

## ASX RELEASE

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## Barrambie Pre-feasibility Study Results

### HIGHLIGHTS

- Confirmation of the technical feasibility of a licenced proprietary process to produce +99% pure titanium dioxide (TiO<sub>2</sub>).
- Potential for lowest quartile operating cost per tonne pure TiO<sub>2</sub> produced after co-product credits.

Neometals Ltd (ASX: NMT) ("Neometals") is pleased to provide the results of its Pre-feasibility Study ("PFS") on its 100% owned Barrambie Titanium Project. The economic assessment carried out by Snowden, and based on Capital and Operating costs developed by Sedgman Limited, indicates the potential for a viable hard-rock titanium mining and processing operation.

The PFS has highlighted the potential for the Barrambie Project to be a low cost producer of titanium dioxide (TiO<sub>2</sub>), vanadium pentoxide (V<sub>2</sub>O<sub>5</sub>) and iron oxide (Fe<sub>2</sub>O<sub>3</sub>), over a mine life of 19.6 years.

Full details of the Pre-Feasibility Study are attached, with key highlights summarised in the table below:

| Pre-feasibility Study Highlights                                                |                                                                                                             |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Average Annual Production                                                       | 98,000t TiO <sub>2</sub><br>2,000t V <sub>2</sub> O <sub>5</sub><br>234,000t Fe <sub>2</sub> O <sub>3</sub> |
| Life of Mine (LOM)                                                              | 19.6 years                                                                                                  |
| Life of Mine (LOM) Revenue                                                      | A\$ 8,746 million                                                                                           |
| Pre-tax Net Cashflow                                                            | A\$ 2,409 million                                                                                           |
| Pre-tax NPV (12% discount rate)                                                 | A\$ 355 million                                                                                             |
| Pre-tax Internal Rate of Return                                                 | 21%                                                                                                         |
| Cash Operating Cost per tonne of paid TiO <sub>2</sub> net of co-product credit | US\$ 572 <sup>1</sup>                                                                                       |
| Pre-production Capital cost (excluding EPCM and Contingency)                    | A\$ 549 million <sup>1</sup>                                                                                |
| Payback of capital costs                                                        | 3.9 years                                                                                                   |

<sup>1</sup> Estimated to accuracy of ±25%



Operating and Capital costs are both valid as at July 2015 with an indicative accuracy of  $\pm 25\%$ . All analysis is in Australian dollars and assumes conservative, real long-term prices of US\$1,838/t for titanium dioxide, US\$14,873 /t for vanadium pentoxide, US\$520/t for synthetic iron oxide pigment and an AUD exchange rate of US\$0.75.

#### CAUTIONARY STATEMENT

The Pre-Feasibility Study referred to in this report is based on medium level technical and economic assessments, it is sufficient to support reporting of Ore Reserves using the JORC Code but not sufficient to prove definitive assurance of an economic development case or to provide certainty that the conclusions of the Pre-Feasibility Study will be realised.

#### PROJECT DEVELOPMENT AND CORPORATE STRATEGY

Following the robust Pre-Feasibility Study results, Sedgman support the project progressing to a full Feasibility Study to assess the many opportunities which have been identified to improve the economics of the project via optimisation of the flow sheet.

As a next step, Neometals plan to undertake full pilot plant evaluation of the proprietary hydrometallurgical technology, with this work planned in the current financial year. Subject to the success of the full pilot scale test work it is Neometals' intention to proceed to Feasibility Study (FS).

The currently preferred project development strategy is to advance the project to a suitable stage of evaluation to obtain a titanium industry partner who would fund and operate the development of the Barrambie project on a shared equity or joint-venture basis.

#### MANAGING DIRECTOR COMMENT:

Chris Reed, Managing Director, commented:

*"We are pleased to have completed another step towards transforming Barrambie into a globally competitive titanium dioxide producer and supplier."*

*The next step in the project's development plan is to complete a full-scale pilot plant test program before we commit to a Feasibility Study. In parallel we will commence a formal partner selection process to commercialise this globally significant project."*

#### ENDS

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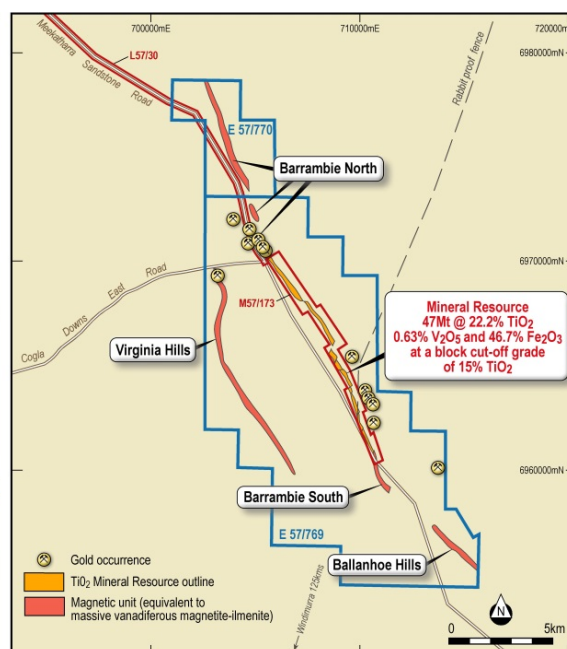
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## BARRAMBIE PROJECT – PRE-FEASIBILITY STUDY DETAILS

### DEVELOPMENT SCENARIO

The development scenario envisaged for the PFS includes:

- Mine Wet Plant (MWP) at Barrambie treating 550,000 tpa and producing 308,880 tonnes of magnetic concentrate
- Magnetic concentrate to be transported by road 834 km to Kwinana in side tipping road trains
- Chemical Processing Plant (CPP) at Kwinana treating 308,880 tonnes of magnetic concentrate, using iron leach, titanium leach, titanium hydrolysis, iron oxide precipitation, vanadium precipitation and acid regeneration.
- CPP average annual production output being 98,000 t of +99%  $\text{TiO}_2$ , 2,000 t of +98.5%  $\text{V}_2\text{O}_5$  and 234,000 t of synthetic iron oxide ( $\text{Fe}_2\text{O}_3$ ) pigment.



### MINERAL RESOURCE ESTIMATE

The Barrambie Titanium Project contains total Indicated and Inferred Mineral Resources of 47.2Mt at 22.2%  $\text{TiO}_2$ , 0.63%  $\text{V}_2\text{O}_5$ , and 46.7%  $\text{Fe}_2\text{O}_3$ , at a cut-off grade of 15%  $\text{TiO}_2$ .

| Category (JORC, 2012) | Tonnage (Mt) | $\text{TiO}_2$ (%) | $\text{V}_2\text{O}_5$ (%) | $\text{Fe}_2\text{O}_3$ (%) | $\text{Al}_2\text{O}_3$ (%) | $\text{SiO}_2$ (%) |
|-----------------------|--------------|--------------------|----------------------------|-----------------------------|-----------------------------|--------------------|
| Indicated             | 34.7         | 22.25              | 0.64                       | 46.77                       | 9.48                        | 14.95              |
| Inferred              | 12.5         | 21.99              | 0.58                       | 46.51                       | 9.32                        | 15.40              |
| Total                 | 47.2         | 22.18              | 0.63                       | 46.70                       | 9.44                        | 15.07              |

Note: All tonnage and grade figures have been rounded down to two or three significant figures, respectively; slight errors may occur due to rounding of values.

The information is extracted from the ASX Announcement entitled “Barrambie – Amended JORC 2012 Mineral Resource Estimate” released on 6 December 2013 and is available to view on [neometals.com.au](http://neometals.com.au). The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcement.

## ORE RESERVE ESTIMATE

Snowden identified a mining inventory based in the 2013 Mineral Resource estimate that was reported in accordance with the JORC Code 2012. Snowden’s Ore Reserves at May 2015 are estimated using a 17.5% TiO<sub>2</sub> cut-off as provided in the table below (See Table 4 in Appendix B for material information pertaining to Ore Reserve). The ore is contained within 14 pits that strike north- south along the ore body and have a maximum depth of 70 vertical metres. The LOM strip ratio is 2.9:1.

| Category<br>(JORC, 2012) | Tonnage<br>(Mt) | TiO <sub>2</sub><br>(%) | V <sub>2</sub> O <sub>5</sub><br>(%) | Fe <sub>2</sub> O <sub>3</sub><br>(%) |
|--------------------------|-----------------|-------------------------|--------------------------------------|---------------------------------------|
| Probable                 | 10.762          | 25.18                   | 0.6                                  | 42.5                                  |

Note: Mineral Resources are inclusive of Ore Reserves

## OPERATING COST ESTIMATE

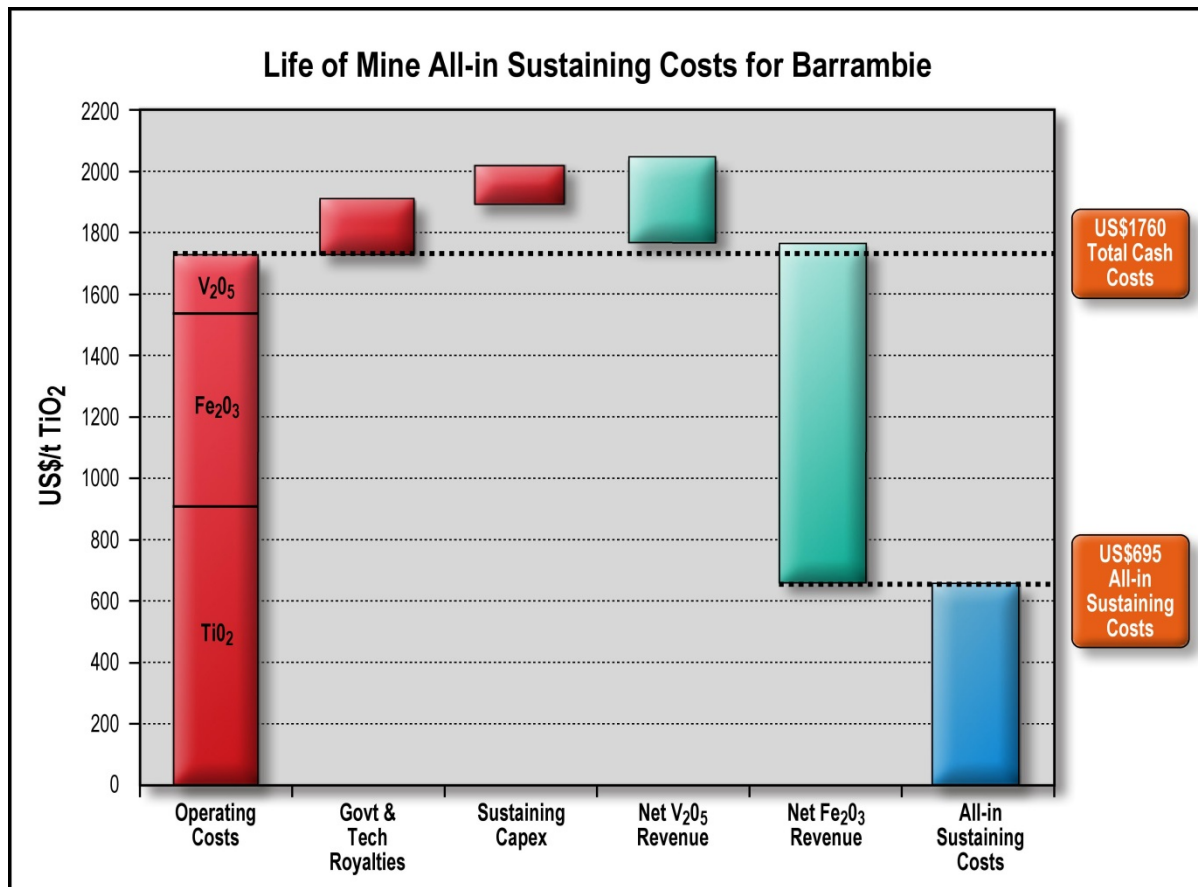
Sedgman have estimated the operating costs for both the MWP at Barrambie and the CPP at Kwinana to a PFS accuracy of ±25%.

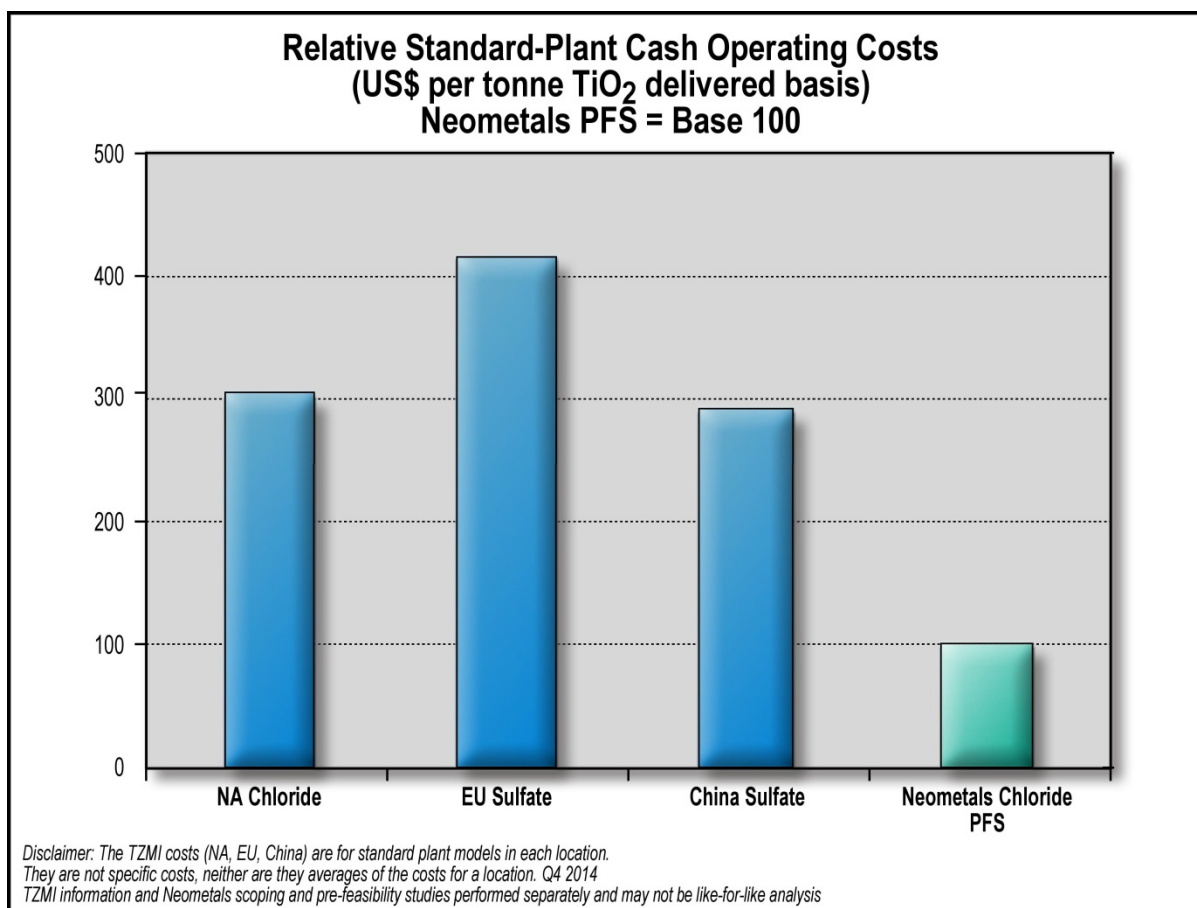
| OPEX IN AUD                                    | \$/t/TiO <sub>2</sub>         | \$/annum             |
|------------------------------------------------|-------------------------------|----------------------|
| <b>Contract mining, crushing and screening</b> | \$123.36                      | \$14,359,104         |
| <b>MWP</b>                                     | \$426.32 <sup>2</sup>         | \$42,669,641         |
| <b>CPP</b>                                     | \$1,749.46                    | \$175,155,234        |
| <b>Total</b>                                   | <b>\$2,299.14<sup>3</sup></b> | <b>\$232,183,979</b> |

<sup>2</sup> Please note that these figures exclude the contract mining costs and the crushing and screening costs which is \$123.36/tTiO<sub>2</sub>

<sup>3</sup> This is the total all-inclusive Opex cost based on each tonne of TiO<sub>2</sub> produced per annum before co-product credits.

| Item                           | Units | LOM     |
|--------------------------------|-------|---------|
| <b>Mining</b>                  |       |         |
| Total Mining Cost / t Ore      | A\$/t | 25.69   |
| Total mining Cost / t Moved    | A\$/t | 6.65    |
| Total Mining Cost              | A\$M  | 276.4   |
| <b>Processing</b>              |       |         |
| Average cost / t processed     | A\$/t | 336.78  |
| Total processing cost          | A\$M  | 3,624.3 |
| <b>Product transport</b>       |       |         |
| Total transport cost / ore     | A\$/t | 64.44   |
| Total transport cost / product | A\$/t | 114.72  |
| Total product transport cost   | A\$M  | 693.4   |
| <b>Summary</b>                 |       |         |
| Total operating / tonne ore    | A\$/t | 426.91  |
| Total operating cost           | A\$M  | 4,594.2 |



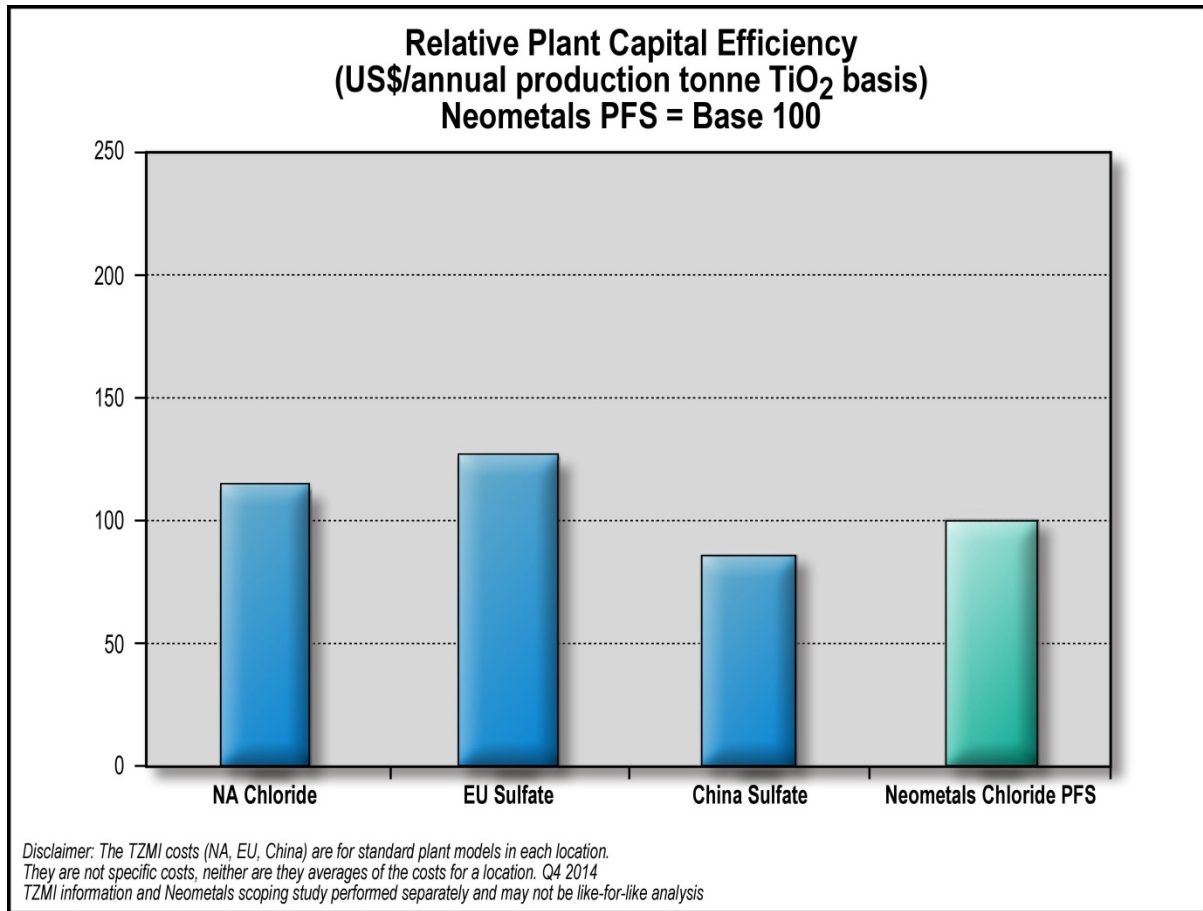


## CAPITAL COST ESTIMATE

Sedgman have estimated the capital costs to build both the MWP at Barrambie and the CPP at Kwinana to a PFS accuracy of  $\pm 25\%$ .

| Capex in AUD                | AUD                  | NMT allowance for EPCM contingency | Grand Totals         |
|-----------------------------|----------------------|------------------------------------|----------------------|
| <b>Total Direct costs</b>   | \$474,726,916        | nil                                | \$474,726,916        |
| <b>Total Indirect Costs</b> | \$ 69,822,863        | nil                                | \$ 69,822,863        |
| <b>Mining – Roads</b>       | \$ 4,480,000         | nil                                | \$ 4,480,000         |
| <b>Sedgman Total</b>        |                      |                                    | <b>\$549,029,779</b> |
| <b>EPCM Contingency</b>     | nil                  | \$75,542,094 <sup>4</sup>          | <b>\$ 75,542,094</b> |
| <b>Grand Total</b>          | <b>\$549,029,779</b> | <b>\$75,542,094</b>                | <b>\$624,571,873</b> |

<sup>4</sup> Assumes NMT applies a 15% contingency at a P50 percentile level to all EPCM scope of work



## MARKET AND MARKETING

Assessment of the market by Neometals using leading, independent commodity research houses provided the basis for management assumptions of real long term pricing - US\$1,838/t for titanium dioxide powder (99% purity), US\$14,873/t for vanadium pentoxide (98.5% purity) and US \$520/t for iron oxide pigment (99.9% purity), all on an FOB Kwinana basis. The titanium dioxide powder and iron oxide pigment price assumptions have been significantly discounted to allow for the uncoated or raw nature of titanium dioxide product and planned discount for marketing the synthetic iron oxide product.

## ECONOMIC ANALYSIS

Snowden prepared a discounted cash flow analysis to provide an indication of the potential of the project.

| Parameter           | Units | Value   |
|---------------------|-------|---------|
| NPV (@ 12% DCF)     | A\$M  | 355.7   |
| Net cash -flow      | A\$M  | 2,409.2 |
| Revenue             | A\$M  | 8,746.8 |
| Cash outflow        | A\$M  | 6,337.6 |
| Max Working capital | A\$M  | 549.0   |
| IRR                 | %     | 20.9    |

## **Appendix A: Statements by Competent Persons**

### **1.1 Competent Persons Statement – Frank Blanchfield**

The information in the PFS report that relates to the Barrambie pit dilution optimisation, pit design, production scheduling and cashflow analysis and classification and reporting of the Mineral Reserves is based on, and fairly represents, information and supporting documentation – the compilation of which was reviewed by Frank Blanchfield who is a Member of The Australasian Institute of Mining and Metallurgy and a full-time employee of Snowden Mining Industry Consultants Pty Ltd. Frank Blanchfield has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Frank Blanchfield consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.

### **1.2 Competent Persons Statement – Peter Hayward**

The information in the PFS report that relates to Ore Reserves (Processing and Metallurgy) is based on, and fairly represents, information and supporting documentation – the compilation of which was reviewed by Peter Hayward who is a Fellow of The Australasian Institute of Mining and Metallurgy and a full-time employee of Sedgman Ltd. Peter Hayward has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which she 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'. Peter Hayward consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.



## Appendix B: JORC Tables

JORC Table 1, Section 1, Sampling Techniques and Data

| Criteria              | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sampling techniques   | <p>The Barrambie resource estimation is based on the logging and sampling of 796 reverse circulation (RC) and 41 diamond (DD) drillholes (PQ and HQ3 size). Of these holes 782 RC and 36 DD holes were drilled by AVCH.</p> <p>Limited information is available on the sampling methods used for the historic data (pre-2007). Snowden reviewed documents provided by Bryan Smith (Geosciences Pty Ltd) detailing drilling and sampling methods used for the most recent drilling (2007 to present) which are considered to be in line with industry standard.</p> <p>Drillholes have been sampled on 3 m intervals in areas of background mineralisation and 1 m intervals within mineralised zones.</p> <p>For RC holes the drill cuttings were collected in a cyclone, discharged at 1 m intervals into a bucket and then passed through a 3 tiered Jones riffle splitter to produce a split sample of about 3.5 kg. Diamond core was sampled on 1 m intervals with core being sawn in half and sampled as quarter core samples.</p> <p>Samples have generally been assayed for 13 attributes using XRF analysis except for 4 historical DD holes which were assayed using AAS.</p> <p>Magnetic susceptibility readings have been taken for the majority of RC holes on 1 m intervals and 0.5 m intervals for DD holes.</p> |
| Drilling techniques   | <p>The Barrambie deposit has a 40 year drilling history. Drilling techniques include rotary air blast (RAB), open hole percussion (OHP), RC and DD. Only RC and DD holes have been used for the resource estimation.</p> <p>Core orientation marks were attempted using a spear and crayon at the end of each core run; however, these were only successful on partly oxidised or fresh material.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Drill sample recovery | <p>A qualitative logging code was used to record recovery for the recent RC and DD drilling. Recovery of samples is considered to be good with only minor losses within fault zones which are dominated by clay.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Logging               | <p>Geological logging of core and rock chips was carried out recording oxidation, colour, texture, mineralisation, water and recovery. Magnetic susceptibility readings were taken every 1 m for RC holes and 0.5 m for DD holes.</p> <p>Snowden considers the logging was carried out in sufficient detail to meet the requirements of resource estimation and mining studies.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| Criteria                                       | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sub-sampling techniques and sample preparation | <p>Core was wrapped in film and transferred to core trays where the downhole depth was marked on core blocks. Core was cut in half using a core saw.</p> <p>RC samples were collected in a cyclone at the rig. All samples within the mineralised zones were considered to be mostly dry.</p> <p>Initially sample intervals were adjusted so samples did not cross geological boundaries. This was modified to routine 1 m samples, due to the difficulty in identifying the contacts during the second drilling campaign in 2007 (hole BDDH012).</p> <p>Limited information is available on the quality control (QC) methods applied to the historic drillholes. QC procedures to ensure sampling is representative of the in situ material for the most recent drilling include the use of field duplicates and twinned holes. Comparison of the original and duplicate assays show an acceptable level of precision indicating field sampling procedures are reasonable. A total of 13 DD holes were twinned with selected RC holes. The results indicate minimal downhole smearing in RC drillholes.</p> <p>The samples sizes are considered to be appropriate to correctly represent the mineralisation.</p> |
| Quality of assay data and laboratory tests     | <p>Samples have been assayed for 13 attributes using XRF analysis except for 4 historical DD holes which were assayed using AAS.</p> <p>Limited information is available on the QC methods applied to the historic drillholes. Field QC procedures for the most recent drilling include the use of assay standards, field duplicates and umpire laboratory analysis.</p> <p>Results of the QC analysis indicated that acceptable levels of accuracy and precision have been achieved.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Verification of sampling and assaying          | <p>A total of 13 DD holes were twinned with selected RC holes. The results indicate minimal downhole smearing in RC drillholes.</p> <p>Primary data from the historic drilling have been compiled into a single Microsoft Excel spreadsheet. The most recent drilling has been compiled into a separate Excel spreadsheet.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Location of data points                        | <p>The drilling coordinates are in a local metric grid established by surveyors Hille Thompson and Delfos located in Geraldton, which has a grid north-south baseline at 5500 mE. The historic drillholes were surveyed on the local metric grid. Where the historic hole collars could not be identified the collar locations were converted from the old imperial grid locations.</p> <p>The topographic surface was provided by Southern Geoscience Consultants (SGC) compiled as part of an aeromagnetic survey flown on 25 m spaced lines in 2005. The Digital Elevation Model (DEM) was supplied in GDA, MGA Zone 50 coordinates and transformed to the local metric grid using 4 drillholes as common points.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Data spacing and distribution                  | <p>Drill spacing is predominantly 100 m by 25 m. There is one 100 m area drilled at centres of 25 m by 25 m, and one 25 m area drilled at centres of 12.5 m by 12.5 m.</p> <p>Drill spacing is sufficient to establish the degree of geological and grade continuity necessary to support the resource classification.</p> <p>All samples were composited using a nominal 1 m interval prior to compiling the estimate. Where necessary the composite interval has been adjusted to ensure that there are no residual sample lengths.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Criteria                                                | Explanation                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Orientation of data in relation to geological structure | Drillholes are drilled towards local grid east or west at varying angles to intersect the mineralised zones perpendicularly. The location and orientation of the Barrambie drillholes is appropriate given the strike and morphology of the mineralisation.                                             |
| Sample security                                         | Samples are stored onsite and transported to the laboratory on a regular basis. The laboratory was instructed to dispose of the residual samples by AVCH, the pulps have been retained. Bulk samples required for future metallurgical test work have been retained and are currently stored at Koorda. |
| Audits or reviews                                       | To date there have been no audits or reviews of sampling techniques and data.                                                                                                                                                                                                                           |

## JORC Table 1, Section 2, Reporting of Exploration Results

| Criteria                                                         | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mineral tenement and land tenure status                          | The Barrambie mineralisation is within granted mining lease M57/173 in the Eastern Murchison Goldfields. In April 2003, Reed Resources Ltd (Reed) through its subsidiary AVCH acquired 100% ownership of M57/173. The tenure was secure at the time of resource estimation and reporting. No known impediments exist to operate in the area.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Exploration done by other parties                                | There is no exploration done by other parties to acknowledge or appraise at this time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Geology                                                          | <p>The ferrovanadium titanium (Ti-V-Fe) deposit occurs within the Archaean Barrambie Greenstone Belt, which is a narrow, NNW-SSE trending greenstone belt in the northern Yilgarn Craton. The linear greenstone belt is about 60 km long and attains a maximum width of about 4 km. It is flanked by banded gneiss and granitoids. The mineralisation is hosted within a large layered, mafic intrusive complex (the Barrambie Igneous Complex), which has intruded into and is conformable with the general trend of the enclosing Greenstone Belt. From aeromagnetic data and regional geological mapping, it appears that this layered sill complex extends over a distance of at least 25 km into tenements to the north and south of M57/173 that have been acquired by Reed. The layered sill varies in width from 500 m to 1700 m.</p> <p>The sill is comprised of anorthositic magnetite-bearing gabbros that intrude a sequence of metasediments, banded iron formation, metabasalts and metamorphosed felsic volcanics of the Barrambie Greenstone Belt. The metasediment unit forms the hanging-wall to the layered sill complex.</p> <p>Exposure is poor due to deep weathering, masking by laterite, widespread cover of transported regolith (wind-blown and water-borne sandy and silty clay), laterite scree and colluvium. Where remnant laterite profiles occur on low hills, there is ferricrete capping over a strongly weathered material that extends down to depths of 70 m.</p> <p>Ti-V-Fe mineralisation occurs as bands of cumulate aggregations of vanadiferous magnetite (martite)-ilmenite (leucoxene) in massive and disseminated layers and lenses.</p> <p>Within the tenement the layered deposit has been divided into five sections established at major fault offsets. Cross faults have displacements that range from a few metres to 400 m. The water table occurs at about 35 m below the surface (when measured where the laterite profile has been stripped).</p> |
| Drill hole Information                                           | <p>See description in main summary. Reed has reported exploration results to the ASX on the following dates:</p> <p>2/3/2007, 4/4/2007, 1/5/2007, 14/6/2007, 23/7/2007, 20/12/2007<br/>6/11/2008, 8/12/2008.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Data aggregation methods                                         | There are no exploration results to report in this news release however in past news releases of exploration results, Reed has provided summaries of all length weighted intercepts of vanadiferous mineralisation for all assays with greater than 0.5 % V <sub>2</sub> O <sub>5</sub> , continuous throughout each intercept.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Relationship between mineralisation widths and intercept lengths | There are no exploration results to report in this news release however in past news releases of exploration results, Reed has reported all holes drilled at an angle of 60 degrees from the horizontal toward grid east or west, depending on the apparent dip of mineralised bands. All depths and intercept lengths are down-hole distances and not intended to represent the true width of high-grade bands.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Criteria                           | Commentary                                                                                                                                                                                                                                                                     |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Diagrams                           | See figures in main summary.                                                                                                                                                                                                                                                   |
| Balanced reporting                 | Due to size of the drillhole database it is not practicable to report all drilling results. Cut-off grade for reporting is a natural well-defined boundary for the higher grade massive magnetite bands that will be the principal target for selective mining of the deposit. |
| Other substantive exploration data | Only drill hole data used for resource calculation purposes.                                                                                                                                                                                                                   |
| Further work                       | Further exploration work is not planned for the immediate Barrambie area .                                                                                                                                                                                                     |

**JORC Table 1, Section 3, Reporting of Mineral Resources**

| Criteria                            | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Database integrity                  | <p>Hand written logs are entered into Microsoft Excel at the end of each day and transferred to an Access Database on a regular basis.</p> <p>Snowden completed a basic validation check of the database for potential errors as a preliminary step to compiling the resource estimate. A number of minor issues were identified and corrected.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Site visits                         | <p>The geological and sample database is maintained by AVCH and was validated by Snowden during the last resource update in January 2009, this included a review of the QC data. Drilling and sampling procedures were documented by Bryan Smith (Geosciences Pty Ltd) who made regular site visits during the drilling campaigns. Snowden considers sufficient information was provided to develop the geological model and resource estimate to the level of an Indicated and Inferred Resource.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Geological interpretation           | <p>The interpretations for structural and lithological surfaces have been compiled by Snowden using the drillhole database supplied by AVCH.</p> <p>A topography wireframe surface was generated from RC and DD drillhole collars, combined with the DEM points supplied by SGC. Discrepancies in elevation between drillhole collars and the DEM in the order of 2 m to 3 m were found north of 12600 mN.</p> <p>The interpretations for the mineralisation envelope and domains were based on V<sub>2</sub>O<sub>5</sub> grade cut-offs determined from statistical analysis of the drillhole data. A mineralisation indicator of 0.6% V<sub>2</sub>O<sub>5</sub> was used to define the high grade domain within both the Central and Eastern zones. The Eastern zone low grade mineralisation was based on a threshold of 0.3% V<sub>2</sub>O<sub>5</sub> and 0.1% V<sub>2</sub>O<sub>5</sub> for the Central and Eastern zone low grade mineralised envelopes surrounding the lodes. Six mineralised domains have been interpreted, four within the Eastern zone and two within the Central zone.</p> <p>AVCH completed a program of closely spacing drilling within a test area which has provided better understanding of the short range continuity of mineralisation.</p>                                                                                                                                                                          |
| Dimensions                          | <p>The deposit covers an area of approximately 10.5 km north-south by approximately 250 m east-west and extends to a depth approximately 60 m below surface. The deposit remains open at depth and along strike.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Estimation and modelling techniques | <p>Drillhole data was coded using the wireframe interpretations representing oxidation surfaces, fault blocks and mineralised domains. Samples were composited to 1 m downhole, with the composite lengths adjusted to include all intervals and avoid loss of residual samples.</p> <p>Top cuts were applied to V<sub>2</sub>O<sub>5</sub> and TiO<sub>2</sub> in the Central zone to limit the influence of outlier grades. Statistical analysis of the remaining attributes within each domain indicates that there are no extreme outliers and therefore no top cut was applied.</p> <p>Traditional variograms were modelled for the combined Eastern and Central zones and the parameters applied to the six original mineralised domains, with the nuggets and sill values adjusted for those domains. There was insufficient data within the Far Eastern zone high grade domain; therefore the Eastern zone high grade parameters were applied. The Dyke variogram was modelled as an omni-directional variogram as the low number of samples in this domain could not support directional variography.</p> <p>CAE Studio (Datamine) software was used to estimate grades for V<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, CaO and magnetic susceptibility using ordinary block kriging (OK) into 10 mE by 40 mN by 5 mRL parent cell size as determined by a kriging</p> |

| Criteria | Explanation |
|----------|-------------|
|----------|-------------|

neighbourhood analysis (KNA) carried out in March 2008. Sub-celling to 0.25 m by 10 m by 1.25 m has been allowed. A block discretisation of 2 by 5 by 1 was used in the easting, northing and elevation directions respectively.

Boundary conditions used in the estimate are listed below:

| Domain              | Attribute                                                                                                                                                               | Boundary conditions                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Mineralised domains | V <sub>2</sub> O <sub>5</sub> , TiO <sub>2</sub> , Fe <sub>2</sub> O <sub>3</sub> , Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub>                                   | Hard boundaries across grouped domains. Soft boundaries over oxidation horizons |
| Mineralised domains | CaO and magnetic susceptibility                                                                                                                                         | Hard boundaries across grouped domains and oxidation horizons                   |
| Dyke                | V <sub>2</sub> O <sub>5</sub> , TiO <sub>2</sub> , Fe <sub>2</sub> O <sub>3</sub> , Al <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub> , CaO and magnetic susceptibility | Hard boundaries across grouped domains and oxidation horizons                   |

The orientations of the search ellipses were defined to suit the approximate local dip and strike of the lode wireframes within each fault block. The initial search pass used ranges derived from the variograms. Blocks were estimated using a minimum of 6 and a maximum of 30 samples. If the initial search failed to find the minimum number of samples required, then a second search was conducted using 1.5 times the initial search radii.

After the estimation of V<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub> approximately 0.3% of the total number of blocks within the mineralised domains were not estimated due to an insufficient numbers of samples. The majority of these blocks were located within the Dyke and were assigned the mean assay of the Dyke. Uninformed blocks within the mineralised domains were assigned the mean assay of the Central and Eastern zones as appropriate.

The estimates were validated as follows:

- A visual comparison of the block grade estimates to the input drillhole composite data on a section by section basis shows a reasonable correlation, although there is some evidence of smoothing of low and high grades within the low grade mineralised envelopes.
- A comparison of the estimated block grades to the average composite (naïve) grades for V<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub> within the mineralised domains show good results, with both sets of results being within 8%.
- Trend plots show a reasonable comparison of the block grades with the samples grades in the easting and northing directions. For the elevation direction the model and sample means sometimes diverge. This is due to the sub-vertical geometry of the lodes; few drillhole intercepts in the vertical direction and the fact that grades have been estimated using a search ellipse that has a significant range in the vertical direction resulting in apparent smoothing of the model.

The Barrambie Resource was previously estimated by Snowden in March 2008 and January 2009. A comparison between the 2008 and 2009 estimate shows an overall increase in tonnes of 80%. This is due to additional drilling extending the resource approximately 5 km to the north; and infill drilling along the western side of the resource. A revised resource was reported in September 2013 using a TiO<sub>2</sub> cut-off rather than V<sub>2</sub>O<sub>5</sub> following additional hydrometallurgical test work that indicated an alternative processing route that could result in the dominant revenue coming from TiO<sub>2</sub>.

| Criteria                                    | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Moisture                                    | Not applicable to this estimate – only dry mass considered.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Cut-off parameters                          | The Mineral Resource is reported at a 15% TiO <sub>2</sub> grade cut-off. This threshold was determined by preliminary financial modelling carried out by AVCH.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Mining factors or assumptions               | A Scoping Study was completed by Snowden in November 2013 on the basis that the Barrambie deposit will be mined using conventional drill and blast with truck and shovel open pit mining methods. Reasonably small mining equipment would be used to mine the high grade with limited dilution. Ore mined will be placed on a ROM stockpile and transferred to highway haul trucks and transported to a proposed 50 ktpa processing plant to be constructed near Geraldton.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Metallurgical factors or assumptions        | Metallurgical samples from the oxide and transition zones were provided for laboratory test work. The test work demonstrated that both V <sub>2</sub> O <sub>5</sub> and TiO <sub>2</sub> can be recovered using a 2-stage leaching process. Whilst mineralisation within the primary zone has not been tested this zone constitutes a minor proportion of the defined resource. Test work carried out on similar primary material from Canadian deposits indicates that the Barrambie primary material would be amenable to this processing technique.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Environmental factors or assumptions        | <p>Previous submissions to the Environmental Protection Agency (EPA) are no longer relevant given the revised mine plan and production forecast and these will be resubmitted for consideration by the EPA. It is expected that the restrictions could be less severe given the significantly reduced mining rate and the fact that processing will no longer take place at the mine site.</p> <p>A new environmental study focussing on a site near Geraldton as the new processing site will need to be undertaken.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Bulk density                                | Density values were estimated from the mineralised domains in the block model with regression equations using estimated Fe <sub>2</sub> O <sub>3</sub> , SiO <sub>2</sub> and Al <sub>2</sub> O <sub>3</sub> block grades. Limited data was available from the transitional and very little data was available from the fresh. Waste blocks were assigned a default density based on fresh non mineralised gabbro.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Classification                              | <p>The Barrambie resource is classified as Indicated and Inferred for the five major elements V<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, based on a number of criteria, including the geological confidence, the integrity of the data, the spatial continuity of the mineralisation as demonstrated by variography and the quality of the estimation. The estimates of CaO and magnetic susceptibility have not been classified as they are considered to have low confidence due to poor validation.</p> <p>Mineralised zones where the drill spacing is 100 m by 25 m, 120 m by 25 m or 150m by 25 m and are within the OK variance envelope (based on a threshold of 0.5) and above the base of drilling have been classified as Indicated. Mineralised zones outside the OK variance envelope and below the base of drilling have been classified as Inferred. Mineralised zones have been extrapolated approximately 20 m beyond the base of drilling.</p> <p>The Mineral Resource estimate appropriately reflects the views of the Competent Person with respect to the deposit.</p> |
| Audits or reviews.                          | Snowden has completed an internal peer review of the estimate which has concluded that the procedures used to estimate and classify the Mineral Resource are appropriate. There have been no external audits or reviews carried out.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Discussion of relative accuracy/ confidence | The relative accuracy and confidence in the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as set out in the JORC code (2012 Edition).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |



**JORC Table 1, Section 4, Reporting of Ore Reserves**

| Item                                           | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|----------------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------|-----------------------------|---------|-----------|-------|-------|------|-------|------|-------|------|---------|----------|-------|-------|------|-------|------|-------|------|---------|-----------|------|-------|------|-------|-------|-------|------|---------|----------|------|-------|------|-------|------|-------|------|-------|--|-------|-------|------|-------|------|-------|------|
| Mineral Resource for conversion to Ore Reserve | Snowden prepared the updated Barrambie Mineral Resource estimate in November 2013. The relevant part of the Mineral Resource estimate is provided below. No planned dilution was applied to these estimates. Mineral Resources are inclusive of Ore Reserves.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | Barrambie Resource table for 15% TiO <sub>2</sub> cut-off                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | <table><tr><th>Zone</th><th>Resource category JORC 2012</th><th>Mt</th><th>TiO<sub>2</sub> (%)</th><th>V<sub>2</sub>O<sub>5</sub> (%)</th><th>Fe<sub>2</sub>O<sub>3</sub> (%)</th><th>Al<sub>2</sub>O<sub>3</sub> (%)</th><th>SiO<sub>2</sub> (%)</th><th>Density (t/m<sup>3</sup>)</th></tr><tr><td>Eastern</td><td>Indicated</td><td>29.83</td><td>23.11</td><td>0.60</td><td>46.02</td><td>9.35</td><td>15.10</td><td>3.06</td></tr><tr><td>Eastern</td><td>Inferred</td><td>11.39</td><td>22.44</td><td>0.55</td><td>45.78</td><td>9.33</td><td>15.65</td><td>3.31</td></tr><tr><td>Central</td><td>Indicated</td><td>4.86</td><td>16.95</td><td>0.91</td><td>51.40</td><td>10.28</td><td>14.08</td><td>3.10</td></tr><tr><td>Central</td><td>Inferred</td><td>1.15</td><td>17.55</td><td>0.90</td><td>53.71</td><td>9.30</td><td>12.96</td><td>3.62</td></tr><tr><td colspan="2">Total</td><td>47.20</td><td>22.18</td><td>0.63</td><td>46.70</td><td>9.44</td><td>15.07</td><td>3.13</td></tr></table> | Zone                        | Resource category JORC 2012 | Mt                   | TiO <sub>2</sub> (%)              | V <sub>2</sub> O <sub>5</sub> (%)  | Fe <sub>2</sub> O <sub>3</sub> (%) | Al <sub>2</sub> O <sub>3</sub> (%) | SiO <sub>2</sub> (%)        | Density (t/m <sup>3</sup> ) | Eastern | Indicated | 29.83 | 23.11 | 0.60 | 46.02 | 9.35 | 15.10 | 3.06 | Eastern | Inferred | 11.39 | 22.44 | 0.55 | 45.78 | 9.33 | 15.65 | 3.31 | Central | Indicated | 4.86 | 16.95 | 0.91 | 51.40 | 10.28 | 14.08 | 3.10 | Central | Inferred | 1.15 | 17.55 | 0.90 | 53.71 | 9.30 | 12.96 | 3.62 | Total |  | 47.20 | 22.18 | 0.63 | 46.70 | 9.44 | 15.07 | 3.13 |
|                                                | Zone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Resource category JORC 2012 | Mt                          | TiO <sub>2</sub> (%) | V <sub>2</sub> O <sub>5</sub> (%) | Fe <sub>2</sub> O <sub>3</sub> (%) | Al <sub>2</sub> O <sub>3</sub> (%) | SiO <sub>2</sub> (%)               | Density (t/m <sup>3</sup> ) |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | Eastern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Indicated                   | 29.83                       | 23.11                | 0.60                              | 46.02                              | 9.35                               | 15.10                              | 3.06                        |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | Eastern                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Inferred                    | 11.39                       | 22.44                | 0.55                              | 45.78                              | 9.33                               | 15.65                              | 3.31                        |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | Central                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Indicated                   | 4.86                        | 16.95                | 0.91                              | 51.40                              | 10.28                              | 14.08                              | 3.10                        |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
| Central                                        | Inferred                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.15                        | 17.55                       | 0.90                 | 53.71                             | 9.30                               | 12.96                              | 3.62                               |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
| Total                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 47.20                       | 22.18                       | 0.63                 | 46.70                             | 9.44                               | 15.07                              | 3.13                               |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
| Site visits                                    | A site visit is undertaken by Mr Blanchfield who is one of the CP’s for the Ore Reserve estimate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
| Study status                                   | A definitive feasibility study (DFS) for a Barrambie vanadium project was completed by the Reed Resources, in 2009.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | Work was completed in 2013 by Snowden to confirm a viable titanium project from a scoping study.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | In July 2015, Sedgman Limited compiled a prefeasibility study (PFS) Snowden considers that the 2015 work completed was of a prefeasibility level of accuracy. Snowden has recently completed most of the mining studies that are required for the PFS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | Key difference between the 2009 Barrambie vanadium project and the 2015 Barrambie titanium project are that the central lodes that are higher in vanadium grade formed part of the basis for the 2009 DFS, and the eastern lodes that are higher in titanium are the basis of the 2015 PFS. Some items such as the location of the beneficiation plant, waste dumps, mining leases and the studies relating to geotechnical conditions, environment, that were developed in 2009 were relevant to the 2015 PFS and used in this study.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
| Cut-off parameters                             | The cut-off grade of 17.5% TiO <sub>2</sub> is considered for the twenty years of the project. A marginal cut-off grade was approximately assessed at 12.5% TiO <sub>2</sub> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
| Mining factors and assumptions                 | To identify the 2015 Barrambie titanium Ore Reserve, a process of Whittle pit optimization, staged pit design production scheduling and mine cost modelling was undertaken by Snowden.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | The mining method is conventional open pit drill and blast, load and haul on a 5 m high blasting bench reflective the semi-selective consideration. An excavator bucket of 6.7m <sup>3</sup> matched the selectivity. There are no special infrastructure requirements for this mining method.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |
|                                                | Mining will be completed using a yearly mining campaign completed on a three year cycle, with                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |                             |                      |                                   |                                    |                                    |                                    |                             |                             |         |           |       |       |      |       |      |       |      |         |          |       |       |      |       |      |       |      |         |           |      |       |      |       |       |       |      |         |          |      |       |      |       |      |       |      |       |  |       |       |      |       |      |       |      |

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|                                       | <p>ore being stockpiled and rehandled for continuous crusher feed.</p> <p>Overall the 125mm skin planned dilution has reduced the recovered metal by approximately 1.5% and decreased the ore tonnage processed by 1%. Because the supporting grade is high next to the 17.5% cut-off grade material, low dilution is considered and no further unplanned ore loss is modelled.</p> <p>No Inferred Mineral Resources were used in the economic modelling or reported in the Ore Reserve.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Metallurgical factors and assumptions | <p>Process development work for the project in its current form commenced with bench scale test work in 2012, which indicated that the titanium values within the Barrambie ore would be amenable to dissolution with hydrochloric acid. The most significant test work was conducted in 2014, with both bench scale and 'mini-plant' hydrometallurgical test work and beneficiation test work.</p> <p>Test work indicated that the ore is amenable to upgrading through magnetic concentration and so this was adopted as the basis for the mine wet plant flowsheet design. Magnetic concentrate samples were used as feed for the hydrometallurgical test work conducted in 2014.</p> <p>The objective for the process development done was to dissolve the titanium values and then produce a high grade <math>\text{TiO}_2</math> precipitate product. Concurrent with the titanium dissolution, vanadium and iron minerals also dissolve in the hydrochloric acid leach. The flowsheet was developed such that both metals will be extracted and converted to saleable oxide products (<math>\text{V}_2\text{O}_5</math> and <math>\text{Fe}_2\text{O}_3</math>). Over all recoveries are:</p> <ul style="list-style-type: none"> <li>• <math>\text{TiO}_2</math> product 72.3%</li> <li>• <math>\text{V}_2\text{O}_5</math> product 58.2%</li> <li>• <math>\text{Fe}_2\text{O}_3</math> product 100%, however the recovery of iron is increased to 100% because the addition of sponge iron in the metallurgical process that is additional to the insitu reserve iron metal and adds to the <math>\text{Fe}_2\text{O}_3</math> product.</li> </ul> <p>The metallurgical factors were developed by Sedgman and Esmont. Metallurgical recoveries were applied to the Snowden optimisation, Snowden production schedule that produced:</p> <ul style="list-style-type: none"> <li>• 1,958 kt <math>\text{TiO}_2</math> product</li> <li>• 40 kt <math>\text{V}_2\text{O}_5</math> product</li> <li>• 4,683 kt <math>\text{Fe}_2\text{O}_3</math> product</li> </ul> |
| Environmental                         | <p>Snowden is aware of the status of mining titles and approvals critical to the viability of the Project as outlined in the project environmental review document that was prepared by Aqua Terra Consulting Pty Ltd. The approvals status is also documented in SKM 2009 DFS. Snowden understands all fauna and flora and heritage surveys were completed. Snowden is unaware of any other project operating licence or approval that could be rejected, as disclosed by AVCH.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Infrastructure                        | <p>This PFS has assumed that all Non Process Infrastructure</p> <ul style="list-style-type: none"> <li>• Cryogenic oxygen generation at the CPP</li> <li>• Power generation at the MWP</li> <li>• Accommodation village at the MWP (100 bed)</li> <li>• Tailings waste disposal at the CPP</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

|                                       | <ul style="list-style-type: none"><li>Diesel common user facility at the MWP</li></ul> <p>The exiting airstrip 120km away at Meekatharra will be utilised for the Fly in /out roster.</p> <p>All dangerous goods facilities will be designed to meet the most stringent of Australian design codes in areas of the CPP where reagents are used, covering aspects like, containment and storage as well and reticulation throughout the plant, such as:</p> <ul style="list-style-type: none"><li>Hydrochloric acid (HCl)</li><li>Chlorine gas (Cl<sub>2</sub>)</li><li>Sodium Hydro Sulphide (NaHS)</li><li>Iron/sponge powder</li><li>Sulphuric Acid (H<sub>2</sub>SO<sub>4</sub>)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                    |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------|-------|------------------------------------|---------------------------------------------|--------|---------------------------------------|--------------------------------------------------|-------|-----------------------------|---------|------|-------------------|-----|-------|-------------------|--|--|----------------------------|------|--------|-----------------------|-----|---------|--------------------------|--|--|----------------------------|------|-------|--------------------------------|------|--------|------------------------------|-----|-------|----------------|--|--|-----------------------------|------|--------|----------------------|-----|---------|
| Cost factors                          | <p>All costs were supplied in AUD.</p> <p>The Barrambie project operating cost is summarised as:</p> <table><thead><tr><th>Item</th><th>Units</th><th>LOM</th></tr></thead><tbody><tr><td colspan="3"><b>Mining</b></td></tr><tr><td>Total Mining Cost / t Ore</td><td>\$/t</td><td>25.69</td></tr><tr><td>Total mining Cost / t Moved</td><td>\$/t</td><td>6.65</td></tr><tr><td>Total Mining Cost</td><td>\$M</td><td>276.4</td></tr><tr><td colspan="3"><b>Processing</b></td></tr><tr><td>Average cost / t processed</td><td>\$/t</td><td>336.78</td></tr><tr><td>Total processing cost</td><td>\$M</td><td>3,624.3</td></tr><tr><td colspan="3"><b>Product transport</b></td></tr><tr><td>Total transport cost / ore</td><td>\$/t</td><td>64.44</td></tr><tr><td>Total transport cost / product</td><td>\$/t</td><td>114.72</td></tr><tr><td>Total product transport cost</td><td>\$M</td><td>693.4</td></tr><tr><td colspan="3"><b>Summary</b></td></tr><tr><td>Total operating / tonne ore</td><td>\$/t</td><td>426.91</td></tr><tr><td>Total operating cost</td><td>\$M</td><td>4,594.2</td></tr></tbody></table> <p>Sedgman estimated capital costs as:</p> <ul style="list-style-type: none"><li>Pre-production capital costs, tailings infrastructure, other Infrastructure costs (TSF, Roads, Power, Camp) of \$544.6M</li><li>Sustaining costs \$319.7M</li></ul> <p>Closure costs are not estimated in the PFS.</p> | Item                               | Units                          | LOM   | <b>Mining</b>                      |                                             |        | Total Mining Cost / t Ore             | \$/t                                             | 25.69 | Total mining Cost / t Moved | \$/t    | 6.65 | Total Mining Cost | \$M | 276.4 | <b>Processing</b> |  |  | Average cost / t processed | \$/t | 336.78 | Total processing cost | \$M | 3,624.3 | <b>Product transport</b> |  |  | Total transport cost / ore | \$/t | 64.44 | Total transport cost / product | \$/t | 114.72 | Total product transport cost | \$M | 693.4 | <b>Summary</b> |  |  | Total operating / tonne ore | \$/t | 426.91 | Total operating cost | \$M | 4,594.2 |
| Item                                  | Units                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LOM                                |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| <b>Mining</b>                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                    |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total Mining Cost / t Ore             | \$/t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 25.69                              |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total mining Cost / t Moved           | \$/t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6.65                               |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total Mining Cost                     | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 276.4                              |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| <b>Processing</b>                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                    |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Average cost / t processed            | \$/t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 336.78                             |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total processing cost                 | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3,624.3                            |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| <b>Product transport</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                    |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total transport cost / ore            | \$/t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 64.44                              |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total transport cost / product        | \$/t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 114.72                             |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total product transport cost          | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 693.4                              |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| <b>Summary</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                    |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total operating / tonne ore           | \$/t                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 426.91                             |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Total operating cost                  | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4,594.2                            |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Revenue factors                       | <p>Metal prices was supplied by AVCH as:</p> <table><tbody><tr><td>Titanium price (Long term average)</td><td>US\$/tonne of TiO<sub>2</sub></td><td>1,838</td></tr><tr><td>Vanadium price (Long term average)</td><td>US\$/tonne of V<sub>2</sub>O<sub>5</sub></td><td>14,873</td></tr><tr><td>Iron powder price (Long term average)</td><td>US\$/tonne Fe<sub>2</sub>O<sub>3</sub> powder</td><td>519</td></tr><tr><td>US: AUS exchange rate</td><td>AUD/USD</td><td>0.75</td></tr></tbody></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Titanium price (Long term average) | US\$/tonne of TiO <sub>2</sub> | 1,838 | Vanadium price (Long term average) | US\$/tonne of V <sub>2</sub> O <sub>5</sub> | 14,873 | Iron powder price (Long term average) | US\$/tonne Fe <sub>2</sub> O <sub>3</sub> powder | 519   | US: AUS exchange rate       | AUD/USD | 0.75 |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Titanium price (Long term average)    | US\$/tonne of TiO <sub>2</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1,838                              |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Vanadium price (Long term average)    | US\$/tonne of V <sub>2</sub> O <sub>5</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 14,873                             |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| Iron powder price (Long term average) | US\$/tonne Fe <sub>2</sub> O <sub>3</sub> powder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 519                                |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |
| US: AUS exchange rate                 | AUD/USD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.75                               |                                |       |                                    |                                             |        |                                       |                                                  |       |                             |         |      |                   |     |       |                   |  |  |                            |      |        |                       |     |         |                          |  |  |                            |      |       |                                |      |        |                              |     |       |                |  |  |                             |      |        |                      |     |         |

|                                                                            | State royalty - Selling cost                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | % price of TiO <sub>2</sub> , Fe <sub>2</sub> O <sub>3</sub> and V <sub>2</sub> O <sub>5</sub> recovered | 5  |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----|-----------|-------|-------|--------------------|-----|-------|---------------|-----|---------|---------|-----|---------|--------------|-----|---------|----------------------|-----|-------|---------------------|-----|---------|-----|---|----|
|                                                                            | Technology royalty                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | % price of recovered                                                                                     | 5  |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
|                                                                            | Discount rate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | %                                                                                                        | 12 |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Metal prices were applied as real and flat forward in the financial model. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                          |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Market assessment                                                          | Market outlooks for TiO <sub>2</sub> pigment 99.25% pure, V <sub>2</sub> O <sub>5</sub> 99.9% pure and Iron oxide pigments were provided by TZMI with real forecast prices in 2014 terms provided from 2014 to 2025.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                          |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Economic                                                                   | <p>Snowden developed a project cashflow model for the 20 year project.</p> <p>A financial sensitivity study was undertaken evaluating capital expenditure, operating costs and metal price. The project is most sensitive to changes in titanium grade, titanium recovery and price of titanium and the beneficiation factor.</p> <p>Approximately one third of the revenue that is generated from the iron oxide sales is generated from the iron that is imported for the metallurgical process and this accounts for about \$M 1,000 of the overall revenue, however the project would still be cashflow positive if the revenue from iron was only considered from insitu iron sources.</p> <p>The project cashflow summary from the cashflow model is:</p> <table><tr><th>Parameter</th><th>Units</th><th>Value</th></tr><tr><td>NPV<sub>12%</sub></td><td>\$M</td><td>355.8</td></tr><tr><td>Net cash-flow</td><td>\$M</td><td>2,409.3</td></tr><tr><td>Revenue</td><td>\$M</td><td>8,746.8</td></tr><tr><td>Cash outflow</td><td>\$M</td><td>6,337.6</td></tr><tr><td>Max. working capital</td><td>\$M</td><td>549.0</td></tr><tr><td>Operating cash-flow</td><td>\$M</td><td>3,278.0</td></tr><tr><td>IRR</td><td>%</td><td>21</td></tr></table> |                                                                                                          |    | Parameter | Units | Value | NPV <sub>12%</sub> | \$M | 355.8 | Net cash-flow | \$M | 2,409.3 | Revenue | \$M | 8,746.8 | Cash outflow | \$M | 6,337.6 | Max. working capital | \$M | 549.0 | Operating cash-flow | \$M | 3,278.0 | IRR | % | 21 |
| Parameter                                                                  | Units                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Value                                                                                                    |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| NPV <sub>12%</sub>                                                         | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 355.8                                                                                                    |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Net cash-flow                                                              | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2,409.3                                                                                                  |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Revenue                                                                    | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 8,746.8                                                                                                  |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Cash outflow                                                               | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6,337.6                                                                                                  |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Max. working capital                                                       | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 549.0                                                                                                    |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Operating cash-flow                                                        | \$M                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3,278.0                                                                                                  |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| IRR                                                                        | %                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 21                                                                                                       |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Social                                                                     | <p>A Native Title Deed has been signed between the Yugunga-Nya Native Title Claimants and Neometals covering tenements associated with the Barrambie Project.</p> <p>Only one area of potential Aboriginal heritage significance known as “One tree Hill” was identified within the Barrambie Project Area. AVCH has recorded ‘One Tree Hill” as a potential ethnographic site on spatial data base files and quarantined this area from any disturbance as an interim measure until the final status of the place is determined.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                          |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Classification                                                             | The Ore Reserve is classified as Probable in accordance with the JORC Code, corresponding respectively, to the Mineral Resource classifications of Indicated. No Inferred Resources is included in the Ore Reserve estimate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                          |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Audits or reviews                                                          | Snowden has completed an internal peer review of the Ore Reserve estimate.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                          |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |
| Relative accuracy / confidence                                             | The Ore Reserve estimate is supported by the current 2015 Barrambie Titanium Project PFS report. Snowden’s opinion of Ore Reserve is that the classification of probable is reasonable.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                          |    |           |       |       |                    |     |       |               |     |         |         |     |         |              |     |         |                      |     |       |                     |     |         |     |   |    |