

ASX ANNOUNCEMENT

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Steve Formica

Jerome G (Gino) Vitale

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**Company Secretary:**

David Palumbo

**Capital Structure:**

Ordinary Shares: 117,409,428

Unlisted Options: 32,500,000



ASX Code: **QNL**

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**29 June 2017**

**Victory Bore Project – JORC 2012 Vanadium-Titanium-Iron  
Mineral Resource Statement**

**HIGHLIGHTS:**

- *Inferred Vanadium-Titanium-Iron Mineral Resource of 151 million tonnes at 0.44% V<sub>2</sub>O<sub>5</sub>, 6.73% TiO<sub>2</sub> and 25% Fe*
- *Partner to be sought by QNL to evaluate the potential to produce high grade vanadium and titanium concentrates as well as beneficiated iron product from magnetite mineralisation*

**Quest Minerals Limited (QNL or Company) (ASX: QNL)** is pleased to announce that as part of the Company's review of all exploration activity previously conducted within the present tenement boundary at the Victory Bore project area, the following Mineral Resource estimate has been provided by independent geological consultants CSA Global Pty Ltd (CSA) in accordance with JORC Code 2012, including the information required by Table 1 (refer Appendix below).

**Table 1: Inferred Mineral Resource, Victory Bore**

Tonnes (Mt)	Fe (%)	V <sub>2</sub> O <sub>5</sub> (%)	TiO <sub>2</sub> (%)	P (%)	SiO <sub>2</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)	LOI (%)
151	25.0	0.44	6.73	0.013	28.6	14.8	0.56

*Note: the Mineral Resource was estimated within constraining wireframe solids based on a nominal lower cut-off grade of 20% Fe. The Resource is quoted from blocks above a specified Fe % cut-off grade of 20% Fe.*

This Mineral Resource estimate was first announced by the Company on 4 March 2011 based on JORC 2004 reporting guidelines based on drilling conducted primarily in 2010.

**Regional Geology and Geological Interpretation**

Victory Bore is located within the western margin of the Barlee Terrane, within the Southern Cross Province of the Archean Yilgarn Craton of Western Australia. The Southern Cross Province is characterised by arcuate, north-south trending greenstone belts surrounded and intruded extensively by granitoids. 3.3 km of a total 9.2km strike length. Archaean lithologies within the Youanmi Greenstone Belt include gneisses, tholeiitic basalts, ultramafic volcanics/intrusives, banded iron formations, intercalated banded iron formations, layered mafic intrusive complexes and granitoids. Proterozoic dolerite dykes cross cut the above mentioned lithologies.

**Figure 1: Victory Bore Regional Location Map**

The structure of the region is dominated by the Youanmi-Youanmery regional scale fault. Both of these faults have undergone substantial periods of activity and have resulted in the extensively offset stratigraphy approximated as being 15km dislocation. The Youanmi fault extends long a strike length of 650km and is interpreted to be a north-south orientated compressive fault with localised east to west compression.

The Victory Bore Fe-V-Ti deposit is contained within the metamorphosed Atley Igneous Complex, containing layered gabbros with magnetite-rich layers. The layered gabbro at the project strikes  $020^{\circ}$  and dips  $80^{\circ}$  to the west. The gabbro contains several magmatically separated layers of titaniferous-magnetite, with the contacts of the magnetite layers with the host gabbro commonly appearing to be gradational. The magnetite layers attain true widths of up to 25m. The fresh gabbro contains variable amounts of disseminated sulphides, including pyrite, chalcopyrite and pyrrhotite. The sulphide content increases with increasing amounts of magnetite. Vanadium also occurs with the magnetite-sulphide mineralisation.

The Project is located in the Mid-West Region of Western Australia, 560km north-east of Perth and 120km south-east of Mt Magnet. Access to the Project is via the sealed Paynes Find-Sandstone Road thence via station tracks. The Windamurra Ti-V-Fe project, presently on care and maintenance, and where a gas pipeline has its terminus is located approx. 35km to the west.

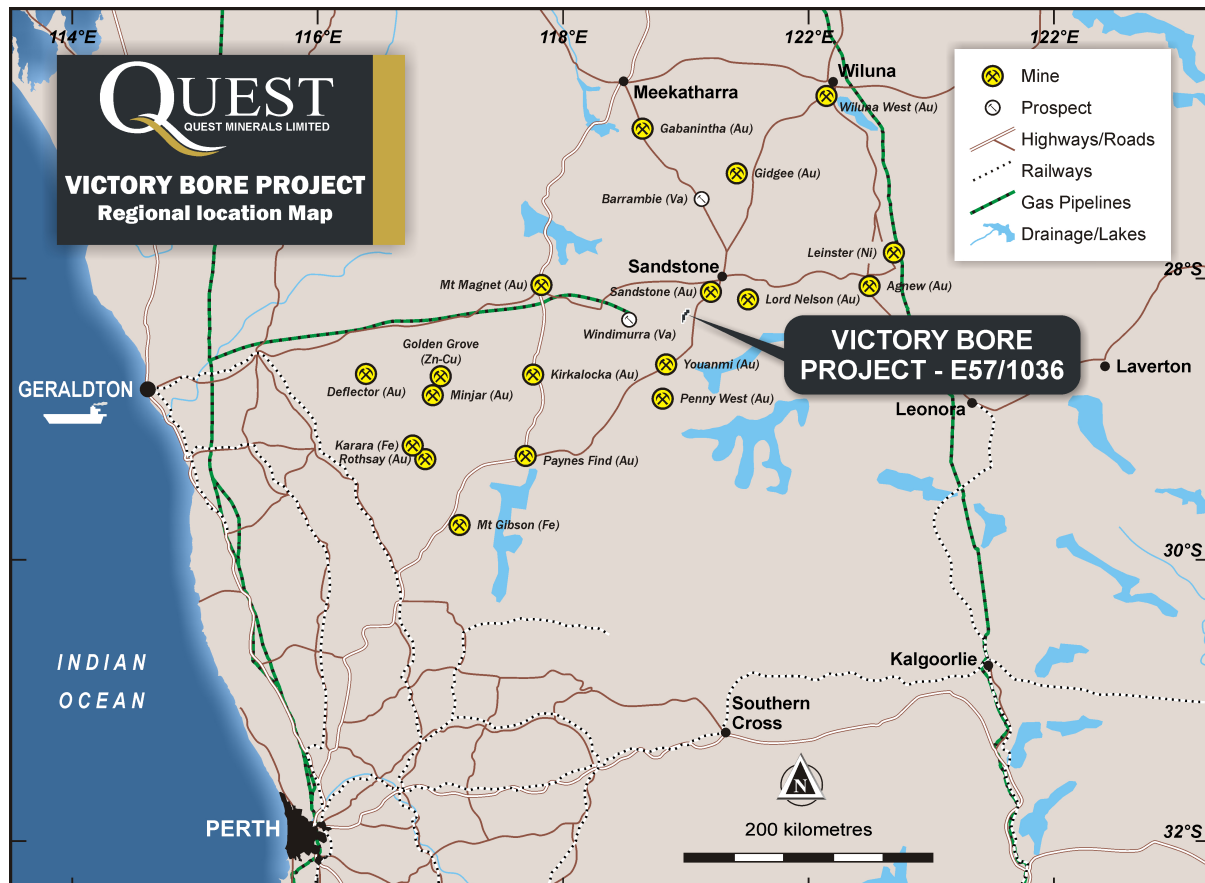
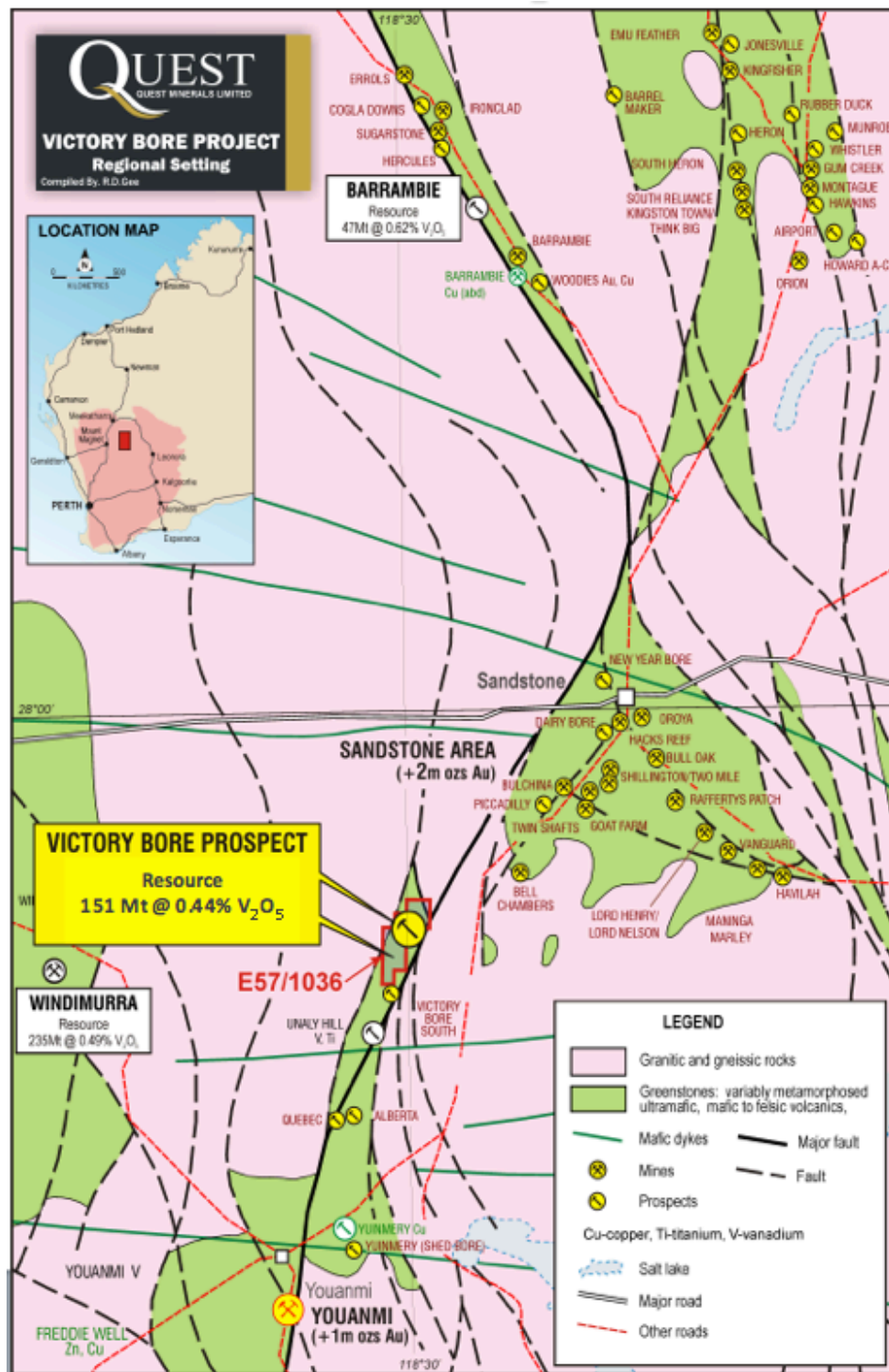
**Figure 2: Victory Bore Regional Location and Infrastructure**

Figure 3: Victory Bore Regional Geological Setting &amp; Mineralisation



### Tenure

The Victory Bore Exploration Licence E57/1036 was granted to Quest's wholly owned subsidiary Acacia Mining Pty Ltd on the 1st of July 2016 for an initial period of 5 years and covers a total land area of 39.33km<sup>2</sup>. The minimum expenditure requirement inclusive of up to 20% administration expenses is \$20,000.

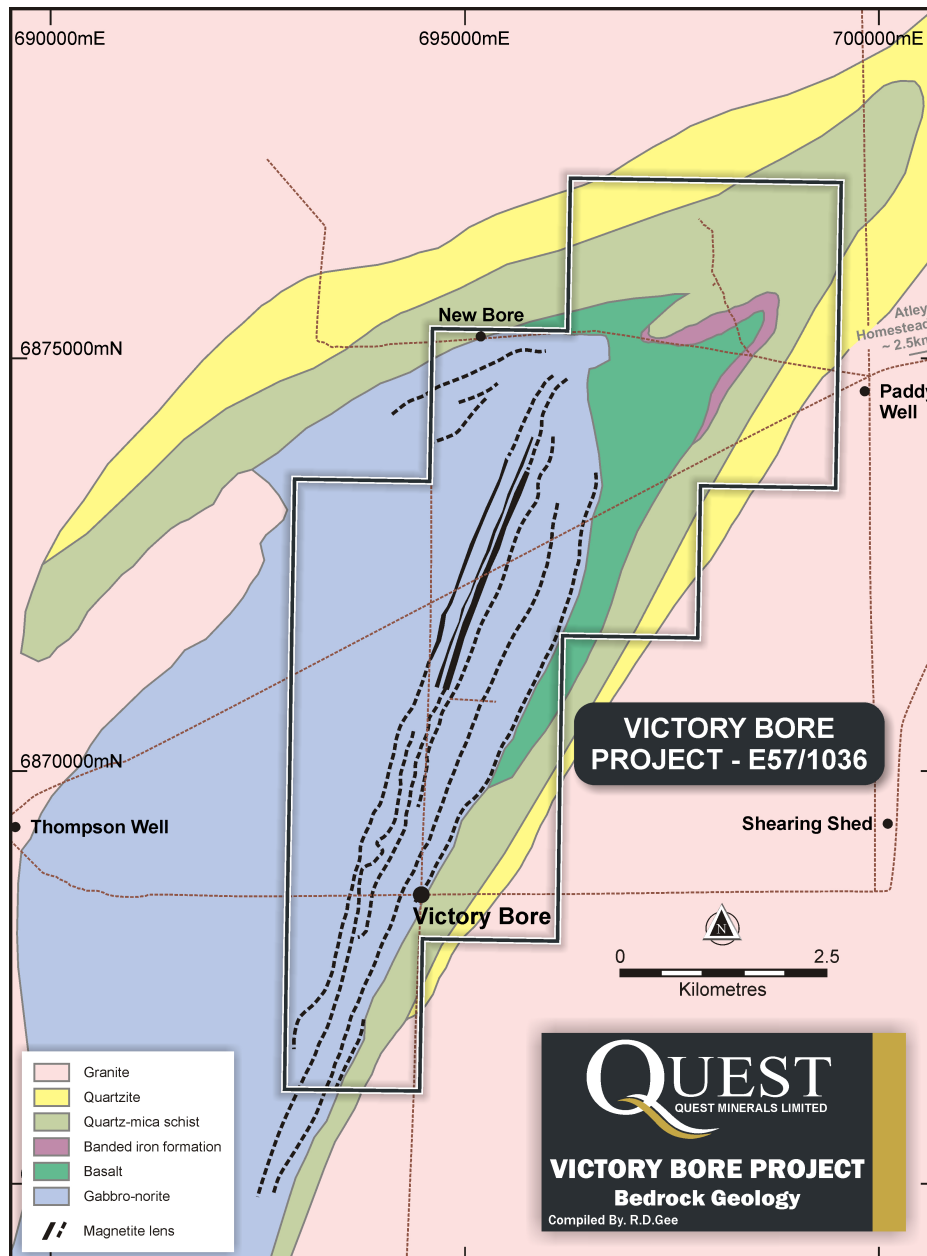
### Drilling Techniques

The deposit was drilled using Reverse Circulation (RC) and diamond core drilling methods. RC drilling used a face sampling hammer bit. The rig was truck mounted, with an auxiliary booster compressor mounted on another truck. Diamond drilling used a truck mounted rig with HQ diameter core tube. The core was not orientated.

### Sampling and Sub-Sampling Techniques

RC chips were sampled at 1 m intervals from a rig mounted cyclone, with samples split and collected in a large 20 kg green plastic bag, and into a smaller calico bag. The geologist took a sample from the larger bag for geological analysis and logging. Diamond core was transported to the project's sample yard, where it was geologically logged, photographed (wet and dry) and core cut in half by a diamond saw, with half core retained and half for sample analyses. Core was cut to geological intervals, with minimum 0.3 m and maximum 1.5 m lengths, otherwise sampled to 1 m lengths when outside zone of mineralisation.

**Figure 4: Victory Bore – Bedrock Geology**



The geological interpretation is based on 21 RC holes totalling 3,130 metres and 2 diamond core holes for 479 metres which defined the strike extent and width of the mineralisation. The mineral resource covers 3.3 km of a total 9.2km strike length.

### Sample Analysis Method

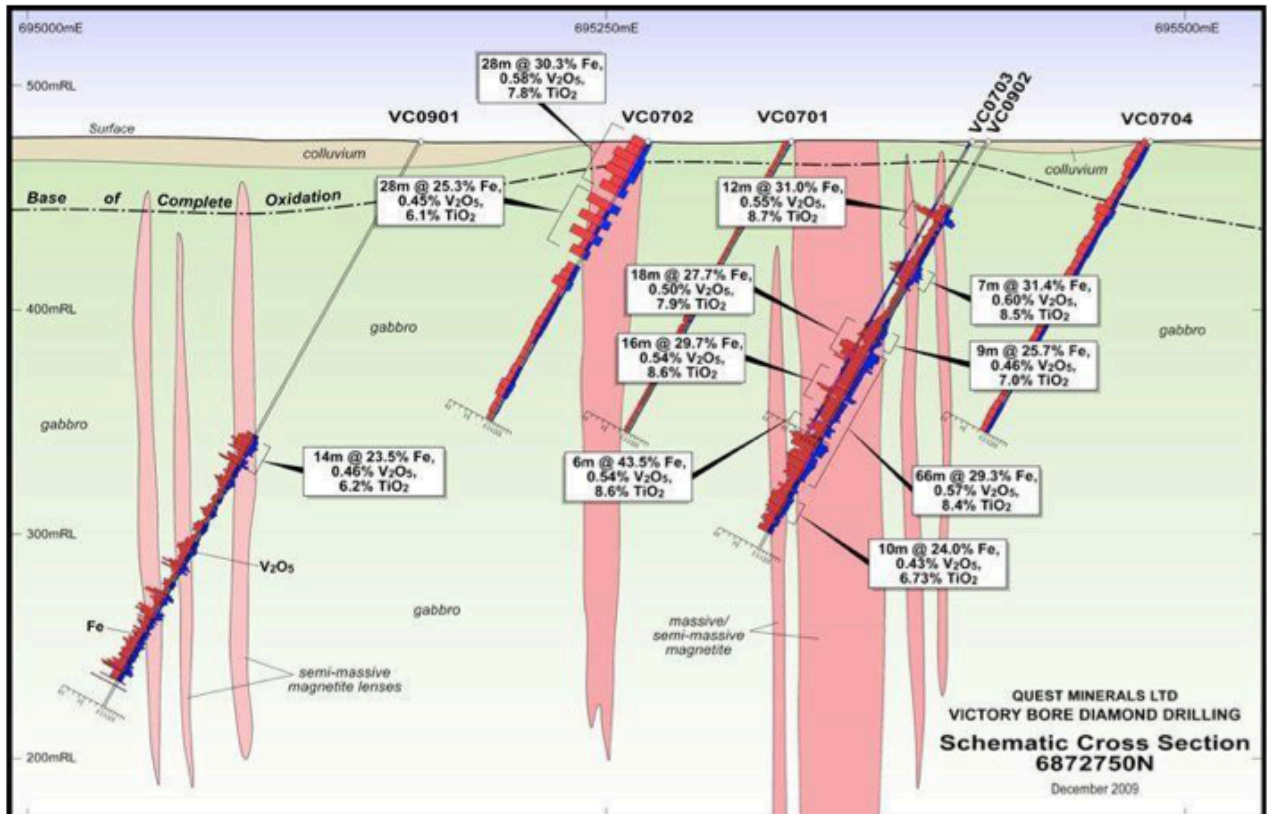
Samples were securely delivered to ALS Chemex Laboratories in Perth, where they were crushed to 3 mm fraction, then pulverized to 105  $\mu\text{m}$  (p95). A portion of the pulp fraction was pressed into a pellet and analysed using the fused disc x-ray fluorescence (XRF) technique. The laboratory collected splits of the sub samples at the crushing and pulverizing stages, with the splits stored for future reference. The pulp splits were sourced for laboratory duplicate XRF analyses.

### Estimation Methodology

Grades for Fe, P,  $\text{SiO}_2$ ,  $\text{Al}_2\text{O}_3$ , LOI,  $\text{V}_2\text{O}_5$  and  $\text{TiO}_2$  were interpolated using ordinary kriging (OK) techniques from the majority 1 m length RC drill samples. Statistical analyses for all these grade variables were carried out, including variography. Only samples contained within the mineralisation lenses were used for grade interpolation and no top cuts were used. Estimated block grades were validated by means of swath plots, comparison of block model and sample mean grades, and visual review of the block model against drill hole assay grades.

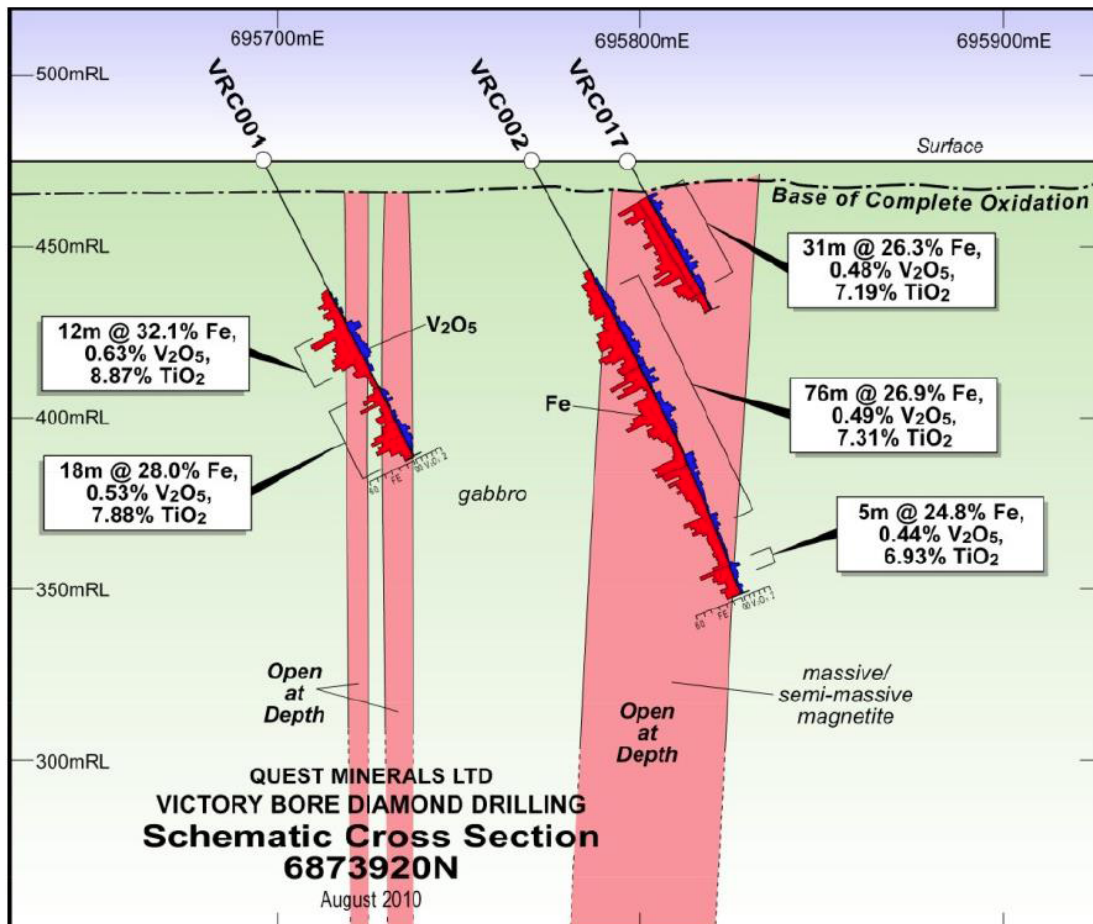


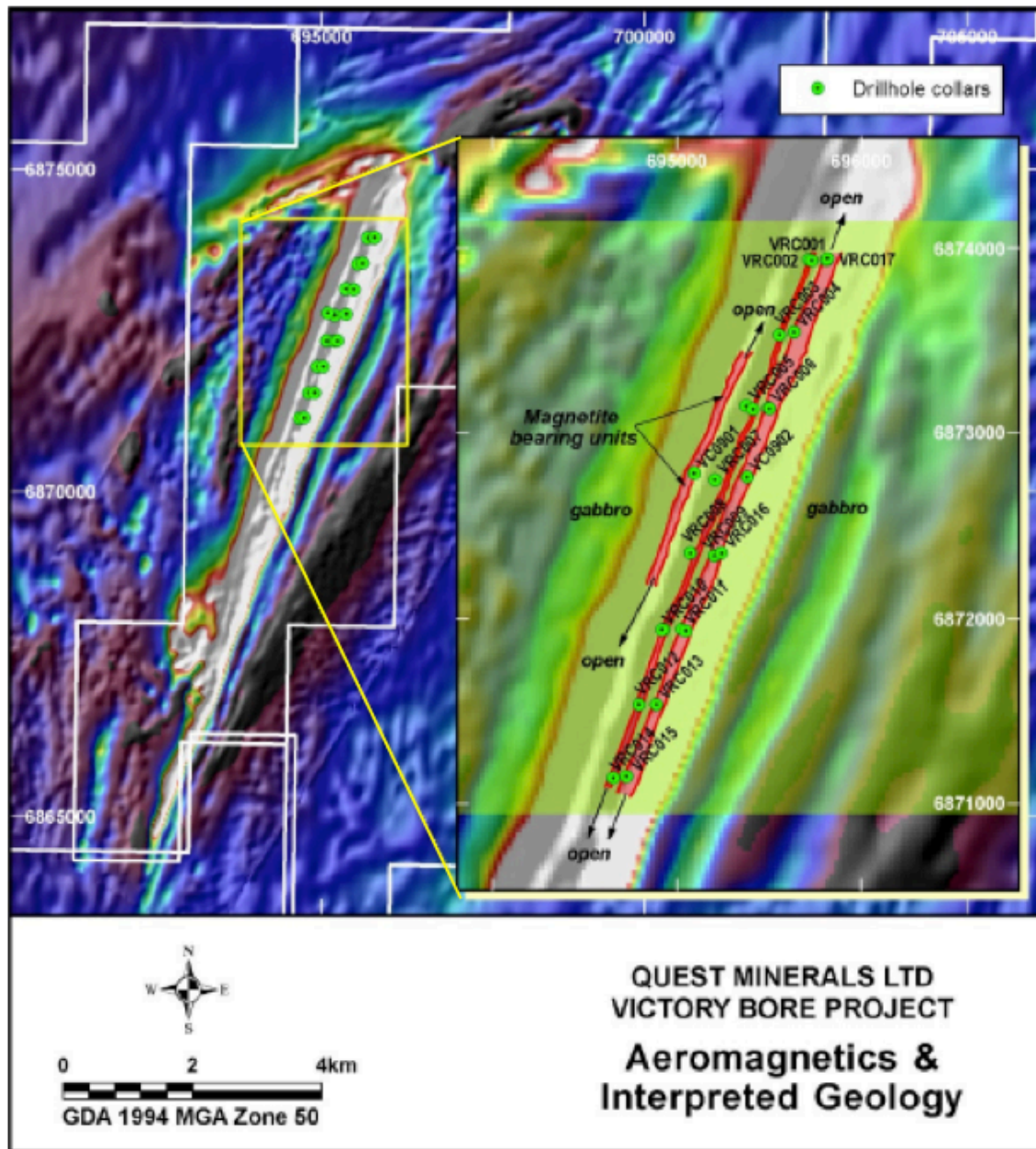
Figure 5: Schematic Cross Section from 2009 Diamond Drilling



A 'base of complete oxidation' (BOCO) surface was modelled based upon geological drill logs, and the sulphur assays.  
 "VC" = diamond core hole

Figure 6: Schematic Cross Section from 2010 Diamond Drilling ("VRC" = RC hole)



**Figure 7: Aeromagnetics and Interpreted Geology**

Results from an aeromagnetic survey (refer QNL ASX announcement 4 March 2011) indicate magnetic trends, probably representing magnetite layers. The interpretation used a nominal cut-off grade of 20% Fe and a maximum internal waste intercept of 3 m. Nine mineralised lenses were interpreted, ranging from 2 m to 45 m in horizontal thickness, with the six main lenses (in terms of volume) totalling to about 75 m thick. The lenses were interpreted to 275 m below surface, down to approximately 200 m RL. The strike length of the interpreted zone of mineralisation is 4,400 metres.

#### Classification of Mineral Resource

The Mineral Resource is classified as Inferred. The geological evidence is considered sufficient to imply but not verify geological and grade continuity. The geological logs from the 21 RC and 2 diamond holes provide sufficient geological information to support the classification level. Models from earlier aeromagnetic surveys support the geological interpretation and hence the classification. Bulk density samples were not taken, and Quality Control protocols for the drill samples and sample analyses were not implemented by the Company at the time of drilling. A review of the Quality Control results from the analytical laboratory's internal procedures

indicate precision and accuracy of the sample assays and sub-sampling within the laboratory, and these results support the current classification level.

### **Cut-off Grade**

The geological interpretation supporting the Mineral Resource estimate used a lower cut of 20% Fe to define the mineralisation envelopes, and was determined from analysis of Fe log probability plots. The Mineral Resource is reported from blocks in the Mineral Resource model where blocks are >20% Fe. Approximately 90% of the total tonnage within the Mineral Resource model has been reported.

### **Mining and Metallurgy**

It is assumed any future mining will use conventional open cut mining methods. An open pit mining study undertaken in 2012 suggested that an open cut mine producing only vanadium would not be economic using the economic assumptions made at the time of the study. No mining studies have been carried out focusing on the economic viability of the deposit producing iron from magnetite mineralisation.

Preliminary metallurgical assessment conducted in 2011 by Quest included Initial Davis Tube Recovery (DTR) test work (refer QNL ASX Quarterly Report 31 December 2011 released 31 January 2012). This confirmed favourable metallurgy with mineralisation having excellent beneficiation characteristics amenable to producing a high grade ferrovanadium concentrate on site using standard metallurgical processes and grade in concentrate achieved of 1.32% V<sub>2</sub>O<sub>5</sub> (Vanadium Pentoxide), Fe 59% and 10.83% TiO<sub>2</sub>. These results are considered encouraging in terms of the processing potential of the vanadium, suggesting the mineralisation is amenable to processing via beneficiation by conventional magnetic separation and sodium salt roast and water leach. Magnetic separation testwork achieved 93.7% recovery of the vanadium suggesting good recovery should be possible at a larger scale. The average leach recovery of the vanadium was 89.2%.

### **Nature of the Ti-V-magnetite lenses**

Altogether there are six magnetite lenses in the Atley Intrusion on the Victory Bore Project. These can conveniently be numbered 1 to 6 from west to east – number 6 being at the top of the intrusion.

Only lenses 1-3 have been drilled by Quest and therefore only these three have been included in the Mineral Resource estimate. Despite the fact that Quest has defined a vanadium Mineral Resource on the three magnetite lenses and commissioned several preliminary scoping studies in 2011 and 2012, very little is known about the mineralogical, metallurgical and geotechnical features of the magnetite lenses. To progress the project more geological input into further scoping and pre-feasibility studies is required. This work would include:

- SEM examination to ascertain the nature and distribution of both V and Ti within the magnetite
- the tenor of the upper three magnetite lenses that have not been drilled
- geotechnical tests such as crushing index and grinding index (BWI)

As an initial programme to advance the project, the Quest considers that at least one, and preferably two, PQ (83mm) cored holes with appropriate pre-collars need to be drilled to provide material for metallurgical testwork, a mineralogy study and geotechnical assessment.

### **Future Project Development**

The use of an alternative hydrometallurgical process flow sheet similar to that adopted by TNG Limited at its Mount Peake project in the Northern Territory has not been investigated at Victory Bore. Such alternatives involving the innovative configuration of well established technologies could have a material and favourable impact on project economics. Benefits could include reduced capital costs and additional income streams such as a separate concentrate as a feedstock for titanium pigment production (used in paints, coatings, plastics, photo-electrode, pigment, paper, cosmetics), or beneficiated titaniferous magnetite, and high purity vanadium for production of electrolyte for use in Vanadium Redox batteries. No testwork has been carried out to date and no consideration given in previous scoping studies focusing on these potential product streams.



Quest considers that the size, grade, location of the Victory Bore Vanadium-Titanium-Iron deposit, coupled with the recent tightening of supply and strengthening of prices for vanadium and titanium feedstock in particular, warrant additional future investment in the project. Activities to add value would include a comprehensive metallurgical review including all data generated in previous test work and scoping studies completed in 2011 and 2012 with a view to identifying alternative product and processing strategies. Mineralogical analyses should be included to determine the suitability of alternative hydrometallurgical process flow sheets to the style of mineralisation exhibited at Victory Bore. This will initially require additional diamond drilling to provide drill-core material and geotechnical data for pit design and revised mining parameters, optimisation of grind size v recovery, as well as detailed geological data. Due to limited funding availability the Company will be actively seeking a joint venture partner to fund this work and future development of the project.

**Gino Vitale**  
**Director**

### **Competent Persons Statement**

The information that relates to Mineral Resources is based on and fairly represents information compiled by **Mr David Williams**, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Williams is employed by CSA Global Pty Ltd, an independent consulting company. Mr Williams has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity 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 Williams consents to the inclusion of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to the historical Exploration Results is based on and fairly represents information compiled by **Dr Dennis Gee**, who is a Member of the Australian Institute of Geoscientists (AIG) and a consultant to Quest Minerals Ltd. Dr Gee has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Dr Gee consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

### **Disclaimer**

Forward-looking statements are statements that are not historical facts. Words such as "expect(s)", "feel(s)", "believe(s)", "will", "may", "anticipate(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: (i) those relating to the interpretation of drill results, the geology, grade and continuity of mineral deposits and conclusions of economic evaluations, (ii) risks relating to possible variations in reserves, grade, planned mining dilution and ore loss, or recovery rates and changes in project parameters as plans continue to be refined, (iii) the potential for delays in exploration or development activities or the completion of feasibility studies, (iv) risks related to commodity price and foreign exchange rate fluctuations, (v) risks related to failure to obtain adequate financing on a timely basis and on acceptable terms or delays in obtaining governmental approvals or in the completion of development or construction activities, and (vi) other risks and uncertainties related to



the Company's prospects, properties and business strategy. Our audience is cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

**Attached:**

***Appendix 1 - JORC Code, 2012 Edition – Table 1***

## APPENDIX 1

### JORC Code, 2012 Edition – Table 1

#### 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)</i></li> </ul>	<ul style="list-style-type: none"> <li>Drilling at Victory Bore was by way of reverse circulation (RC) and diamond core methods. Sampling of RC holes was guided by Quest Minerals’ procedures as valid at the time of preparation of the Mineral Resource estimate in 2011.</li> <li>Drill holes targeted gabbroic host rock, with targets initially determined by geophysics (aeromagnetic anomalies). Drill samples penetrated mineralisation and care was taken to ensure maximum sample recovery as the drilling and ground conditions would allow.</li> <li>RC chips were sampled at 1 m intervals from a rig mounted cyclone, with samples split and collected in a large 20 kg green plastic bag, and into a smaller calico bag. The geologist took a sample from the larger bag from geological analysis and logging.</li> <li>Diamond core were geotechnically logged (rock quality designation, core recovery) at the project’s sample yard, photographed (wet and dry), and the core cut in half by a diamond saw, with half core retained and half for sample analyses. Core was cut to geological intervals, with minimum 0.3 m and maximum 1.5 m lengths. Otherwise sampled to 1 m lengths when outside zone of mineralisation.</li> <li>RC and diamond core samples were ticketed with a unique sample number, then dispatched to ALS Global (Perth) laboratory for sample analyses.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>may warrant disclosure of detailed information.</i>	
<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>• RC drilling used a face sampling hammer bit. The rig was truck mounted, with an auxiliary booster compressor mounted on another truck. Diamond drilling used a truck mounted rig with HQ diameter core tube. The core was not orientated.</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>• The project geologist recorded the sample recovery for each RC sample whilst logging the samples, however no assessment of data has been made to date. Core recoveries were calculated during geotechnical logging and core markup prior to geological logging of the core.</li> <li>• Care was taken during RC drilling when aquifers were encountered, to attempt to minimize water egress. This did not prove to be successful, even with a booster compressor, and some wet samples were recovered.</li> <li>• Sample recovery records were not provided to the Competent Person and a relationship between recovery and sample grades could not be determined.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• RC and diamond core samples were geologically logged to a level of detail sufficient to support geological modelling and the eventual Mineral Resource classification. Mineralisation domains and a weathering profile were modelled based upon the geological logs. The Competent Person considers the quality of the geological models sufficient to support targeting drill holes designed to provide samples for metallurgical testwork.</li> <li>• Geological logging is mostly qualitative in nature (lithological logs). Diamond drill core was photographed in both wet or dry state.</li> <li>• All RC chips were logged on a meterage basis. Diamond core were logged on a geological basis.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond core was cut with a diamond saw, with half core submitted for sample analyses.</li> <li>• RC chips were split by cyclone at the drill rig. Wet samples were occasionally recovered from the drill hole, and attempts were made to maximize sample recovery, although records for this were not made available to the Competent Person.</li> <li>• Samples were securely delivered to the analytical laboratory where they were crushed to 3 mm fraction, then pulverized to 105 µm (p95). The sample preparation is considered appropriate for the mineralisation investigated.</li> <li>• The laboratory collected splits of the sub samples at the crushing and pulverizing stages, with</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><i>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.</i></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p>the splits stored. The pulp splits were sourced for laboratory duplicate XRF analyses.</p> <ul style="list-style-type: none"> <li>Early stage Davis Tube Recovery testwork has been completed but is of insufficient quantity to allow the concentrate grades to be interpolated into the Mineral Resource model.</li> <li>Quality control procedures were not adopted for the RC and diamond drill programmes, with respect to use of certified reference materials (CRM) and/or field duplicates. The analytical laboratory (ALS Chemex) used their own internal quality control procedures, monitoring CRMs, blanks and lab duplicates. Results were reviewed by the Competent Person and the assays were generally noted to be within expected limits, with some exceptions. The Competent Person is satisfied that the quality control assay results support the Inferred classification level for the Mineral Resource estimate.</li> <li>Sample sizes are considered appropriate for the grain size of the material being sampled.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The analytical laboratory prepared the samples by crushing to 3mm fraction, then pulverized to 105 µm (p95). A portion of the pulp fraction was pressed into a pellet and analysed by XRF. The laboratories are accredited to industry standards, and the sample preparation stages are industry standard. The sample preparation is considered appropriate for the mineralisation investigated. The analytical technique is considered total.</li> <li>The analytical laboratory implemented their internal quality control procedures monitoring CRMs, blanks and laboratory duplicates. Results were reviewed by the Competent Person and the assays were generally noted to be within expected limits, with some exceptions. Acceptable levels of accuracy and precision have been established for the results.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Significant intersections of mineralisation were verified by a Quest Director, and by the contract consultant geologist supervising the drill programme.</li> <li>One pair of twin holes was drilled and evaluated, VC0902 (diamond) and VC0703 (RC), with collars separated by 8 m. The drill traces exhibit similar assays and geological logs, after taking into account downhole offset due to the steeply dipping nature of the host lithology.</li> <li>Primary drill holes data is stored in MS Excel spreadsheets. Data was validated by a company geologist and stored securely on the company's servers in their head office.</li> <li>The analyses for V were multiplied by 1.7852 to derive V<sub>2</sub>O<sub>5</sub>, used in the Mineral Resource estimate. No other adjustments were made to the data upon receipt from the assay laboratory.</li> </ul>
<b>Location of</b>	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill hole collars were surveyed using a handheld GPS. Eastings and northing coordinates are considered accurate. An elevation was assigned to each collar, with each set at 475 mRL. The</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>data points</b>	<p>surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</p> <ul style="list-style-type: none"> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<p>local topography is very flat which supports the assigned RL. Down hole surveys were taken at 30 m down hole intervals for most holes.</p> <ul style="list-style-type: none"> <li>• All coordinates are in Geocentric Datum of Australia (GDA94, 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>• Holes were drilled orthogonal to interpreted strike of mineralisation, with drill lines spaced approximately 400 m. Along the drill lines, holes are spaced at approximately 80 m intervals.</li> <li>• The Competent Person believes the data spacing and distribution is sufficient to imply geological and grade continuity, and to classify the Mineral Resource as Inferred.</li> <li>• Sample compositing to 4 m was used where the drill samples were deemed to be in waste rock. The drill samples deemed to be within potential mineralisation were not composited.</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 drill holes were drilled orthogonal to the interpreted strike of the host lithology, which in turn was interpreted from geophysical surveys, mainly aeromagnetic. It was not possible to drill orthogonal to the interpreted dip of the mineralisation due to the steep dip of the host lithology, and a minor bias is sampling was anticipated and not considered to be of a material nature to the sampling. Most holes were drilled towards east-southeast and any sampling bias was managed.</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>• Drill samples were transported by company personnel from the drill rig to the company's secure drill and sample compound in Sandstone. The samples were then transported by courier to ALS Chemex Laboratories in Perth.</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 reviews of sampling techniques, data management or resultant data has occurred to date, beyond the reviews undertaken by the Resource Geologist who prepared the Mineral Resource estimate, and the Competent Person.</li> </ul>

## ▪ **Section 2 Reporting of Exploration Results**

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

Criteria	JORC Code explanation	Commentary
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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>The Project is located within tenement E57/1036, held by wholly owned Quest subsidiary Acacia Mining Pty Ltd. Acacia was awarded the Exploration Licence on 1<sup>st</sup> July 2016. The licence covers an area of 39 km<sup>2</sup> on 13 blocks, near the town of Sandstone, 560 km north east of Perth.</li> <li>The licence expires on 30<sup>th</sup> June 2021. Rental payments of \$1,587 have been paid in full.</li> <li>There are no known impediments to obtaining a licence to operate in the area.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The tenement is prospective for gold mineralisation, with historical mining documented. For Fe and V, there have been several phases of exploration since 1981. The potential of the area to host an iron deposit was first indicated from aeromagnetic surveys, to be later confirmed by detailed ground magnetics and diamond drilling.</li> <li>Aeromagnetic surveys were flown soon after Quest's acquisition of the Project, on 100 m line spacings with a major anomaly associated with the regional scale Youanmi Fault, extending in a southwest-northeast direction for more than 22 km, including 11 km through the western half of the Victory Bore licence. Magnetic trends within this anomaly probably represent magnetite layers in the basal part of the Atley layered gabbro.</li> <li>Modelling of the aeromagnetic data by Southern Geoscience Consultants (SGC) shows the northern 4 km of the magnetic anomaly is relatively undisturbed by faulting with the magnetic signature being relatively constant over the entire 4 km. The southern 6 km of the magnetic metagabbro unit is interpreted to be more structurally complicated than the northern section. The southern area appears to be thicker than the northern section, possibly because of structural repetition. The magnetic response in this area is less continuous along strike which suggests less continuous magnetite units are present. The lack of continuity is most likely due to magnetite destruction associated with deep weathering or alteration associated with faulting. This area is still highly prospective for magnetite mineralisation but continuity in this area is not assured and requires additional drilling to assess the tenor and continuity.</li> </ul>
<b>Geology</b>	<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 Victory Bore Fe – V deposit is contained within the metamorphosed Atley Igneous Complex, containing layered gabbros and anorthosite, with magnetite and pyroxenitic layers. The Atley Igneous Complex is located within the Murchison Domain of the Yilgarn Craton, and</li> </ul>

Criteria	JORC Code explanation	Commentary																																																																																																																
		<p>has been dated at 2780 Ma.</p> <ul style="list-style-type: none"><li>• The layered gabbro at the project strikes 020° and dips 80° to the west. The gabbro is greenish grey, coarse grained and comprises pyroxene, olivine?, plagioclase feldspar and hornblende. The gabbro contains several magmatically separated layers of titaniferous-magnetite, with the contacts of the magnetite layers with the host gabbro commonly appearing to be gradational. The magnetite layers attain true widths of up to 25 m.</li><li>• The fresh gabbro also contains variable amounts of disseminated sulphides, which include pyrite, chalcopyrite and pyrrhotite. The sample analyses demonstrate an average grade of 0.3% S for all samples (Northing &gt; 6870500 mN), to a maximum of 3.8%, and mean grade of 0.4% within the zones of mineralisation. The sulphide content increases with increasing amounts of magnetite. Vanadium also occurs with the magnetite-sulphide mineralization.</li><li>• Basaltic mega-xenoliths have been intersected in drill holes within the gabbro in holes VRC002, VRC006 and VRC013. Along strike, the distribution of the xenoliths appears to be cyclical, appearing every 800 m. Immediately below the xenoliths, the drill holes intersected the most strongly mineralized magnetite zones. It is interpreted that the mega-xenoliths provided an extra source of Fe to the gabbro magma, resulting in more magnetite mineralization.</li></ul>																																																																																																																
<b>Drill hole Information</b>	<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>• The following holes were used to interpret the deposit. Not all holes penetrated the mineralisation. Down hole dips and hole azimuth are planned values. Depth to mineralisation indicates the down hole depths of the geologically interpreted lodes.</li></ul> <table><tr><th>BHID</th><th>Easting</th><th>Northing</th><th>RL</th><th>Dip</th><th>Azimuth</th><th>Depth to mineralisation</th><th>Total length</th></tr><tr><td>VRC001</td><td>695690</td><td>6873950</td><td>475</td><td>60</td><td>110</td><td>46</td><td>120</td></tr><tr><td>VRC002</td><td>695775</td><td>6873950</td><td>475</td><td>60</td><td>110</td><td>38</td><td>180</td></tr><tr><td>VRC003</td><td>695505</td><td>6873550</td><td>475</td><td>60</td><td>110</td><td>59</td><td>186</td></tr><tr><td>VRC004</td><td>695625</td><td>6873550</td><td>475</td><td>60</td><td>110</td><td>17</td><td>180</td></tr><tr><td>VRC005</td><td>695365</td><td>6873150</td><td>475</td><td>60</td><td>110</td><td>24</td><td>150</td></tr><tr><td>VRC006</td><td>695455</td><td>6873150</td><td>475</td><td>60</td><td>110</td><td>69</td><td>174</td></tr><tr><td>VRC007</td><td>695190</td><td>6872750</td><td>475</td><td>60</td><td>110</td><td>34</td><td>100</td></tr><tr><td>VRC008</td><td>695060</td><td>6872350</td><td>475</td><td>60</td><td>110</td><td>27</td><td>100</td></tr><tr><td>VRC009</td><td>695150</td><td>6872350</td><td>475</td><td>60</td><td>110</td><td>91</td><td>100</td></tr><tr><td>VRC010</td><td>694912</td><td>6871950</td><td>475</td><td>60</td><td>110</td><td>30</td><td>100</td></tr><tr><td>VRC011</td><td>694995</td><td>6871954</td><td>475</td><td>60</td><td>110</td><td>44</td><td>180</td></tr><tr><td>VRC012</td><td>694750</td><td>6871550</td><td>475</td><td>60</td><td>110</td><td>23</td><td>150</td></tr><tr><td>VRC013</td><td>694850</td><td>6871550</td><td>475</td><td>60</td><td>110</td><td>60</td><td>174</td></tr></table>	BHID	Easting	Northing	RL	Dip	Azimuth	Depth to mineralisation	Total length	VRC001	695690	6873950	475	60	110	46	120	VRC002	695775	6873950	475	60	110	38	180	VRC003	695505	6873550	475	60	110	59	186	VRC004	695625	6873550	475	60	110	17	180	VRC005	695365	6873150	475	60	110	24	150	VRC006	695455	6873150	475	60	110	69	174	VRC007	695190	6872750	475	60	110	34	100	VRC008	695060	6872350	475	60	110	27	100	VRC009	695150	6872350	475	60	110	91	100	VRC010	694912	6871950	475	60	110	30	100	VRC011	694995	6871954	475	60	110	44	180	VRC012	694750	6871550	475	60	110	23	150	VRC013	694850	6871550	475	60	110	60	174
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<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>Cutting of assay results were not considered necessary. Mineralisation intercepts are not reported here, and have been captured within the Mineral resource estimate.</li><li>No aggregation of sample intercepts was carried out.</li><li>Metal equivalent values are not reported.</li></ul>																																																																																
<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>The layered gabbro at the project strikes 020° and dips 80° to the west. All holes were drilled at a planned dip of 60°, however the dip of the drill holes generally increased with depth of drilling due to the control exerted by the lithologies upon the declination of drilling. The interpreted mineralised lenses (Fe&gt;20%) exhibit a consistent true width along strike, although this is a preliminary assessment and is reflected in the classification of the Mineral Resource.</li></ul>																																																																																



Criteria	JORC Code explanation	Commentary
<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>Diagrams presenting the geology and drilling of the deposit are presented in this report.</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>All drill hole information was used to interpret the mineralisation domains for the Mineral Resource estimate. The low-grade intercepts were assigned equal importance as the mineralised intercepts when the interpretation of the mineralisation domains was carried out.</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>Results from aeromagnetic surveys were used as a basis for the planning of drill holes and the geological model. A major anomaly associated with the regional scale Youanmi Fault was discerned from the geophysical imagery, extending in a southwest-northeast direction for more than 22 km, including 11 km through the western half of the Victory Bore licence. Magnetic trends within this anomaly probably represent magnetite layers in the basal part of the Atley layered gabbro.</li> <li>Holes drilled on sections which did not encounter the basaltic mega-xenoliths, encountered aquifers at include depths of approximately 55 m. The aquifers are tentatively interpreted to be pressure shadows between the mega-xenoliths.</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>Quest is likely to be seeking a JV partner to conduct further work on the Vanadium and titanium bearing magnetite at Victory Bore. The company anticipates this process will commence immediately with a view to securing partner sometime later in 2017. Part of this work might be to review the possibility of selectively mining near surface material where magnetite scree is evident at surface. This could potentially reduce the waste to ore strip ratio in any future mining studies.</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>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.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Drill logs were entered by the project geologist into Excel spreadsheets, and were validated after data entry.</li> <li>Drill data was loaded into Datamine and checks made for duplicate collars, overlapping sample intervals, and missing down hole surveys. Errors were corrected prior to proceeding with the estimation of the Mineral Resource.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>A representative of the Competent Person visited the project on 25<sup>th</sup> May 2017. The following items were assessed as part of the site visit: <ul style="list-style-type: none"> <li>Verification of project.</li> <li>Verified selected drill collars with GPS, and compared to actual surveyed coordinates.</li> <li>Inspection of drill samples.</li> <li>Review infrastructure and project setting.</li> <li>Inspection of outcrop.</li> <li>Geological and other project discussions with Quest Minerals staff.</li> </ul> </li> <li>The Competent Person is satisfied that the site observations support the current classification of the Mineral Resource and that there are no known significant impediments to future development of the project.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>There is an implied level of confidence in the geological interpretation.</li> <li>The geological interpretation is based on 21 RC holes and 2 diamond core holes which defined the strike extent and width of the mineralisation. No geological outcrop exists which would have provided a high level of confidence to the geological interpretation.</li> <li>Aeromagnetic surveys of the tenure indicate magnetic trends probably representing magnetite layers.</li> <li>No other geological interpretations have been considered to this point in time.</li> <li>The interpretation used a nominal cut-off grade of 20% Fe and a maximum internal waste intercept of 3 m.</li> <li>A 'base of complete oxidation' (BOCO) surface was interpreted based upon geological drill logs and sulphur assays.</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The extent and variability of the Mineral</li> </ul>	<ul style="list-style-type: none"> <li>Mineralised lenses range from 2 m to 45 m in horizontal thickness, with the six main lenses</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>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>	totalling about 75 m thick. The lenses were interpreted to 275 m below surface, down to approximately 200 mRL. Strike length of the interpreted zone of mineralisation is 4,400 m.
<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 of model data</i></li> </ul>	<ul style="list-style-type: none"> <li>The geological models were prepared by CSA Global using Datamine Studio (v3) software. Snowden Supervisor software was used for geostatistical evaluation of assay data.</li> <li>The Fe domain is based upon a nominal cut-off grade of 20% Fe, which was derived following review of a log probability plot of all drill samples within the Mineral Resource area. The geological interpretation was digitised and wireframed, with strike extrapolation limited to approximately half the typical drill hole spacing. Nine zones of mineralisation were modelled. Drill hole samples were flagged by mineralised zone using the constructed wireframes. Variograms were generated and grades were interpolated using ordinary kriging (OK) from the majority 1 m length RC drill samples. Each lens was interpolated using samples from that lens only. Search radii were 400 m along strike, 170 m vertically and 70 m across strike. A maximum of 24 samples and a minimum of 8 samples were used to interpolate grades. Octant searching was not employed. Grades for Fe, P, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, LOI, V<sub>2</sub>O<sub>5</sub> and TiO<sub>2</sub> were interpolated.</li> <li>Interpolation was validated by comparing mean grades and visually comparing model grades and sample grades on sections for each assay.</li> <li>Density was assumed at 3.2 g/cm<sup>3</sup> based on the density of banded iron formation of similar Fe grade at other locations.</li> <li>A block model with parent cells 50 mE x 50 mN x 10 mRL was constructed, with subcells 5 m x 5 m x 5 m used to control filling of the wireframes along the edges. Grades were interpolated into the parent cells.</li> <li>This is the maiden Mineral Resource estimate. It was originally published to the market in 2011 and reported under the JORC Code (2004). No changes have been made to the Mineral Resource estimate with this report, apart from reporting compliant with JORC (2012).</li> <li>No mining activity has occurred at the project, and no check estimates were carried out to date.</li> <li>Vanadium (V<sub>2</sub>O<sub>5</sub>, %) and titanium dioxide (TiO<sub>2</sub>, %) were interpolated into the block model. Early stage mining studies have shown that the deposit cannot be economically mined as a vanadium focused project, but vanadium shows a strong correlation with Fe (%) and thus there is the opportunity to recover vanadium from the magnetite processing stream, if the project is deemed to be economic for extraction of magnetite mineralisation, and appropriate vanadium extraction modules are included in the processing plant design. No metallurgical testwork has been carried out to date on titanium.</li> <li>SiO<sub>2</sub>, P, Al<sub>2</sub>O<sub>3</sub>, S and LOI are deleterious elements and variables interpolated into the block</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>to drill hole data, and use of reconciliation data if available.</i>	<p>model. These grade variables were estimated into the mineralisation domains. A statistical analysis of S (%) within the mineralisation domain demonstrates a mean grade of 0.4%, with a mean grade for the block estimates of 0.44%. A mean grade of 0.2% is observed in the drill intercepts located outside the mineralisation domains, however sulphur was not estimated into waste blocks.</p> <ul style="list-style-type: none"> <li>• Selective mining units were not used.</li> <li>• Fe is extremely well correlated with other interpolated elements, with a correlation coefficient of 99% for many correlations.</li> <li>• Grades were interpolated into individual lenses.</li> <li>• Top cuts were not applied in this Mineral Resource. Some of the grade distributions exhibit a high-grade tail, but there are no grade outliers and the Competent Person is satisfied the application of top cuts would make negligible difference to the Mineral Resource.</li> </ul>
<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 Mineral Resource is constrained within an envelope representing &gt; 20% Fe material. The Mineral Resource was reported above a cutoff grade of 20% Fe, and from the fresh rock volume. 90% of the volume of the mineralisation envelopes within the fresh rock zone was reported.</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>• It is assumed that conventional open pit mining will be used due to the shallow nature of the mineralisation.</li> <li>• A Scoping Study was undertaken in 2012 focusing on the vanadium mineralisation at Victory Bore. This study focused upon the processing of the vanadium mineralisation, suggesting the mineralisation is amenable to processing via beneficiation by magnetic separation and sodium salt roast and water leach.</li> <li>• An open pit optimisation study followed this in 2012 and suggested that an open cut mine producing only vanadium would not be economic using the economic drivers used at the time of the study.</li> <li>• No mining studies have been carried out focusing on the economic viability of the deposit producing iron from magnetite mineralisation.</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</i></li> </ul>	<ul style="list-style-type: none"> <li>• Preliminary metallurgical testwork carried out in 2012 is encouraging in terms of the processing potential of the vanadium. The testwork suggests the mineralisation is amenable to processing via beneficiation by magnetic separation and sodium salt roast and water leach. Magnetic separation testwork achieved 93.7% recovery of the vanadium suggesting good</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>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></p>	<p>recovery should be possible at a larger scale. The average leach recovery of the vanadium was 89.2%.</p> <ul style="list-style-type: none"> <li>• Davis Tube Recovery (DTR) testwork was undertaken in 2012 from 8 samples of pulverised magnetite material, which were combined into 2 composite samples for the DTR testwork. Results show a 61.3% recovery with concentrate grades of 59.89% Fe, 1.32% V<sub>2</sub>O<sub>5</sub>, 10.83% TiO<sub>2</sub>, 1.04% SiO<sub>2</sub> and 2.67% Al<sub>2</sub>O<sub>3</sub>. The combined value for SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> of 3.7% is well within the generally regarded upper limit of 5% for salt roasting of magnetic concentrate.</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 these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Competent Person is not aware of any environmental studies which may have been conducted over the tenure related to the Fe – V deposit. The location is flat lying with no hilly terrain or major watercourses in the vicinity.</li> <li>• A Heritage survey is currently being planned.</li> </ul>
<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</i></li> </ul>	<ul style="list-style-type: none"> <li>• The density is assumed. No density measurements have been taken to date from drill samples. A density of 3.2 t/m<sup>3</sup> was applied to the Mineral Resource model based which is considered by the Competent Person to be appropriate for the host rock lithology.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>the different materials.</i>	
<b>Classification</b>	<ul style="list-style-type: none"> <li>• The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>• 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).</li> <li>• Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>• The Mineral Resource is classified as Inferred, as per the guidelines of the JORC Code (2012). The Inferred classification level was applied because the Competent Person considers the geological evidence is sufficient to imply but not verify geological and grade continuity.</li> <li>• The geological logs from samples from the 21 RC and 2 diamond holes provide sufficient geological information to support the classification level. Models from earlier aeromagnetic surveys support the geological interpretation and hence the classification. Bulk density samples were not taken, and quality assurance / quality control analyses were not provided to the Competent Person for assessment.</li> <li>• Appropriate consideration was given to all relevant factors – sample assays, geological logs and the geological interpretation, and the overall reliability of the input data.</li> <li>• The Inferred classification appropriately reflects the Competent Person's view of the deposit.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>• No independent audits or reviews of the Mineral Resource have been carried out.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• These statements of relative accuracy and confidence of the estimate should be compared with production data, where</li> </ul>	<ul style="list-style-type: none"> <li>• The mineralisation domains were modelled by a geologist using geological logs from drill samples. Grades were interpolated using ordinary kriging, an industry standard grade estimation technique.</li> <li>• The approach taken was deemed appropriate to the Competent Person to allow the Mineral Resource to be classified as Inferred, which reflects a low level of confidence in the geological models and resource model, compared to higher classification levels (Indicated or Measured) which would rely on substantially more data (drilling, geological mapping, density analyses, quality control reviews) and which would garner a higher confidence rating for the Mineral Resource.</li> <li>• The Mineral Resource is a local estimate, whereby the drill hole data was geologically domained, resulting in fewer drill hole samples to interpolate the block model than the complete drill hole dataset, which would comprise a global estimate.</li> <li>• No mining production data is available for reconciliation purposes.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>available.</i>	