

A modern mining company



07 November 2016

The Manager, Companies  
Australian Securities Exchange  
Companies Announcement Centre  
20 Bridge Street  
Sydney NSW 2000

Dear Sir/Madam,

**Carrapateena Project Ore Reserve and Mineral Resource Explanatory Notes**

Please find enclosed the 2015 Carrapateena Restated Mineral Resource Statement as at 17 October 2016 and Carrapateena Ore Reserve Statement as at 20 October 2016.

Sincerely,

A handwritten signature in black ink, appearing to be 'R Mancini', with a long horizontal flourish extending to the right.

**Robert Mancini**

Company Secretary and Head of Legal

**OZ Minerals Limited**

**Carrapateena Project**

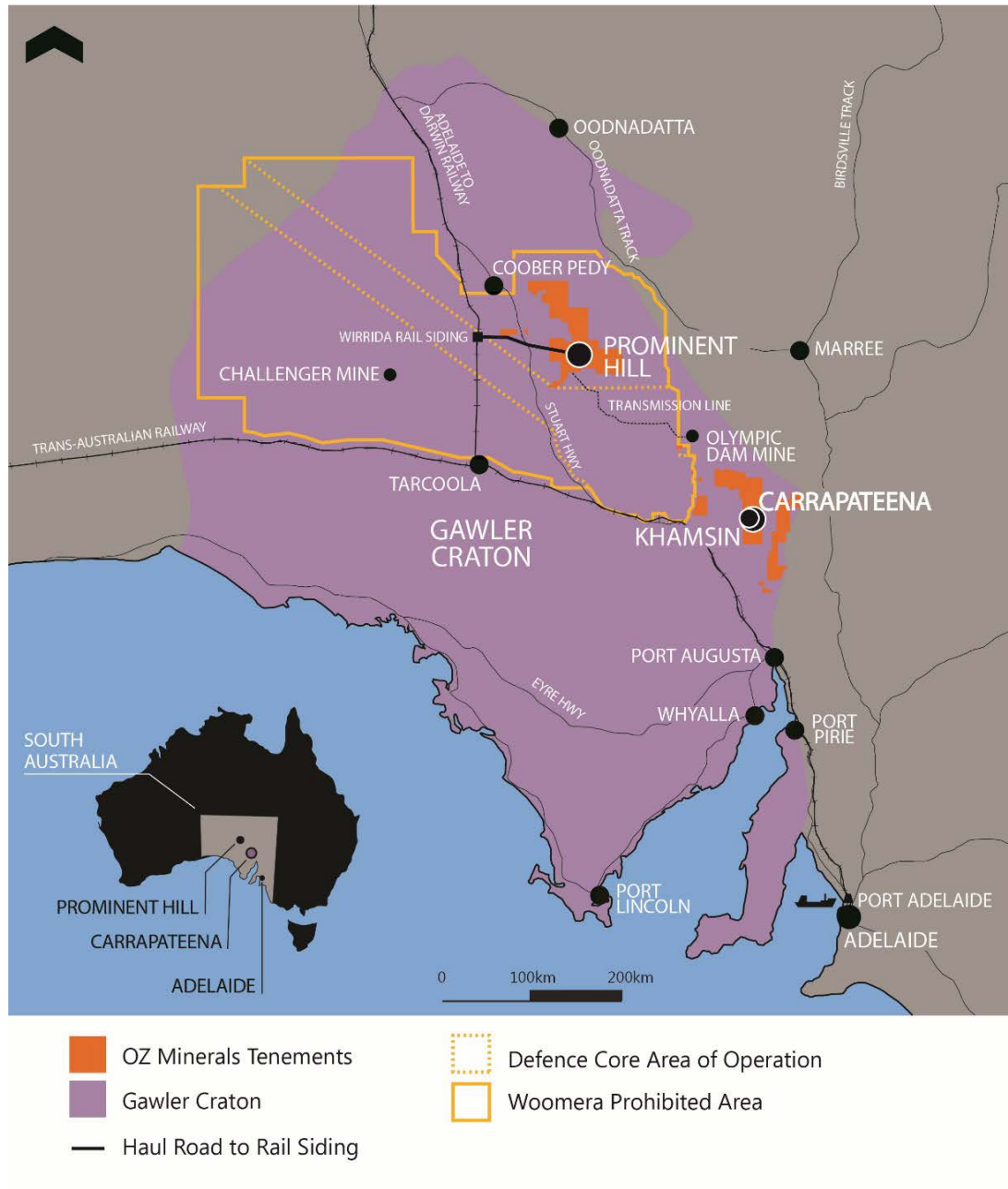
**Mineral Resource Explanatory Notes**

**Restated 2015 Mineral Resource**

**as at 17 October 2016**

## **CARRAPATEENA RESTATED 2015 MINERAL RESOURCE STATEMENT – 17 October 2016**

The Carrapateena restated 2015 Mineral Resource Statement relates to a 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**

This Mineral Resource Statement as at 17 October 2016 restates the 2015 Mineral Resource as at 25 September 2015<sup>1</sup> at a lower NSR cut-off grade appropriate to a sub-level cave operation (SLC). This restated Mineral Resource underpins the Prefeasibility Study and replaces the 2015 Mineral Resource which was intended to be suitable for a sub-level open stope operation.

## Mineral Resource

The estimated restated Mineral Resource for the Carrapateena deposit is shown in Table 1. The restated Mineral Resource has been reported in accordance with the 2012 edition of the JORC Code. This restated Mineral Resource is reported using the 2015 Mineral Resource model with the application of a nominal cut-off of A\$70 per tonne net smelter return (NSR), which has been used to generate a continuity shape. All material within the shape is deemed to have reasonable prospects of eventual economic extraction.

**Table 1: Summary of the restated 2015 Mineral Resource Estimate<sup>2 3</sup> for the Carrapateena deposit within the nominal A\$70/t NSR<sup>4</sup> cut-off shape.**

Classification	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Cu (Kt)	Au (Koz)	Ag (Moz)
Indicated	126	1.5	0.6	6.7	1,941	2,561	27.1
Inferred	7	1.0	0.5	3.3	67	99	0.7
<b>Total</b>	<b>133</b>	<b>1.5</b>	<b>0.6</b>	<b>6.5</b>	<b>2,008</b>	<b>2,661</b>	<b>27.8</b>

## Geology and geological interpretation

The Carrapateena Breccia Complex is located within the Olympic copper gold (Cu-Au) Province on the eastern edge of the Gawler Craton. It is hosted within Donington Suite granite and is unconformably overlain by approximately 480 metres of Neoproterozoic sediments. Mineralisation and alteration is in the form of that seen at other large South Australian iron oxide copper gold (IOCG) deposits including Prominent Hill and Olympic Dam. For modelling and estimation the deposit geology was grouped into several domains based on a combination of lithology, chemistry, and mineralisation style, including: chalcopyrite-dominant domain, bornite-dominant domain, pyrite-chalcopyrite domain, leached zone and barren hematite breccias.

## 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 one metre but respects geological contacts in places. Entire samples were crushed then pulverised. For OZ Minerals drill holes, sample preparation included drying, crushing, and pulverising in full to a nominal 90

<sup>1</sup> Released to ASX on 6 October 2015 entitled "Carrapateena Update-61 Mt @ 2.9% CuEq" available to view at <http://www.ozminerals.com/media/asx/page/3/>

<sup>2</sup> This table is subject to rounding errors.

<sup>3</sup> This Mineral Resource does not account for mining recovery or mining dilution.

<sup>4</sup> Net Smelter Return (NSR) details can be found under Section 3 "Cut-off parameters" in the attached JORC Table 1 documentation.

percent passing 75 microns. For Teck Cominco Australia Pty Ltd (Teck) drill holes, samples were pulverised to a nominal 85 percent passing 75 microns.

### **Drilling techniques**

For Teck Cominco Australia Pty Ltd 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.

### **Sample analysis method**

Samples were sent to either Bureau Veritas' (Amdel) Adelaide laboratory by (OZ Minerals and large proportion of Teck drill holes) or Intertek Genalysis' Perth laboratory (limited Teck holes). Copper and silver were analysed using a multi-acid digest and ICP-OES (copper and silver) or ICP-MS (silver, OZ Minerals holes). Gold grades were analysed using fire assay (typically 20 grams or 40 grams) and in nearly all cases AAS finish.

### **Estimation methodology**

A block model was constructed having grades estimated independently for Cu, Au, Ag, U, F, C, Fe, SG (as measured), and Weight Loss on Drying, by using Ordinary Kriging of sample data composited to four metre intervals. Domain boundaries were generally treated as hard boundaries during estimation except for uranium, for which soft boundaries were used between some domains.

### **Mineral Resource Classification Criteria**

The basis for Mineral 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; and those parts of the model which are unlikely to satisfy the 'reasonable prospects test' (reasonable prospects for eventual economic extraction), mainly on the basis of contiguity, dimensions and grade. A depth cut-off of 1470m below surface (3630mRL) has been applied to the A\$70 NSR shape as mineralisation below this level is outside of the reasonable prospects volume.

A shape for an Indicated zone was constructed within which the distance to the nearest informing composite was typically less than 50 metres and the slope of regression for copper estimation, which is a measure of the quality of estimation and ranges between 0 and 1, was generally more than 0.5.

Inferred Mineral Resources typically have a hole spacing of 100 metres. The Competent Person has checked, reviewed and integrated all of this information and subsequently assigned a classification of Indicated or Inferred Mineral Resource to the estimates; and excluded parts of the model that do not to satisfy the 'reasonable prospects test' from the Mineral Resources

## Cut-off value

The Mineral Resource is reported within a shape which has been generated using a cut-off NSR (net smelter return) of A\$70 per tonne. The NSR of A\$70 per tonne was selected as the number which exceeds expected mining, milling and GA costs, assuming that the mineralisation is amenable to mining by SLC. No cut-off has been applied to Mineral Resources inside the A\$70 NSR cut-off shape.

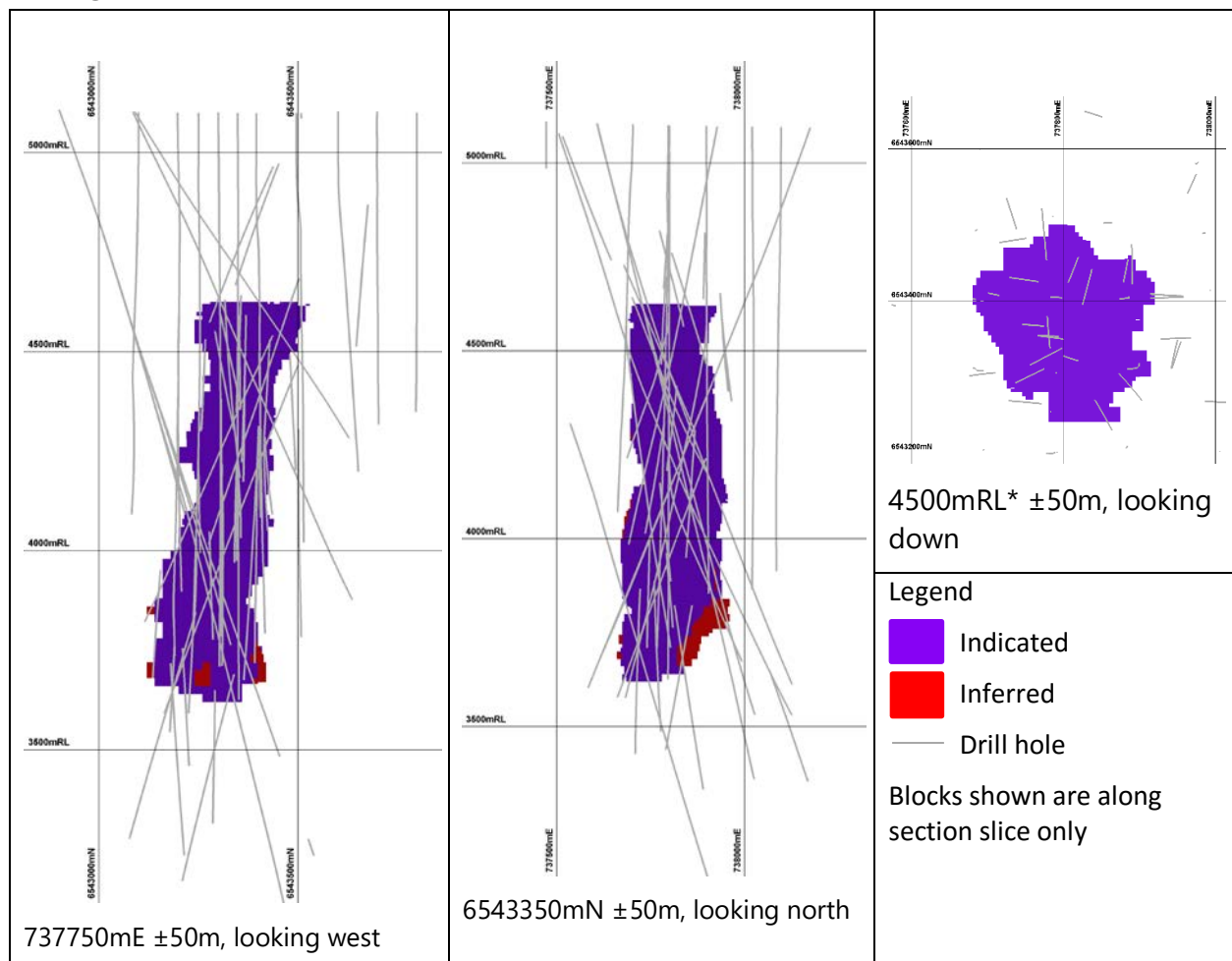
The formula that has been used for the NSR calculation is:  $NSR = 0.7 \times (Cu \% \div 100\% \times 2204lb/t \times USD2.94/lb + Au\ g/t \div 31.1g/oz \times USD1281/oz + Ag\ g/t \div 31.1g/oz \times USD19/oz) \div 0.75USD/AUD$ .

The assumed recoveries for the purposes of determining an NSR formula were 91 percent for copper and 67 percent for gold and silver but a simplified formula has been used that combines recoveries with off-site costs by using a factor of 0.7. The difference between using the simplified formula above and a more detailed NSR formula was not considered to be significant for the purposes of this Mineral Resource estimate.

**Figure 2. Mineral Resource showing blocks within the nominal A\$70/t NSR cut-off shape and their classification.**

\* Australian Height Datum = 5000mRL. The topographic surface above the Mineral Resource is approximately 5100mRL.

## Mining and Geotechnical



Carrapateena has a high grade core of bornite and chalcopyrite rich mineralisation that is considered to be amenable to mining by SLC. For the purpose of this statement it is assumed that SLC will be a suitable method for extraction of the high grade mineralisation and initial geotechnical investigations support this.

This Mineral Resource does not account for mining recovery, however the nature of the 'reasonable prospects' shape, and the reporting of all material within it regardless of NSR, means that some dilution is already accounted for in the Resources.

### **Processing**

Metallurgical test work has been conducted as part of the Carrapateena Pre-Feasibility Study on representative samples selected via a geometallurgy study. The results show that a conventional crushing, grinding and flotation circuit is suitable for copper extraction from the mineralisation with saleable concentrate grades at 91 percent recovery. Gold and silver are recoverable by flotation with 67 percent recovery achievable.

### **Environment**

Environmental baseline studies at Carrapateena have been ongoing since OZ Minerals acquired the project in 2011. As a part of any approvals process environmental and social impact assessments including but not limited to studies covering groundwater, surface water, flora, fauna and air quality would need to be finalised and presented to the government as the first step towards gaining a Mining Lease. OZ Minerals has protocols to define and manage environmental and social risks.

### **Reasonable Prospects**

- Mining and geotechnical studies suggest that the core of the deposit is amenable to underground mining using SLC.
- The reasonable prospects shape was generated based on a cut-off NSR of A\$70 per tonne assuming mining by SLC.
- Given the likely mining method the classification also accounts for the expected contiguity of material above cut-off.
- Metallurgical test work to date indicates that a saleable concentrate can be produced.
- Reporting of the Resources has been limited to above 1470 metres below surface (3630mRL) as mineralisation below 3630mRL does not pass the current reasonable prospects test.

### **Dimensions**

- The maximum extents of the Mineral Resource are approximately 300 metres (X) x 425 metres (Y) x 970 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 2.

**Table 2: Dimensions of the Mineral Resource**

<b>Dimension</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Extent (metres)</b>
Easting	737,665	737,965	300
Northing	6,543,101	6,543,526	425
RL	3,630	4,600	970

**JORC 2012 EDITION, TABLE 1**  
**SECTION 1 Sampling Techniques and Data**

<b>Criteria</b>	<b>Comments</b>
<b>Sampling techniques</b>	<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. The method of sampling is considered to be of an acceptable quality for the estimation of Mineral Resources.</p> <p>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% passing 75 microns. The resulting pulps were analysed using a variety of methods which included multi acid digest with ICP-OES determination for copper and fire assay with AAS for gold (40g or 20g charge). Sub-sampling, sample preparation, assay methods and assay quality are discussed in other parts of this table.</p>
<b>Drilling techniques</b>	<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% of Teck drill holes were vertical to sub-vertical, 2 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 or ACT core orientation tool.</p>
<b>Drill sample recovery</b>	<p>Length based core recovery is measured from reassembled core for every drill run. The data were recorded in a SQL Server database via a GBIS front end. Average core recovery was high with more than 99% recovered through the mineralised zone.</p> <p>The style of mineralisation and drilling methods employed lead to very high sample recovery so no further effort was considered necessary to increase core 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>
<b>Logging</b>	<p>Core samples were geologically 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 was photographed both dry and wet after metre marking and orientation.</p> <p>All sampled core in the mineralised zone (65,690m, 100%) was logged.</p>



**Carrapateena Mineral Resource**  
**Explanatory Notes**  
**As at 17 October 2016**

Criteria	Comments
<b>Sub-sampling techniques and sample preparation</b>	<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 0.5m to 1.5m if adjusted to geological or major alteration boundaries.</p> <p>Only core samples were used in basement.</p> <p>Sample preparation included drying, crushing, and pulverising in full to a nominal 90% (OZ) or 85% (Teck) passing 75 microns. This is considered industry standard for this style of mineralisation.</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 in these. Checks were made by geologists on sampling prior to loading data into database.</p> <p>Sample representativity was assured by taking field duplicates, lab coarse crush, and pulp duplicates every 50 samples. Sizing data was collected for OZ Minerals holes for one in every 40 pulverised samples by the laboratory analysing the samples. Analysis of these results indicates that the sampling is representative.</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>Quality of assay data and laboratory tests</b>	<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 silver grades determined by IC3E (ICP-OES), with 'high grade' (Cu &gt;1%) undergoing reanalysis by MET1 (ICP-OES). Gold grades were determined via FA2 (Fire Assay, 20g, AAS). Samples sent by Teck to Genalysis in Perth had copper grades determined by four acid digest and ICP-OES, with 'high grade' analysis (Cu &gt;1%) determined by modified four acid digest and ICP-OES. Au at Genalysis was determined by Fire Assay finished by flame AAS. Uranium was analysed using lithium metaborate fusion (Bureau Veritas, Adelaide) or sodium peroxide fusion (Genalysis, Perth) followed by ICP-MS.</p> <p>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).</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>

**Carrapateena Mineral Resource**  
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Criteria	Comments
	<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 1 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. Analysis of results from these samples showed that levels of bias, precision and contamination are within limits that are considered acceptable.</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>Verification of sampling and assaying</b>	<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>Where assay results are below detection limit, a value of half the detection limit has been used. No other adjustments were made to assay data used in this estimate.</p>

**Carrapateena Mineral Resource**  
**Explanatory Notes**  
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Criteria	Comments
<b>Location of data points</b>	<p>All collar locations were determined by DGPS.</p> <p>Teck drill holes had downhole surveys (about every 30m) 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 30m 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\text{m}</math> maximum) with the DGPS collar pickups for drill holes affecting the Mineral Resource.</p>
<b>Data spacing and distribution</b>	<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 Indicated part of the Mineral Resource, becoming wider at depths below 3,800mRL and in the Inferred part of the Mineral Resource.</p> <p>The data spacing and distribution is considered sufficient to establish geological and grade continuity appropriate for the Mineral Resource estimation and classification.</p> <p>Compositing of sample data to 4m lengths is discussed in Estimation and modelling techniques, below. No physical compositing of samples has occurred.</p>
<b>Orientation of data in relation to geological structure</b>	<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.</p> <p>The edges of the main high-grade zone constituting the Indicated part of the Mineral Resource are now reasonably well defined in the upper part of the deposit. The original Teck drilling was mostly vertical but OZ Minerals 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 mineralisation (mostly east</p>

**Carrapateena Mineral Resource**  
**Explanatory Notes**  
**As at 17 October 2016**

Criteria	Comments
	<p>of 738,000mE, above 4,100mRL), still relies primarily on vertical drill holes at 100m x 100m 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 of copper grade varies locally. 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>Angled drilling by OZ Minerals has not highlighted any orientation-specific sampling biases.</p>
<b>Sample security</b>	<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>
<b>Audits or reviews</b>	<p>An internal audit of Teck's Carrapateena database was conducted in 2008. This study identified a significant proportion (9%) of failed QAQC samples in the Teck database at that time. During 2007 and 2008 a total of 9,007 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. 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>

## SECTION 2 Reporting of Exploration Results

<b>Criteria</b>	<b>Comments</b>
<b>Mineral tenement and land tenure status</b>	<p>The Carrapateena deposit is located in South Australia in Exploration Licence 4903 which is held by OZ Minerals Carrapateena Pty Ltd (34 percent) and OZM Carrapateena Pty Ltd (66 percent), both wholly owned subsidiaries of OZ Minerals Limited.</p> <p>The tenement is located on the traditional lands of the Kokatha people.</p> <p>EL4903 is currently in good standing. No known impediments exist to obtaining a licence to operate in the area.</p>
<b>Exploration done by other parties</b>	<p>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.</p>
<b>Geology</b>	<p>The Carrapateena Breccia Complex is located within the Olympic copper gold (Cu-Au) Province on the eastern edge of the Gawler Craton. It is hosted within Donington Suite granite and is unconformably overlain by approximately 480m of Neoproterozoic sediments. Mineralisation and alteration is in the form of that seen at other large South Australian iron oxide copper gold (IOCG) deposits including Prominent Hill and Olympic Dam.</p>
<b>Drill hole Information</b>	<p>No Exploration Results have been reported in this release, therefore there is no drill hole information to report. This criterion is not relevant to this report on Mineral Resources.</p>
<b>Data aggregation methods</b>	<p>No Exploration Results have been reported in this release, therefore there are no drill hole intercepts to report. This criterion is not relevant to this report on Mineral Resources.</p>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>No Exploration Results have been reported in this release, therefore there are no drill hole intercepts to report. This criterion is not relevant to this report on Mineral Resources.</p>
<b>Diagrams</b>	<p>No Exploration Results have been reported in this release, therefore no exploration diagrams have been produced. This criterion is not relevant to this report on Mineral Resources.</p>
<b>Balanced reporting</b>	<p>No Exploration Results have been reported in this release. This criterion is not relevant to this report on Mineral Resources.</p>
<b>Other substantive exploration data</b>	<p>No Exploration Results have been reported in this release. This criterion is not relevant to this report on Mineral Resources.</p>
<b>Further work</b>	<p>The company is currently undertaking a prefeasibility study (PFS) assuming a SLC mining method. Further resource definition work will be planned based on the outcomes of this study.</p>

### **SECTION 3 Estimation and Reporting of Mineral Resources**

<b>Database integrity</b>	<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>
<b>Site visits</b>	<p>The Competent Person has visited the Carrapateena site a total of eight times since OZ Minerals acquired the Project. The Competent Person found the protocols and practices relating to all stages of resource definition to be acceptable. The Competent Person did not find any issues that would materially affect the Mineral Resource estimate.</p>
<b>Geological interpretation</b>	<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. Bornite-dominant and chalcopyrite-dominant zones appear as distinct clusters on scatter plots of copper and sulphur grades. The interpreted high-copper-grade domains were constructed using a combination of copper grade, ratio of Cu:S (adjusted for the assumed presence of sulphur in barite), and visual logs of lithology and mineralisation. Delimiting grade criteria for the chalcopyrite-dominant zone were typically copper exceeding 1.5% and Cu:S between 0.8 and 1.25. Bornite-dominant mineralisation generally had Cu:S exceeding 1.25. Copper in the bornite-dominant zone was usually more than 1.5% Cu but locally some zones having lower copper grades than this were included in this domain. Chalcopyrite-dominant zones are often but not always adjacent to zones of bornite mineralisation. The distinction between the pyrite-chalcopyrite and chalcopyrite-dominant domains has only been modelled since the 2013 Carrapateena Mineral Resource estimate. At that time, the distinction was not considered to be significant because block caving was viewed as being the preferred mining method and local grade estimation within the mineralised zone was not critical. For a detailed assessment of selective mining options, this distinction between chalcopyrite-dominant and pyrite-chalcopyrite mineralisation was considered to be material. Grade statistics within the new interpreted domains and boundary plots across the interpreted domain boundaries supported the decision to introduce a chalcopyrite-dominant domain. Confidence in the boundaries and continuity of the bornite-dominant and chalcopyrite-dominant high-copper-grade domains are commensurate with their classification. The mostly low-grade mineralisation at in the north, east, and at depth is less continuous</p>

	<p>and has consequently been classified as Inferred. Confidence decreases 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 may have a moderate effect on estimated grades at a local scale.</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 mineralisation hosted in the hematite breccia zone.</p> <p>Copper grades are generally highest where bornite is the dominant copper sulphide, although there is also a high grade chalcopyrite dominant zone. 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>
<b>Dimensions</b>	<p>The maximum extents of the Mineral Resource inside the A\$70/t NSR cut-off shape are 300 metres (X) x 425 metres (Y) x 970 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 485m and 1,470m respectively.</p>
<b>Estimation and modelling techniques</b>	<p>Domain definition used a combination of assay data and geology, taking into consideration the characteristics of the breccia, the mineralogy of copper and iron, and the copper and iron grades. There are distinct differences in copper 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, U, Co, S, Ba, As, Bi, Pb and Zn. Lithological domains were used for the estimation of SG and major rock-forming elements. Two additional domains were created for estimation of fluorine because of the distinctly bimodal fluorine 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>Pyrite-chalcopyrite in main copper-mineralised zone</li> </ul>

	<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>• Deep high-grade zone (mixed bornite and chalcopyrite)</li> <li>• Barren hematite zone</li> <li>• Leached zones</li> </ul> <p>Other domains exist including the surrounding granite, dykes 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 except uranium, which was treated as soft between the chalcopyrite, bornite and barren hematite domains. The chalcopyrite and pyrite-chalcopyrite zones have been treated separately, as was discussed in the criterion Geological Interpretation above. The effect of this is to confine the generally higher-grade copper mineralisation into the chalcopyrite domain, which locally changes estimated block grades around the pyrite-chalcopyrite to chalcopyrite boundary. The bornite domain has also been treated as a separate domain for copper estimation, as was the case in the previous estimate. Domain wireframes were constructed using a combination of implicit modelling and manually digitised surfaces. The implicit modelling process used categorical values for modelled domains based on drill hole data. Additional constraints were also applied, by using horizontal lines to force the domain boundaries produced by the implicit modelling to go through interpreted points. 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 4m. 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% of the modelled variogram ranges. The second pass used 200% of the modelled variogram range. For the two most important domains in the Mineral Resource, the bornite-dominant and chalcopyrite-dominant zones, the first pass search radii were 160m x 80m x 60m and 120m x 80m x 40m respectively. The first two passes used a minimum of 4 and a maximum of 20 composites. The first pass allowed a maximum of only 15 composites from a single drill hole, to reduce the number of blocks estimated using composites from only one hole. No octant search was used. The third pass assigned the median composite grade for the relevant domain to unestimated blocks. None of the blocks included in the Mineral Resource had a copper grade assigned by the third pass.</p> <p>The Mineral Resource does not contain material extrapolated beyond the nominal drill hole spacing. The maximum distance from any block within the Mineral Resource to the closest composite used for the estimation of the copper grade of that block is 76m.</p> <p>The block model used for the current estimate was compared with the 2013 estimate. The differences in tonnages and grades at a range of cut-off grades were in line with those expected as a consequence of the changes to domains and estimation parameters for the current Mineral Resource. No other check estimates have been run for the</p>
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	<p>current model. There has been no historical mine production from the Carrapateena deposit.</p> <p>The current assumption is that revenue will only be obtained from copper, gold and silver.</p> <p>Grades were estimated independently for Cu, Au, Ag, U, F, Fe, SG (as measured), and weight loss on drying. Sulphur and barium were also estimated using the same parameters as copper to ensure that the same composites were used with the same Kriging weights as for copper, because the purpose of estimating these elements was to distinguish the sulphide/sulphate mineralogy. Arsenic, Bi, Co, Pb and Zn were estimated using the same parameters as copper. Carbon, Si, Al, K, Mg, Ca, Mn, Na, P, Ti, Ce and La were estimated using the same parameters as iron.</p> <p>A sub-blocked model was used, having a parent block size of 40×40×40 metres, with sub-blocks down to 5×5×5m to honour domain boundaries. Maximum block sizes were applied to different domains, with the main high-copper-grade domains having maximum block sizes of 10×10×10m and low-grade mineralised domains having maximum block sizes of 20×20×20m. This was done in order to adequately represent domain geometry while still taking into consideration drill hole spacing which varies between domains.</p> <p>Sample spacing varies widely. In the vertical direction, composites are spaced at 4 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 50×50 metres, increasing to ~100×100 metres outwards from here. Since holes have been angled to obtain information on lateral controls, the horizontal spacing varies.</p> <p>Blocks and sub-blocks in this estimate were made sufficiently small as to provide resolution of domain geometry in the block model. The block size chosen does not imply a selective mining unit size. Blocks having grades below cut-off surrounded by blocks having grades above cut-off do not constitute a significant proportion of the Mineral Resource.</p> <p>Strong correlations exist between some variables. Variables have been estimated independently. Other than fluorine, carbon 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, particularly of copper and sulphur. The Carrapateena Breccia Complex was treated as a limit for the estimated Mineral Resource, although localised zones of copper mineralisation exist beyond this.</p> <p>Very high-grade composites were restricted (with a "high yield limit") in their influence to either one half or one quarter of the limit of the pass one search (and variogram) range, depending on the domain. 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 0.03% of the composites for the two most important domains. For gold and silver the high yield limit applied to 0.4% and 1.8% respectively of composites for the most important domains. Deleterious elements and major rock-forming elements were not subjected to high grade limits.</p>
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**Carrapateena Mineral Resource**  
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	<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 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.</p>															
Moisture	<p>Tonnages are estimated on a dry basis. Although core recovery is very high (&gt;99%) 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%.</p>															
Cut-off parameters	<p>A shape generated using a cut-off NSR (net smelter return) of A\$70/t has been used for the reported Mineral Resource, assuming mining with SLC. The value of \$A70/t was recommended by OZ Minerals' mining engineers as the value which covers expected mining, processing and site G&amp;A costs, while still maintaining acceptable continuity of mineralisation above cut-off.</p> <p>The formula that has been used for the NSR calculation is:</p> $\text{NSR} = 0.7 \times (\text{Cu \%} \div 100\% \times 2204\text{lb/t} \times \text{USD}2.94/\text{lb} + \text{Au g/t} \div 31.1\text{g/oz} \times \text{USD}1281/\text{oz} + \text{Ag g/t} \div 31.1\text{g/oz} \times \text{USD}19/\text{oz}) \div 0.75\text{USD/AUD}$ <p>Economic assumptions used for the NSR formula are provided below. They are drawn from OZ Minerals life-of-mine (LOM) Corporate Economic Assumptions released in Quarter 3 2016 and are the consensus values of major brokers issued in July 2016.</p> <table><tr><th>Assumptions</th><th>Unit</th><th>LOM</th></tr><tr><td>Copper</td><td>US\$/lb</td><td>2.94</td></tr><tr><td>Gold</td><td>US\$/oz</td><td>1281</td></tr><tr><td>Silver</td><td>US\$/oz</td><td>19</td></tr><tr><td>Exchange Rate</td><td>AUD/USD</td><td>0.75</td></tr></table> <p>The assumed recoveries for the purposes of determining an NSR formula were 91 percent for copper, 73 percent for gold and 79 percent for silver but a simplified formula has been used that combines recoveries with off-site costs by using a factor of 0.7. The difference between using the simplified formula above and a more detailed NSR formula was not considered to be significant for the purposes of this Mineral Resource estimate.</p>	Assumptions	Unit	LOM	Copper	US\$/lb	2.94	Gold	US\$/oz	1281	Silver	US\$/oz	19	Exchange Rate	AUD/USD	0.75
Assumptions	Unit	LOM														
Copper	US\$/lb	2.94														
Gold	US\$/oz	1281														
Silver	US\$/oz	19														
Exchange Rate	AUD/USD	0.75														
Mining factors or assumptions	<p>Carrapateena has a high grade core of bornite and chalcopyrite rich mineralisation that is amenable to SLC. For the purpose of this statement it is assumed that SLC will be a suitable method for extraction of the higher grade mineralisation and initial geotechnical investigations support this. The higher grade SLC core is surrounded by a</p>															

**Carrapateena Mineral Resource**  
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	<p>contiguous zone of mineralisation that may in future support an expanded sub level cave mining operation at a lower cut-off.</p> <p>The SLC mining parameters are based on using 25 metre level spacing and 15 metre drill drive spacing to yield a 4Mtpa production rate.</p> <p>Extraction of the Resources has only been contemplated to a depth of 1470m metres as mineralisation below 3630mRL does not pass the current reasonable prospects test.</p> <p>This Mineral Resource does not account for mining recovery.</p>
<b>Metallurgical factors or assumptions</b>	<p>Metallurgical test work has been conducted as part of the Carrapateena Pre-Feasibility Study on representative samples selected via a geometallurgy study. The results show that a conventional crushing, grinding and flotation circuit is suitable for copper extraction from the mineralisation with copper at 91 percent recovery. Gold and silver are recoverable by flotation with 67 percent recovery achievable.</p>
<b>Environmental factors or assumptions</b>	<p>In 2013 OZ Minerals was granted a Retention Lease to allow for further Advanced Exploration Works associated with the Carrapateena deposit. Since granting of this lease Environmental monitoring works have been ongoing as part of continued compliance with lease conditions and the continued preparation for an application for a Mining Lease. These include developing a further understanding of baseline conditions for groundwater, surface water, flora, fauna, air quality and social.</p> <p>Cultural clearance of a large project footprint was undertaken with the recognised Traditional Owners during 2015 as a part of ensuring any cultural heritage considerations are understood prior to final engineering.</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 and impact assessments have been and will continue to be conducted.</p>
<b>Bulk density</b>	<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>

**Carrapateena Mineral Resource  
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As at 17 October 2016**

<b>Classification</b>	<p>The basis for Mineral 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; and those parts of the model which are unlikely to satisfy the 'reasonable prospects test', mainly on the basis of contiguity, dimensions and grade within the context of the proposed mining method of SLC.</p> <p>The Competent Person has checked, reviewed and integrated all of this information and subsequently: assigned a classification of Indicated or Inferred Mineral Resources to the estimates; and excluded parts of the model that do not to satisfy the 'reasonable prospects test' from the Mineral Resources.</p> <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).</p> <p>The result appropriately reflects the Competent Person's view of the deposit.</p>
<b>Audits or reviews.</b>	<p>This Mineral Resource estimate (September 2016) has not been audited. A 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 was fit for purpose. The conclusions of the 2013 AMC audit were considered, and where appropriate, modifications to the estimation processes were incorporated into subsequent models, including the model on which the current Mineral Resource is based.</p>
<b>Discussion of relative accuracy / confidence.</b>	<p>Factors affecting global accuracy and confidence of the estimated Mineral Resource at the selected cut-off include:</p> <ul style="list-style-type: none"> <li>• Conditional biases of estimated grades caused by the use of Ordinary Kriging. This has been mitigated by the introduction of a chalcopryite-dominant domain, for which copper grades typically exceed 1.5%. This roughly coincides with the selected cut-off grade, so in general the boundaries of the chalcopryite and bornite domains with lower-grade domains tend to coincide with the limits of the reported Mineral Resource. Within the bornite-dominant domain, there are some small zones having grades below cut-off that were not treated as a separate domain for copper estimation, and so smoothing of estimated grades in this domain will introduce local conditional biases of estimated Cu grades. However, below-cut-off material makes up a relatively small proportion of the bornite domain so the effect of this on the accuracy of the estimated Mineral Resource is not expected to be large.</li> <li>• Uncertainty of the position of domain boundaries. The size of the mineralised domain wireframes has a direct effect on the estimated tonnage of the Mineral</li> </ul>

	<p>Resource. The classification of the Mineral Resource has taken into consideration to the confidence in the position of domain boundaries given the distribution of drill hole data.</p> <p>Whilst the Mineral Resource estimate reported is a global one, the block model on which it is based is intended to have sufficient local-scale detail to be useful for the preliminary technical and economic evaluation of a SLC mining method.</p> <p>There has been no production from the Carrapateena deposit for comparison with the estimated Mineral Resource.</p>
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### **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 30 years of relevant and continuous experience as a geologist including 11 years in Iron-Oxide-Copper-Gold style deposits. Stuart Masters has visited site on ten occasions since OZ Minerals acquired the project including three times since the 2013 Mineral Resource was reported and once since the 2015 Mineral Resource was originally reported.

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

## **Contributors**

- Overall
  - Stuart Masters, CS-2 Pty Ltd
- Data Quality
  - Bruce Whittaker, OZ Minerals
- Geological Interpretation
  - Bruce Whittaker, Mick Sawyer, OZ Minerals
- Estimation
  - Bruce Whittaker, OZ Minerals

Stuart Masters is solely responsible for Mineral Resource classification but has relied on, and checked and reviewed, data and advice from OZ Minerals' geologists regarding data quality, interpretation and estimation.

**OZ Minerals Limited**

**Carrapateena Project**

**Ore Reserve Explanatory Notes**

**As at 20 October 2016**

## **CARRAPATEENA ORE RESERVE STATEMENT AS AT 20 OCTOBER 2016**

### **Introduction**

This Ore Reserve estimate is based on the 2015 Mineral Resource estimate as at 17 October 2016 and the results of a 2016 sub-level cave Pre-Feasibility study (PFS16).

This Ore Reserve estimate supersedes the 2014 estimate<sup>1</sup> which was based on the results of the Pre-Feasibility study (PFS14) of a 12.4Mtpa block cave operation.

### **Ore Reserve Estimate**

The 2016 Ore Reserve estimate is summarised in Table 1. The Ore Reserve was declared at an NSR cut-off grade of A\$100 per tonne.

**Table 1 Carrapateena Ore Reserve Estimate 20 October 2016<sup>2</sup>**

<b>Classification</b>	<b>Ore (Mt)</b>	<b>Cu (%)</b>	<b>Au (g/t)</b>	<b>Ag (g/t)</b>	<b>Cu (kt)</b>	<b>Au (koz)</b>	<b>Ag (Moz)</b>
Proved	0	0.0	0.0	0.0	0	0	0
Probable	70	1.8	0.7	8.4	1,300	1,700	19
<b>Total</b>	<b>70</b>	<b>1.8</b>	<b>0.7</b>	<b>8.4</b>	<b>1,300</b>	<b>1,700</b>	<b>19</b>

### **Mining Method**

The Carrapateena orebody is located within the Carrapateena breccia complex. The orebody is 200 m – 300 m in diameter and extends over 1000 m vertically. The rock of the orebody is very competent. The orebody is overlain by about 480 m of barren sediments. The mining method on which the Ore Reserve estimate is based is sub-level caving. It is a method appropriate to the orebody. The ore is drilled and blasted before being extracted for processing. Mining proceeds downwards from the top of the orebody. As extraction progresses the overlying sediments will cave to fill the resultant void. Eventually caving will break through to surface and form a crater surrounded by a zone of lesser subsidence and cracking.

### **Ore Value**

Revenue at Carrapateena will be derived from copper, gold and silver. Ore value is expressed as a net smelter return (NSR), the payable value of metals in concentrate less realisation and penalty costs and royalties. The calculation was simplified to:

$$\text{NSR} = \text{in-situ value (ISV)} \times 0.7$$

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<sup>1</sup> ASX Release - Ore Reserve for Carrapateena underpins low operating cost, long life operation 18 August 2014

<sup>2</sup> Values in the table are subject to rounding errors



where

$$ISV = (Cu\% / 100 \times 2204 \times Cu \text{ price} + Au \text{ g/t} / 31.1 \times Au \text{ price} + Ag \text{ g/t} / 31.1 \times Ag \text{ price}) / XR$$

Cu price in US\$ / lb

Au price in US\$ / oz

Ag price in US\$ / oz

XR = AU\$ / US\$

The simplified calculation was derived from the 2016 Scoping Study financial model.

## **Cut-Off Grade**

A cut-off NSR of \$100 per tonne was selected for the delineation of the shape to be mined by sub-level caving. This cut-off grade was determined to generate a satisfactory economic return from the project. The break-even cut-off NSR for the project was estimated to be \$51 per tonne including sustaining capital.

## **Production Rate**

The sustainable production rate from the Ore Reserve was estimated to be 4 Mtpa.

## **Dilution and Ore Loss**

The cave draw modelling produced an estimated recovery of 91% of the blasted ore tonnes and 88% of the contained metal value. Approximately 13% dilution is included in the recovered ore tonnes. The dilution comes from the overlying rocks and from mineralised material surrounding the SLC shape.

**Table 2 Metal Prices and Exchange Rate**

<b>Parameter</b>	<b>Units</b>	<b>LOM</b>
Copper	US \$ / lb	2.94
Gold	US \$ / oz	1281
Silver	US \$ / oz	19
Exchange Rate	AUD / USD	0.75

**Table 3 Metal Recoveries**

<b>Metal</b>	<b>Recovery %</b>
Copper	91
Gold	73
Silver	79

### **Competent Person's Statement**

The information in this report that relates to Ore Reserves is based on and fairly represents information and supporting documentation compiled by Justin Taylor BEng (Min), a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AUSIMM Membership No. 307796).

Justin Taylor is a full time employee of OZ Minerals Limited. Justin Taylor is a shareholder in OZ Minerals Limited and is entitled to participate in the OZ Minerals Performance Rights plan.

Justin Taylor BEng (Min) has over 30 years of experience as a mining engineer including nine years in Iron-Oxide-Copper-Gold style deposits. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities 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). Justin Taylor consents to the inclusion in the report of the matters based on his information in the form and context in which they appear.

The Ore Reserve estimate has been compiled in accordance with the guidelines defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012 Edition).

**Justin Taylor**  
**Principal Mining Engineer**  
**OZ Minerals Limited**

### **Contributors**

Justin Taylor is solely responsible for the Ore Reserve estimate in this Report.

The Ore Reserve estimate is based on information provided by AMC Consultants Ltd and Power Geotechnical.

**JORC 2012 EDITION, TABLE 1**

**Section 4 Estimation and Reporting of Ore Reserves**

<b>Criteria</b>	<b>Commentary</b>												
<b>Mineral resource estimate for conversion to Ore Reserves</b>	This Ore Reserve estimate was based on the Restated 2015 Mineral Resource estimate for Carrapateena as at 17 October 2016. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves.												
<b>Site visits</b>	The Competent Person for the Ore Reserve estimate is an employee of OZ Minerals Limited based in Adelaide and has visited site.												
<b>Study status</b>	A Pre-Feasibility Study of a 4 Mtpa sub-level cave mining operation has been completed. The results of the PFS support the development of the project.  The development of the access decline to the orebody commenced in September 2016.												
<b>Cut-off parameters</b>	<p><b>Ore Value</b></p> <p>Ore value was calculated as a net smelter return (NSR), the payable value of metals in concentrate less realisation and penalty costs and royalties. The calculation was simplified to:</p> $\text{NSR} = \text{in-situ value (ISV)} \times 0.7$ <p>where</p> $\text{ISV} = (\text{Cu\%} / 100 \times 2204 \times \text{Cu price} + \text{Au g/t} / 31.1 \times \text{Au price} + \text{Ag g/t} / 31.1 \times \text{Ag price}) / \text{XR}$ <p>Cu price in US\$ / lb  Au price in US\$ / oz  Ag price in US\$ / oz  XR = AU\$ / US\$</p> <p>The simplified calculation was derived from the 2016 Scoping Study financial model.</p> <p><b>Break-even Cut-off Grade</b></p> <p>The break-even cut-off grade for the sub-level cave is shown in Table 4 below. The cut-off grade is expressed as a Net Smelter Return (NSR). The cut-off grade includes sustaining capital.</p> <p><b>Table 4 Sub-Level Cave Break-even Cut-off NSR</b></p> <table border="1"> <thead> <tr> <th><b>Item</b></th><th><b>\$ / ore tonne</b></th></tr> </thead> <tbody> <tr> <td>Mining &amp; Materials Handling</td><td>24</td></tr> <tr> <td>Processing</td><td>16</td></tr> <tr> <td>General &amp; Administration</td><td>4</td></tr> <tr> <td>Sustaining Capital</td><td>7</td></tr> <tr> <td><b>Total</b></td><td><b>51</b></td></tr> </tbody> </table>	<b>Item</b>	<b>\$ / ore tonne</b>	Mining & Materials Handling	24	Processing	16	General & Administration	4	Sustaining Capital	7	<b>Total</b>	<b>51</b>
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Criteria	Commentary												
	<p>The cut-off grade used to define the sub-level cave mining shape was an NSR of \$100 per tonne. The cut-off was chosen because it generated a satisfactory economic return from the orebody.</p> <p>The cave mining shape largely follows the cut-off grade. In some instances, material below cut-off was included to ensure a smooth cave shape. Similarly, convexities of grade above cut-off but of limited size were excluded from the cave mining shape. All material within the final shape was deemed ore irrespective of grade.</p> <p><b>Development Cut-off Grade</b></p> <p>The break-even cut-off grade for ore development is shown in Table 5 below. The cut-off grade is expressed as a Net Smelter Return (NSR). The cut-off grade includes sustaining capital.</p> <p><b>Table 5 Sub-Level Cave Development Cut-off NSR</b></p> <table> <tr> <th>Item</th><th>\$ / ore tonne</th></tr> <tr> <td>Ore Processing</td><td>16</td></tr> <tr> <td>Administration</td><td>4</td></tr> <tr> <td>Sustaining Capital</td><td>7</td></tr> <tr> <td>Total</td><td>27</td></tr> <tr> <td><b>Rounded up to</b></td><td><b>30</b></td></tr> </table>	Item	\$ / ore tonne	Ore Processing	16	Administration	4	Sustaining Capital	7	Total	27	<b>Rounded up to</b>	<b>30</b>
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<b>Criteria</b>	<b>Commentary</b>								
<b>Mining factors or assumptions</b>	<p>Previous studies by OZ Minerals determined that block caving, sub-level caving and sub-level open stoping methods were appropriate to the orebody geometry and expected ground conditions of the Carrapateena orebody. The Scoping Study conducted in 2016 (CHSS-8220-MAN-STU-0001) concluded that sub-level caving was the best mining method for Carrapateena.</p> <p>A review of the cavability of the overlying rocks was conducted by Power Geotechnical Pty Ltd. Using empirical data, the area of the cave footprint considered sufficient to ensure continuous caving was estimated and the mine designed accordingly. The use of empirical data is appropriate for a PFS but further study will be required to design the mine and engineer the rock mass to ensure that continuous caving will occur.</p> <p>Power Geotechnical used proprietary software to model the SLC draw and the dilution entrained in the draw from outside the blasted area of the SLC. The cave draw modelling resulted in the recovery of 91% of blasted ore tonnes and 88% of the contained metal value. Approximately 13% dilution is included in the recovered ore tonnes. The dilution comes from the overlying rocks and from mineralised material surrounding the SLC shape. Given the potential of the overlying Woomera Shale to degrade into finer particles than other rock types, cave draw modelling assumed that the Woomera Shale had twice the probability of migrating into the caved mass than did the other diluting rock types.</p>								
<b>Metallurgical factors or assumptions</b>	<p>Metallurgical test work was conducted as part of PFS14. The test work showed that a conventional crushing, grinding and flotation circuit would produce acceptable concentrate grades and metal recoveries. The metallurgical recoveries used in the PFS are shown in Table 6.</p> <p><b>Table 6 Metallurgical Recoveries</b></p> <table border="1"> <thead> <tr> <th><b>Metal</b></th><th><b>Recovery %</b></th></tr> </thead> <tbody> <tr> <td>Copper</td><td>91</td></tr> <tr> <td>Gold</td><td>73</td></tr> <tr> <td>Silver</td><td>79</td></tr> </tbody> </table>	<b>Metal</b>	<b>Recovery %</b>	Copper	91	Gold	73	Silver	79
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**Carrapateena Mineral Resource  
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Criteria	Commentary
<b>Environmental</b>	<p>In 2013 Carrapateena was granted a Retention Lease 127 to allow for further Advanced Exploration Works associated with the Carrapateena Deposit. Since the granting of this lease technical studies have been ongoing both as part of the continued compliance with the Retention Lease 127 conditions and the development of a Mining Lease Proposal for the proposed future project.</p> <p>As a part of the impact assessment work OZ Minerals developed a further understanding of baseline conditions for groundwater, surface water, flora, fauna, air quality, radiation and social to build upon works completed in 2012. Detailed modelling and assessment of effects studies were subsequently completed for groundwater, surface water, air quality and socioeconomic aspects of the project as conceptualised in the Pre-Feasibility Study. These projects confirmed the low impact profile expected to be observed from a remote project such as Carrapateena. Due to the importance of groundwater in the region the outcomes of the groundwater modelling has been subject to and validated by an independent peer review process.</p> <p>Environmental risk will be defined through ongoing risk assessments and evaluations and managed through the application of appropriate design and management controls. All fundamental design controls that are required to achieve the environmental outcomes desired by the project are subject to rigorous assessment through Layers of Protection Analysis.</p> <p>OZ Minerals has progressed the environmental studies for Australian Government and South Australian Government approval submissions and having completed pre lodgement consultation with regulators, local government, local community and directly impacted stakeholders has the confidence that the project has no fatal flaws in the environmental assessment.</p>
<b>Infrastructure</b>	<p>Infrastructure sufficient for the operation of a 4 Mtpa mine and processing plant has been designed and costed in the PFS. It is believed that adequate water has been identified for the project but this remains to be confirmed.</p>
<b>Costs</b>	<p>Detailed estimates of capital and operating costs were prepared for the PFS.</p> <p>The royalty will be 2% of revenue net of realisation costs for the first five years of production. From then on the royalty payable will rise to 5%.</p>

**Carrapateena Mineral Resource  
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Criteria	Commentary																																	
Revenue factors	The Ore Reserve estimates are based on the life-of-mine (LOM) economic parameters. These parameters are shown in the table below. They are drawn from 2016 Corporate Economic Assumptions <sup>3</sup> released in Quarter 4 2016 and are the consensus values of major brokers issued in September 2016.																																	
	<b>Table 7 Carrapateena Economic Parameters</b>																																	
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Criteria	Commentary
<b>Market assessment</b>	<p>Copper concentrates are sold on the open concentrate market to a range of overseas smelters.</p> <p>The Ore Reserve estimates use OZ Minerals forecast assumptions shown in Tables 9 and 10 to estimate the revenue and cost of sales.</p> <p>Revenue is determined by the metal content, metal payable scales negotiated for the product and the price assumptions.</p> <p>The cost of sales includes the transport costs from mine to customer, the negotiated smelter treatment and refining charges and commercial remedies for deleterious elements. The smelter treatment and refining charges are typically negotiated on an annual basis directly with customers with regard to industry benchmark terms. Deleterious elements are accounted for in the product with penalty scales on a pro rata basis according to their content.</p> <p>There is a proven ability by OZ Minerals to sell and a proven acceptance by buyers (smelters) to purchase a concentrate of the quality which will be produced by Carrapateena. Any improvements on concentrate quality such as higher concentrations of payable metals or decreased deleterious elements achieved through technical processes will increase the saleability of the concentrate.</p>
<b>Economic</b>	<p>Carrapateena is an economically robust project. Pre-production capital of \$830M generates an NPV of \$770M at a 9.5% cost of capital and an IRR of 20%. A summary of the economic analysis is presented in Appendix XX.</p> <p>Sensitivity analyses were carried out and the project was found to be most sensitive to commodity prices. For all sensitivity scenarios modelled project NPV remained positive.</p>
<b>Social</b>	<p>OZ Minerals has negotiated a Native Title Mining Agreement with the Kokatha Aboriginal Corporation for the activities as approved under Retention Lease 127 and is in the process of negotiating an agreement for the future stages of the project. During 2016 OZ Minerals and Kokatha Aboriginal Corporation commenced a process that seeks to develop a partnership, as equals. The partnering agreement titled <i>'Nganampa palyanku kanyintjaku or Keeping the future good for all of us'</i> encapsulates, recognises and values the ongoing contribution of both partners to the development of the Carrapateena Project.</p> <p>Negotiations have commenced with the local landowners to negotiate new land access agreements for the future stages of the project.</p> <p>Community briefing sessions were held in Roxby Downs, Woomera and Port Augusta in September 2016 and OZ Minerals staff regularly meet with community groups, local business and local councils. OZ Minerals has a strong focus and positive reputation in the Upper Spencer Gulf and Outback Communities Area.</p>
<b>Other</b>	<p>OZ Minerals has advised that Carrapateena is in compliance with all legal and regulatory requirements.</p>



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<b>Criteria</b>	<b>Commentary</b>
<b>Classification</b>	<p>The Ore Reserve estimate is based on the Mineral Resource estimate classified as "Indicated" after consideration of all mining, metallurgical, social, environmental and financial aspects of the project.</p> <p>Probable Ore Reserves were derived from the Indicated Mineral Resources.</p> <p>The Ore Reserve classification reflects the Competent Person's view of the deposit.</p>
<b>Audits or reviews</b>	<p>The Ore Reserve estimate has been reviewed by OZ Minerals and by AMC Consultants Pty Ltd in their peer review process but has not been subjected to an independent audit.</p>
<b>Discussion of relative accuracy/ confidence</b>	<p>The Ore Reserve was estimated using a cut-off grade significantly higher than the breakeven grade. It is unlikely to be significantly impacted by adverse changes in metal prices or operating costs.</p> <p>The Ore Reserve estimate is supported by appropriate design, scheduling, and costing work reported to a prefeasibility study.</p> <p>No statistical procedures were carried out to quantify the accuracy of the Ore Reserve.</p> <p>There is greater uncertainty inherent in cave mining methods than in more selective mining methods.</p> <p>SLC mines have traditionally controlled sub-level cave draw by sampling grades in drawpoints. It is now considered better to manage ore recovery through adhering to a pre-determined tonnage draw schedule by drawpoint based on modelled shut-off grade criteria and to ignore sampled drawpoint grades. Using this approach cave performance is measured by reconciling the predicted head grade to the milled head grade. The estimation of the Carrapateena Ore Reserve assumed the use of this newer approach.</p> <p>The ore and metal recovery parameters derived in the estimation of the Ore Reserve represent best practice in sub-level cave mining.</p>