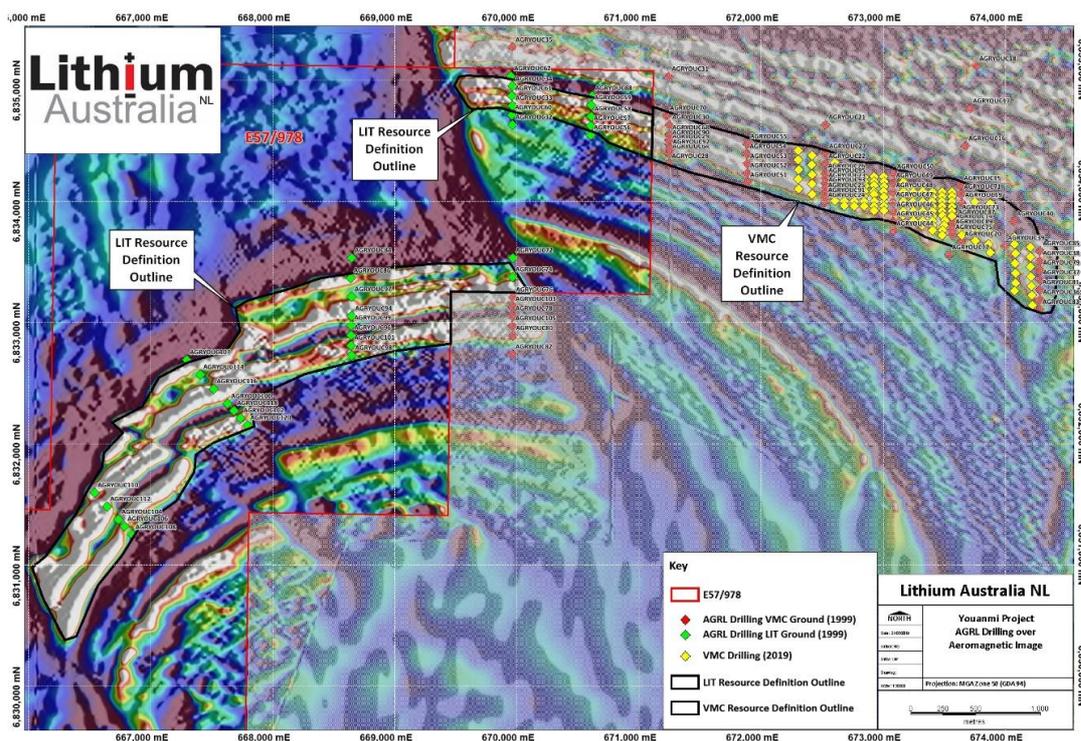


Figure 1 – Aeromagnetic image of part of the Youanmi Complex, showing drill hole locations and Mineral Resource outline.

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### **Lithium Australia's vanadium strategy**

Lithium Australia is heavily invested in the battery industry. It has lithium assets around the globe, plus a suite of proprietary technologies that enable material to transition from ore, concentrates or mine waste right through to the production of lithium-ion batteries ('LIBs'). The Company's strategic alliances include the potential for LIB production through a partnership with DLG, one of China's largest battery producers.

That said, the Company acknowledges the competition from alternative technologies in the battery field; in particular, vanadium flow batteries.

While Lithium Australia does not consider vanadium a core part of its business, it has also taken prospective ground near the Coates vanadium deposit, located only 35 km to the east of Perth, Western Australia, and is undertaking regional regolith sampling along the Darling Range. The area of investigation extends from Coates in the north to Greenbushes in the south, a distance of over 200 km. To date, multi-element geochemistry has been completed on about 7000 samples to provide indications of lithium, vanadium or other base metal occurrences that may be obscured by the extensive laterite cover.

Lithium Australia will evaluate the potential to form partnerships that leverage its current position with respect to vanadium. Already, the Company's formation of strategic alliances has added significantly to its capacity in both the battery manufacturing and battery recycling fields, and its strong resource position with respect to vanadium offers a similar opportunity.

### **Future exploration**

Lithium Australia will evaluate the metallurgical characteristics of the oxide mineralisation at Youanmi, initially focusing on the potential for direct leaching of the vanadium and associated base metals. A drilling programme is being planned, to enable a reasonable quantity of oxide material to be recovered over the full depth of the oxidised profile.

Preliminary evaluation of the fresh material will also be undertaken and drilling of the nearby lithium pegmatites has the necessary statutory approvals and should commence in the September quarter, weather permitting..

### **Nature of the mineralisation at Youanmi**

The oxidised mineralisation extends to between 20 m and 50 m, with an average depth of 40 m and virtually no overburden. The fresh mineralisation has been estimated to 400 m above sea level, and between 75 m and 80 m below the surface.

The vanadium mineralisation continues to the east into Venus Metals' vanadium project area, from within which it has reported total oxide resources of 134.73 Mt grading 0.34% V<sub>2</sub>O<sub>5</sub> (ASX announcement dated 20 March 2019, entitled 'Youanmi Vanadium Project – New JORC 2012 Vanadium Oxide Mineral Resource confirmed').



Significantly, Venus Metals has reported that vanadium, together with associated nickel, cobalt and copper, can be leached from the oxide material with sulphuric acid, potentially providing a low-capital avenue for the production of vanadium salts that can be used in the manufacture of vanadium flow batteries.

### Summary of material information on the Maiden Resource

The Mineral Resource was estimated by consultant John Doepel, based upon 41 reverse circulation ('RC') drill holes completed by Australian Gold Resources Ltd in 1999.

*Youanmi Mineral Resource estimate (at 21 May 2019)*

Category	Material type	Mt	% V <sub>2</sub> O <sub>5</sub>
Inferred	Oxide	96	0.34-
Inferred	Fresh	88	0.33
<b>Total</b>		<b>185</b>	<b>0.33</b>

### Geology and geological interpretation

The Youanmi Complex is a layered gabbroic intrusion; it contains several prominent vanadiferous titanomagnetite horizons that form a strong magnetic signature near the base of the stratigraphy. These units comprise numerous individual, massive magnetite bands varying from less than 1 cm to 1 m in thickness. Figure 1, which shows an aeromagnetic image of a portion of E57/978, clearly shows the magnetic units that host the primary mineralisation.

Geological interpretation includes a combination of surface mapping, downhole logging, geophysics and chemistry to define mineralisation zones and oxide/fresh boundary. The major vanadiferous magnetite units are fairly well defined and continuous geologically.

Within E57/958, the vanadiferous units are dislocated by a major fault. To the east of the fault, they strike east-west with a moderate dip to the south. To the west, the units are offset by several minor faults and strike northeast-southwest, dipping moderately to the southeast. Oxidised mineralisation extends to between 20 m and 50 m, with an average depth of 40 m and minimal overburden.

### Drilling, sampling and assaying techniques

The Mineral Resource estimate is based on 41 RC holes drilled by Australian Gold Resources Ltd in 1999. The historic exploration data were obtained from Open File WAMEX Reports.

Sampling was by RC drilling, collected every 1 m through a cyclone and riffle splitter; 4 m composite samples were also collected via scoop and spear sampling from the residue bags. Initial assays were carried out on 4 m composites of splits of these samples, with 1 m samples of most intervals returning greater than 2000 ppm V<sub>2</sub>O<sub>5</sub> then assayed.



The methods used for assay analysis of RC drill samples are lithium meta-borate fusion XRF at AMDEL (XRF4) and fusion XRF at Analabs (X408).

### **Estimation and modelling techniques**

The estimation used traditional polygonal sectional methods, which are appropriate given the consistency of grade of defined mineralised bands along strike. Estimated intervals had a minimum length of 6 m and a minimum grade of 0.2% V<sub>2</sub>O<sub>5</sub>. The estimated grades are consistent with those estimated along strike to the east in VMC's adjoining ground in 2018 and over the same and adjoining ground in 1999.

### **Mineral Resource classification criteria**

The Mineral Resource estimate is classified as 'Inferred' in its entirety.

The classification is based on confidence in the geological model, mineralisation continuity, data density and data quality.

Within the northeast section of the resource area, the RC drilling was completed on 640 m spaced sections with drill hole spacing of approximately 80 m. In the southwest the sections were about 1280 m apart, with about 80 m hole spacing.

### **Cut-off parameters**

The estimation is reported at a lower interval cut-off grade of 0.2% V<sub>2</sub>O<sub>5</sub>.

### **Mining, metallurgical and other assumptions**

No assumptions regarding mining have been made, other than that mining would be by open-cut methods. Metallurgical studies, completed by Venus Metals on the adjoining tenement and geologically contiguous with this Mineral Resource, have shown that "simple beneficiation by way of low-energy crushing and desliming can markedly increase the ore grade ... before vanadium extraction by way of leaching." Details are contained in the Venus Metals ASX announcement dated 20 March 2019 and entitled 'Youanmi Vanadium Project – New JORC 2012 Vanadium Oxide Mineral Resource confirmed'. The announcement also states: "Initial hydro-metallurgical leach tests at atmospheric pressures show that 81.6% of the vanadium can be recovered by leaching of the oxide material using acid solutions."



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### **About Lithium Australia NL**

Lithium Australia aspires to 'close the loop' on the energy-metal cycle in an ethical and sustainable manner. To that end, it has amassed a portfolio of projects and alliances and developed innovative extraction processes to convert *all* lithium silicates (including mine waste) to lithium chemicals. From these chemicals, the Company plans to produce advanced components for the lithium-ion battery industry. The final step for Lithium Australia involves the recycling of spent batteries and e-waste. By uniting resources and the best available technology, the Company aims to establish a vertically integrated lithium processing business.

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### **Competent Person**

The information in this report as it relates to Mineral Resources is based on information compiled by John Doepel, a member of the Australasian Institute of Mining and Metallurgy. Mr Doepel has sufficient experience in mineral resource estimation relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves*. Mr Doepel consents to the inclusion in this announcement of the information in the form and context in which it appears.



Appendix 1 Collar details of drill holes used in Mineral Resource estimate

AGRYOUC101	668641	6832811	480	80	RC	-60	360
AGRYOUC102	667735	6832211	481	80	RC	-60	315
AGRYOUC103	669961	6833131	480	80	RC	-60	360
AGRYOUC104	666736	6831375	485	62	RC	-60	315
AGRYOUC105	669961	6832971	480	76	RC	-60	360
AGRYOUC106	666784	6831316	489	80	RC	-60	315
AGRYOUC107	667296	6832691	480	46	RC	-60	315
AGRYOUC108	666848	6831249	486	80	RC	-60	315
AGRYOUC110	666541	6831593	480	60	RC	-60	315
AGRYOUC112	666641	6831479	480	72	RC	-60	315
AGRYOUC114	667406	6832571	480	54	RC	-60	315
AGRYOUC116	667516	6832451	480	60	RC	-60	315
AGRYOUC118	667681	6832271	480	80	RC	-60	315
AGRYOUC120	667791	6832151	480	80	RC	-60	315
AGRYOUC28	671243	6834310	469	39	RC	-90	0
AGRYOUC29	671245	6834470	470	50	RC	-90	0
AGRYOUC30	671246	6834629	470	50	RC	-90	0
AGRYOUC31	671240	6835029	473	54	RC	-90	0
AGRYOUC32	669963	6834629	471	46	RC	-90	0
AGRYOUC33	669960	6834788	472	56	RC	-90	0
AGRYOUC34	669961	6834949	473	54	RC	-90	0
AGRYOUC35	669963	6835270	474	54	RC	-90	0
AGRYOUC56	670603	6834544	473	57	RC	-90	0
AGRYOUC57	670604	6834623	475	57	RC	-90	0
AGRYOUC58	670609	6834700	477	63	RC	-90	0
AGRYOUC59	670606	6834792	477	63	RC	-90	0
AGRYOUC60	669959	6834711	471	51	RC	-90	0
AGRYOUC61	669957	6834869	472	40	RC	-90	0
AGRYOUC62	669951	6835031	473	40	RC	-90	0



AGRYOUC64	671247	6834392	470	40	RC	-90	0
AGRYOUC68	671245	6834546	470	36	RC	-90	0
AGRYOUC70	671226	6834706	471	24	RC	-90	0
AGRYOUC72	669964	6833533	469	80	RC	-60	360
AGRYOUC74	669963	6833374	469	60	RC	-60	360
AGRYOUC76	669966	6833208	469	50	RC	-60	360
AGRYOUC78	669962	6833053	469	40	RC	-60	360
AGRYOUC80	669964	6832892	468	40	RC	-60	360
AGRYOUC82	669961	6832734	468	50	RC	-60	360
AGRYOUC84	668644	6833532	475	51	RC	-60	360
AGRYOUC86	668637	6833367	475	81	RC	-60	360
AGRYOUC88	670616	6834871	476	80	RC	-90	0
AGRYOUC90	671248	6834505	470	81	RC	-90	0
AGRYOUC92	671111	6834278	470	80	RC	-90	0
AGRYOUC94	668647	6833053	476	80	RC	-60	360
AGRYOUC96	668642	6832892	479	80	RC	-60	360
AGRYOUC97	668644	6833212	475	64	RC	-60	360
AGRYOUC98	668647	6832729	475	80	RC	-60	360
AGRYOUC99	668641	6832974	477	79	RC	-60	360

# JORC Code, 2012 Edition – Table 1 Report

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>• <i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised 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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The historic exploration data were obtained from Open File WAMEX Reports on historical exploration Reverse Circulation (RC) drilling conducted by Australian Gold Resources (AGR) during 1999.</li> <li>• Sampling was by Reverse Circulation drilling, collected every 1m through a cyclone and riffle splitter. 4m composite samples were also collected via scoop and spear sampling from the residue bags.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>• <i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Reverse Circulation drilling by Australian Gold Resources (AGR) during 1999</li> <li>• The northeast lines of RC holes in the program were drilled vertically; The southwest lines were drilled with a 60° dip to the south or southeast,</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No recovery issues were reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Logging</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• RC drill samples were geologically logged and the downhole magnetic susceptibility was also conducted as per the historical report. Drillhole geological logging, assay data and metallurgical testing were used to support resource estimation of V<sub>2</sub>O<sub>5</sub>.</li> <li>• The complete drill holes were logged</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>• 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.</li> <li>• Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>• For historical drilling sampling has been by Reverse Circulation drilling, collected every 1m through a cyclone and riffle splitter. 4m-composite samples were also collected via scoop and spear sampling from the residue bags.</li> <li>•</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>• 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.</li> <li>• Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>• The methods used for assay analysis of RC drill samples are lithium meta-borate fusion XRF at AMDEL (XRF4) and fusion XRF at Analabs (X408).</li> <li>• Down hole geophysical logging was carried out</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>• No independent verification of sampling and assaying has been reported.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>• The RC drill hole locations (collar) were located using GPS. Grid systems used were Geodetic datum: AGD 84, Vertical datum: AHD; Projection: AMG, Zone 50.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• 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.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Within the northeast section of the resource area, the RC drilling was completed on 640m spaced sections with drill hole spacing of approximately 80m. In the southwest the sections were about 1280m apart with about 80m hole spacing.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• The dip of the vanadiferous bands is approximately 40° to the south. Both the lines of vertical holes and the northerly inclined holes were oriented appropriately at right angles to the stratigraphy.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Details of sample security not given in historical reports.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• No audits or review have been located.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Resource area within E57/958 held by Diversity Resources Pty Ltd, a private company. Lithium Australia (LIT) has an option over the tenement (LIT ASX announcement: 11 December 2018)</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>The tenement area was historically explored by many explorers since 1967. Australian Gold Resources Limited (AGR) explored extensively for vanadium resources within historical tenement E59/419.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>The project area lies on the northern part of the Youanmi Complex, a layered gabbroic intrusion. Within E57/958 the vanadiferous units are dislocated by a major fault. To the east of the fault they strike east-west with a moderate dip to the south. To the west the units are offset by a number of minor faults; and strike northeast-southwest dipping moderately to the southeast. Oxidised mineralisation extends to between 20m and 50m, with an average depth of 40m. There is minimal overburden.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> <li><i>easting and northing of the drill hole collar</i></li> <li><i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li><i>dip and azimuth of the hole</i></li> <li><i>down hole length and interception depth</i></li> <li><i>hole length.</i></li> </ul> </li> <li><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill hole information is within Appendix 1 above</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill samples were taken as 1m samples. Initial assays were carried out on 4m composites of splits of these samples. 1m samples of most intervals returning greater than 2000ppm V<sub>2</sub>O<sub>5</sub> were then assayed.</li> <li>The resource estimation used the 1m assays where available and the composite assays for other intervals.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>	<ul style="list-style-type: none"> <li>• To east of main fault dip 40o to south and holes vertical with apparent width about 84% of true width. To west of fault dip approximately 430 to south and holes drilled at 60o to north with apparent width about 109% of true width.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>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 drill hole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A drill hole location plan is provided in Figure 1 above in the body of the text.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Grade consistent throughout resource area. Estimated intervals vary from 0.26 to 0.48% V<sub>2</sub>O<sub>5</sub>. Average north-south section grades vary from 0.31 to 0.37% for oxidized mineralisation and vary from 0.32 to 0.38% for fresh mineralisation.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• To assess the stratigraphy, structure and correlation between magnetic units and zones of high vanadium grade, AGR carried out low-level high-resolution aeromagnetic survey (UTS) during 1999.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• LIT intends to carry out infill drilling in selected areas to enable estimation of Indicated Resources</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>• <i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i></li> <li>• <i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Standard data validation was carried out on historical drill-hole data.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Site visits</b>	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No site visits were carried out as hole locations were verified on Goggle earth and as previous work was obviously of a high standard. Nothing would have been gained by a site visit as minimal outcrop is present within the resource area.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The geological interpretation includes a combination of surface mapping, downhole logging, geophysics and chemistry to define mineralisation zones and oxide/fresh boundary. The major vandaniferous magnetite units are fairly well defined and continuous geologically,</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The resource has a length of 605km and a width of 600m. It has been estimated to a depth of between 75m and 80m. There is negligible overburden.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>• <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li>• <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <i>The process of validation, the checking process used, the comparison</i></li> </ul>	<ul style="list-style-type: none"> <li>• The estimation used traditional polygonal sectional methods, which are appropriate given the consistency of grade of defined mineralised bands along strike. Estimated intervals had a minimum length of 6m and a minimum grade of 0.2% V<sub>2</sub>O<sub>5</sub>. Minimum waste intervals were 8m.</li> <li>• The estimated grades are consistent with those estimated along strike to the east in adjoining ground in 2018 and over the same and adjoining ground in 1999.</li> <li>• No assumption have been made regarding by-products.</li> <li>• No estimation of deleterious elements was made.</li> <li>• No grade cutting was required as no high grade outlier assays were present.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>of model data to drill hole data, and use of reconciliation data if available.</i>	
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• <i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Tonnages are estimated on a dry basis .</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• <i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The estimation is reported at a lower interval cut-off grade of 0.2% V<sub>2</sub>O<sub>5</sub>. This was largely driven by the sampling and assaying methodology whereby only 1m samples of most 4m composite intervals returning greater than 2000ppm V<sub>2</sub>O<sub>5</sub> were assayed</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>• <i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No assumptions have been made, other than that mining would be by open-cut methods.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>• <i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Venus Metals, referring to the along strike mineralisation within its adjoining ground,' stated that: "Metallurgical studies show that simple beneficiation by way of low-energy crushing and desliming can markedly increase the ore grade ... before vanadium extraction by way of leaching"; and that "Initial hydro-metallurgical leach tests at atmospheric pressures show that 81.6% of the vanadium can be recovered by leaching of the oxide material using acid solutions" (ASX release 20 March 2019).</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>• <i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where</i></li> </ul>	<ul style="list-style-type: none"> <li>• No assumptions made</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></p>	
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• <i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></li> <li>• <i>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</i></li> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Bulk densities of 2.63 for oxidized material and 2.76 for fresh material, which values were derived by from over 6,800 downhole density log measurements taken by AGR during its 1999 drilling.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill line spacing adequate and appropriate for Inferred Resources – given continuity of geological units and grade. Data quality adequate.</li> <li>• The result reflects the competent person's view of the deposit.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Resource estimate peer reviewed.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>• <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Consistency of grade along strike gives confidence in estimation.</li> <li>• The resource relates to local estimation of grade.</li> </ul>

