

## Large EM Anomaly Confirms Priority Drill Target at Thor, Western Australia

ASX Announcement  
Wednesday 10 May 2017  
Ref: /VMS/606/VMS0410

Venture Minerals Limited (**ASX code: VMS**), is pleased to announce that a large airborne EM (Electro-Magnetic) anomaly has been identified within the Thor Prospect in Western Australia (Refer Figure Three). The EM anomaly was identified following the reprocessing of geophysical data covering the western portion of one of the recently granted tenements, in the Company's South Western tenement portfolio.

The discovery of the EM target follows the Company's recent announcement (Refer to ASX announcement 12 April 2017), which detailed the identification of a large VMS style geochemical anomaly, referred to as the Thor Prospect, situated only a few kilometres from where historic drilling by Teck Cominco successfully intersected several metres of massive sulphides (Refer Figure Four). The location of the historic drilling, known as the Kingsley Prospect, straddles the boundary of Venture's E70/4837.

Having completed a review of historic data from the Kingsley Prospect, Venture noted that airborne EM was very effective at identifying massive sulphides under laterite in local high grade metamorphic rocks. The Company acquired the data and reprocessed the geophysical survey covering the western portion of the Thor Prospect. The resultant EM target at Thor is many times larger than the Kingsley Prospect, and importantly exhibits a similar surface geochemical signature considered to be indicative of VMS style base metal mineralization in deeply weathered terranes.

**Venture's Managing Director commented** *"Following the recent discovery of Thor, we are very pleased to have upgraded the prospect to a priority drill target following the identification of a substantial and coincident EM anomaly. The Company looks forward to further results from Thor and to finalising a maiden drill program. The recent discoveries at Thor follows on from a series of successful exploration programs at the Caesar Project, where the Company is now finalising access agreements for a maiden drill program."*

Having successfully identified a high-quality target at Thor, the Company will look to infill the current geochemical survey as well as expand the EM survey to cover a number of additional base metal targets within the immediate area (Refer Figures One and Two).

Figure One | Thor and Kingsley Tungsten in laterite anomalies over airborne EM image conductivity

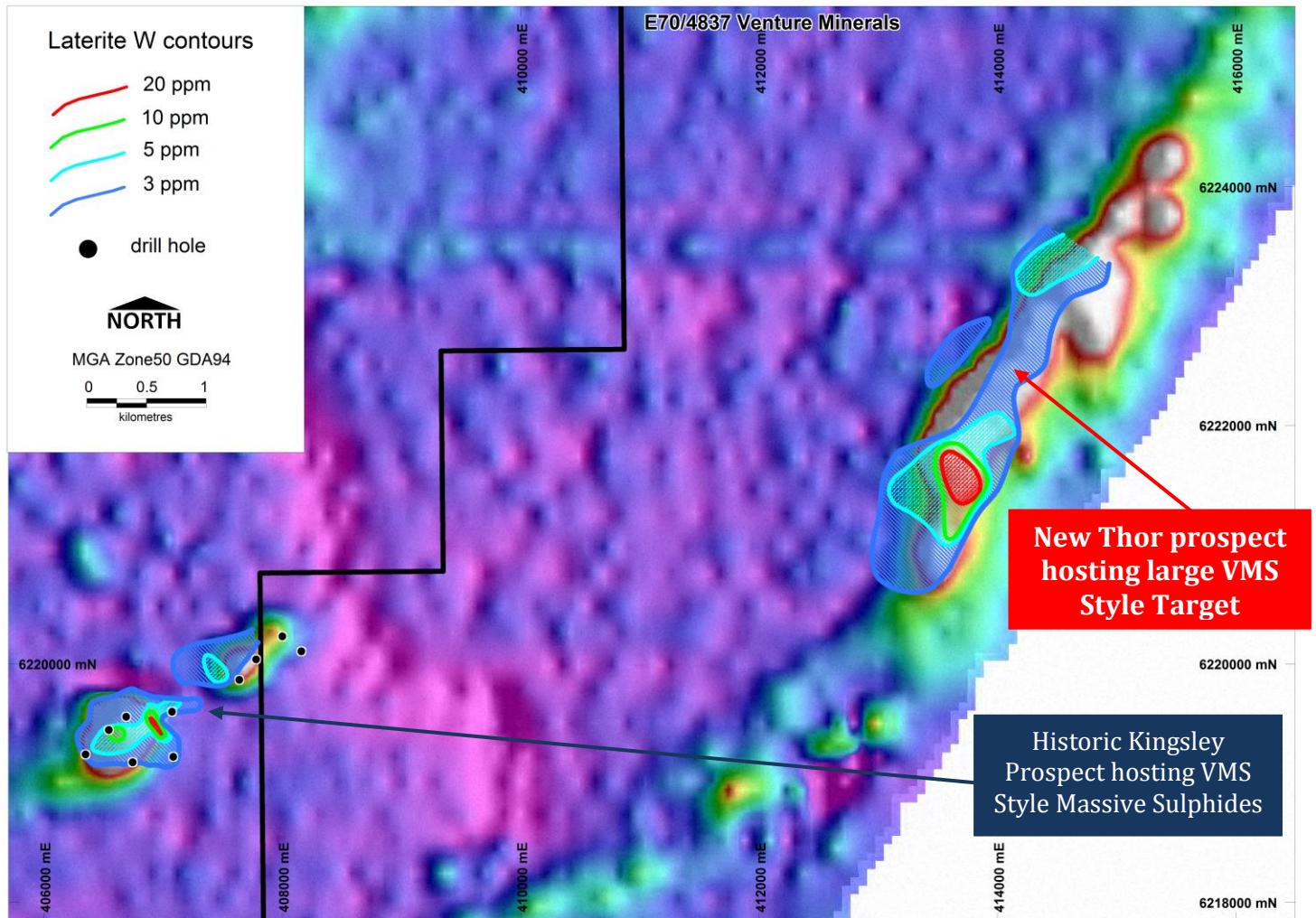


Figure Two | Thor and Kingsley Bismuth in laterite anomalies over airborne EM image conductivity

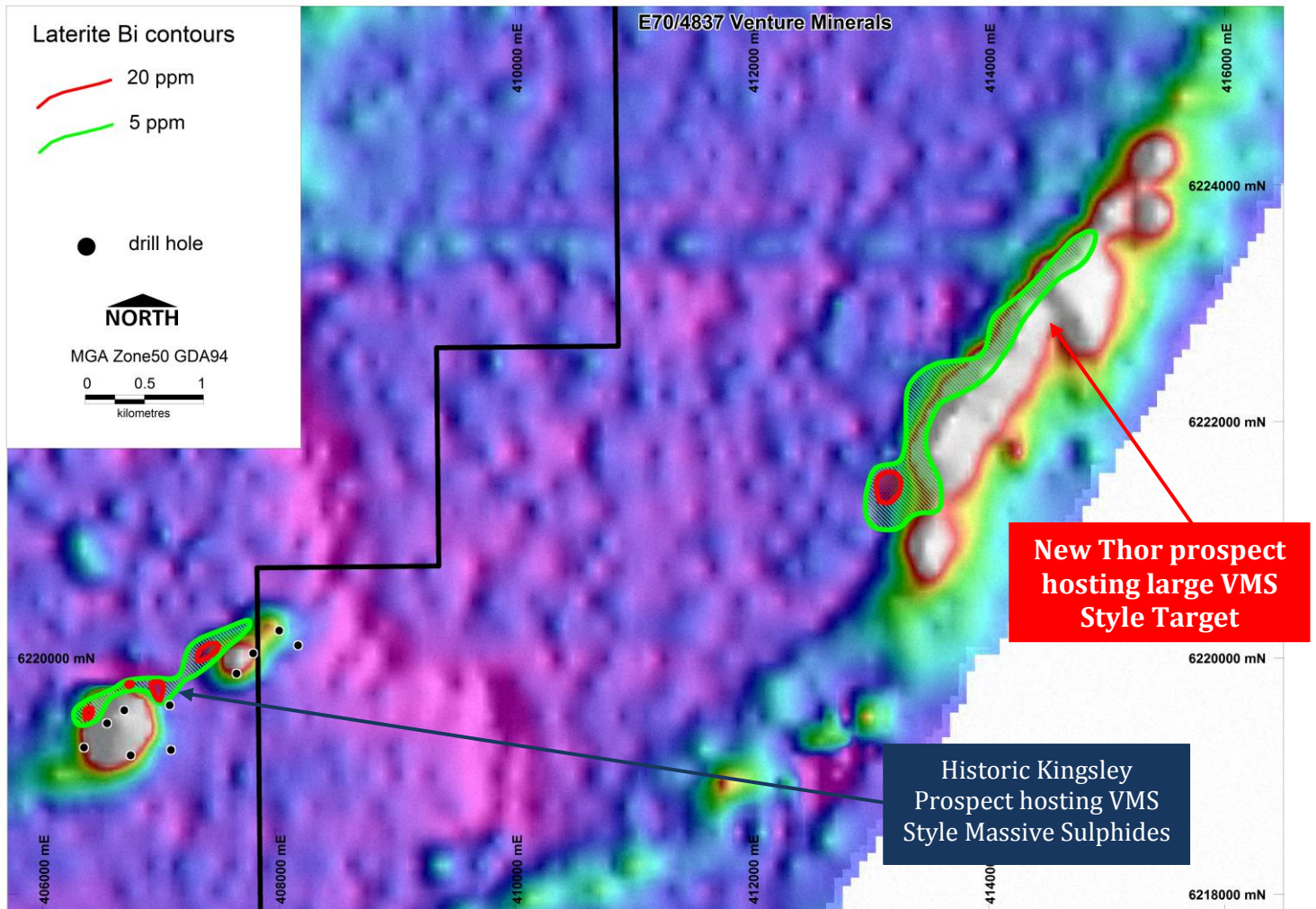
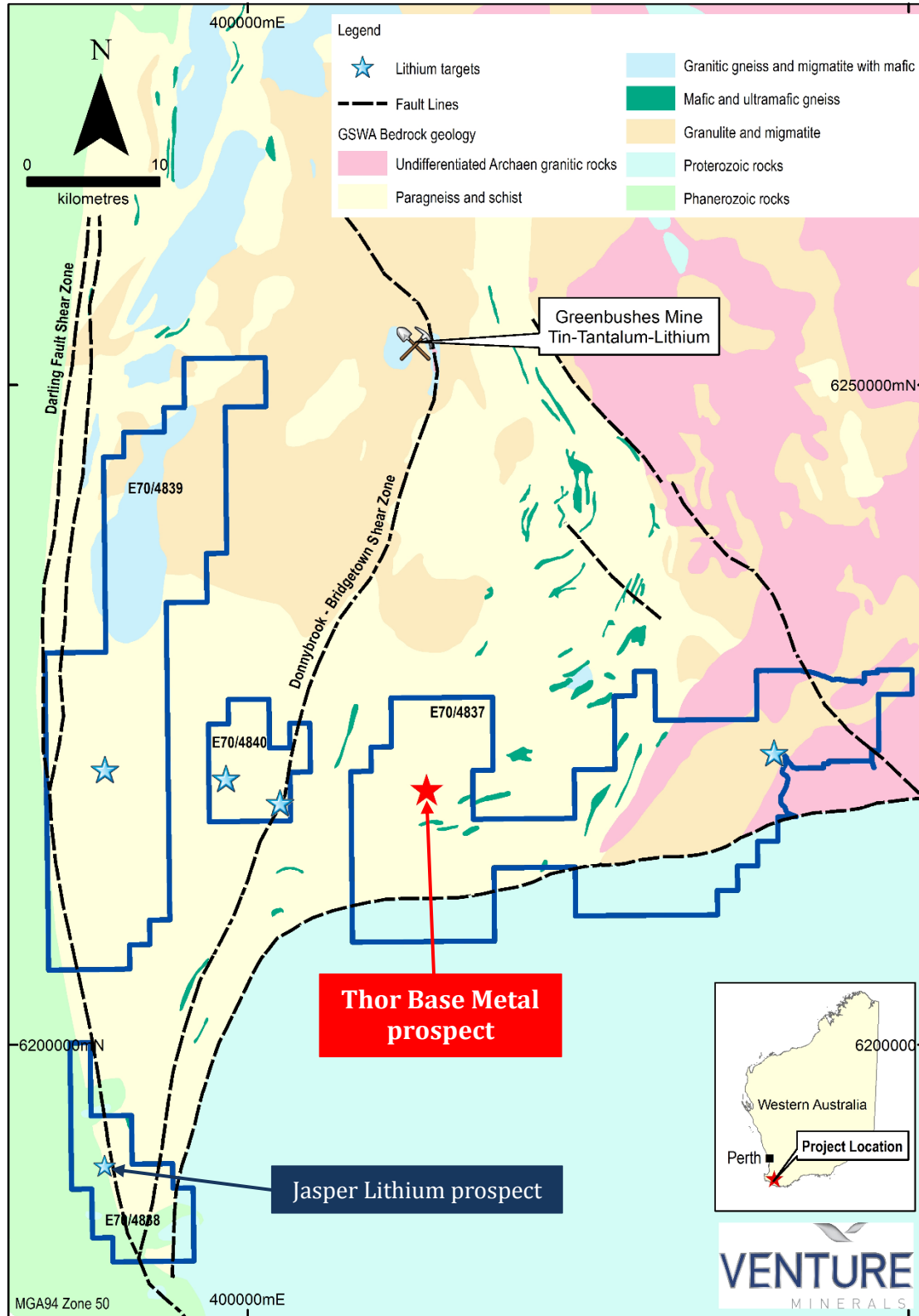




Figure Three | Prospect Location Plan



**Figure Four | Image of Historic Drill Core from Kingsley meta-VMS deposit.**



## Project Overview

The Thor Prospect is located 240km south of Perth hosted within the Balingup Gneiss Complex. A joint venture between Teck Cominco, BHP Billiton and Hampton Hill Mining NL, first identified this area as being prospective for base and precious metals hosted within the complex. The joint venture completed surface sampling and airborne EM surveys which culminated in the discovery of the Kingsley prospect, a base and precious metals deposit, which Teck Cominco identified as a meta-VMS system in high grade metamorphic rocks. Venture's Thor prospect is an EM anomaly and a strong and coherent arsenic in laterite anomaly with discrete tungsten, bismuth and tin anomalies locally elevated levels of copper, zinc and antimony, elements that are typically elevated in VMS systems.

Yours sincerely



**Hamish Halliday**  
**Managing Director**

The information in this report that relates to Exploration Results and Exploration Targets is based on information compiled by Mr Andrew Radonjic, a full time employee of the company and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Andrew Radonjic has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity which he is undertaking 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 Andrew Radonjic consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## Appendix One

### 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
Sampling techniques	<ul style="list-style-type: none"> <li>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.</li> <li>Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report. 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.</li> </ul>	<ul style="list-style-type: none"> <li>The Thor and Kingsley laterite geochemical anomalies shown in the attached figures are based on 66 reconnaissance lag and pisolitic duricrust samples collected by Venture Minerals Limited ("Venture") and 183 lag samples collected by a joint venture between Teck Cominco, BHP Billiton and Hampton Hill Mining ("Teck JV") respectively.</li> <li>Lag and laterite samples were collected by hand from surface and submitted to commercial assay laboratories for preparation and assay.</li> <li>The airborne EM survey referred to in this release was conducted for the Teck JV in 2004 by Geotech Ltd using a helicopter-borne time-domain EM system (VTEM).               <ul style="list-style-type: none"> <li>Line spacing 250 m;</li> <li>Line direction 090-270 degrees UTM 50S WGS84;</li> <li>Tie Line Spacing 6,000 m;</li> <li>Tie Line direction 180-360 degrees UTM 50S WGS84;</li> <li>Sensor Height 55 m;</li> <li>The EM bird was towed 45 m below the helicopter;</li> <li>Recording Rate 10 samples per second;</li> <li>Receiver and transmitter coils were concentric and Z-direction oriented;</li> <li>Transmitter coil diameter was 26 metres, with a total of 4 turns;</li> <li>Receiver coil diameter was 1.1 metres, with a total of 100 turns;</li> <li>Transmitter pulse repetition rate was 25 Hz;</li> <li>Peak Current was 191 A;</li> <li>Duty Cycle was 32%;</li> <li>Peak Dipole Moment was 405630 NIA;</li> <li>Wave Form – Trapezoid;</li> <li>Twenty-six measurement gates were used, ranging from 130 <math>\mu</math>s to 7540 <math>\mu</math>s.</li> </ul> </li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>No drilling at the Thor prospect, not applicable.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling at the Thor prospect, not applicable.</li> </ul>
Logging	<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>The soil samples were qualitatively logged and described by a suitably qualified geologist.</li> </ul>

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<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>• Samples were dried, crushed and pulverised to nominally 80% passing 75 microns at ALS Global, Perth ("ALS") and Genalysis Laboratory Services, Perth ("Genalysis") for assay.</li> <li>• No drilling at the Thor prospect so information regarding drill sampling not applicable.</li> </ul>
Quality of assay data and laboratory tests	<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>• Historic Teck JV samples were assayed by Genalysis for a suite of elements including Cu, Pb, Zn, As, Bi, Sb, Sn and W by industry standard multi-acid digest including HF with MS finish.</li> <li>• Venture's samples were assayed at ALS for a broad suite of elements including Cu, Pb, Zn, As, Bi, Sb, Sn and W by industry standard multi-acid digest with HF and ICP-MS finish, and Sn and W by lithium metaborate fusion with acid digest and ICP-MS finish.</li> <li>• Commercially certified reference materials were included in ALS batches at a minimum rate of one standard per 20 samples. Results for assay reference materials and verification assays are considered to be of acceptable standard.</li> <li>• QC data is not available for the historic Genalysis (Teck JV) assays.</li> </ul>
Verification of sampling and assaying	<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>• The use of twinned holes is not applicable at this stage (no drilling).</li> <li>• Primary data is stored and documented in industry standard ways.</li> <li>• Venture assay data is as reported by ALS and has not been adjusted in any way.</li> <li>• Teck JV assay and VTEM data is as reported to the WA DMP and has not been adjusted in any way by Venture.</li> <li>• Remnant assay pulps for the Venture samples are held in storage by Venture.</li> <li>• Remnant pulps from the Teck JV work are not available to Venture.</li> </ul>
Location of data points	<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>• Sample locations were determined by handheld GPS considered accurate to <math>\pm 10</math> m.</li> <li>• All co-ordinates have been recorded in MGA Zone 50 datum GDA94.</li> <li>• Topographic control is provided by government 1:250,000 topographic map sheets and a Digital Terrain Model based on the 30 m Shuttle Radar Topographic Mission data.</li> </ul>
Data spacing and distribution	<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>• Venture's current sample spacing over Thor comprises irregular reconnaissance along public roads and ranges from 300 to 900 m, and in the broader area of interest (western E70/4837) ranges from c. 4 to 6 km.</li> <li>• Teck JV samples were collected on approx. 50 m spacings along MGA E-W traverses spaced c. 100 – 200 m apart over the Kingsley EM anomaly.</li> <li>• The laterite sampling data is in no way sufficient to establish mineral resources.</li> <li>• Sample compositing has not been applied.</li> <li>• Specifications for the VTEM survey are as recorded above.</li> </ul>



Orientation of data in relation to geological structure	<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 laterite sampling pattern is of appropriate orientation to cover the observed geochemical anomalism at this reconnaissance stage.</li> <li>The VTEM flight line orientation is at an appropriate high angle to the strike of the Thor and Kingsley prospects.</li> <li>No drilling at the Thor prospect, not applicable.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>The chain of custody for all Venture samples from collection to dispatch to assay laboratory is managed by Venture personnel. The level of security is considered appropriate for such reconnaissance sampling.</li> <li>Sample numbers for both Venture and Teck JV samples are unique and do not include any locational information.</li> </ul>
Audits or reviews	<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>The assay results agree well with the observed lateritic materials.</li> <li>No further reviews have been carried out at this reconnaissance stage.</li> <li>Further surface sampling to verify these reconnaissance results is proposed.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	<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>The Thor exploration target is located within granted Exploration Licence 70/4837. The historic Kingsley Prospect straddles the western boundary of E70/4837. E70/4837 is 100% held by Venture Lithium Pty Ltd, a wholly owned subsidiary of Venture Minerals Limited.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>A total of 66 laterite samples were collected by Venture at Thor to follow up regional geochemical anomalism recognised from historic Pancontinental Mining NL ("Pancontinental") laterite assay data.</li> <li>Previous regional laterite sampling by Pancontinental is consistent with the more detailed reconnaissance sampling conducted by Venture.</li> <li>Diamond core drilling by the Teck JV during the 2000-2011 period identified the presence of VMS type base metal mineralisation at the Kingsley Prospect approx. 5 to 6 km west of the Thor geochemical anomaly. While grades and thicknesses encountered by the Teck JV are not considered currently economic the drilling importantly shows the presence of VMS-type base metal mineralisation within high grade metamorphic rocks in the western part of E70/4837.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The exploration area is within the Balingup Metamorphic Belt which is considered prospective for pegmatite hosted lithium, tin and tantalum-niobium deposits including the world class Greenbushes tin-tantalum-lithium mine, and as the work of the Teck JV shows also prospective for metamorphosed VMS deposits.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>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:               <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar;</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar;</li> <li>dip and azimuth of the hole;</li> <li>down hole length and interception depth;</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling at the Thor prospect, not applicable.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling at the Thor prospect, not applicable.</li> </ul>

Criteria	Explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul style="list-style-type: none"> <li>No drilling at the Thor prospect, not applicable.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>An appropriate exploration plan is included in the body of this release.</li> <li>No drilling at the Thor prospect, drill plans and sections are not applicable.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Of the total 249 lag and laterite samples some 31 % assayed &gt;3 ppm W, 15 % assayed &gt;5 ppm W, 4 % assayed &gt;10 ppm W and 2 % assayed &gt;20 ppm W, with a maximum 56 ppm W. Some 14 % of samples assayed &gt;5 ppm Bi and 4 % assayed &gt;20 ppm Bi with a maximum 90 ppm Bi. Associated spot maxima Cu 394 ppm, Pb 156 ppm, Zn 505 ppm, As 1840 ppm, Sn 96 ppm, and Sb 21 ppm.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate reconnaissance exploration plans are included in the body of this release.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Venture proposes to conduct further prospecting and geochemical sampling to refine the targets before considering geophysical surveys and drilling.</li> <li>An appropriate exploration target plan is included in the body of this release.</li> </ul>