

28 NOVEMBER 2013

# ASX Release

## Annual Carrapateena Resource Update - 2013

The Annual Carrapateena Resource Update for 2013 confirms that Carrapateena is Australia's largest undeveloped copper project.

The current phase of the Resource delineation program has now been completed and is available to be used to inform the Pre-Feasibility Study currently underway on the Carrapateena project. Since the estimation of the 2012 Resource for Carrapateena, drilling has been focused on the lower part of the deposit and the Resource estimated in this 2013 update has increased from 760Mt to 800Mt.

In the 2013 Resource released today, an additional seven holes (including five wedged holes) totalling 11,187metres were included in the data modelling, bringing the total number of holes and metres drilled and intersecting mineralisation to 100 holes and 65,690m respectively.

Total Indicated and Inferred Resources (at a 0.3 percent copper cut-off) have increased from 760Mt at 0.8 percent copper and 0.3g/t Au for 5.9Mt of contained copper and 7.3Moz of contained gold to 800Mt at 0.8 percent copper and 0.3g/t gold for 6.3Mt copper and 8.4Moz of gold reflecting:

- an increase in tonnage of 5 percent,
- an increase in contained copper of 7 percent, and
- an increase in contained gold of 14 percent.

The increase is mainly attributable to the additional drilling information which has allowed geologists to better understand and interpret the deeper parts of the deposit and extend the envelope of the copper mineralisation.

The Mineral Resource Explanatory notes, prepared according to JORC 2012 are attached to this document.

Terry Burgess, CEO of OZ Minerals said that *'this completes the current stage of work on delineating the Carrapateena resource and demonstrates again that we have a very significant copper resource in the global context. Carrapateena also has the significant added benefit of being located in a highly favourable mining jurisdiction and in a district which is demonstrating potential to host further deposits.'*

**Table 1. Summary Mineral Resources for the Carrapateena deposit at 0.3 percent Cu cut-off grade (COG)**

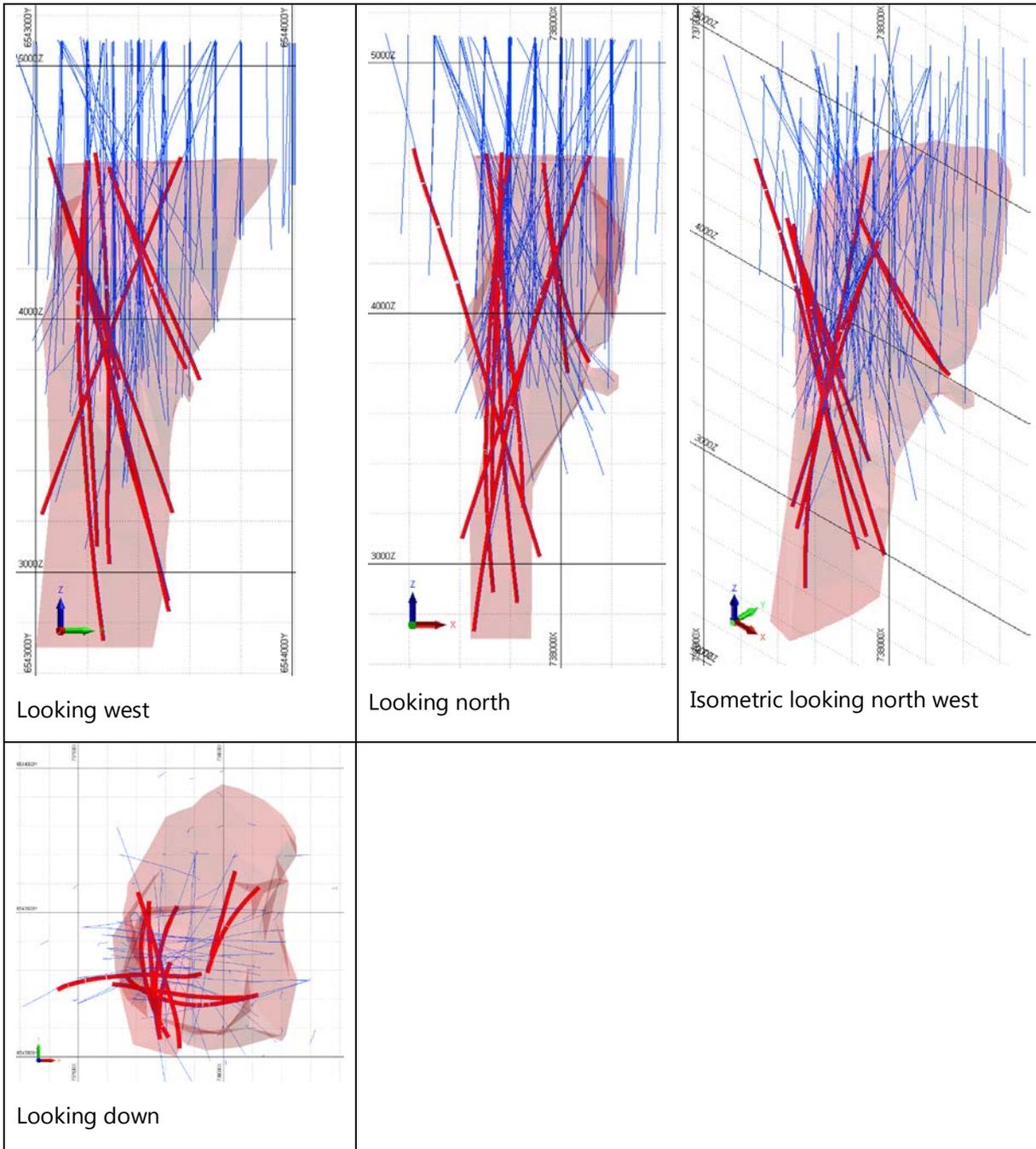
Classification	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	U (ppm)	Density (t/m <sup>3</sup> )	Cu (Mt)	Au (Moz)	Ag (Moz)
Indicated	356	1.0	0.4	4.3	191	3.49	3.7	4.9	50
Inferred	444	0.6	0.2	2.4	126	3.44	2.6	3.5	35
<b>Total</b>	<b>800</b>	<b>0.8</b>	<b>0.3</b>	<b>3.3</b>	<b>155</b>	<b>3.47</b>	<b>6.3</b>	<b>8.4</b>	<b>84</b>



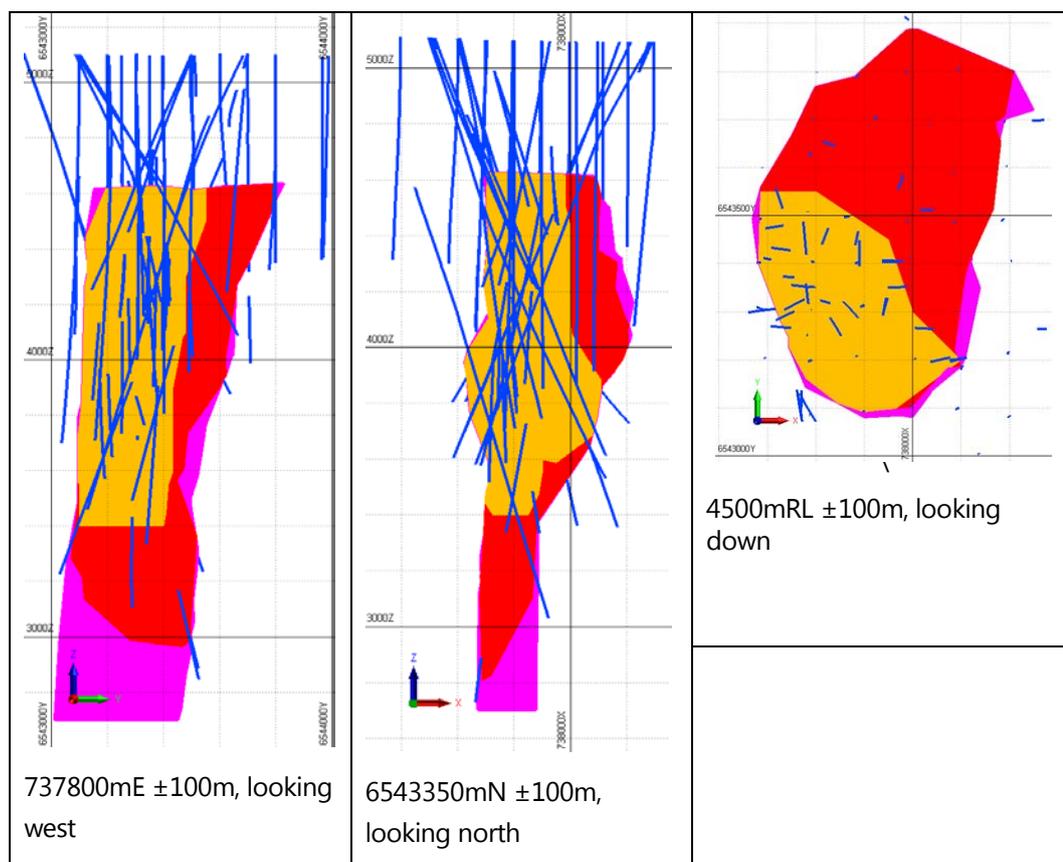
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For comparison purposes with the 2012 Resource, Mineral Resources are also stated at cut-off grades of 0.5 percent and 0.7 percent copper in the Mineral Resource Explanatory Notes.

**Figure 1.** Shows the traces of drill holes in blue and sampled intervals in red for which data has become available since the previous estimate. The shape represents the interpreted hematite breccia zone which hosts the mineralisation.



**Figure 2.** Shows the shapes of the Indicated and Inferred classifications.



### Legend

- Indicated
- Inferred - Interpolated
- Inferred - Extrapolated
- Drill Trace

### Requisite supporting information

#### Geology and geological interpretation

Carrapateena is an iron oxide copper gold (IOCG) deposit. Mineralisation is hosted within the Carrapateena Breccia Complex (CBC). The CBC is a polymictic hematite-granite breccia with hematite-sericite-chlorite-carbonate (HSCC) alteration hosting disseminated Cu sulphides. The CBC contains several broad rock types: hematite breccias, granite breccias, chloritised granite breccias and dyke breccias. For modelling and estimation the deposit geology was grouped into several domains based on a combination of lithology, chemistry, and mineralisation style, including: Chalcopyrite domains, Bornite domain, Leached Zone, Internal Granite and Barren Hematite Breccias. Nearly all of the copper and gold mineralisation within the deposit is hosted by hematite dominated breccias. Sulphides are the primary copper-bearing minerals in the CBC. The most abundant sulphides are Chalcopyrite > Pyrite > Bornite, and constitute the vast majority of the sulphides at Carrapateena. Gold occurs both as grains and finely disseminated in sulphides.

### **Sampling and sub-sampling techniques**

All basement samples consist of diamond drill core (NQ, NQ2, HQ and PQ) cut with a manual or automatic core saw and sampled as half core, except for PQ core, metallurgical holes and field duplicates, where quarter core was sampled. All available basement drill core was sampled. Sampling interval is generally 1m but respects geological contacts in places. Entire samples were crushed then pulverised to a nominal 90 percent passing 75 microns. For OZ Minerals drill holes, sample preparation included drying, crushing, and pulverising in full to a nominal 90 percent passing 75 microns. For Teck Cominco Australia Pty Ltd (Teck) drill holes, no documentation of quality control procedures for sub-sampling stages is available.

### **Drilling techniques**

OZ Minerals used diamond drilling from surface using a combination of PQ, HQ and NQ2 core sizes. For Teck drill holes, a combination of RC and mud-rotary was used for precollars. The holes have been drilled in a variety of directions and so the spacing between holes is not uniform. The spacing is mostly less than 50 metre in the upper part of the south-western copper-mineralised zone, becoming wider at depths below 3,800mRL (1,300 metres below surface).

### **Resource Classification Criteria**

There are no set criteria for the classification of resources, although key estimation statistics were taken into account during classification. Resources have been classified into Indicated or Inferred resources after accounting for the robustness of the underlying conceptual geological model, quality of informing data; robustness of the interpretation, data arrangement and data density with respect to the continuity of key variables; contiguity of the mineralisation around the likely economic cut-off grade (~0.3 percent Cu) and consideration of the 'reasonable prospects' test.

### **Sample analysis method**

Samples sent to Bureau Veritas' (Amdel) Adelaide Laboratory by Teck had Cu and Ag grades determined by IC3E, with 'ore grade' Cu (>1 percent) samples undergoing reanalysis by MET1. Au grades were determined via FA2. Samples sent by Teck to Genalysis in Perth had Cu grades determined by four acid digest and ICP-OES, with 'ore grade' analysis (Cu >1 percent) determined by modified four acid digest and AX/OES. Au at Genalysis was determined by Fire Assay finished by flame AAS. For OZ Minerals drill holes, Cu grades were determined using a modified aqua regia digest with ICP-OES determination at Bureau Veritas Adelaide Laboratory. Au grades were determined by 40g Fire Assay finished by AAS at Bureau Veritas Adelaide Laboratory (Amdel).

### **Estimation methodology**

Grades of 10 x 10 x 10m blocks were estimated independently for Cu, Au, Ag, Co, U, F, C, Fe, SG (as measured), and weight loss on drying using Ordinary Kriging of sample data composited to 10m intervals. Domain boundaries were generally treated as hard boundaries during estimation.

## Cut-off grade

Block caving has been identified as the lowest likely cost, for a technically and economically viable mining method for Carrapateena. The cut-off grade of 0.3 percent Cu is based on the assumption that the deposit can be exploited by block-caving and the estimated operating costs associated with such given OZ Minerals' life-of-mine (LOM) economic assumptions as listed below:

**Table 2: Economic Assumptions**

Assumptions	Unit	LOM
Copper	US\$/lb	3.15
Gold	US\$/oz	1,200
Silver	US\$/oz	20
Exchange Rate	AUD/USD	0.83
Estimated Mine Life	Years	20

Estimated total operating costs, inclusive of mining, processing and site G&A, for block caving are A\$23 per tonne. This corresponds to a cut-off grade of approximately 0.3 percent Cu. Within the Mineral Resource there is a sufficient volume of contiguous mineralisation above a cut-off grade of 0.3 percent Cu to support a block cave mine.

## Mining and metallurgical methods and parameters and other material modifying factors considered to date

Block caving has been identified as a potentially technically and economically viable mining method for Carrapateena although other, more selective, mining methods are also being investigated;

Preliminary geotechnical studies have indicated that the Carrapateena deposit will cave;

Metallurgical test work has shown that a conventional crushing, grinding and flotation circuit is suitable for copper extraction from the mineralisation with concentrate grades of 30 to 35 percent copper at 90 percent recovery. Gold is recoverable by flotation at a concentrate grade of 10 grams per tonne with 70 percent recovery achievable. These figures are consistent with OZ Minerals' experience at its nearby Prominent Hill copper-gold mine;

Carrapateena has an approved Retention Lease for the development of a decline. A waste rock storage facility has been designed to encapsulate potentially acid forming material from the decline. As part of the approvals processes baseline studies covering groundwater, surface water, flora, fauna, social aspects, air quality and radiological impacts are ongoing. OZ Minerals has protocols to define and manage environmental risks.

**Competent Person Statement**

The information in this release that relates to Mineral Resources is based on information compiled by Stuart Masters, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (108534) and a Member of the Australian Institute of Geoscientists (5683). Stuart Masters is a full time employee of CS-2 Pty Ltd and has no interest in, and is entirely independent of, OZ Minerals. Stuart Masters has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC 2012).

Stuart Masters consents to the inclusion in the release of the matters based on his information in the form and context in which it appears.

Stuart Masters BSc (Geology), CFSG, has over 27 years of relevant experience as a geologist including 10 years in Iron-Oxide-Copper-Gold style deposits. Stuart Masters has visited site on eight occasions since OZ Minerals acquired the project including three times since the previous Mineral Resource was reported.

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**OZ Minerals Limited**

**Carrapateena Project**

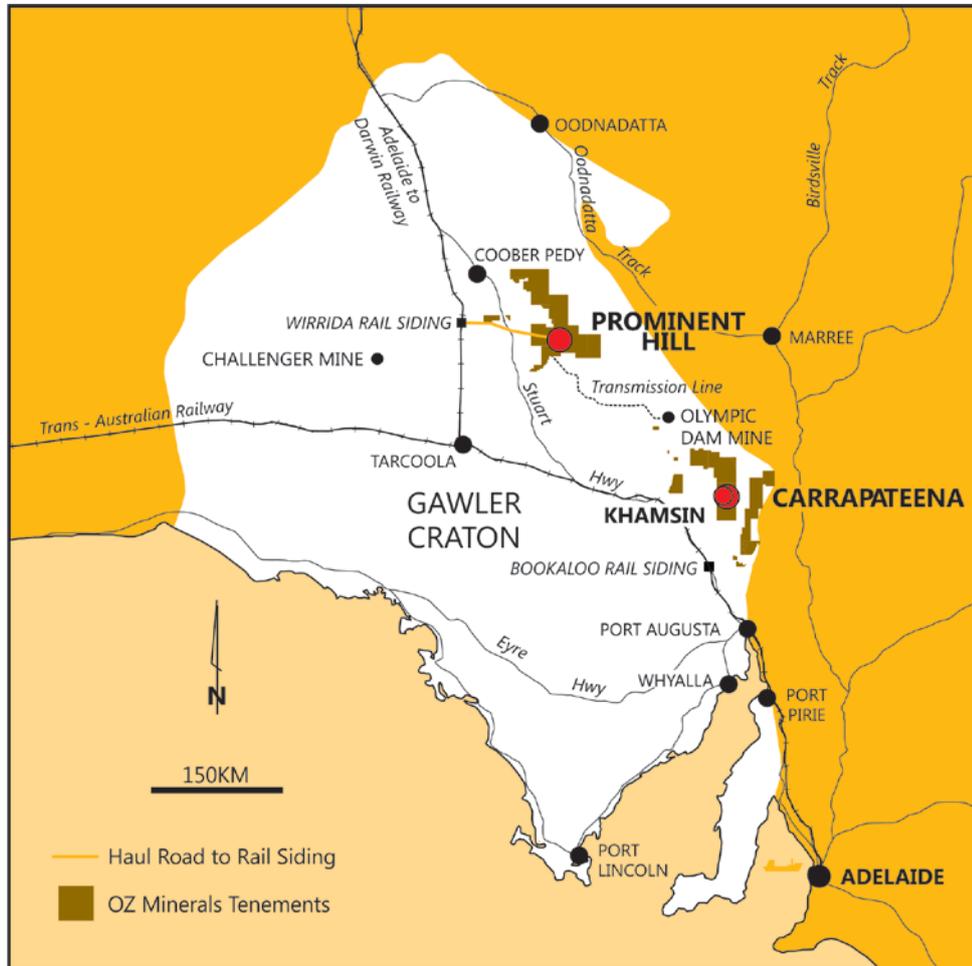
**Mineral Resource Explanatory Notes**

**As at 30 June 2013**

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## CARRAPATEENA MINERAL RESOURCE STATEMENT – 30 JUNE 2013

The Carrapateena 2013 Mineral Resource Statement relates to an updated Mineral Resource estimate for the Carrapateena Copper Gold deposit, which is an iron oxide copper-gold (IOCG) deposit located in central South Australia on the eastern margin of the Gawler Craton (see Figure 1).



**Figure 1. Location of Carrapateena, South Australia**

Since the previous statement (January 2013, which used data up to October 2012) OZ Minerals continued its drilling program at Carrapateena until February 2013, focussing on the lower part of the deposit. The deposit has been remodelled and the Mineral Resource re-estimated.

### Mineral Resource

The estimated Mineral Resource for the Carrapateena deposit is shown in Table 1. The Mineral Resource has been reported in accordance with JORC, 2012. This Mineral Resource is based on data from 100 drill holes having a total of 65,690 metres of sampling in the interpreted mineralisation. The cut-off grade of 0.3 percent (Cu) copper is based on the assumption that the deposit can be exploited by block-caving and the estimated operating costs associated with such given OZ Minerals' life-of-mine (LOM) economic assumptions as listed in Table 2.

**Table 1: Summary Mineral Resources for the Carrapateena deposit at 0.3 percent Cu cut-off grade (COG)**

<b>Classification</b>	<b>Tonnes (Mt)</b>	<b>Cu (%)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>U (ppm)</b>	<b>Density (t/m<sup>3</sup>)</b>	<b>Cu (Mt)</b>	<b>Au (Moz)</b>	<b>Ag (Moz)</b>
Indicated	356	1.0	0.4	4.3	191	3.49	3.7	4.9	50
Inferred	444	0.6	0.2	2.4	126	3.44	2.6	3.5	35
<b>Total</b>	<b>800</b>	<b>0.8</b>	<b>0.3</b>	<b>3.3</b>	<b>155</b>	<b>3.47</b>	<b>6.3</b>	<b>8.4</b>	<b>84</b>

**Table 2: Economic Assumptions**

<b>Assumptions</b>	<b>Unit</b>	<b>LOM</b>
Copper	US\$/lb	3.15
Gold	US\$/oz	1,200
Silver	US\$/oz	20
Exchange Rate	AUD/USD	0.83
Estimated Mine Life	Years	20

Note:

- There are currently no Measured Resources defined for Carrapateena.
- Test work suggests metallurgical recoveries of around 90 percent and 70 percent are achievable for copper and gold respectively. These figures are consistent with OZ Minerals' experience at its nearby Prominent Hill copper-gold mine.
- Rounding errors occur.

Approximately 20 percent of the Inferred Mineral Resources are deemed to be extrapolated. The definition of extrapolation used here is a strictly geometric one as shown later in Figure 3. Of the blocks considered to be extrapolated, 58 percent are within 100 metres of an informing composite.

The following table compares the current Mineral Resources to those previously quoted at a 0.3 percent copper cut-off grade (COG).

**Table 3: Summary of Current (2013) and Previous (2012) Mineral Resources for the Carrapateena deposit at 0.3 Cu COG**

	<b>Tonnes (millions)</b>	<b>Cu (%)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>U (ppm)</b>	<b>Density (t/m<sup>3</sup>)</b>	<b>Cu (Mt)</b>	<b>Au (Moz)</b>	<b>Ag (Moz)</b>
2012 Indicated <sup>1</sup>	392	1.0	0.4	4.3	165	3.41	3.8	4.9	54
Estimation changes <sup>2</sup>	-36						-0.1	0.0	-4
Depth extension <sup>3</sup>	0						0.0	0.0	0
<b>2013 Indicated</b>	<b>356</b>	<b>1.0</b>	<b>0.4</b>	<b>4.3</b>	<b>191</b>	<b>3.49</b>	<b>3.7</b>	<b>4.9</b>	<b>50</b>
2012 Inferred <sup>1</sup>	368	0.6	0.2	2.3	120	3.40	2.1	2.5	27
Estimation changes <sup>2</sup>	20						0.1	0.4	3
Depth extension <sup>3</sup>	56	0.7	0.3	2.9	204	3.62	0.4	0.6	5
<b>2013 Inferred</b>	<b>444</b>	<b>0.6</b>	<b>0.2</b>	<b>2.4</b>	<b>126</b>	<b>3.44</b>	<b>2.6</b>	<b>3.5</b>	<b>35</b>
2012 Total	760	0.8	0.3	3.3	143	3.41	5.9	7.4	80
Estimation changes <sup>2</sup>	-16						-0.1	0.4	-1
Depth extension <sup>3</sup>	56	0.7	0.3	2.9	204	3.62	0.4	0.6	5
<b>2013 Total</b>	<b>800</b>	<b>0.8</b>	<b>0.3</b>	<b>3.3</b>	<b>155</b>	<b>3.47</b>	<b>6.3</b>	<b>8.4</b>	<b>84</b>

<sup>1</sup> Previously stated resources were reported in compliance with JORC 2004.

<sup>2</sup> Changes include revised domain boundaries and additional data above 3050mRL<sup>4</sup>, revised estimation parameters and revised classification boundaries.

<sup>3</sup> Below 3050mRL.

<sup>4</sup> Australian Height Datum = 5000mRL. The topographic surface above the Mineral Resource is approximately 5100mRL.

## Drilling and sampling

One hundred holes, including wedges, have been drilled in mineralisation at Carrapateena, with 65,690 metres of samples in the mineralised domains. The total length of drill holes in and near the deposit, including holes intersecting mineralisation, granite and/or cover is 114,613 metres.

Drill testing the spatial extent of the prospect started with a 200 metre x 200 metre grid sequence, with 100 metre x 100 metre infill drilling commencing in September 2006. Two infill holes with four additional wedges were drilled to 50 metre spacing (north-south) in the bornite zone in the south west of the deposit. Since late 2011, OZ Minerals has drilled non-vertical holes with the intention of better defining the limits of the copper mineralised zones. The holes have been drilled in a variety of directions and so the spacing between holes is not uniform. The spacing is mostly less than 50 metre in the upper part of the south-western copper-mineralised zone, becoming wider at depths below 3,800mRL.

## **Mining and Geotechnical**

Block caving has been identified as a potentially technically and economically viable mining method for Carrapateena. Further work is underway to confirm this premise, however for the basis of this statement it is assumed that this method of mining will be suitable for Carrapateena. Estimated total operating costs for block caving, inclusive of mining, processing and site G&A, are A\$23 per tonne, which is based on the economic assumptions mentioned above and industry measures. This corresponds to a cut-off grade of approximately 0.3 percent copper. Within the Mineral Resource there is a sufficient volume of contiguous mineralisation above a cut-off grade of 0.3 percent copper to support a block cave mine.

Preliminary geotechnical studies have indicated that the Carrapateena deposit will cave and that fragmentation early in the mine life will be coarse. Pre-conditioning by hydro-fracturing and blasting may be used to improve fragmentation and hence the build-up in ore production. Sediments which overlie the mineralisation will fragment more finely and contribute dilution to the caved ore mass. Dilution will increase as the caved mass is drawn down.

## **Processing**

Metallurgical test work conducted over the last 12 months as part of the Carrapateena Pre-Feasibility Study from samples selected via a geometallurgy study to ensure representativeness has shown that a conventional crushing, grinding and flotation circuit is suitable for copper extraction from the mineralisation with concentrate grades of 30 to 35 percent copper at 90 percent recovery. Gold is recoverable by flotation at a concentrate grade of 10 grams per tonne with 70 percent recovery achievable. Concentrate grades and recoveries are averages from specific material type testing within the footprint suggested by geotechnical and mining studies. These material types are expected to account for the bulk of the mineralisation within this footprint.

## **Environment**

Carrapateena has an approved Retention Lease for the development of a decline. A waste rock storage facility has been designed to encapsulate potentially acid forming material from the decline. As part of the approvals processes baseline studies covering groundwater, surface water, flora, fauna, social aspects, air quality and radiological impacts are ongoing. OZ Minerals has protocols to define and manage environmental risks.

## **Comparison to Previous Estimate**

For the purposes of comparison to the previously stated Resources the following table shows the previous and current Resources at cut-off grades of 0.3 percent, 0.5 percent and 0.7 percent copper.

**Table 4: Comparison of Current (2013) and Previous (2012) Mineral Resources for the Carrapateena deposit at 0.3%, 0.5% and 0.7% Cu COG's**

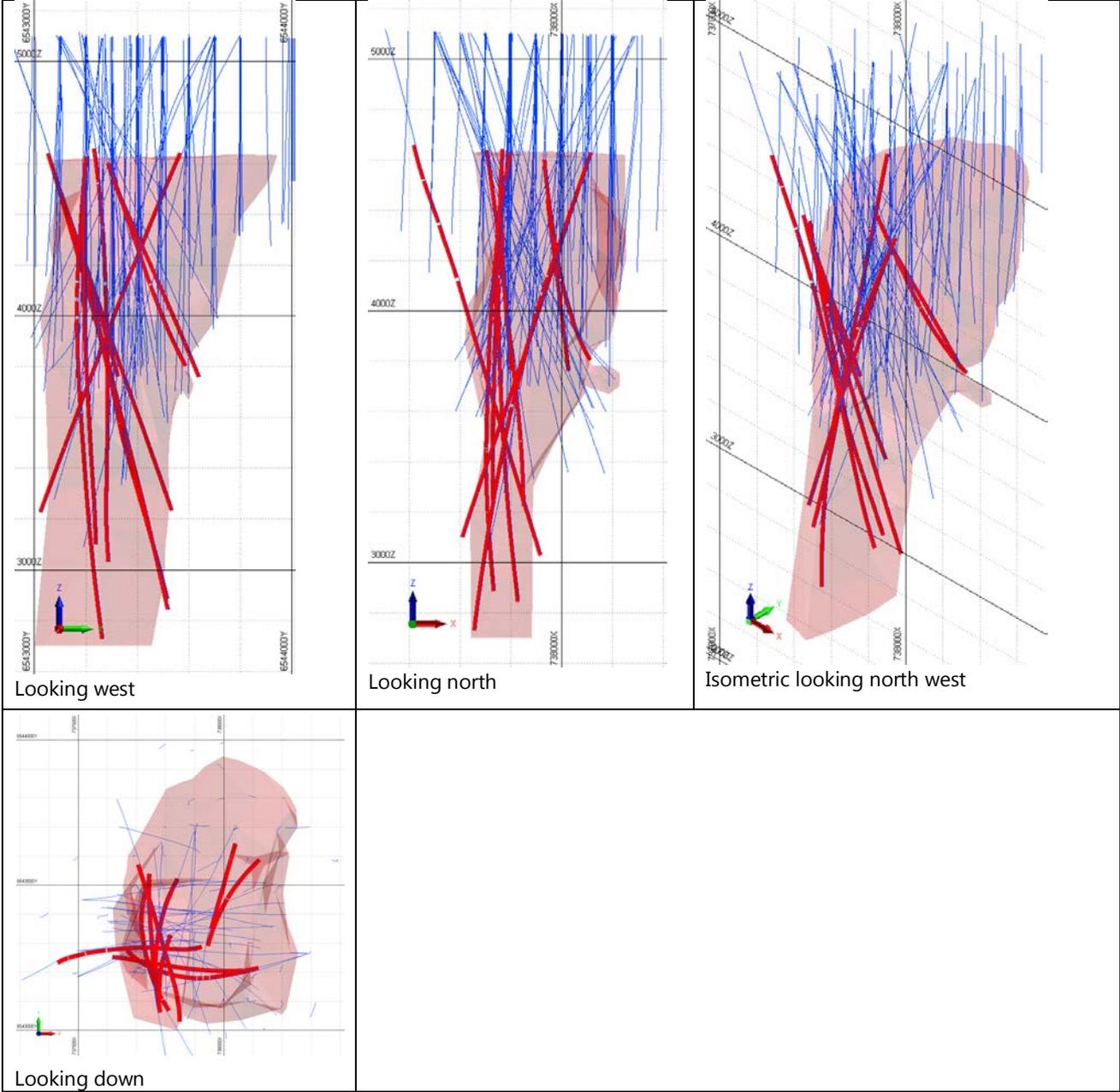
COG % Cu	Estimate	Classification	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	U (ppm)	Density (t/m <sup>3</sup> )	Cu (Mt)	Au (Moz)	Ag (Moz)
0.3	Current	Indicated	356	1.0	0.4	4.3	191	3.49	3.7	4.9	50
		Inferred	444	0.6	0.2	2.4	126	3.44	2.6	3.5	35
		Total	800	0.8	0.3	3.3	155	3.47	6.3	8.4	84
	Previous	Indicated	392	1.0	0.4	4.2	165	3.41	3.8	4.9	53
		Inferred	368	0.6	0.2	2.3	120	3.40	2.1	2.5	27
		Total	760	0.8	0.3	3.3	143	3.41	5.9	7.3	81
0.5	Current	Indicated	283	1.2	0.5	5.0	214	3.49	3.4	4.5	45
		Inferred	260	0.7	0.3	2.9	149	3.47	1.9	2.5	24
		Total	543	1.0	0.4	4.0	183	3.48	5.2	7.0	70
	Previous	Indicated	282	1.2	0.5	5.2	197	3.44	3.4	4.4	47
		Inferred	193	0.8	0.3	2.8	144	3.43	1.5	1.6	17
		Total	475	1.0	0.4	4.2	175	3.43	4.8	6.0	64
0.7	Current	Indicated	199	1.4	0.6	6.1	240	3.50	2.9	3.7	39
		Inferred	116	0.9	0.3	3.6	161	3.51	1.0	1.3	13
		Total	315	1.2	0.5	5.2	211	3.50	3.9	5.0	52
	Previous	Indicated	202	1.4	0.6	6.2	227	3.45	2.9	3.6	40
		Inferred	90	1.0	0.3	3.6	162	3.43	0.9	0.9	10
		Total	292	1.3	0.5	5.4	207	3.44	3.8	4.5	51

The changes in the resources between this (2013) and the previous (2012) estimate are attributable to several factors as described below.

**Data**

- OZ Minerals has drilled seven more holes into the mineralisation, including five wedges, since the previous estimate.
- Assay results have been received for 11,187 metres of samples in the mineralisation since the previous estimate.

Figure 2 shows the traces of drill holes in blue and sampled intervals in red for which data has become available since the previous estimate. The shape represents the interpreted hematite breccia zone which hosts the mineralisation. Table 5 tabulates the data available for this estimate and the previous estimate.



**Figure 2. Hematite breccia zone containing the mineralisation, drill hole traces and locations of samples with assay results received since the previous estimate**

**Table 5: Summary of data available for this estimate**

<b>Item</b>	<b>Previous data</b>	<b>New data</b>	<b>Total this estimate</b>
Number of holes informing the resource estimate (includes wedges as separate holes). Only includes holes that intersect at least one of the mineralised domains.	93 (including 22 wedges)	7 (including 5 wedges)	100 (including 27 wedges)
Number of metres of samples informing the resource estimate (includes intervals from wedges). Only includes intervals in mineralised domains.	54,502	11,187	65,690
Number of density measurements in mineralised domains	42,114	6,629	48,743
Number of metres of drilling in holes informing the resource estimate (includes intervals from wedges). Includes all intervals whether in mineralised or barren (i.e. cover, country granite) domains.	105,715	8,898	114,613

### **Interpretation**

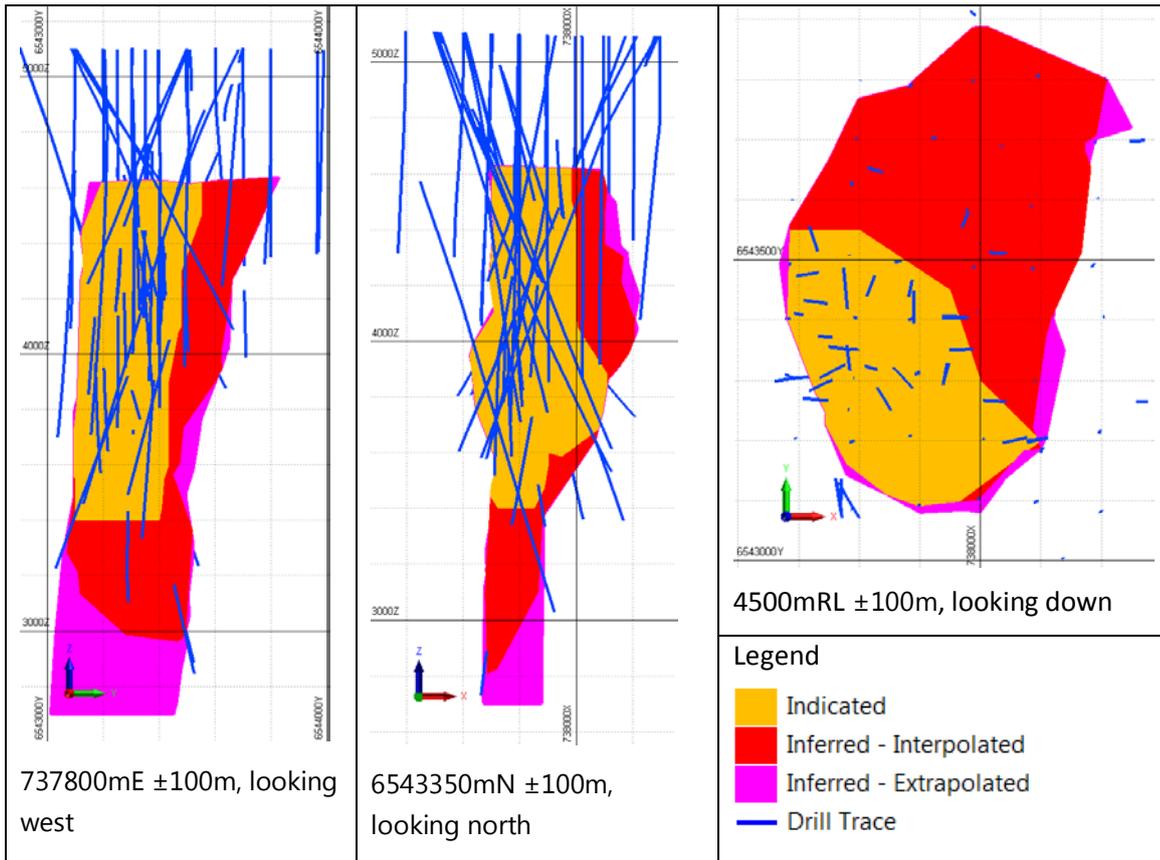
- The additional data has provided OZ Minerals' geologists with a better basis for understanding and interpreting the deeper part of the deposit. All domain boundaries were reviewed and revised once assay data became available from the drilling programme completed in February 2013.
- The key difference between the 2012 and 2013 interpretations is the extension of the hematite breccia envelope and copper mineralisation at depth. Other minor changes included:
  - Increasing the size and shape of the granite-dominant zone in the upper eastern part of the breccia complex. This zone typically lacks significant copper mineralisation.
  - Minor revisions to the hematite breccia envelope in the upper part of the deposit, generally making it slightly smaller.
  - Combining the upper and lower western copper mineralised domains into one domain.
  - Removal of the gold-only rim to the north of the main south western copper mineralisation, and inclusion of this gold-mineralised material in a barren hematite zone for the purposes of gold estimation. This was done to reduce the number of gold grade outliers within the main copper-mineralised zone.
  - Updated interpretation of dykes on the basis of additional data.

### **Estimation**

- The Bornite zone was used as a domain having hard boundaries with respect to copper grade estimation.
- Variogram models and search parameters were revised for all domains.

## **Classification**

- The latest Resources have been classified after taking the following issues into account:
  - Robustness of the underlying conceptual geological model.
  - Quality of informing data (location, logging, sampling, sample handling and preparation, assaying, density and data management).
  - Robustness of the interpretation (and specifically whether any plausible, but materially different interpretations are possible).
  - Data arrangement and data density with respect to the continuity of:
    - Grade of key variables (Cu, Au, U)
    - Density; and
    - Geology.
  - Relevance of estimation methods and parameters.
  - Checks that the modelling was implemented as intended.
  - Checks to ensure estimated grades and density adequately matched the inputs.
  - Checks on wireframe volumes vs. block volume for each domain.
  - Contiguity of the mineralisation around the likely economic cut-off grade (~0.3 percent copper).
  - Reasonable prospects (see detailed comments below).
- The Indicated zone has been joined into one contiguous shape. Some non-contiguous material in the northern part that was previously reported as Indicated in the 2012 Mineral Resource has been reclassified as Inferred. The 2013 Indicated zone has been extended down 170m to 3400mRL, based on drill hole data obtained after the previous estimate.
- Classification has been undertaken by the Competent Person, who has taken into account advice from OZ Minerals' geologists and its external consultants specifically regarding the:
  - Quality of the data
  - Interpretation of geological domains and grade domains, and
  - Quality of the estimated block grades and density.



**Figure 3. Mineral Resource classification shapes**

### Reasonable Prospects

- Mining studies suggest Block Caving to be the most likely mining method in areas where the mineralisation is wide and contiguous.
- A review of this model within that context and economic assumptions reveals that a cut-off grade of 0.3 percent copper is currently appropriate for defining resources in areas where the mineralisation is wide and contiguous.
- Given the likely mining method the classification also accounts for the expected contiguity of material above cut-off grade.
- Metallurgical test work to date indicates that a saleable concentrate can be produced.
- Preliminary geotechnical studies have indicated that the deposit is amenable to block caving.

**Dimensions**

- The maximum extents of the Mineral Resource are approximately 630 metres (X) x 920 metres (Y) x 1,900 metres (Z). The deposit geometry is generally pipe-like, with the lateral extent reducing with depth. Limits of the Mineral Resource are listed in Table 6.

**Table 6: Dimensions of the Mineral Resource**

<b>Dimension</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Extent (metres)</b>
Easting	737,620	738,250	630
Northing	6,543,010	6,543,930	920
RL	2,720	4,620	1,900

**Key points relating to the Mineral Resource Estimate**

**Sampling Techniques and Data**

<b>Criteria</b>	<b>Comments</b>
Sampling techniques	<p>All basement samples consist of diamond drill core (NQ, NQ2, HQ and PQ) cut with a manual or automatic core saw and sampled as half core, except for PQ core, metallurgical holes and field duplicates, where quarter core was sampled. All available basement drill core was sampled. Sampling interval is generally 1m but respects geological contacts in places.</p> <p>Entire samples were crushed then pulverised to a nominal 90 percent passing 75 microns. Sizing data was collected for OZ Minerals drill holes for one in every 40 samples. Sub-sampling, sample preparation, assay methods and assay quality are discussed in other parts of this table.</p>
Drilling techniques	<p>For Teck Cominco Australia Pty Ltd (Teck) drill holes, a combination of RC and mud-rotary was used for precollars. HQ diamond drilling was used through to top of basement and NQ through basement to EOH. For OZ Minerals drill holes, diamond drilling was used from surface with a combination of PQ, HQ and NQ2 core sizes.</p> <p>70 percent of Teck drill holes were vertical to sub-vertical, two holes were angled (non-vertical) from surface, and 13 holes were wedges off a sub-vertical parent hole. All OZ Minerals drill holes were angled from surface. For angled and wedge holes, core was orientated using an ACE core orientation tool.</p>
Drill sample recovery	<p>Length based core recovery is measured from reassembled core for every drill run. The data is recorded in a GBIS database. Average core recovery was high with more than 99 percent recovered through the mineralised zone.</p> <p>The style of mineralisation and drilling methods employed lead to very high sample recovery.</p> <p>There is no significant relationship between sample recovery and grade. The very high core recovery means that any effect of such losses would be negligible if such a relationship even existed.</p>
Logging	<p>Core samples were geologically and logged by geologists and geotechnically logged by geologists (Teck drill holes) or geotechnical personnel (OZ Minerals drill holes). Logging is considered to have appropriate detail to support Mineral Resource estimation, mining studies and metallurgical studies.</p> <p>Core logs were qualitative and quantitative in nature. Lithology and alteration were logged qualitatively; mineralisation, structure and geotechnical data were logged quantitatively. Core is photographed both dry and wet after metre marking and orientation.</p> <p>All core was logged.</p>

<b>Criteria</b>	<b>Comments</b>
Sub-sampling techniques and sample preparation	<p>All sampled core was cut with an automatic or manual core saw in a consistent way that preserved the bottom of hole reference line, where present. Half core was used for normal samples, quarter core for field duplicates and for three metallurgical drill holes. Samples were mostly 1m in length, but also ranged from 0.5 metre to 1.5 metre if adjusted to geological or major alteration boundaries.</p> <p>Only core samples were used in basement.</p> <p>For OZ Minerals drill holes, sample preparation included drying, crushing, and pulverising in full to a nominal 90 percent passing 75 microns. This is considered industry standard for this style of mineralisation. For Teck drill holes, no documentation of quality control procedures for sub-sampling stages is available.</p> <p>For OZ Minerals drill holes, controlled copies of SOPs (Standard Operating Procedures) and sign-offs exist for all sampling steps, all staff were adequately trained. Checks were made by geologists on sampling prior to loading data into database.</p> <p>Sizing data was collected for OZ Minerals holes for one in every 40 pulverised samples by the laboratory analysing the samples.</p> <p>Analysis of duplicate data from a variety of scales, from quarter core to crushed core to pulp duplicates, indicates the sample sizes are appropriate to the grain size of the material being sampled.</p>

<b>Criteria</b>	<b>Comments</b>
Quality of assay data and laboratory tests	<p>OZ Minerals received data quality reports and data for Teck drill holes, including Certified Standards, which indicated the raw data were suitable as a basis for Mineral Resource estimation. Samples sent to Bureau Veritas' (Amdel) Adelaide Laboratory by Teck had copper and grades determined by IC3E, with 'ore grade' copper (&gt;1 percent) undergoing reanalysis by MET1. Gold grades were determined via FA2. Samples sent by Teck to Genalysis in Perth had copper grades determined by four acid digest and ICP-OES, with 'ore grade' analysis (copper &gt;1percent) determined by modified four acid digest and AX/OES. Gold at Genalysis was determined by Fire Assay finished by flame AAS.</p> <p>For OZ Minerals drill holes, copper grades were determined using a modified aqua regia digest with ICP-OES determination at Bureau Veritas Adelaide Laboratory. Gold grades were determined by 40g Fire Assay finished by AAS at Bureau Veritas Adelaide Laboratory (Amdel).</p> <p>For both Teck and OZ Minerals assay results, the techniques are considered to be total for all relevant elements with the exception of sulphur (Teck, ICP-OES) which is near-total.</p> <p>Geophysical measurements of magnetic susceptibility and radioactivity were taken on drill core by both Teck and OZ Minerals, but this data has not been used for Mineral Resource estimation.</p> <p>For Teck drill holes, assay data quality was determined through submission of field and laboratory standards, blanks and repeats which were inserted at a nominal rate of one each per 20 drill samples.</p> <p>For OZ Minerals drill holes, assay data quality was monitored through submission of standards and blanks every 25 samples, quarter core field duplicates and lab coarse crush and pulp duplicates every 50 samples.</p> <p>Teck sent a selection of coarse rejects and pulps to an umpire laboratory for analysis. Comparison of results between laboratories did not reveal any significant problems. OZ Minerals submitted two batches of check assays each to two umpire laboratories. Comparison of the results between laboratories did not reveal any significant problems. Quarterly QAQC reports commenced from the June 2012 quarter.</p> <p>Minor differences exist in the accuracy and precision of data between drilling campaigns (Teck using Amdel, Teck using Genalysis, OZ Minerals using Bureau Veritas Amdel), but the differences are not considered to be significant, and the results are considered to be acceptable.</p>

<b>Criteria</b>	<b>Comments</b>
Verification of sampling and assaying	<p>Documented verification of significant intervals by independent personnel has not been done, however the mineralisation appears to be reasonably continuous and is not dominated by any one significant intersection. Furthermore the tenor of copper is visually predictable. The assay data for all Teck drill holes were imported from source lab text files into the OZ Minerals database by an external company (Expedio), and the results were compared with the database supplied by Teck.</p> <p>Several drill holes were wedged providing close-spaced data from which short scale variability was assessed. OZ Minerals drilled several holes around Teck drill hole CAR050 to confirm grade and geological continuity. Two pairs of twin holes were drilled through the Mineral Resource for metallurgical testing. A review of data from these holes reveals very strong correlation of geology and grades.</p> <p>Primary data is stored both in its source electronic form, and, where applicable, on paper. Assay data is retained in both the original certificate (.pdf) form, where available, and the text files received from the laboratory. Data entry, validation and storage are discussed in the section on database integrity below.</p> <p>No adjustments were made to assay data used in this estimate.</p>
Location of data points	<p>All collar locations were determined by DGPS.</p> <p>Teck drill holes had downhole surveys (about every 30 metre) by multiple methods including Ranger Multi-Shot survey tool, Wellnav SRG (surface recording gyro) and Eastman Camera surveys.</p> <p>For OZ Minerals drill holes, magnetic downhole surveys were taken at nominal 30 metre intervals using digital Reflex EZ-Trac equipment. Completed holes were gyro surveyed using a conventional Reflex Gyro E537 tool. An APS GPS-based system was used to determine the reference azimuth at the collar. Due to difficulties with establishing the collar reference azimuth, some OZ Minerals holes use as a reference azimuth a calculated "best-fit" with EZ-Trac (magnetic) surveys in non-magnetic ground in the cover sequence. To minimise the effect of drift of azimuth measurements with the conventional gyro, an average of multiple runs was normally used, generally two runs up to June 2012, and four runs from that date onwards. Some holes were surveyed by Surtron Pty Ltd and/or ABIM Solutions Pty Ltd using a north-seeking gyroscope.</p> <p>The grid is MGA94 zone 53. Local elevations have been used, where 5000mRL is equal to Australian Height Datum.</p> <p>A DTM was flown for Teck in 2007, and over an expanded area for OZ Minerals in April 2012. The 2012 DTM was consistent (<math>\pm 1.6</math>m maximum) with the DGPS collar pickups for drill holes affecting the Mineral Resource.</p>

<b>Criteria</b>	<b>Comments</b>
Data spacing and distribution	<p>No Exploration Results are reported in this statement.</p> <p>Drill testing the spatial extent of the prospect started with a 200 metre x 200 metre grid sequence, with 100 metre x 100 metre infill drilling commencing in September 2006. Two infill holes with four additional wedges were drilled to 50 metre spacing (north-south) in the bornite zone in the south west of the deposit. Since late 2011, OZ Minerals has drilled non-vertical holes with the intention of better defining the limits of the copper mineralised zones. The holes have been drilled in a variety of directions and so the spacing between holes is not uniform. The spacing is mostly less than 50 metre in the upper part of the south-western copper-mineralised zone, becoming wider at depths below 3,800mRL.</p> <p>The data spacing and distribution is sufficient to establish geological and grade continuity appropriate for the Mineral Resource estimation and classification.</p> <p>Compositing of samples to 10m lengths is discussed in Estimation and modelling techniques, below. No physical compositing of samples has occurred.</p>
Orientation of data in relation to geological structure	<p>The Hematite Breccia that hosts the mineralisation is generally massive (at the scale of interest) with little internal structure. The deposit is interpreted as steep on the south and west sides, with recent infill drilling now adequately defining the locations of these boundaries.</p> <p>The edges of the main south-western copper mineralisation is now reasonably well constrained in the upper part of the deposit. The original Teck drilling was mostly vertical but OZ Minerals recent infill drilling program consisted of deep angled holes to better define the boundaries of the steeply plunging mineralisation. Some of the Inferred part of the Mineral Resource, particularly the upper part of the eastern low-grade mineralisation (mostly east of 738,000mE, above 4,100mRL), still relies primarily on vertical drill holes at 100 metre x 100 metre horizontal spacing.</p> <p>Structures and mineralisation boundaries through the deposit mostly appear to be sub-vertical. Angled drill holes have been used to intersect these boundaries. Within the mineralised zone anisotropy appears to be minor. A variety of drill hole orientations have been used to minimise the possibility of bias being introduced by drill hole orientation. The mineralisation occurs mostly as disseminated sulphides and does not show a strong structural fabric at drill-core scale.</p> <p>Recent angled drilling by OZ Minerals has not highlighted any orientation-specific sampling biases (however the orientation still means that the location of some internal domain boundaries are not always well defined).</p>

<b>Criteria</b>	<b>Comments</b>
Sample security	<p>Samples were transported from site to the laboratories by road. For OZ Minerals drill holes, despatches listing samples were sent electronically to the laboratory. Any discrepancy between listed and received samples was communicated back to site staff for resolution.</p>
Audits or reviews	<p>An internal audit of Teck's Carrapateena database was conducted in 2008. This study identified a significant proportion (9 percent) of failed QAQC samples in the Teck database at that time. During 2007 and 2008 a total of 9007 samples, including QAQC samples, coarse rejects and quarter core from an entire hole (CAR051W1) were sent to an umpire laboratory (Genalysis, Perth) for reanalysis. Minor contamination issues were concluded to have affected Amdel results but were not deemed to have a significant impact on the data.</p> <p>An external audit of Bureau Veritas Amdel Adelaide was undertaken by ioGlobal in October 2012. OZ Minerals' geologists conducted three inspections of Bureau Veritas Amdel Adelaide during the 2011-2013 drilling campaign. Minor issues were noted on both the audit and inspections but were not considered to be material overall.</p> <p>AMC Consultants Pty Ltd undertook a review of the data collection and sampling procedures during an audit of the Mineral Resource estimate between 30 September and 3 October 2013. Whilst AMC's audit took place after the data collection period for the Mineral Resource estimate, AMC formed the view that the data collection procedures were industry standard practice, with the exception of the monitoring of the quality control samples, which did not appear to be being undertaken on a batch by batch and continuous basis. OZ Minerals accepts AMC's view, but does not believe that this issue has had a material effect on the quality of the data, as the systematic monitoring of quality control samples occurred on a periodic basis prior to modelling in any case.</p>

**Mineral Resources**

<b>Criteria</b>	<b>Comments</b>
Mineral tenement and land tenure status	The Carrapateena deposit is located in South Australia in Exploration Licence 4903 which is held by OZ Minerals Carrapateena Pty Ltd and OZM Carrapateena Pty Ltd. EL4903 is currently in good standing.
Exploration done by other parties	The Carrapateena deposit was discovered in 2005 by RMG Services Pty Ltd. The approximate lateral extent of the mineralised zone was defined by drilling carried out during 2006-2008 by a joint venture between RMG Services Pty Ltd and Teck Cominco Australia Pty Ltd. The project was acquired by OZ Minerals in 2011.
Database integrity	<p>Data is stored in a SQL Server database and is entered via a GBIS front end. Assay data were loaded from text files supplied by the laboratory directly into the database without manual transcription. Core logging for OZ Minerals holes was directly into the database using Toughbooks. Weight measurements for density were keyed into the database up to 16 March 2012, and then automated data capture was used from that date onwards. Core length measurements for recovery were made on paper prior to entry into the GBIS database. Whenever records are added or modified, the database records the time, date and the identity of the user entering or changing the data. Different user profiles and security settings exist to minimise the possibility of inadvertent modification of data.</p> <p>Lookup codes are used to ensure consistency of the way data are recorded and for referential maintaining integrity of the database. Assay and density data were reviewed visually for reasonableness and also through using statistical plots. Outliers identified were investigated and corrected as required. The Teck historical data loaded from source laboratory files was compared with the database handed over by Teck.</p>
Site visits	The Competent Person visited Carrapateena site three times during 2013, and has visited site a total of eight times since OZ Minerals acquired the Carrapateena Project.

<b>Criteria</b>	<b>Comments</b>
Geological interpretation	<p>Confidence in the geological interpretation varies locally, and is dependent on the spacing of drilling as well as the continuity of mineralisation, both of which vary throughout the deposit. At deposit scale, the hematite breccia zone appears to be quite continuous, but its limits at depth are not yet well-defined. A subset of the hematite breccia zone contains significant copper mineralisation. Confidence in the boundaries and continuity of the southwest copper-mineralised zone is higher than confidence in the more discontinuous and low-grade zones of mineralisation in the north and east. Confidence decreases significantly with depth as the distances between drill holes becomes wider. Both the hematite breccia zone and the copper-mineralised zones are open at depth.</p> <p>The geological interpretation was based on drill core data, including geochemical data, and core logs and photos. The geological model is interpreted to be a near-vertical body of hematite dominated breccia hosted within altered granite. Holes drilled by Teck up to 2008 were mostly sub-vertical, and these have in some cases been assumed to be near-parallel to geological and mineralisation boundaries. This interpretation has mostly been confirmed by drilling by OZ Minerals Limited since 2011 using angled drill holes. It has been assumed that near-vertical boundaries continue at depth where there is limited data. Alternative, plausible interpretations in the upper part of the deposit are only likely to differ in the nature of the boundaries between domains. Domain boundaries in the lower part of the Inferred Mineral Resource could plausibly be interpreted differently, in a way that could change the grade-tonnage distribution of the estimate in this area.</p> <p>Copper sulphide mineralisation is mostly hosted in a hematite breccia zone within altered granite. The deposit is overlain by mostly unmineralised sediments. There is evidence of a leached zone lacking copper mineralisation at the top of the hematite breccia zone immediately below the unmineralised sediments. The Mineral Resource is restricted to copper mineralisation hosted in the hematite breccia zone, up to the base of the leached zone.</p> <p>Copper grades are generally highest where bornite is the dominant copper sulphide. Chlorite alteration is present in some parts of the deposit. Where chlorite is abundant, copper and gold grades are generally low. Continuity of zones of chlorite alteration can be quite variable and zones with abundant chlorite have not been modelled separately. Dykes are present within the hematite breccia zone and in the granite, but they are not necessarily barren of copper and are not considered to have a significant effect on the estimated mineral resource. Gold-only mineralisation is present in some parts of the hematite zone where only trace concentrations of copper are present. Copper mineralisation is generally accompanied by gold mineralisation, although gold grades vary.</p>
Dimensions	<p>The maximum extents of the Mineral Resource at a 0.3 percent copper cut-off are 630 metres (X) x 920 metres (Y) x 1,900 metres (Z). The deposit geometry is generally pipe-like with the lateral extent decreasing with depth. The topographic surface over the mineralisation is at approximately 5100mRL. The depths from surface to the upper and lower limits of the Mineral Resource are approximately 480 metres and 2,380 metres respectively.</p>

<b>Criteria</b>	<b>Comments</b>
Estimation and modelling techniques	<p>Domain definition used a combination of assay data and geology, taking into consideration the characteristics of the breccia, the mineralogy of Cu and Fe, and the Cu and Fe grades. There are distinct differences in Cu grade population statistics between lithological domains and changes in grade at lithological domain boundaries. Mineralisation domains were derived primarily from the lithological domains but modified for the presence of leached zones and differences in copper sulphide mineralogy. Mineralisation domains were used for the estimation of Cu, Au, Ag, Co, S and Ba. Lithological domains were used for the estimation of SG, U, and major rock-forming elements. Two additional domains were created for estimation of F because of the distinctly bimodal F grade populations in the main copper-mineralised domains. The mineralisation domains relevant for the estimated Mineral Resource are:</p> <ul style="list-style-type: none"> <li>• Chalcopyrite in main copper-mineralised zone</li> <li>• Bornite in main copper-mineralised zone</li> <li>• Eastern copper-mineralised zone</li> <li>• Barren hematite zone</li> <li>• Internal granite zone</li> </ul> <p>Other domains exist including the surrounding granite, dykes, leached zones and cover sequence, but these do not contain significant copper mineralisation and have been excluded from the estimated Mineral Resource. Domain boundaries were treated as hard boundaries for the estimation of all variables. A significant difference between the domains used in the previous Carrapateena Mineral Resource estimate and this estimate is the treatment of bornite and chalcopyrite zones within the main mineralised zone. In the previous estimate, bornite and chalcopyrite mineralisation were both grouped into one domain. In this estimate they have been treated separately. The effect of this is to confine the generally higher-grade copper mineralisation into the bornite domain, which locally changes estimated block grades around the chalcopyrite-bornite boundary. Domain wireframes were constructed using a series of surfaces. Cross-sectional interpretation was not the primary method of wireframe construction due to a combination of the pipe-shaped mineralisation, irregular drill pattern, and steep drill holes.</p> <p>Estimation used Ordinary Kriging. Samples were composited to 10 metres. Variographic analysis was done using Snowden Supervisor. Domain construction and estimation was done using Maptek Vulcan. Up to three search and estimation passes were used. The first pass used search radii equivalent to 100 percent of the modelled variogram ranges. The second pass used 200 percent of the modelled variogram range. The first two passes used a minimum of three and a maximum of 16 composites. The first pass allowed a maximum of only twelve composites from a single drill hole, to reduce the number of blocks estimated using composites from only one hole. No octant search was used. This differs from the previous estimate. The reason for the change was because the octant/line restrictions in the previous estimate had the effect of making the search more isotropic, and led to dominantly</p>

Criteria	Comments
	<p>sub-horizontal grade interpolation perpendicular to steep drill holes that was not considered to have a realistic appearance. The third pass assigned the median composite grade for the relevant domain to unestimated blocks, and to blocks that had unrealistic estimated grades (negative grades or higher grades than the maximum composite grade for the domain). Blocks where a copper grade was assigned by the third pass account for 0.02 percent of the Mineral Resource.</p> <p>The maximum distance of extrapolation is 287m. A strictly geometric definition of extrapolation has been adopted. Any blocks falling outside a tetrahedron defined by four samples within the breccia complex are considered to be extrapolated. Approximately 20 percent of the Inferred Mineral Resources (at the 0.3 percent copper cut-off) are deemed to be extrapolated. Fifty percent of extrapolated material (at 0.3 percent copper cut-off) is below 3100mRL, where drilling data becomes sparse. Near-vertical continuity of mineralisation has been assumed in the absence of other data at depth. There has been no vertical extrapolation below the blocks containing the deepest drill hole sample data at 2728mRL.</p> <p>Check estimates were created using the nearest neighbour and inverse distance squared methods. The inverse distance squared model agreed quite closely with the Ordinary Kriging model. The nearest neighbour model had a significantly different block grade distribution relative to the Ordinary Kriging model, as was expected for the nearest neighbour method. This estimate used the data that was available for the previous estimate, plus an additional 14,154m of sampling (including unmineralised domains) from holes that were in progress or drilled after the cut-off date for the previous estimate. There has been no historical mine production from the Carrapateena deposit.</p> <p>The current assumption is that revenue will only be obtained from Cu, Au and Ag.</p> <p>Grades were estimated independently for Cu, Au, Ag, Co, U, F, C, Fe, SG (as measured), and weight loss on drying. Sulphur and Ba were also estimated using the same parameters as Cu to ensure that the same composites were used with the same Kriging weights as for Cu, because the purpose of estimating these elements was to distinguish the sulphide/sulphate mineralogy. Silicon, Al, K, Mg, Ca, Mn, Na, P, Ti, Ce and La were estimated using the same Kriging weights as Fe.</p>

<b>Criteria</b>	<b>Comments</b>
Estimation and modelling techniques	<p>The block size is 10x10x10 metres. This is small in relation to planned cave dimensions, to horizontal drill-hole spacing, and to the search radii. This was done in order to adequately represent domain geometry without the necessity to account for volume proportions by either block partials or sub-blocking.</p> <p>Sample spacing varies widely. In the vertical direction, composites are spaced at 10 metres downhole. In the horizontal plane, the spacing between holes is not uniform. In the higher grade core of the deposit, the spacing is targeted to 50x50 metres, increasing to ~100x100 metres outwards from here. Since holes have been angled to obtain information on lateral controls, the horizontal spacing varies.</p> <p>For the previous estimate, the tonnage and grade of block estimates were checked against a theoretical distribution of tonnage and grade for blocks of this size, derived from the Discrete Gaussian model of change of support. These were sufficiently close to make Ordinary Kriging estimates a reliable basis for reporting and mine planning. This work was not revisited for the current estimate.</p> <p>The concept of an Selective Mining Unit (SMU) is a difficult one for a block cave. Of more interest is the position of ore/waste transitions. Blocks in this estimate were made sufficiently small as to provide resolution of domain geometry in the block model.</p> <p>Strong correlations exist between some variables. Variables have been estimated independently. Other than F, C and weight loss on drying, all other variables estimated are fully assayed and estimated using similar domains, methods and parameters, meaning that the data assists to preserve any correlation between the variables at the block scale.</p> <p>Geological interpretation guided the selection of domains, along with exploratory data analysis. The Carrapateena Breccia Complex was treated as a limit for the estimated Mineral Resource, although localised zones of copper mineralisation exist beyond this. Assumed vertical continuity has guided the shape of the domains below 3100mRL where drill holes are more widely spaced.</p> <p>Very high-grade composites were restricted (with a "high yield limit") in their influence to the limit of the pass one search (and variogram) range. The threshold for outlier restrictions was assessed independently for each variable for each domain and depended on the grade distribution. Copper grade distribution was not highly skewed and the high yield limit was applied to approximately 0.5 percent of the composites for relevant domains. For gold and silver the high yield limit varied by domain, depending on the characteristics of the mineralisation and the shape of the grade distribution, but typically applied to approximately 1 percent of composites. Deleterious elements and major rock-forming elements were not subjected to high grade limits. Grade capping was applied to SG data only. Where possible, the preferred method for dealing with outliers was to construct domains appropriately.</p> <p>Estimates were carefully validated by: visual validation in 3D, checks include that all blocks are filled, that block grades match sample grades logically, that artefacts are not excessive given the choice of search parameters, and visual assessment of relative</p>

<b>Criteria</b>	<b>Comments</b>
	<p>degree of smoothing.</p> <p>Statistical validation by: comparison of input versus output grades globally; semi-local checks using swath plots to check for reproduction of grade trends; comparison of global grade tonnage curve of estimates against grade tonnage curves derived from the previous estimate and check estimates made using the inverse distance and nearest neighbour methods.</p>
Moisture	<p>Tonnages are estimated on a dry basis. Although core recovery is very high (&gt;99 percent) and core is competent and of very low porosity, a small moisture adjustment has been made to measured SG when calculating dry density. Received and dried sample weight measurements were taken at the Bureau Veritas (Amdel) Adelaide laboratory for OZ Minerals drill holes. The percentage difference (weight loss on drying) has been treated as a separate variable for estimation. The dry density from which tonnages were estimated was calculated for each block after correcting for the estimated weight loss on drying. Weight loss on drying averaged 0.3 percent.</p>
Cut-off parameters	<p>Block caving has been identified as a technically and economically viable mining method for Carrapateena. Estimated total operating costs, inclusive of mining, processing and site G&amp;A, for block caving are A\$23 per tonne. This corresponds to a cut-off grade of about 0.3 percent copper including gold credits. Within the Mineral Resource there is a sufficient volume of contiguous mineralisation above a cut-off grade of 0.3 percent copper to support a block cave mine.</p>
Mining factors or assumptions	<p>Preliminary geotechnical studies have indicated that the Carrapateena deposit will cave but that fragmentation early in the mine life is likely to be coarse. Pre-conditioning by hydro-fracturing and blasting may be used to improve fragmentation and hence the build-up in ore production. Sediments which overlie the mineralisation will fragment more finely and contribute dilution to the caved ore mass. Dilution will increase as the caved mass is drawn down.</p>
Metallurgical factors or assumptions	<p>Metallurgical test work conducted over the last 12 months as part of the Carrapateena Pre-Feasibility Study from samples selected via a geo-metallurgy study to ensure representativeness has shown that a conventional crushing, grinding and flotation circuit is suitable for copper extraction from the mineralisation with concentrate grades of 30 to 35 percent copper at 90 percent recovery achievable. Gold is recoverable by flotation at a grade of 10 grams per tonne with 70 percent recovery achievable. Concentrate grades and recoveries are averages from specific material type testing within the footprint suggested by geotechnical and mining studies. These material types are expected to account for the bulk of the mineralisation within this footprint.</p>
Environmental factors or assumptions	<p>Carrapateena has an approved Retention Lease for the development of a decline via Tunnel Boring Machine including the construction of necessary onsite ground water supplies, surface facilities, camps, airstrips, access roads and waste rock storage facilities. The waste rock storage facility was designed to encapsulate potentially acid forming material as determined through kinetic testing studies on a representative suite of samples. Baseline studies commenced as a part of the Retention Lease Approvals work have been ongoing through 2013 to continue to add to regional</p>

<b>Criteria</b>	<b>Comments</b>
	<p>knowledge for any future approvals work. These include groundwater, surface water, flora, fauna, social aspects and air quality and radiological impacts.</p> <p>Further works as a part of the Pre-Feasibility Study are ongoing for the definition of facilities required for the Mining stage of the Carrapateena deposit. Final location for infrastructure and project layout is yet to be determined.</p> <p>Environmental risk will be both defined and managed through the application of appropriate engineering and design controls, monitoring and measurement, modelling and infield inspections and maintenance regimes throughout the prefeasibility and ongoing engineering stages. As a part of engineering studies environmental risk assessments have been and will continue to be conducted on the base case and viable alternatives regarding any proposed waste disposal options, water supply options and mining methodologies. The approval strategy continues to develop as the project is further defined.</p>
Bulk density	<p>The water immersion method was used for density determination. For Teck drill holes, the density was determined from a sample from almost every second metre of core in basement. For OZ Minerals drill holes in basement, the density was determined for the entire length of every metre for NQ core, or a representative sample from every metre of HQ or PQ core.</p> <p>OZ Minerals routinely repeated measurements and also had 2 standards each made of aluminium and titanium for QAQC purposes.</p> <p>The mineralised material is not significantly porous. Moisture has been estimated as described in the Moisture criterion in this table.</p> <p>The lithological domains were considered to be suitable for use as domains for density estimation.</p>
Classification	<p>The basis for resource classification is underpinned by the robustness of the conceptual geological model, quality of data and the continuity of geology and grade relative to the arrangement of data. OZ Minerals provided advice to the Competent Person relating to: the quality of the data and the confidence in the interpretations of geology and mineralisation, the quality of the estimation of grades and density, including, but not limited to, the number of composites, slope of regression, sum of negative weights and weight of the mean for each block estimate, those parts of the model which are unlikely to satisfy the 'reasonable prospects test', mainly on the basis of contiguity, dimensions and grade; and the differentiation of estimates based on interpolation and extrapolation. The Competent Person has checked, reviewed and integrated all of this information and subsequently: assigned a classification of Indicated or Inferred resources to the estimates, and excluded parts of the model that do not to satisfy the 'reasonable prospects test' from the resources.</p>

<b>Criteria</b>	<b>Comments</b>
	<p>Appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data) The result appropriately reflects the Competent Person's view of the deposit.</p>
Audits or reviews.	<p>The current Mineral Resource estimate (as at 30 June 2013) has not been audited. The previous Carrapateena Mineral Resource estimate (as at 31 October 2012) was audited by AMC Consultants Pty Ltd during 2013 to assess whether it was suitable for use in a pre-feasibility study (PFS). The audit found that there were no fundamental flaws in the Mineral Resource estimate and, with minor caveats regarding local grade estimation which may be relevant for the evaluation of selective mining options, it is fit for purpose.</p>
Discussion of relative accuracy / confidence.	<p>As part of the previous estimate in 2012 consultants from Quantitative Geoscience (QG) undertook a 'change-of-support' analysis to assess the likely distortion of the grade-tonnage curve in using OK on relatively small blocks (10x10x10 metres). Given the low level of selectivity available for the proposed mining method (block caving) and the fact that the blocks would be aggregated for the purposes of planning studies the level of confidence in the estimate was deemed to be commensurate with that implied by the classification of resources. This finding is still deemed to be appropriate for this estimate.</p> <p>The block size of 10x10x10 metres is very small when compared to the proposed mining method of block caving for the bulk of the deposit. However, the continuity of mineralisation, drilling grid and estimation methods and parameters employed mean that the estimated grades will be very continuous within a domain. As such it is unlikely that significant quantities of sub-cut-off grade material will sit within the extensive above-cut-off grade material.</p> <p>There has been no production from the Carrapateena deposit for comparison with the estimated Mineral Resource.</p>

## **Competent Person Statement**

The information in this report that relates to Mineral Resources is based on information compiled by Stuart Masters, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (108534) and a Member of the Australian Institute of Geoscientists (5683). Stuart Masters is a full time employee of CS-2 Pty Ltd and has no interest in, and is entirely independent of, OZ Minerals. Stuart Masters has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC 2012). Stuart Masters consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Stuart Masters BSc (Geology), CFSG, has over 27 years of relevant experience as a geologist including ten years in Iron-Oxide-Copper-Gold style deposits. Stuart Masters has visited site on eight occasions since OZ Minerals acquired the project including three times since the previous Mineral Resource was reported.

### **Stuart Masters CS-2 Pty Ltd**

## **Contributors**

- Overall
  - Stuart Masters, CS-2 Pty Ltd
- Data Quality
  - Bruce Whittaker, Sophie Damm, OZ Minerals
- Geological Interpretation
  - Bruce Whittaker, Ryan Pippy, Mick Sawyer, John de Little, OZ Minerals
- Estimation
  - Bruce Whittaker, OZ Minerals

Stuart Masters is solely responsible for resource classification but has relied on, and checked and reviewed, data and advice from:

- OZ Minerals' geologists regarding data quality, interpretation and estimation, and
- Geostatisticians from Quantitative Geoscience (QG) regarding grade modelling work undertaken for the previous estimate, but which remains relevant to this estimate.