Carrapateena
2020 Mineral Resources and Ore Reserves Statement and Explanatory Notes

As at 30 June 2020

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Table 1: Carrapateena Mineral Resources Estimate[1236] **as at 30 June 2020**

Envelope Cut-off	Category	Tonnes	Cu	Au	Ag	Cu	Au	Ag
NSR/t A$		Mt	%	g/t	g/t	kt	koz	Moz
$25	Measured	130	0.96	0.42	3.6	1,200	1,700	15
	Indicated	500	0.62	0.26	2.9	3,100	4,200	46
	Inferred	330	0.32	0.16	2.0	1,100	1,700	21
	Total	**950**	**0.57**	**0.25**	**2.7**	**5,400**	**7,600**	**82**

Table 2: Carrapateena Ore Reserves Estimate[145678] **as at 30 June 2020**

Category	Tonnes	Cu	Au	Ag	Cu	Au	Ag
	Mt	%	g/t	g/t	kt	koz	Moz
Proved	0	0	0	0	0	0	0
Probable – SLC	32	1.5	0.74	7.9	460	750	8.0
Probable – BC1	140	1.1	0.45	4.4	1,600	2,000	20
Probable – BC2	46	0.61	0.22	2.0	280	320	3.0
Total – Probable Ore Reserves	**220**	**1.1**	**0.45**	**4.4**	**2,300**	**3,100**	**31**

1   These tables are subject to rounding.

2   This Mineral Resource does not account for mining recovery or mining dilution.

3   The use of a cut-off to generate a contiguous envelope required by block caving (BC) results in some blocks below cut-off being included in the Mineral Resources, as exemplified by the Inferred Resources, of which 66% of the tonnage is below the cut-off.

4   Shut -off values vary by mining block, with $93/tonne used for the top 10 levels, reducing to A$70/tonne for the SLC. Shut off for BC1 is A$28/tonne. Shut off for BC2 is A$32/tonne.

5   Dilution is incurred due to the nature of the mining method and is included in the Ore Reserves Estimate. Dilution totals 36 Mt @ 0.9% Cu, 0.4 g/t Au, 4 g/t Ag and originates from Inferred Resources and Unclassified material.

6   Mineral Resources are inclusive of the Ore Reserves. The BC1 and BC2 Ore Reserves are supported by the 2020 Carrapateena Block Cave Expansion Pre-Feasibility Study.

7   The Ore Reserve estimate for the sub-level cave (SLC) component is based on the SLC 2020 business plan for the top 10 levels at a shut-off of A$93/tonne followed by a declining shut-off value on the next three SLC levels, reducing to $70/tonne on the final level.

8   At the time of publication, the Competent Person has a reasonable basis for the publishing of this Ore Reserve estimate, in that the Block Cave Pre-Feasibility Study has been completed and is being progressed to a Feasibility Study. The economic viability of the Block Cave option is based on a staged schedule which includes the Sub-Level Cave, Block Cave 1 and Block Cave 2. Changes to the decision date to proceed with the block cave, or changes to the sub-level cave mining strategy will impact on the ratio of sub-level cave and block cave material in the total estimate, but not materially impact on the total Ore Reserve estimate. The economic viability of the block cave option reduces with time, and a decision to change the mining plan later than 1 January 2023 impacts on the financial viability of the block cave mining options.

Carrapateena Resource Statement as at 30 June 2020

The Carrapateena November 2020 Mineral Resources statement relates to an updated Mineral Resources 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).
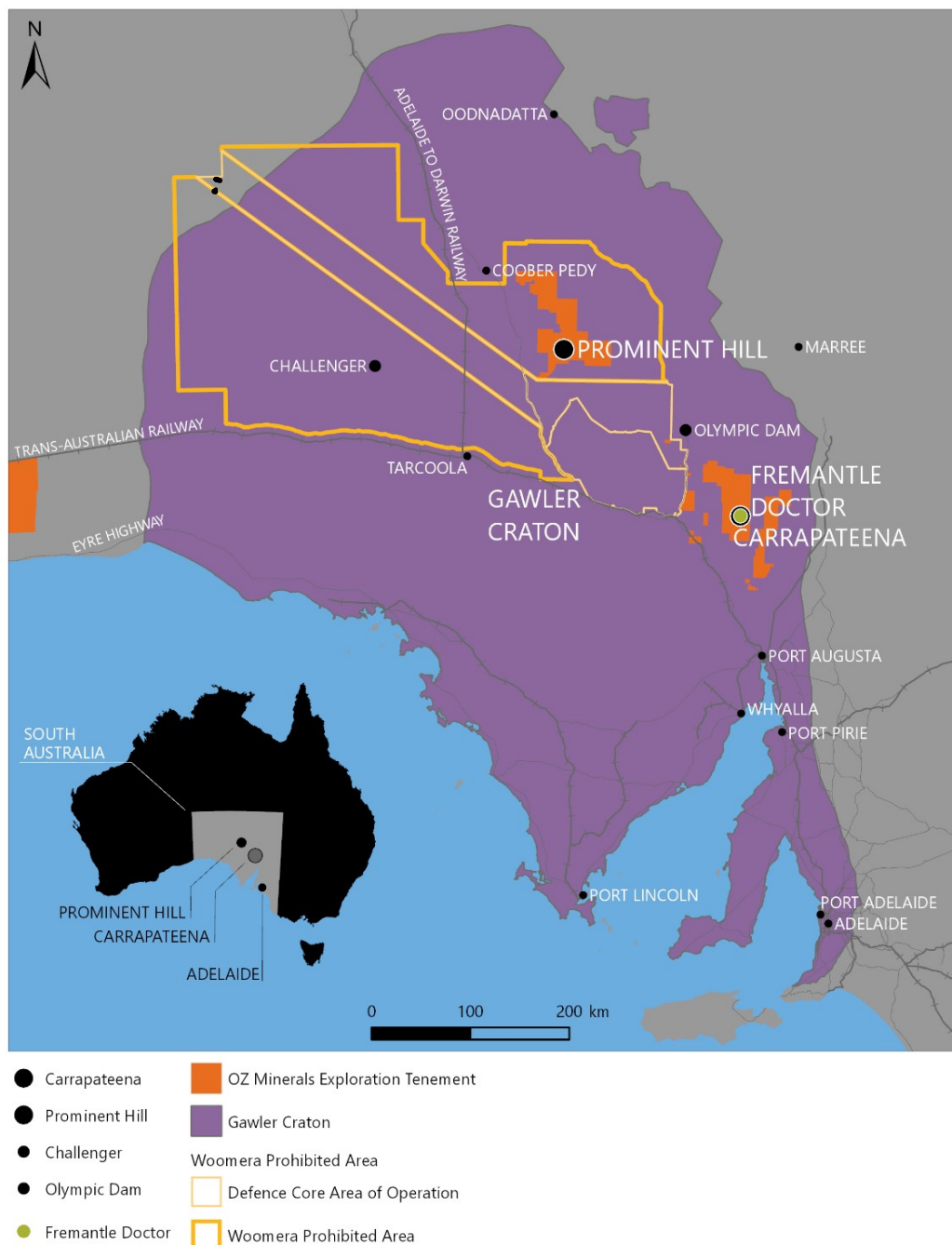

Figure 1: Location of Carrapateena, South Australia

This Mineral Resources statement is an update to the November 2019 Mineral Resources statement as at 30 June 2020[1]. This update includes drillhole data acquired between June 2019 and June 2020, and also uses mapping information collected from underground development to inform the interpretation. The 2020 model uses an approach to interpretation consistent with that used for previous models. The Reasonable Prospects test uses updated commodity prices and exchange rate. Copper and gold recoveries have been updated based on recent test work. The model has been created and classified assuming it will underpin an assessment of the applicability of the Block Caving (BC) mining method but is also valid for evaluating a Sub-level Caving (SLC) mining method.

Mineral Resources

The estimated Mineral Resources for the Carrapateena deposit are shown in Table 3. The Mineral Resources estimate has been reported in accordance with the 2012 edition of the JORC Code. For mineralisation above the 3,600 RL, a nominal cut-off of A$25 NSR per tonne[2] has been used to generate a continuous shape[3] in which all material was deemed to have reasonable prospects of eventual economic extraction, assuming a BC operation.

Table 3: Carrapateena Mineral Resource Estimate[9][10][11][12] as at 30 June 2020

Envelope Cut-off (NSR/t A$)	Category	Tonnes Mt	Cu %	Au g/t	Ag g/t	Cu kt	Au Koz	Ag Moz
$25	Measured	130	0.96	0.42	3.6	1,200	1,700	15
	Indicated	500	0.62	0.26	2.9	3,100	4,200	46
	Inferred	330	0.32	0.16	2.0	1,100	1,700	21
	Total	**950**	**0.57**	**0.25**	**2.7**	**5,400**	**7,600**	**82**

9   This table is subject to rounding.

10   This Mineral Resource estimate does not account for mining recovery or mining dilution.

11   The use of a cut-off to generate a contiguous envelope required by block caving (BC) results in some blocks below cut-off being included in the Mineral Resources, as exemplified by the Inferred Resources, of which 66% of the tonnage is below the cut-off.

12   Mineral Resources are inclusive of Ore Reserves.

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[1] Carrapateena Mineral Resource Statement and Explanatory Notes as at 30 June 2019, https://www.ozminerals.com/uploads/media/OZL_Carrapateena_MROR.pdf

[2] Net Smelter Return (NSR) details can be found under Section 3 "Cut-off parameters" in the attached JORC Table 1 documentation.

[3] The shape was generated by digitising a single polygon around blocks above the cut-off on 20 m levels. These polygons were then refined to ensure a 3D shape that was realistic given the BC mining option. No separate internal waste shapes were defined as the likelihood of selectively recovering such material during mining is very low in a BC operation. Minimum (maximum) planar polygon area for the BC is around 135,000 m^2 (370,000 m^2), which equates to a circle with diameter of 410 m (685 m).

Changes in the June 2020 Mineral Resource Estimate

The June 2020 Mineral Resources show a 2% decrease in tonnes, 5% increase in copper grade resulting in a 4% increase in copper tonnes when compared to the June 2019 resources.

These changes are due to:

- Additional drilling data acquired since 2019;

- Additional sampling and mapping data from underground development;

- Updated interpretation to accommodate new data;

- Minor refinements to estimation parameters;

- Refinements to resource classification criteria;

- Changes to the economic parameters and change from a Simplified Net Smelter Return (SNSR) in 2019 to a NSR for 2020; and

- Use of Leapfrog™ software instead of Vulcan™ for geological interpretation.

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 m of Neoproterozoic sediments. Mineralisation and alteration are in the form of that seen at other large South Australian IOCG deposits, including Prominent Hill and Olympic Dam.

For modelling and estimation, the deposit geology was interpreted into several domains based on a combination of lithology, chemistry and mineralisation style, including a chalcopyrite-dominant domain, bornite-dominant domain, pyrite-chalcopyrite domain, gold enriched zones, leached zones, mineralised granite domain 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. The drill core is sampled as half core, except for PQ core, metallurgical holes and field duplicates, where quarter core was sampled.

All available basement drill core, except for metallurgical and some geotechnical holes and some instances where holes passed through large intervals of granite outside the mineralisation, were sampled on 1 m intervals but respect 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% passing 75 microns. For Teck Cominco Australia Pty Ltd (Teck) drill holes, samples were pulverised to a nominal 85% passing 75 microns.

Drilling Techniques

For 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. OZ Minerals underground drilling commenced in 2019 with a combination of HQ and NQ core sizes.

Sample Analysis Method

Samples were sent to either the Bureau Veritas (Amdel) Adelaide laboratory by (OZ Minerals and large proportion of Teck drill holes) or the 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, an AAS finish.

Estimation Methodology

A block model was constructed having values estimated independently for Cu, Au, Ag, U, F, C, Ba, Fe, Mg, Si, S, SG (as measured) and Weight Loss on Drying, by Ordinary Kriging of sample data composited to 4 m intervals. Domain boundaries were treated as hard boundaries.

Mineral Resource Classification Criteria

The basis for Mineral Resource classification is underpinned by:

- Robustness of the conceptual geological model
- Quality of data
- Continuity of geology and grade relative to the arrangement of data
- Agreement between the model and process plant reconciled grade estimates.

The Competent Person assessed the quality of the data and the confidence in the interpretations of geology and mineralisation. The quality of the estimation of grades was assessed using the relative kriging variance of the copper estimate. The confidences in the interpretations and estimate were then integrated. Finally, those parts of the model that were unlikely to satisfy the 'reasonable prospects test' (reasonable prospects for eventual economic extraction), were excluded from the resource estimate, mainly based on contiguity, dimensions and grade. A depth cut-off of 1,500 m below surface (3,600 RL), has been applied to the A$25 NSR/t shape, which is based on the lowest level to be reasonably extracted by block caving given the current understanding of rock mass and stress.

The Competent Person has checked, reviewed and integrated all this information and subsequently assigned a classification of Measured, Indicated or Inferred Mineral Resource to the estimate, and excluded parts of the model that do not satisfy the 'reasonable prospects test' from the Mineral Resources.

Cut-Off Value

The Mineral Resources are reported within a shape that has been generated using a cut-off applied to the NSR per tonne (NSR/t). NSR is calculated considering 2020 business plan metallurgical recovery based on current performance, current royalties and transport, treatment and refining costs. Recovery is calculated for copper, gold and silver based on five flotation domains, which is based on test work during the Pre-Feasibility and Feasibility Studies.

The Mineral Resource is reported within a 'reasonable prospects' shape that has been generated using a cut-off NSR of A$25 per tonne, being the expected combined mining, milling and GA costs excluding sustaining capital assuming mineralisation is amenable to mining by BC. No cut-off has been applied to Mineral Resources inside the A$25 NSR per tonne cut-off shape.

The shape was generated by digitising a single polygon around blocks above the cut-off on 20 m vertical increments. These polygons were then refined to ensure a 3D shape that was realistic given the proposed mining option. To achieve this, in places some blocks below the cut-off were included. No separate internal waste shapes were defined as the likelihood of selectively recovering such material during mining is very low in a BC operation. Minimum and maximum planar polygon areas for the BC are around 135,000 m^2 and 370,000 m^2 respectively, which equate to circles with diameters of 410 m and 685 m respectively.

Mining and Geotechnical

Carrapateena has a high-grade core of bornite and chalcopyrite-rich mineralisation, surrounded by a pyrite-chalcopyrite zone that is considered amenable to mining by BC. For the purpose of this statement, it is assumed that BC will be a suitable method for extraction of the mineralisation. 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/t, means that a lot of dilution is already accounted for in the Resource estimate.

Processing

Metallurgical test work studies on representative samples selected via a geometallurgical study have shown that a conventional crushing, grinding and flotation circuit would produce acceptable concentrate grades and metal recoveries. The recovery assumptions for the Resource and Reserves are based on test work. For the quarter to June 2020 the Copper recovery and the gold recovery is commensurate with test work.

Environment

The Carrapateena deposit is located on Mineral Lease 6471. This lease has an approved Program for Environmental Protection and Rehabilitation (PEPR) as required under the South Australian Government *Mining Act 1971* (SA) and is in good standing.

Reasonable Prospects

- The budgeted mining method is sub-level caving (SLC), however block caving (BC) is being investigated through feasibility studies and desktop studies through the whole province.

- The 2020 Pre-Feasibility Study was released outlining a block cave on the 3,700 RL joining the SLC at approximately the 4,200 RL.

- A desktop study in 2019 identified additional resources outside the current SLC shape above the 4,200 RL that are amenable to recovery by block cave mining methods.

- The reasonable prospects shape above 3,600 RL up to the 4,600 RL was generated based on a cut-off NSR of A$25 per tonne assuming mining by BC.

- Given the likely mining method, the classification also accounts for the expected contiguity of material above cut-off.

- Metallurgical test work indicates that a saleable concentrate can be produced and has been supported by initial production.

- Reporting of the Resources has been limited to above 1,500 m below surface (3,600 RL) as the 3,600 RL is the lowest level suitable for extraction by the block caving method based on the current understanding of rock mass and stress.

- Material outside of any SLC but within the BC shape is assumed to satisfy the reasonable prospects test. Further mining studies will identify how much of the halo around any SLC may not be recoverable by a BC.

Dimensions

The deposit geometry is generally pipe-like, with the lateral extent reducing with depth. Limits of the Mineral Resource are listed in Table 4.

Table 4: Dimensions of the Mineral Resource

Dimension	Minimum	Maximum	Extent (m)
Easting	87,600	88,300	700
Northing	43,000	43,940	940
RL	3,600	4,620	1,020

JORC Code, 2012 Edition, Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	All basement samples consist of diamond drill core (NQ, NQ2, HQ and PQ) cut with a manual or automatic core saw. The drill core is sampled as half core, except for PQ core, metallurgical holes and field duplicates, where quarter core was sampled. The method of sampling is considered acceptable for the estimation of Mineral Resources. All available basement drill core prior to 2016 was sampled. Where 2016 resource drill holes intersected large intervals of basement granite distal to the mineralisation zone, drill core was sampled at one metre intervals every second metre. All other available basement drill core from 2016 resource drilling was sampled. 2018 - 2020 resource drill holes were sampled when in basement. Sampling interval is generally 1 m but respects geological contacts in places. 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 (40 g or 20 g charge). Sub-sampling, sample preparation, assay methods and assay quality are discussed in other parts of this table.

Criteria	JORC Code explanation	Commentary
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	For Teck Cominco Australia Pty Ltd (Teck) drill holes, a combination of RC and mud-rotary was used for pre-collars. 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. 70% of Teck drill holes were vertical to sub-vertical, 2 holes were angled (nonvertical) 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, ACT or Coretell core orientation tool. Underground diamond drill holes were drilled with a combination of NQ2 and HQ. Down hole orientations were completed using "Reflex® ACT" & "Trucore®" orientation tools.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	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/Geobank front end. Average core recovery was high with more than 99% recovered through the mineralised zone. 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. 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.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	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. 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. All core in the mineralised zone (74,974 m, 100%) was logged. This included 3,602 m of core from metallurgical drill holes that was used to guide the geological interpretation but not used in the grade estimation.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	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 up until 2020 half core duplicates from 2020 and quarter core for three metallurgical drill holes. Samples were mostly 1 m in length, but also ranged from 0.3 m to 1.5 m if adjusted to geological or major alteration boundaries. Only core samples were used in basement. Sample preparation included drying, crushing, and pulverising in full to a nominal 90% (OZ Minerals) or 85% (Teck) passing 75 microns. This is considered industry standard for this style of mineralisation. For OZ Minerals drill holes, controlled copies of Standard Operating Procedures (SOPs) and signoffs 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. Sample representivity was confirmed by results from 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 indicated that the sampling was representative. Analysis of duplicate data at a variety of scales, from quarter core to crushed core to pulp duplicates, indicated the sample sizes were appropriate to the grain size of the material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	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' copper (>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 ICPOES, with 'high grade' analysis (Cu >1%) determined by modified four acid digest and ICP-OES. Gold 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 ICPMS.

Criteria	JORC Code explanation	Commentary
		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 40 g Fire Assay finished by AAS at Bureau Veritas Adelaide Laboratory (Amdel).
		For both Teck and OZ Minerals assay results, the techniques are total for all relevant elements except for sulphur (Teck, ICP-OES) which is near-total.
		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.
		For OZ Minerals drill holes, assay data quality was monitored through submission of standards and blanks every 25 samples, quarter core field duplicates (start – 2019), half core field duplicates (2020) 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.
		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 QA/QC reports commenced from the June 2012 quarter.
		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 acceptable. 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 QA/QC reports commenced from the June 2012 quarter.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	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. 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. 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. 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.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	All collar locations for drill holes prior to 2016 were determined by DGPS. All collar locations for 2016 drill holes were determined by Garmin 62S Handheld GPS. The locations have been cross checked using DGPS and are within an error of ± 9 m. All collar locations after 2016 were determined by DGPS. Teck drill holes had downhole surveys (about every 30 m) by multiple methods including Ranger Multi-Shot survey tool, Wellnav SRG (surface recording gyro) and Eastman Camera surveys.

Criteria	JORC Code explanation	Commentary
		For OZ Minerals drill holes up to 2017, magnetic downhole surveys were taken at nominal 30 m 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.
		2018 and 2019 surface drill programs used a north seeking gyro, a combination of continuous surveys and single surveys at 30 m spacings was utilised across the program. The survey tool was an Axis Champ Gyro.
		Underground diamond drill hole collars were surveyed by the Underground Survey Department using Leica Total Stations. Co-ordinates were calculated from a traverse surveyed down the Tjati Decline from the surface. All co-ordinates were provided in Mine Grid and have no scale factor applied. Underground Survey equipment has been serviced and maintained on a regular basis and the Underground Survey network checked by regular re-surveys to ensure its integrity.
		For underground drilling, Downhole Surveys Pty Ltd's Azimuth Aligner® tool was utilised. This tool clamped to the drill rod (all sizes) and utilised a north seeking gyro to provide a digital read-out of the azimuth and dip at the collar.
		All underground drill holes were surveyed using a a Deviflex® tool. Deviflex RAPID survey tool was utilised from October 2019 until January 2020, after January 2020 Deviflex TwinGyro was used for underground drilling. Surveys are recorded every 3 m on completed holes.
		The grid is local Carrapateena Mine Grid. Local elevations have been used, where 5000 RL is equal to Australian Height Datum.

Criteria	JORC Code explanation	Commentary
		A DTM was flown for Teck in 2007, and over an expanded area for OZ Minerals in April 2012. The 2012 DTM was consistent (±1.6 m maximum) with the DGPS collar pickups for drill holes affecting the Mineral Resource.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	No Exploration Results are reported in this statement. Drill testing the spatial extent of the prospect started with a 200 m x 200 m grid sequence, with 100 m x 100 m infill drilling commencing in September 2006. Two infill holes with four additional wedges were drilled to 50 m spacing (north south) in the bornite zone in the south west of the deposit. After late 2011, OZ Minerals drilled non-vertical holes with the intention of better defining the limits of the copper mineralised zones. The holes were drilled in a variety of directions and so the spacing between holes was not uniform. The spacing is typically less than 50 m in the upper part of the Measured and Indicated parts of the Mineral Resource, becoming wider at depths below 3,800 RL and in the Inferred part of the Mineral Resource. Underground drilling has been drilled in a range of orientations to validate the surface drilling and infill gaps. The data spacing and distribution is considered enough to establish geological and grade continuity appropriate for the Mineral Resource estimation and classification. Compositing of sample data to 4 m lengths is discussed in Estimation and modelling techniques, below. No physical compositing of samples has occurred.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	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. The edges of the main high-grade zone constituting the Measured and Indicated parts 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' drilling has included vertical, sub-vertical and moderately dipping holes. Underground drilling has primarily been at shallow dip angles (<30°) to validate the surface drill programs.

Criteria	JORC Code explanation	Commentary
Sample security	• *The measures taken to ensure sample security.*	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
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	An internal audit of Teck's Carrapateena database was conducted in 2008. This study identified a significant proportion (9%) of failed QA/QC samples in the Teck database at that time. During 2007 and 2008, a total of 9,007 samples, including QA/QC 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.
		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 to 2013 drilling campaign. Minor issues were noted on both the audit and inspections but were not considered to be material overall.
		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.
		Data from the 2016 – 2020 drilling campaigns has not been subject to external audit or review, but OZ Minerals has conducted internal checks, which have not revealed any material issues.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The Carrapateena deposit is located on Mineral Lease 6471, which expires in January 2039. This lease has an approved Program for Environmental Protection and Rehabilitation (PEPR) for the Sub-Level Cave Operation as required under the *Mining Act 1971* (SA) and is in good standing.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration 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.
Geology	• *Deposit type, geological setting and style of mineralisation.*	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 m of Neoproterozoic sediments. Mineralisation and alteration are in the form of that seen at other large South Australian iron oxide copper gold (IOCG) deposits including Prominent Hill and Olympic Dam.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *easting and northing of the drill hole collar* • *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.*	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.

Criteria	JORC Code explanation	Commentary
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	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.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	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.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	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.

Criteria	JORC Code explanation	Commentary
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	No Exploration Results have been reported in this release. This criterion is not relevant to this report on Mineral Resources.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	No Exploration Results have been reported in this release. This criterion is not relevant to this report on Mineral Resources.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	The company is currently undertaking a Feasibility Study (FS) assuming a Block Cave (BC) mining method. Further resource definition work will be planned based on the outcomes of this study.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	Data is stored in a SQL Server database and is entered via a Geobank 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. 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 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.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	The Competent Person works at the Carrapateena mine site as an employee of OZ Minerals, providing direction and overview to the Mineral Resource activities throughout the year. The Competent Person has also been directly involved with the interpretation/review of geological and geostatistical models and their development.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	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

Criteria	JORC Code explanation	Commentary
		mineralisation generally had Cu: S exceeding 1.25. Copper in the bornite-dominant zone was usually more than 1.5% copper but locally some zones having lower copper grades than these were included in this domain. Chalcopyrite-dominant zones are often but not always adjacent to zones of bornite mineralisation. 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 in the north, east and at depth, is less continuous and has consequently been classified mainly 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.
		The geological interpretation was based on drill core data, including geochemical data, and core logs and photos. Core logs, photos and, where appropriate, assays from metallurgical holes and underground wall sampling were also used to guide the interpretation. 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 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.
		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.
		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

Criteria	JORC Code explanation	Commentary
		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.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	The maximum extents of the Mineral Resource inside the A$25/t NSR cut-off shape are 700 m (X) x 940 m (Y) x 1,020 m (Z). The deposit geometry is generally pipe-like with the lateral extent decreasing with depth. The topographic surface over the mineralisation is at approximately 5100 RL. The depths from surface to the upper and lower limits of the Mineral Resource are approximately 485 m and 1,500 m respectively.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.*	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, Ag, U, Co, S and Ba. Lithological domains were used for the estimation of specific gravity, carbon and the important major rock-forming elements iron, magnesium and silicon. Four additional domains were created for estimation of fluorine because of the distinctly bimodal grade populations in the main copper mineralised domains. The mineralisation domains relevant for the estimated Mineral Resource are: • Pyrite-chalcopyrite in main copper-mineralised zone • Chalcopyrite in main copper-mineralised zone • Bornite in main copper-mineralised zone • Eastern copper-mineralised zone • Deep high-grade copper zone (mixed bornite and chalcopyrite) • Barren hematite zone • Gold in barren hematite zone • Low grade copper mineralisation in granite. • Thin gold enriched zones above the Pyrite, Chalcopyrite and Bornite zones

Criteria	JORC Code explanation	Commentary
	• *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• Thin Leached zones above the Pyrite, Chalcopyrite and Bornite zones • A larger, sub-vertical Leached zone in the upper northwest part of the mineralisation. Other domains exist including the surrounding granite, dykes and cover sequence, but these do not contain significant copper mineralisation and primarily have been excluded from the estimated Mineral Resource by the reasonable prospects shape. Domain boundaries were treated as hard boundaries for the estimation of all variables. Chalcopyrite and pyrite-chalcopyrite mineralisation within the main mineralised zone have been treated separately during estimation. Domain wireframes were constructed with Seequent Leapfrog™ using implicit modelling. The implicit modelling process used categorical values for modelled domains based on drill hole data. Additional constraints were also applied, by using control lines to force the domain boundaries produced by the implicit modelling to honour the geologist's interpretation. 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. Estimation used Ordinary Kriging. Sample data were composited to 4 m for all variables. Variographic analysis was done using Snowden Supervisor™. Domain construction used Seequent Leapfrog™ and estimation was done using Maptek Vulcan™. Up to two search and estimation passes were used, with a third pass being used to assign default values to the negligible amount of unestimated blocks remaining after the second pass. The first pass used search radii equivalent to 66% of the modelled variogram ranges if the primary range was above 100 m, 100% of the modelled variogram ranges were used if the primary range was below 100 m. 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 248 m x 66 m x 66 m and 85 m x 64 m x 35 m respectively. The first pass used a minimum of four composites and a maximum of 20 samples, with a maximum of 15 composites per drill hole. The second pass did not have search restrictions and used the same minimum and maximum composites as pass 1. The third pass assigned a grade near to the median composite grade for the relevant domain to unestimated blocks. Less than 0.1% of the blocks included in the Mineral Resource had a copper grade assigned during the third pass. 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 275 m.

Criteria	JORC Code explanation	Commentary
		The block model used for the current estimate was compared with the 2019 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 additional data and changes to domains and estimation parameters for the current Mineral Resource. In addition, several check estimates were run using different top-cuts and search neighbourhood parameters with results showing only minor differences to the base case.
		The current assumption is that revenue will only be obtained from copper, gold and silver.
		Grades were estimated independently for Cu, Au, Ag, U, F, Fe, Co, C and SG (as measured) and Weight Loss on Drying. Magnesium, calcium and manganese were estimated using the same parameters as carbon. Silicon, titanium, aluminium, and potassium were estimated using the same parameters as iron.
		A sub-blocked model was used, having a parent block size of 20 m x 20 m x 20 m in all domains except for granite (which used 40 m x 40 m x 40 m), with sub-blocks down to 5 m x 5 m x 5 m to honour domain boundaries. Parent cell estimation was employed.
		Sample spacing varies widely. In the vertical direction, composites are spaced at 4 m downhole. In the horizontal plane, the spacing between holes is not uniform. In the higher-grade core of the deposit, the spacing is less than around 30 m x 30 m locally, but generally targeted to 50 m x 50 m, increasing to ~100 m ×100 m outwards from there. Since holes have been angled to obtain information on lateral controls, the horizontal spacing varies.
		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.
		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.

Criteria	JORC Code explanation	Commentary
		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.
		The impact of very high-grade composites was restricted using top cuts for all elements and SG estimated, which generally were around the 99th percentile of the distribution of grades of 4 m composites for most variables. Check estimates revealed that the choice of top cuts did not have a material effect on the estimate.
		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.
		Statistical validation included: 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.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages are estimated on a dry basis. 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%.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	A shape generated using a cut-off NSR (net smelter return) of A$25/t has been used for the reported Mineral Resource, assuming mining with BC. The value of $A25/t was recommended by OZ Minerals mining engineers as the value which covers expected mining, processing and site G&A costs, while still maintaining acceptable continuity of mineralisation above cut-off.
		NSR is calculated considering 2020 business plan metallurgical recovery based on current understanding, current royalties and transport, treatment and refining. Recovery is calculated for copper, gold and silver based on five flotation domains, which is based on test work during the Pre-Feasibility and Feasibility Studies.

Criteria	JORC Code explanation	Commentary
		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 the second quarter of 2020 and are the consensus values of major brokers issued in 2020.

Assumptions	Unit	LOM
Copper	US$/lb	2.91
Gold	US$/oz	1246
Silver	US$/oz	18.10
Exchange Rate	AUD/USD	0.67

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	Carrapateena has a high-grade core of bornite and chalcopyrite rich mineralisation that is amenable to SLC based on the current mine plan but, when combined with the broader chalcopyrite-pyrite zone, is likely to be amenable to Block Caving (BC). For the purpose of this statement, it is assumed that BC will be a suitable method for extraction of the resource. Extraction of the resources has only been contemplated to a depth of 1,500 m as mineralisation below 3,600 RL does not pass the current reasonable prospects test. This Mineral Resource does not account for mining recovery.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical*	Metallurgical test work on representative samples selected via a geometallurgical study have shown that a conventional crushing, grinding and flotation circuit would produce acceptable concentrate grades and metal recoveries. The Carrapateena processing plant has been operating since December 2019 and comprises a conventional crushing, grinding and flotation circuit to recover copper, gold and silver to produce a high-quality concentrate.

Criteria	JORC Code explanation	Commentary
	assumptions made.	
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	The Carrapateena deposit is located on Mineral Lease 6471, which expires in January 2039. This lease has an approved Program for Environmental Protection and Rehabilitation (PEPR) for the Sub-Level Cave Operation as required under the *Mining Act 1971* (SA) and is in good standing. A referral for the Carrapateena project was submitted to the Australian Government's Department of the Environment and Energy (DoEE) on 10 March 2017. On 12 April 2017, DoEE released their decision on the referral as a 'controlled action' and this approval is in good standing.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	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. OZ Minerals routinely repeated measurements and had four standards, NQ and HQ size each made of aluminium and titanium for QA/QC purposes. The mineralised material is not significantly porous. Moisture has been estimated as described in the Moisture criterion in this table. The lithological domains were considered to be suitable for use as domains for density estimation.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. 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).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The basis for Mineral Resource classification is underpinned by the robustness of the conceptual geological model, quality of data, the continuity of geology and grade relative to the arrangement of data, and the agreement between the model and process plant reconciled grade estimates. The Competent Person has taken into account the quality of the data and the confidence in the interpretations of geology and mineralisation. The quality of the estimation of grades was assessed using the relative kriging variance in the copper estimate. The confidences in the interpretations and copper estimate were then integrated. Finally, those parts of the model which were unlikely to satisfy the 'reasonable prospects test' (reasonable prospects for eventual economic extraction), were excluded from the resources, mainly based on contiguity, dimensions and grade within the context of the proposed mining method of BC. The Competent Person has checked, reviewed and integrated all of this information and subsequently assigned a classification of Measured, 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. Appropriate account has been taken of all relevant factors (i.e. 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.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	This Mineral Resource estimate was reviewed by OPTIRO Consultants during July 2020. The review found that there were no material issues with the estimate or classification and reporting.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the*	Factors affecting global accuracy and confidence of the estimated Mineral Resource at the selected cut-off include the following: The impact of conditional biases by Ordinary Kriging is minimised by the low cut-off grade implied by the block cave mining method. As well as the nominal delimitation grade for modelling being close to the Mineral Resource cut-off grade.

Criteria	JORC Code explanation	Commentary
	estimate. • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Uncertainty of the position of domain boundaries, which is largely due to the arrangement of drill hole intersections. The size of the mineralised domain wireframes has a direct effect on the estimated tonnage of the Mineral 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. The Mineral Resource estimate reported assumes enough local-scale detail to be useful for the technical and economic evaluation of a BC or SLC mining method. There has been 1.2 Mt @ 1% Cu, 0.7g/t Au and 7g/t Ag processed up until June 30 2020. The variation between the model grades and the reconciled grades is commensurate with the variability implied by the classification.

Competent Person Declaration – Mineral Resources

Competent Person Statement

The information in this report that relates to Mineral Resources is based on information compiled by Shaun Light, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (316591). Shaun Light is a full-time employee of OZ Minerals. Shaun Light 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). Shaun Light consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Shaun Light BSc (Geology), has over 12 years of relevant and continuous experience as a geologist including 9 years in Iron-Oxide-Copper-Gold style deposits. Shaun Light has visited site on a regular roster since joining the Carrapateena team in 2019. Shaun Light is a full-time employee of OZ Minerals and a participant in employer issued shareholder benefits, there is no significant relationship between OZ Minerals shareholder benefits and the outcomes of these Mineral Resources.

Shaun Light

OZ Minerals

Summary – Ore Reserves

Table 5: Carrapateena Ore Reserves Estimate[1234567] as at 30 June 2020

Category	Tonnes	Cu	Au	Ag	Cu	Au	Ag
	Mt	%	g/t	g/t	kt	koz	Moz
Proved	0	0	0	0	0	0	0
Probable – SLC	32	1.5	0.74	7.9	460	750	8.0
Probable – BC1	140	1.1	0.45	4.4	1,600	2,000	20
Probable – BC2	46	0.61	0.22	2.0	280	320	3.0
Total – Probable Ore Reserves	**220**	**1.1**	**0.45**	**4.4**	**2,300**	**3,100**	**31**

1   The table is subject to rounding.

2   Shut-off values vary by mining block, with A$93/tonne used for the top 10 levels, reducing to A$70/tonne for the SLC. Shut off for BC1 is A$28/tonne. Shut off for BC2 is A$32/tonne.

3   Dilution is incurred due to the nature of the mining method and is included in the Ore Reserves Estimate. Dilution totals 35 Mt @ 0.9% Cu, 0.4 g/t Au, 4 g/t Ag and originates from Inferred Resource and Unclassified material.

4   Mineral Resources are inclusive of the Ore Reserves. The BC1 and BC2 Ore Reserves are supported by the 2020 Carrapateena Block Cave Expansion Pre-Feasibility Study.

5   The Ore Reserve estimate for the sub-level cave (SLC) component is based on the SLC 2020 business plan for the top 10 levels at a shut off of $93/tonne followed by a declining shut-off value on the next three SLC levels.

6   At the time of publication, the Competent Person has a reasonable basis for the publishing of this Ore Reserve estimate, in that the Block Cave Pre-Feasibility Study has been completed and is being progressed to a Feasibility Study. The economic viability of the Block Cave option is based on a staged schedule which includes the sub-level cave, Block Cave 1 and Block Cave 2. Changes to the decision date, of the block cave, or changes to the sub-level cave mining strategy will impact on the ratio of sub-level cave and block cave material in total, but not materially impact on the total Ore Reserve estimate. The economic viability of the block cave option reduces with time, and a decision to change the mining plan later than 1 January 2023 impacts on the financial viability of the block cave mining options.

Carrapateena Ore Reserve Statement as at 30 June 2020

The location of Carrapateena is provided in Figure 2. The Carrapateena sub-level cave (SLC) started production through the mill in Q1 2019, and this Ore Reserve estimate replaces the previously stated Ore Reserve estimate as at 31 May 2020[4].

The total Ore Reserve estimate is made up of three separate mining areas of the same deposit (see Figure 3). Important notes regarding the Ore Reserve and mining areas:

- The SLC is currently being mined from the 4580 RL to the 4305 RL at a rate increasing from 4.25 Mtpa to 5 Mtpa.

- The SLC has a lower shut-off value on levels 4280 to 4230 (overdraw zone), to improve economics and capital efficiency of the mine.

- Block Cave 1 (BC1) extraction level is located on the 3700 RL.

- Block Cave 2 (BC2) is a mining block adjacent to BC1, to be mined after the depletion of BC1.

Figure 2: Location of Carrapateena, South Australia

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[4] Carrapateena Mineral Resource and Ore Reserve Statement, 12 November 2019 https://www.asx.com.au/asxpdf/20191112/pdf/44bh2wt0ljcthq.pdf
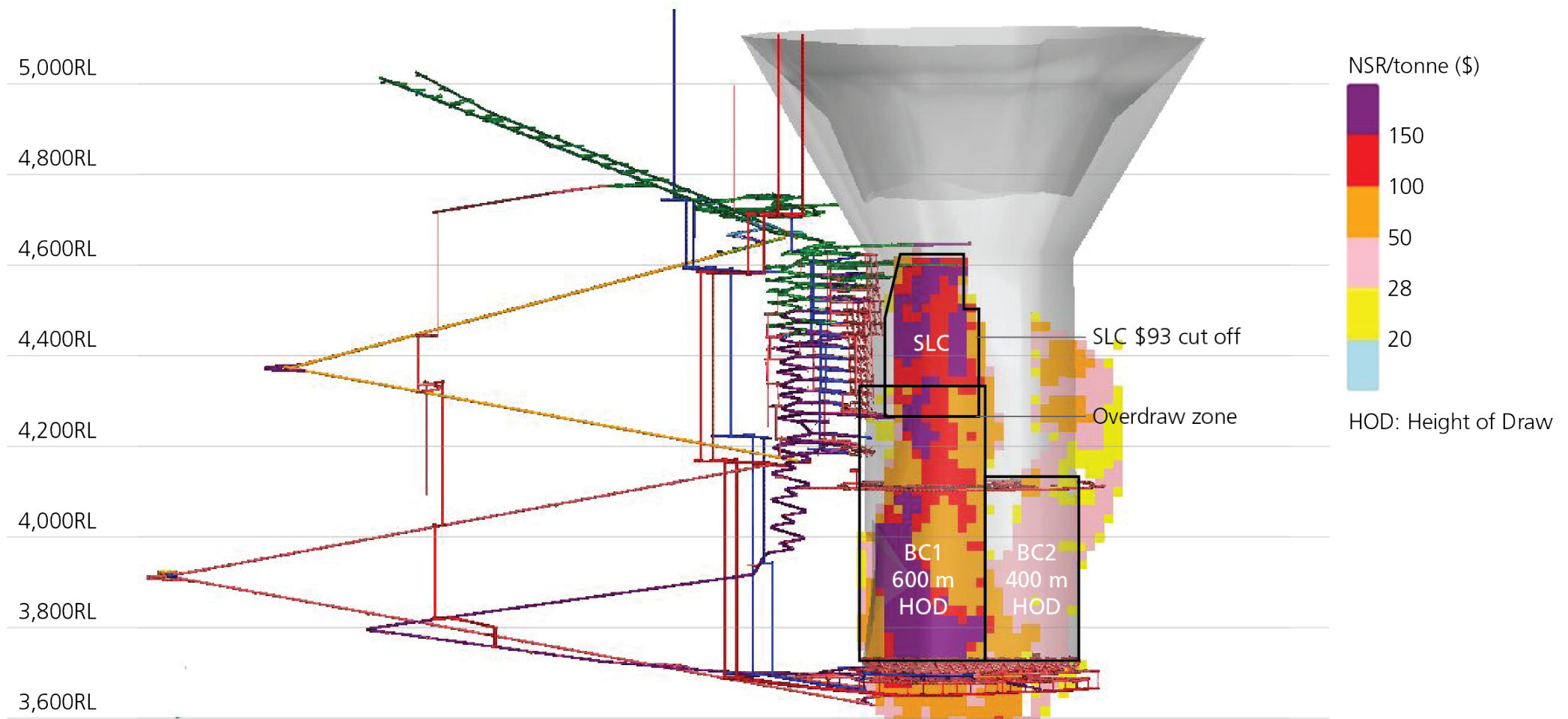
Figure 3: Layout of the Proposed Mine Design for Carrapateena Based on the FS Plan for the SLC, and the 2020 PFS Plan for the Block Cave

Material Assumptions for Ore Reserve

Previous studies have concluded that both block caving and sub-level caving are appropriate methods to mine the Carrapateena Ore Reserve. In 2017, the Feasibility Study Update recommended a top-down SLC mining method as the best option for the deposit and based on that study a decision was made to mine the deposit. The SLC commenced production from SLC rings the uppermost level of the mine in April 2020, following mill production in Q1 2019.

In 2020, a Pre-Feasibility Study was completed on an expansion of the Carrapateena asset (the "2020 PFS"). This Study identified an alternative for mining the deposit was by block cave mining method, a summary of which is included in this document. Two mining blocks were identified to be mined one after the other, being BC1 then BC2. This approach maximises Net Present Value and the Present Value Ratio (Net Present Value divided by Discounted Capital Cost) of the deposit. In addition to the existing mill already constructed for the SLC mining method, an additional mill will need to be constructed to increase the processing throughput rate to 12 Mtpa. Provision has been made in the study for Capital Cost estimation, consistent with the level of accuracy required for a Pre-Feasibility Study. A contingency has also been added to the Capital cost estimate, based on an assessment of other similar projects. A financial evaluation of the 2020 PFS has been completed, for comparison against the 30 June 2019 Ore Reserve Estimate (based on the SLC mining method only) and been shown to be NPV accretive. To mine the block cave economically and safely, it is necessary to transition from SLC mining, and to recover the remaining resource using the block cave mining method. Whilst BC2 recovers lower grade material later in the mine life, financial modelling has demonstrated that it is also economically viable using the economic assumptions detailed in this release.

Ore Reserve Classification

The Ore Reserve Estimate is based on Measured and Indicated Resources. Due to the non-selective nature of caving mining methods, some Inferred Mineral Resources are included in the Ore Reserve Estimate as unavoidable dilution. The classification of Mineral Resources is based on geological confidence, and the conversion of Mineral Resources to Ore Reserves is based on the Competent Person's assessment of the modifying factors detailed in JORC Table One, Section 4. Due to the non-selective nature of caving mining methods, and the uncertainty of flow model prediction within the cave column, any Measured Resource material recovered in either the SLC or BC has been converted to a Probable Ore Reserve.

Diluting material included within the Probable Ore Reserve Estimate includes material from the barren rock above the designed cave and Inferred Mineral Resource material within and above the caving footprints. The total dilution material included as part of this estimate is 35Mt @ 0.9% copper and 0.4 g/t gold, which represents approximately 16% of the Ore Reserve Estimate tonnage, and 13% of the contained copper and gold metal. The economic sensitivity of the project to the inclusion of metal contained in dilution has been assessed by setting the dilution grade to zero. The project continues to demonstrate economically robust returns if revenue generated from dilution is excluded.

Mining Methods

The current mining method of SLC is based on the 2017 Carrapateena Feasibility Study and further refinements since accessing the orebody. The mine is currently in production from its two uppermost level, and production from the orebody to date reflects expectations in terms of mining and milling recovery. If the decision to transition to a block cave mining method is made, the lowest three levels of the SLC will be mined at a declining shut-off value (to as low as $70/tonne on the bottom level 4230 RL), in order to improve overall mine economics. If the mine continues to be mined as an SLC to the bottom of the orebody, the shut-off value strategy will be different. The average grade of the top 10 SLC levels is 1.5% copper and 0.73 g/t gold.

The SLC Ore Reserve is made up of tunnel development which makes up approximately 10% of the SLC Ore Reserve Estimate component, and the remainder comprised of blasted production rings from the SLC. Flow modelling for the SLC production is done using Power Geotechnical Cellular Automata (PGCA) Code, operated by OZ Minerals personnel. The fragmentation of the Lower Whyalla and Woomera Shales units (see Figure 4) has been determined to be finer than the other rock masses, due to their lower rock strength. It is generally accepted that fine material travels more quickly to the draw point than coarse material, therefore to simulate this preferential propagation, the Lower Whyalla and Woomera shales are given a propagation rate of double that of the ore and the other rock masses. Calibration of this mobility through site observation and flow model calibration will be key to the management of this risk.
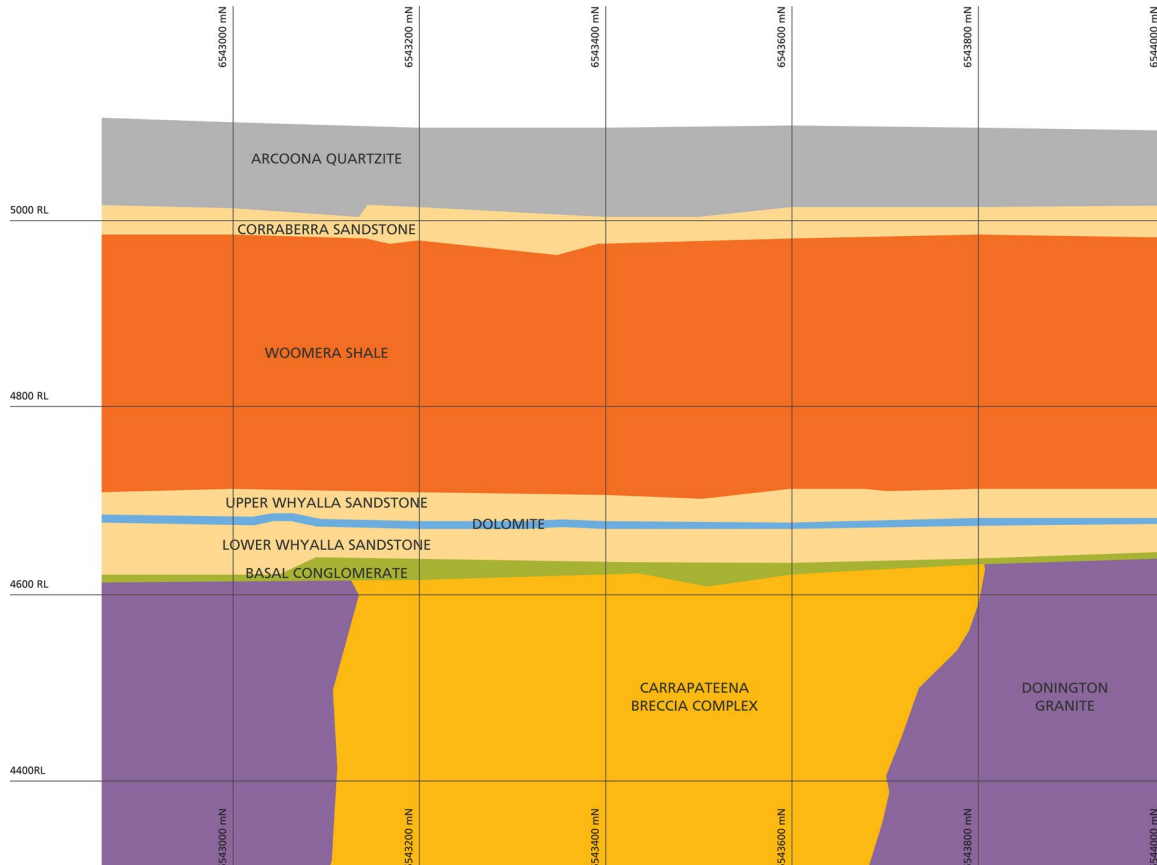

Figure 4: Cross Section of Cover Sequence at Carrapateena, used in Flow Modelling

Transition to Block Cave

Block caving is a mining method that involves the establishment of a stable extraction level using ground support such as rock bolts and cable bolts. An undercut level is mined above the extraction level, and the undercut material is removed through drill and blast. Once the undercut is complete, the extraction level can be mined, and broken ore is removed from draw points on the extraction level. As the ore is removed from the draw points, the rock mass above breaks under stress and moves downwards via gravity, allowing more ore to be removed from draw points on the extraction level. The block cave design at Carrapateena incorporates two blocks called macro blocks – Block Cave 1 and Block Cave 2 (BC1 and BC2). The timing of mining these macro blocks are scheduled to maximise the grade in the early years of the Carrapateena block cave, allowing improved financial returns. BC1 incorporates eight extraction drives and 196 draw points (see Figure 5) and can sustain a production rate of 12 Mtpa. BC2 comprises the five eastern extraction drives, and 149 draw points, and can sustain a production rate of 8 Mtpa.

The design characteristics of BC1 and BC2 are:

- Primary access is through a decline access from the portal shared with the SLC
- Ore is crushed underground and transported to surface using conveyor haulage
- Cave establishment utilising an advanced undercut sequence
- Straight-through draw point layout ("El Teniente" layout)
- Preconditioning level located 400 m above the extraction level that will be used for preconditioning the rock mass and cave monitoring
- Average heights of draw of 580 m for BC1 and 280 m for BC2
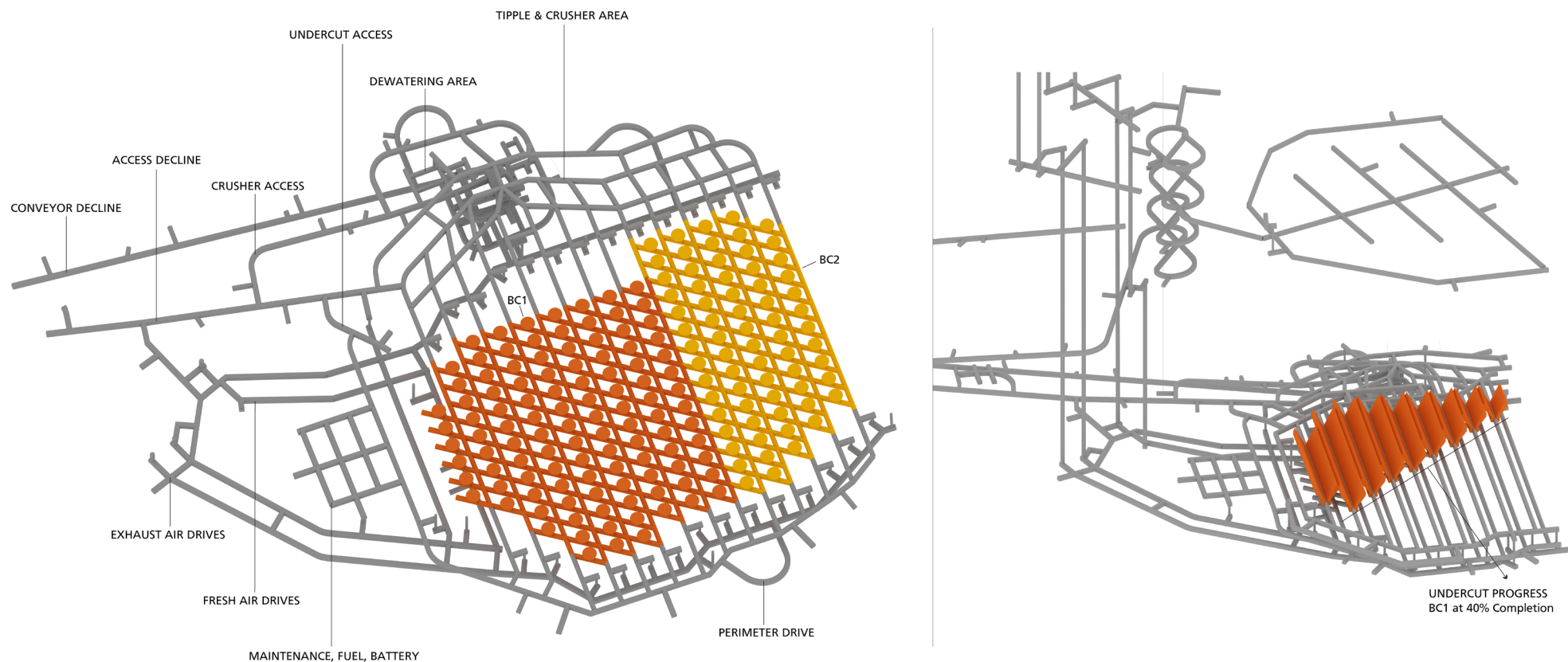- Maximum capped heights of draw of 600 m for BC1 and 400 m for BC2.

Figure 5: Layouts Showing BC1 and BC2 Levels and Undercut Position at 40% Completion of BC1 Undercutting

Ore Processing

The current processing plant at Carrapateena is designed to produce at a rate of 4.25 Mtpa. Debottlenecking studies have been identified to increase the plant capacity to a throughput rate of 5 Mtpa. The current copper concentrator is a standard semi-autogenous, ball mill and flotation circuit. While the block cave is being established, a second process plant will be built using vertical roller mills for comminution and copper flotation, producing a concentrate that will then be transported to port and subsequently to smelters by ships.

Metallurgical test work has been completed during the previous studies for Carrapateena. The test work has resulted in adequate metallurgical characterisation of five flotation domains. Copper and gold recoveries for the life of mine average 90% for copper and 66% for gold for the entirety of this reserve statement. Higher recovery is expected for the SLC due to higher grades. The study has identified that dry stack tailings is the most economically viable method for storing tailings due to the limited availability of water.

Final concentrate produced from the mine plan is considered high quality, with small uranium penalties calculated to be payable in some years.

Cut-off and Shut off Grade

Net Smelter Return (NSR) is used for mining operation optimisation, and the NSR shut-off grade varies throughout the life of mine. The cut off for footprint extents of both the SLC and BC are determined by economic analysis based on maximising Net Present Value.

The SLC footprint extents have been designed to an NSR shut-off value, and for the first 10 levels of the mine uses a shut-off value of A$93/tonne. For the last three SLC levels, a declining shut-off is used, progressively reducing the shut-off on the lowest SLC level to A$70/ tonne. The declining shut-off improves the economics of the mine plan. As more data is gathered on the SLC performance and material flow, this strategy may change. An increase or decrease in tonnes from the SLC will impact on the tonnes in the BC, but not have a material impact on the Ore Reserve estimate.

The footprint extents of BC1 has been completed through Hill of Value analysis based on site economics and assumptions studied in the PFS. The footprint extents of BC2 were undertaken using PCBC footprint finder on the assumption of a marginal cut-off value. Some draw points are included inside the BC2 footprint below shut off to allow for caving and footprint continuity. The site operating costs include mining cost, processing cost, other site costs and corporate costs, and sustaining capital, which is used as the cut-off value. The shut off value of A$28/tonne has been used for BC1 and A$32/tonne for BC2, with the higher cost for BC2 reflective of the lower mining rate.

Estimation Methodology

For each of the SLC, BC1 and BC2, the Mineral Resource Estimate used as a basis for the conversion to an Ore Reserve is the June 2020 Mineral Resource statement compiled by Shaun Light of OZ Minerals, which forms part of this announcement. The Mineral Resources are reported inclusive of the Ore Reserves in this release.

The SLC Ore Reserve Estimate is based on the 2017 Carrapateena Feasibility Study, which has been updated based on site experience and the site's budget planning process. The Ore Reserve estimate has been updated with milled material depleted up until 30 June 2020 and for depletion by mining up until 30 June 2020. The BC Ore Reserve Estimate is based on the 2020 Block Cave Pre-Feasibility Study, which forms the basis of all costs and revenue for BC1 and BC2.

Material Modifying Factors

OZ Minerals owns the Carrapateena Deposit and the Exploration Lease is in good standing with local, state and federal governments.

Carrapateena is a greenfield mine site and processed first ore in December 2019. Major infrastructure is required to increase capacity to a mining and processing rate of 12 Mtpa. The expansion of the Underground Materials Handling System has been incorporated into the study. Additional infrastructure will be required, including ventilation raises, fans, dewatering, an expansion of the process plant and other associated site infrastructure.

While Carrapateena is not a seismically active area, stresses induced by block caving can cause damage to infrastructure, and the mine design has taken this into account. The SLC is currently in production and BC1 and BC2 geotechnical engineering has been completed to a Pre-Feasibility level of confidence.

Block cave mines have inherent risks due to the mining method, including cave propagation that is difficult to predict, seismicity, and early dilution entry is known to occur. The mine design has been completed to ensure that major infrastructure is located such that the risk of seismic damage is low. Cave propagation can impact the overall recovery of the resource. The cave shape has been estimated by two independent consultants – Stratavision and Itasca Australia. This information has been used to inform flow modelling, with no material difference in the estimated ore recovered using either cave shapes.

Carrapateena is situated below 500 m of barren, low-strength rock mass, which is expected to fragment finer than the ore. Fine material will travel faster through the cave column than coarse material in cave mines. For the SLC, the flow modelling has been undertaken using Power Geotechnical Cellular Automata software (PGCA). Fines migration has been estimated using a mobility factor of the barren overburden of twice the average velocity of the ore.

The Mineral Resource block model is depleted using PGCA code to reflect SLC mining before Block Cave modelling commences. Block Cave Flow (BC1 and BC2 production schedules) has been estimated using Personal Computer Block Cave (PCBC) software. This was checked against production schedules generated using PGCA code. When the PCBC production schedule is compared to the PGCA schedule there is no material difference in grades or tonnes predicted. Further work is required in the future BC Feasibility Study to look at structural geology and cave back prediction to improve this estimate.

A cap has been placed on the maximum tonnes available to be drawn from each draw point. The cap is based on the mass of a 600 m vertical column height of material above the draw point for BC1, and a 400 m height for BC2. The point at which the NSR of material to be drawn drops below the shut-off value or the tonnes from this height limit determines when production from the draw point is stopped. All development of Measured and Inferred classification is included as part of the Ore Reserve Estimate.

Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	The Mineral Resource estimate used as a basis for the conversion to Ore Reserves was the June 2020 Mineral Resource statement compiled by Shaun Light. The Mineral Resources detailed in that release are inclusive of the Ore Reserves reported in this release.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	The Competent Person is a permanent employee of OZ Minerals, has visited site 15 times, and has inspected progress on the construction activity, raise boring and the first SLC production level on the 4580 RL.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	A Feasibility Study was completed in 2017 which confirmed that SLC was an appropriate mining method and updated the mining rate to 4.25 Mtpa. The 2020 Carrapateena Expansion Pre-Feasibility Study has been completed and the results were released to the ASX in June 2020. The upper portion of the deposit will continue to be mined by SLC methods from the 4580 RL to the 4230 RL. The lower portion of the Carrapateena orebody will be extracted with two block cave mining blocks – BC1 which will be mined first, followed by BC2. These two cave blocks replace the previous SLC design for the lower portion of the Carrapateena orebody. The 2020 Carrapateena Expansion Pre-Feasibility Study indicates an economically robust project, with financial return in excess of that achievable by using SLC methods for the entire orebody.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	Cut-off values for the mine design were based on iterative reviews of the design, cave flow simulation and economic analysis. NSR has been used as the basis of the cut-off value in this analysis, incorporating OZ Minerals' Q2 2020 economic assumptions. Draw points in both the SLC and BC are assumed to be shut off once they are below the grade determined by the mining method.

Criteria	JORC Code explanation	Commentary
		NSR is calculated considering Q2 2020 metallurgical recovery based on current understanding, current royalties and transport, treatment and refining. Recovery is calculated for copper, gold and silver based on five flotation domains, which is based on test work during the Pre-Feasibility and Feasibility Studies.
		Economic assumptions for each mining area are:
		• Copper US$2.91/lb
		• Gold US$1,246/tr oz
		• Silver US$18.10/tr oz
		• AUD/USD 0.67
		SLC Ore Reserve
		Recovered SLC ore, including dilution, is forecast using Power Geotechnical Cellular Automata (PGCA) software to simulate cave flow and ore recovery based on the Mineral Resource block model. Input parameters for PGCA were based on parameters used at other SLC operations which use PGCA software, plus some site-specific factors. Test work has been completed on the mobility of the weaker overburden geological unit and this input into PGCA has been updated since the 2017 Feasibility Study. These parameters will be further refined using reconciliation data and monitoring data from the cave flow and cave propagation as production continues.
		A range of shut-off values were modelled in PGCA to assess the SLC inventory variability, and high-level schedules undertaken for each case. These have been updated since the 2017 Feasibility Study, and the footprint has been redesigned based on a shut-off value of A$93/tonne and the material draw stopped at a shut-off value of A$93/tonne. For the final three levels of the SLC, a declining shut off is used with the final shut off A$70/tonne.
		An optimisation was undertaken on the mining and milling physicals using the CY20 Q2 Corporate Economic Assumption prices to determine the best mine plan to maximise Net Present Value after tax.
		Adjustments were made to the PGCA generated SLC footprint to account for mining practicality and to ensure a smoother cave shape.

Criteria	JORC Code explanation	Commentary
		Block Cave Ore Reserve (BC1 + BC2) Block cave footprint selection utilised a footprint finder analysis based on SLC depletion, optimisation of discounted cashflows (Net Present Value) and site upgrade costs required to accommodate the increased production rate. BC1 is the higher-grade block cave, and the financial returns of this first macro block justifies the expansion of the mining rate. BC2 is an expansion of the BC1 footprint to the east, using the same infrastructure as BC1. Shut-off values for BC1 and BC2 have been assessed as part of the Pre-Feasibility Study and are based on a first principal work up of costs for both block caves.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	**SLC Ore Reserve** The Pre-Feasibility Study completed in 2016 concluded that sub-level caving was the preferred mining method for Carrapateena. The 2017 Feasibility Study retained this mining method, with modified access, ventilation and material handling designs. Additional modifications to the mine have occurred since the 2017 Feasibility Study, including changing the orientation of the mine layout due to stress direction measurement, and repositioning one of the planned crusher excavations into a higher strength rock mass. Geotechnical parameters and engineering assessments have determined that the rock mass above the mine design area will readily cave and propagate to surface. During the reorientation of the mining layout, the footprint of the upper levels of the cave were expanded beyond the optimum economic footprint in order to ensure cave initiation and propagation. Geotechnical logging and simulation have been completed, and it has been determined that preconditioning is not required for the cave to propagate though to surface. OZ Minerals staff used Power Geotechnical proprietary PGCA software to simulate cave flow and ore recovery, including dilution. Input parameters for PGCA were based on parameters used at other SLC operations which use PGCA software, plus some site-specific factors. PGCA outputs include dilution, and no additional mining dilution factors were incorporated in the Ore Reserve estimate for SLC material.

Criteria	JORC Code explanation	Commentary
		Dilution includes material overlying the SLC design and from the edges of the cave. The overlying Woomera Shale unit and the Lower Whyalla Sandstone unit have the potential to degrade into finer particles than the other rock types overlying the cave. For this reason, the cave flow modelling in PGCA assumed that the Woomera Shale and Lower Whyalla Sandstone units have twice the migration velocity compared to the other rock types.
		The mine design incorporates 25 m sub-level spacing, 5 m wide production drives at a spacing of 15 m (centre to centre) and a standard SLC ring design. The PGCA model assumed a draw width of 11 m, based on experience at other similar SLC operations.
		Sub-level caving is a non-selective, bulk mining method in which dilution is incurred to recover economic ore. Inferred Mineral Resources that have been modelled as recovered in the PGCA cave flow model or development inside the designed cave footprint, has been included in the financial evaluation of the study, as they are inextricably linked in the mining method. The economic value of the Inferred Resource and background material is not material to the economics of the SLC project.
		The infrastructure requirements for the SLC includes two crushers (one which is in operation), and three legs of a conveyor system which goes to approximately the 4200 RL. Ventilation uses intake and exhaust ventilation raises. Dewatering infrastructure is designed adjacent to the main access decline. All surface infrastructure including the camp, mill, airport and offices are currently in place, with the exception of the western access road, which is due for completion in 2021.
		Block Cave Ore Reserve The Block Cave (BC) Ore Reserve is based on the same Mineral Resource model as that used for the SLC Ore Reserve, however the ore and waste tonnes already mined by SLC are depleted using PCGA code to create an input block model for the BC Ore Reserve estimate.
		The Block Cave is to be mined in two adjacent blocks on the same RL. BC1 is scheduled to be mined first, followed by BC2. The mining schedule is created in PCBC a proprietary software for block cave scheduling licensed by Dassault Systemes. Parameters used as inputs to PCBC are based on experience from other caving operations, with modifications made to suit local conditions.

Criteria	JORC Code explanation	Commentary
		In addition to the standard depletion, the software uses cave shapes to constrain the cave propagation to that which is more likely based on predicted cave shapes.
		As part of the PFS the mining schedule was provided to two independent geotechnical consultancy companies (Stratavision and the Itasca Group), to generate predicted cave subsidence shapes. There are only marginal differences between the two cave shapes produced.
		The mining footprint for BC1 consists of 196 draw points, and a hard-maximum limit of 720,000 tonnes (based on 600 m height of draw) was used for every draw point on BC1, to account for draw point recovery. BC2 incorporates an additional 146 draw points. The adjacent BC2 has a hard-maximum of 500,000 tonnes per draw point (400 m height of draw). Cave arching is taken into account by using cave arch shapes as part of the estimate.
		Combined Ore Reserve (SLC, BC1 and BC2)
		The non-selective nature of cave mining methods incorporates unavoidable dilution to recover economic ore. The quantity of dilution that is included in the financial evaluation, and also included in the Ore Reserves is:

Tonnage (Mt)	35
Cu (%)	0.9
Au (g/t)	0.4
Ag (g/t)	4

Financial modelling was also completed on each ore block with the revenue reduced to zero for all Inferred Resource material. The NPV of each production area remains positive. The exclusion of the economic value of the dilution (originating from Inferred Resource and unclassified material) is not material to the economics of the project.

Underground infrastructure required for the expansion includes increasing the capacity of the SLC conveyor system to 12 Mtpa rate, building a jaw gyratory crusher for the block cave, installation of an additional ventilation circuit as well as extension of the existing ventilation circuit, and the expansion of the existing surface infrastructure to a rate of 12 Mtpa, including an additional mill circuit that is based on vertical roller mills.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	Metallurgical test work has shown that a conventional crushing, grinding and flotation circuit would produce internationally saleable concentrate with acceptable metal recoveries. The metallurgical process is well-tested technology. The processing plant on site is currently operational and has achieved nameplate mill throughput rate. The ore is described by five flotation domains based on mineralogy. Test work has been completed subsequent to completion of the Feasibility Study to improve the recovery estimation. Recovery grade relationships have been established for each of the five flotation groups. The average metallurgical recoveries applied for the BC1 and BC2 mining blocks are 90% for copper and 66% for gold and silver. There is no change in the metallurgical recovery factors applied to the portion of Ore Reserve extracted by SLC methods, which remain at 92% for copper and 76% for gold and silver. The higher recoveries applicable to the SLC component of the Ore Reserve estimate is due to higher grades mined, and the high proportion of bornite in the mill feed. Current metallurgical recovery is similar to that achieved in test work. Metallurgical domains are based on the Mineral Resource domains, which are largely driven by mineralogical and chemical properties of the rocks. The Carrapateena Ore Reserves are expected to produce a high-quality copper concentrate containing gold and silver by-products and impurities such as uranium. Standard industry commercial scales for payable metals and impurities shall apply. The concentrate produced by the Carrapateena Project will be marketable to international traders. Metallurgical test work has confirmed a downgrade of uranium grade (when compared to the mined head grade) when processing Run-of-Mine ore through the flotation circuit, a downgrade has been observed in ores until the end of June 2020, with work continuing to improve concentrate quality.

Criteria	JORC Code explanation	Commentary
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	Efforts have been focused around developing a progressive brownfields regulatory approvals strategy that unlocks the province. Key approvals studies have commenced focused on demonstrating that the existing regulatory conditions and outcomes of the Mining Lease, supporting tenements and other approvals can be achieved. Consultation with government agencies has been undertaken to seek alignment on the approval strategy. Effort to date has been focused on consolidating eight years of baseline environmental data and undertaking further air quality, groundwater and surface water numerical modelling. Working with key stakeholders, including the traditional owners, the Kokatha People, and local pastoralists, will continue to be a focus to ensure we continue to create value for our stakeholders.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.*	Infrastructure sufficient for the operation of the 5 Mtpa SLC mine and process plant has been designed and are included in the financial evaluation of the project. Expansion of the underground infrastructure including increasing the conveyor rate and a jaw gyratory underground crusher is part of the block cave and rate expansion. The infrastructure has been designed to enable upgrades to both underground and surface infrastructure which would allow the mine to reach a production rate of 12 Mtpa. The costs for infrastructure upgrades have been included in the financial model. To manage the water availability, a dry stack tails solution is proposed, with the estimated cost included in the PFS. The PFS base case requires the installation of a rail siding to freight concentrate to port, which involves the construction of an underpass under the Stuart Highway. There are no identified impediments to the success of proposed infrastructure.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.*	Mining capital and operating costs were reviewed as part of the 2017 Feasibility Study and have been updated based on SLC operational experience to date. Where required, capital costs were estimated based on quotes for equipment, operating costs were estimated using a first principles informed by current contracts. SLC costs are based on the 2020 Business Plan. Block Cave costs are based on the first principal build up based on the 2020 Feasibility Study.

Criteria	JORC Code explanation	Commentary
	• *The allowances made for royalties payable, both Government and private.*	Commercial costs including TCRCs, penalties etc. were estimated having regard to market benchmarks and future expectations. Penalty elements are based on metallurgical test work and marketing assumptions and exchange rates have all been based on OZ Minerals Internal Economic assumptions. Metallurgical assumptions around recovery have been applied to the economic analysis and the NSR calculations. The South Australian State royalty will be 2.5% of mine gate value for the first five years of production, and 5% thereafter. There is an additional native title royalty on top of the state royalties of 0.5% assumed.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	The financial assessment of the Ore Reserve estimate is based on long term (LT) economic parameters and were updated post the calculation of NSR for optimisation and validation work, which is based on the revenue for all metals, plus assumed penalties for uranium. These parameters are shown in the table following, being the consensus values of major brokers issued in Q2 2020. **Economic Parameter Units**

LT copper price	US$2.91/lb
LT gold price	US$1,246/tr oz
LT silver price	US$18.10/tr oz
AUD/USD	0.67
Land freight	A$51.62/wmt
Loading cost	A$14/wmt
Sea freight	US$49/wmt
Copper concentrate smelting	US$85/dmt
Copper refining	US$0.085/lb
Gold refining	US$5.00/oz
Silver refining	US$0.50/oz

Criteria	JORC Code explanation	Commentary
		<table><tr><td>**Copper Grade in Concentrate**</td><td>**Copper Payable**</td></tr><tr><td>0–35%</td><td>96.75%</td></tr><tr><td>35–45%</td><td>97%</td></tr><tr><td>45–50%</td><td>97.25%</td></tr><tr><td>>50%</td><td>97.5%</td></tr><tr><td>**Gold Grade in Concentrate**</td><td>**Gold Payable**</td></tr><tr><td>0–5 g/t</td><td>93%</td></tr><tr><td>5–10 g/t</td><td>95%</td></tr><tr><td>10–20 g/t</td><td>96%</td></tr><tr><td>>20 g/t</td><td>97%</td></tr><tr><td>**Silver Grade in Concentrate**</td><td>**Silver Payable**</td></tr><tr><td><30 g/t</td><td>0%</td></tr><tr><td>>30 g/t</td><td>90%</td></tr></table>
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	Copper concentrates are sold on the open concentrate market to a range of overseas customers. The Ore Reserve estimate uses OZ Minerals forecast assumptions shown in the tables above to estimate the revenue and cost of sales. Revenue is determined by the metal content, metal payable scales negotiated for the product and the price assumptions.

Criteria	JORC Code explanation	Commentary
		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 concentrate product, with penalty scales on a pro rata basis according to their content.
		There is a proven ability by OZ Minerals to sell and a proven acceptance by buyers to purchase concentrate of the quality which should 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.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Carrapateena sub-level cave and block cave is an economically robust project, generating a strong NPV and high IRR using the economic assumptions as outlined in the Revenue Factors section of this statement, based on a discount rate of 8.5%. The economic analysis is based on nominal analysis.
		Sensitivity analyses were carried out and the project was found to be most sensitive to commodity prices, mill recovery and head grade. For all sensitivity scenarios modelled project NPV remained positive using OZ Minerals' corporate economic assumptions.
		Sensitivities were also completed setting dilution grades to zero. The exclusion of metal from Inferred Resource material still demonstrated economically robust returns for all three caves.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	The Carrapateena deposit is located on Mineral Lease 6471 which expires in January 2039. This lease has an approved Program for Environment Protection and Rehabilitation (PEPR) for the sub-level cave operation as required under the Government of South Australia's *Mining Act, 1971* (SA) and is in good standing.
		A referral for the Carrapateena project was submitted to the Australian Government's Department of the Environment and Energy (DoEE) on 10 March 2017. On 12 April 2017, DoEE released their decision on the referral as a 'controlled action' and this approval is in good standing.

Criteria	JORC Code explanation	Commentary
		Studies have commenced to understand the potential environment impacts and risks associated with the Carrapateena Expansion Project including groundwater, surface water, air quality and socioeconomic modelling and assessment of effects studies and will form the basis of a project variation submission and approval process with the Government of South Australia. Working with key stakeholders, including the traditional owners, the Kokatha People, and local pastoralists, will continue to be a focus to ensure we continue to create value for our stakeholders.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	OZ Minerals advises that Carrapateena is in compliance with all legal and regulatory requirements. Efforts have been focused around developing a progressive brownfields regulatory approvals strategy that unlocks the Carrapateena Province., Key approvals studies have commenced focused on demonstrating that the existing regulatory conditions and outcomes of the Mining Lease, supporting tenements and other approvals can be achieved. Consultation with government agencies has been undertaken to seek alignment on the approval strategy. Effort to date has been focused on consolidating eight years of baseline environmental data and undertaking further air quality, groundwater and surface water numerical modelling. This work will feed into a project variation process to enable the expansion to proceed. Working with key stakeholders, including the traditional owners, the Kokatha People, and local pastoralists, will continue to be a focus to ensure we continue to create value for our stakeholders.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	Measured Resources and Indicated Resources recovered in the cave flow model have been converted to Probable Ore Reserves. The Ore Reserve classification reflects the Competent Person's view of the deposit, with supporting information provided by others.

Criteria	JORC Code explanation	Commentary
		Approximately 37% of the Probable Ore Reserves copper content has been derived from Measured Mineral Resources. The absence of Proved Reserves derived from Measured Mineral Resources is due to the inherent lack of selectivity with SLC and BC mining methods, which precludes the ability to exactly quantify the source of material recovered at underground draw points. Dilution is incurred due to the nature of the mining method and is included in the Mineral Reserve estimate. Dilution totals 35 Mt @ 0.9% Cu, 0.4 g/t Au, 4 g/t Ag and originates from Inferred Mineral Resources and unclassified material.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	The Ore Reserve estimate has been reviewed by OZ Minerals in their peer review process and has been subjected to an independent external review by Worley for the overall estimate. The May 2020 Ore Reserve estimate was reviewed by Power Geotechnical for the cave flow modelling processes, and SRK for the 2020 Block Cave PFS study. No material issues were identified during the reviews undertaken. This June 2020 Ore Reserve estimate incorporates an updated Mineral Resource estimate but has otherwise applied the same methodology.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.*	It is the opinion of the Competent Person that the Ore Reserve estimate is supported by appropriate design, scheduling, and costing work reported to at least a Pre-Feasibility Study level of detail. No statistical procedures were carried out to quantify the accuracy of the Ore Reserve estimate. There is greater uncertainty inherent in caving mining methods than in more selective mining methods. The non-selective nature of the sub-level cave and block cave mining methods precludes the ability to exactly quantify the source of material recovered at underground draw points. SLC recovered grades are estimated with PGCA cave flow modelling software, and BC grades estimated with PCBC software, using input assumptions developed from experience at other operations using the same mining methods. There has been 1.2 Mt @ 1% Cu, 0.7 g/t Au and 7 g/t Ag processed up until 30th June 2020. The variation between the mined grades and the reconciled grades is currently commensurate with the variability implied by the classification.

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	• *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	Calibration of the flow model will be required as SLC production continues, at regular intervals in order to validate the assumptions used in the PGCA cave flow modelling software. Once BC production commences, calibration will also be required to validate the assumptions used for PCBC software. Cave markers have been installed into the overburden material to measure the migration of this material to further calibrate the PCGA and PCBC models as more information is gained. The SLC component of the Ore Reserves was estimated using a shut-off value significantly higher than the breakeven value calculated with the project financial model. It is unlikely to be significantly impacted by adverse changes in metal prices or operating costs. The speed of fines migration through the cave column will influence the value of material recovered. Accelerated rates of migration in excess of what has been assumed in the study will adversely affect the value of material drawn. Conversely, lower migration rates would see an increase in value.

Competent Person Declaration – Ore Reserves

Competent Person Statement

The information reported on the Ore Reserves is based on and fairly represents information and supporting documentation compiled by Dr Rodney Hocking BE (Mining), PhD Mineral Processing, and member of the AusIMM (MN 317073). Dr Hocking is a full-time employee of OZ Minerals and a participant in employer issued shareholder benefits. There is no significant relationship between OZ Minerals shareholder benefits and the outcomes of these Ore Reserves.

Dr Hocking 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). Dr Hocking consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

This Ore Reserves Statement 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).

Rodney Hocking

OZ Minerals