A modern mining company



9 December 2020

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

Dear Sir/Madam

OZ Minerals' West Musgrave Project 2020 Mineral Resource and Ore Reserve as at 9 December 2020

Please find attached the OZ Minerals West Musgrave Project Nebo-Babel Deposits 2020 Mineral Resource and Ore Reserve Statement and Explanatory Notes as at 9 December 2020.

Sincerely,

Michelle Pole Company Secretary and Senior Legal Counsel **OZ** Minerals

This announcement is authorised for market release by OZ Minerals' Managing Director and CEO, Andrew Cole.

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2020 Mineral Resource and Ore Reserve Statement and Explanatory Notes

As at 9 December 2020

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INTRODUCTION

The West Musgrave December 2020 Mineral Resource and Ore Reserve (MROR) Statements relate to an updated Mineral Resource and Ore Reserve estimate for the Nebo and Babel nickel-copper deposits, located within the West Musgrave Project (WMP) area in Western Australia. The deposits are located approximately 1,300 km north-east of Perth and 1,400 km north-west of Adelaide, near the intersection of the borders between Western Australia, South Australia and Northern Territory (Figure 1).



Figure 1: Project Location

The Nebo nickel-copper deposit (Nebo) lies approximately 1.5 km north-east of the Babel nickel-copper deposit (Babel) (Figure 2). Independent models were created for each deposit.

Nebo and Babel were discovered by WMC Resources in 2000 and acquired by BHP Billiton in 2005. WMC Resources and BHP Billiton undertook separate drilling campaigns from 2001–02 and 2006–11, respectively. Cassini Resources Limited (Cassini) purchased the project from BHP Billiton in April 2014 and completed a significant infill drilling campaign at Nebo-Babel followed by a Scoping Study in April 2015, which showed favourable results.

OZ Minerals signed an Earn-in and Joint Venture Agreement in October 2016 with Cassini for the WMP with OZ Minerals earning a 70% equity stake in the project in April 2019 by contributing \$36 million towards the Pre-Feasibility Study (PFS) and regional exploration. In February 2020, the PFS was completed and demonstrated an approximate 26-year mine life via open pit mining methods.

In October 2020, OZ Minerals acquired Cassini via an on market scheme of arrangement, consolidating ownership of the WMP to 100 percent.





2. WEST MUSGRAVE MINERAL RESOURCE STATEMENT

The Mineral Resource estimate as at 9 December 2020 was drawn from the WMP Pre-Feasibility Study Update (PFSU)¹ and this Mineral Resource Statement should be read in conjunction with the ASX Release for the WMP PFSU.

The West Musgrave 2020 Mineral Resource for the combined Nebo-Babel deposits have been estimated at 390 million tonnes of nickel and copper mineralisation grading 0.31 percent nickel and 0.34 percent copper. This Mineral Resource estimate update supersedes the previously reported Mineral Resource estimated for the West Musgrave's Nebo-Babel deposits released on 12 February 2020².

The Mineral Resource has been reported at a Net Smelter Return (NSR) cut-off of A\$20/t. The A\$20/t value represents the PFSU mill limited break-even cut-off of A\$17 per ore tonne mined, plus an all-inclusive mining cost of A\$2.76 per total tonne mined. The Mineral Resource estimate was further constrained within optimised pit shells utilising a 1.2 revenue factor. Within the optimised pit shells, OZ Minerals' assumed metal prices are multiplied by 1.2 on a block-by-block basis, to allow for potential higher future revenue values and reasonable prospects for eventual economic extraction. The Mineral Resource estimates have been reported in accordance with the 2012 edition of the JORC Code.

The updated West Musgrave Mineral Resource estimate for the combined Nebo-Babel deposits are a restatement of the existing PFS Mineral Resource estimations, but at a lower NSR cut-off grade. This lower reporting NSR cut-off grade is driven by favourable changes in the metal price assumptions that support the MROR estimates, improved metal recovery assumptions supported by further metallurgical test work and decreased operating costs based on an increased processing plant throughput, resulting in an expansion of the reporting pit shell.

All NSR assumptions including metal prices, recoveries, royalties, concentrate payability, concentrate transport and penalties are based on the PFSU as at December 2020 and align with the December 2020 PFSU optimisation inputs.

The Mineral Resource estimates for the Nebo-Babel deposits are summarised in Table 1.



¹ See OZ Minerals announcement titled 'West Musgrave value and scale uplift in Pre-Feasibility Study Update' released on 9 December 2020 and available at www.ozminerals.com/media/asx/

² See OZ Minerals announcement titled 'West Musgrave Project Nebo-Babel Deposits Mineral Resource Statement and Explanatory Notes At as 11th Feb 2020' released on 12 February 2020 and available at <u>www.ozminerals.com/media/asx/</u>



Category	Deposit	Tonnes	Ni	Cu	Au	Ag	Со	Pd	Pt	Ni metal	Cu metal
,		(Mt)	(%)	(%)	ppm	ppm	ppm	Ppm	ppm	(kt)	(kt)
	Babel	260	0.30	0.34	0.06	1.0	120	0.09	0.08	780	880
Indicated	Nebo	52	0.36	0.32	0.04	0.73	140	0.08	0.06	180	170
	Sub- total	310	0.31	0.34	0.06	0.96	120	0.09	0.08	970	1,000
	Babel	79	0.32	0.37	0.06	1.2	120	0.10	0.09	250	290
Inferred	Nebo	2.3	0.32	0.33	0.04	0.53	120	0.08	0.06	7.5	7.7
	Sub- total	82	0.32	0.37	0.06	1.1	120	0.10	0.09	260	300
Ind Linf	Babel	340	0.31	0.35	0.06	1.1	120	0.10	0.08	1,000	1,200
Ind + Ini	Nebo	54	0.36	0.32	0.04	0.72	140	0.08	0.06	190	170
Total		390	0.31	0.34	0.06	1.0	120	0.09	0.08	1,200	1,300

Table 1: Nebo-Babel Mineral Resource Estimate³⁴ as at 9th December 2020

Changes in the 2020 Mineral Resource Estimate

There has been no additional drilling incorporated into the Nebo-Babel Mineral Resource estimate since the previous Mineral Resource update published on the 12th February 2020 as part of the WMP PFS and so, the underlying estimate remains unchanged. However, the decrease in reporting NSR cut-off to A\$20/t (-13%) and an increase in size of the optimised reporting pit shell has resulted in a significant increase in the estimated Mineral Resource tonnage. The West Musgrave Mineral Resource estimate for the combined Nebo-Babel deposits increased by 50 million tonnes (~15%) and ~100 kilotonnes (~9%) of nickel and ~100 kilotonnes (~8%) copper metal relative to the previous combined Mineral Resource estimate for Nebo and Babel in February 2020.

The previous Mineral Resource estimate was reported at a NSR cut-off of A\$23/t representing the February 2020 PFS mill limited break-even cut-off of A\$19.60 per ore tonne mined, plus an all-inclusive mining cost of A\$3.40 per total tonne mined. The PFS Mineral Resource estimate was further constrained within a "reasonable prospects" optimised pit shell utilising a 1.2 times revenue factor.

Drilling Techniques

At Nebo, diamond drilling (DD) accounts for 36% of the drilling and comprises PQ, HQ and NQ2 sized core. At Babel, DD accounts for 32% of the drilling and comprises PQ, HQ and NQ2 sized core. Reverse Circulation (RC) drilling makes up the remaining drilling and comprises 140 mm diameter face sampling hammer drilling.



³ Mineral Resources reported at a 1.2 revenue factor A\$20 NSR cut-off and within optimised pit shells using Indicated and Inferred Resources utilising a 1.2 revenue factor

⁴ Table is subject to rounding errors and are reported to significant figures to reflect appropriate precision in the estimate and this may cause apparent discrepancies in totals



Sampling and Sub-Sampling Techniques

RC drilling was used to obtain 2 m samples for both Nebo and Babel from which 3 kg was pulverised to produce a sub sample for analysis. Diamond core was a combination of PQ, HQ and NQ2 size, sampled on visible variation in rock type and range from 0.05 m to 2.0 m. The core was cut on site with half the core being routinely analysed.

The sample preparation of samples for Nebo and Babel follows industry best practice involving oven drying, followed by pulverisation of the entire sample using Essa LM5 grinding mills to a grind size of 90% passing 75 microns. Diamond core required Boyd crushing after drying.

Sample Analysis Method

Samples were sent to the Bureau Veritas Perth laboratory. For 2018 drilling the analytical suite consisted of a combination of fused bead X-ray fluorescence (for whole rock elements including Co, Cu, Pb, Zn, Ni, As, Si, Al, Fe, Ca, Mg, S) and fire assay with a silver secondary collector and ICP-MS finish for Pt, Pd and Au. Loss on ignition (LOI) was measured gravimetrically at 1,000°C. Prior to 2018 a four-acid digest (hydrochloric, nitric, hydrofluoric and perchloric acid) followed by an ICP-AES and ICP-MS finish was undertaken for Co, Cu, Zn, Ni, Ag and As.

Geology and Geological Interpretation

The Nebo-Babel deposits are both hosted by a sub-horizontal, tube-shaped mafic intrusion which is classified as a gabbronorite. The mafic intrusion has a known extent of 5 kilometres, trends in an easterly direction, has a gentle 15 degree dip to the south and, in the case of Babel, a less than 10 degree plunge toward the southwest (Figure 2). Babel and Nebo are separated by the steeply-dipping, north-south trending Jameson Fault. Babel occurs to the west of the fault and Nebo occurs to the east.

Babel consists of three main lithostratigraphic units, which are variably textured leucogabbronorite (VLGN) that forms the outer shell around mineralised gabbronorite (MGN), and barren gabbronorite (BGN) in the core of the intrusion. At Nebo, the main lithostratigraphic units are VLGN that forms an outer shell of the intrusion around barren gabbronorite, and oxide-apatite gabbronorite, which occurs in the core of the intrusion at the eastern end.

The Nebo-Babel deposits contain two main styles of mineralisation: disseminated gabbronorite-hosted sulphides, which represent the bulk of the mineralisation, and massive and breccia sulphides, which are a comparatively minor component of the overall sulphide inventory.







Figure 2: Geology of the Nebo-Babel Deposit – (a) Plan and (b) Long-Section

Interpretation and wireframes have been constructed for lithology (including dykes), weathering and estimation grade domains. Mineralisation is intimately associated with the brecciated contact of the gabbronorite intrusive into the surrounding orthogneiss host rock and, although there is a strong, almost exclusive relationship between lithology and mineralisation, it was determined to construct estimation grade domains to optimise the estimation. At Nebo, 'high-grade' domains were constructed to model Massive Sulphide zones where continuity could be interpreted between sections and drill holes. Weathering surfaces were constructed for Oxide (OX), Pyrite-Violarite (PV), Transitional (TR) and Primary (PR) zones.

Estimation Methodology

Domain definition used a combination of assay data and geology logging, taking into consideration the lithological controls on the mineralisation, the mineralogy of nickel and copper, and the nickel and copper grades. A strong relationship exists between nickel and copper, so constructed grade shells have satisfied the requirements for both elements. Nickel/Copper mineralisation domains were also used for the estimation of Co, Au, Ag, Pt, Pd, Pb, Zn, As, Ca, Mg, S, Fe and Al. Hard boundaries were used across all domains.

For both deposits, a 25 m E by 25 m N by 5 m RL parent cell size was used with sub-celling to 2.5 m E by 2.5 m N by 2.5 m RL to honour wireframe boundaries. Sub-cells were assigned parent cell grades.

Variograms were modelled for all elements in each of the main mineralised domains for both Nebo and Babel. The variogram model for the main grade domain was applied to the other minor grade domains/lenses. Ordinary Kriging (OK) was used for grade estimation. Vulcan Anisotropic Modelling was utilised to inform search ellipse and variogram axis orientations at Babel and at Nebo three 'structural domains' were interpreted to inform search ellipse and variogram axis orientations. Samples were composited to 2 m. The impact of very high-grade composites was managed using top-cuts.





Cut-off Grade

The Mineral Resource has been reported at a NSR cut-off of A\$20/t. The A\$20/t value represents the PFSU mill limited break-even cut-off of A\$17 per ore tonne mined, plus an all-inclusive mining cost of A\$2.76 per total tonne mined. The Mineral Resource estimate was further constrained within 'reasonable prospects' optimised pit shells utilising a 1.2 revenue factor. Within the optimised pit shells, OZ Minerals' assumed metal prices are multiplied by 1.2 on a block by block basis, to allow for potential higher future revenue values and reasonable prospects for eventual economic extraction.

Table 2 shows the assumed prices (prior to being multiplied by 1.2). The assumed exchange rate is 0.67 (AUD/USD) and price assumptions are drawn from OZ Minerals' life-of-mine (LOM) Corporate Economic Assumptions updated in Second Quarter 2020. Metallurgical assumptions were based on metallurgical test work as part of the ongoing studies, current as at First Quarter 2020. All NSR assumptions are based on the PFSU as at December 2020 and align with December 2020 PFSU optimisation inputs.

Parameter	Units	LOM
Nickel	US\$/lb	7.60
Copper	US\$/lb	2.91
Gold	US\$/oz	1,246
Silver	US\$/oz	18.10
Platinum	US\$/oz	1,311
Palladium	US\$/oz	633
Cobalt	US\$/lb	21.90
Exchange Rate	AUD/USD	0.67

Table 2: Revenue Assumptions

* The above metal prices are the assumptions used prior to being multiplied by 1.2

NSR is calculated on a block-by-block basis and includes metal prices, metal recoveries, royalties, concentrate payability, concentrate transport and penalties. Further details of the NSR calculation can be found in JORC 2012 EDITION, TABLE 1 later in this document.

The stated Mineral Resources do not include oxide material based on the current understanding of oxide recovery and economic potential.

The sensitivity of the Nebo-Babel Mineral Resource to cut-off grade can be seen in Figure 3 and Figure 4. Figure 3 and Figure 4 respectively show the Babel and Nebo grade tonnage curves of Classified Resources inclusive of Indicated and Inferred material reported within the PFSU Resource 1.2 revenue factor optimised pit shells. The Babel and Nebo Mineral Resource estimates as at 9 December 2020 are highlighted in orange. Refer to Table 1 for a split of the reported Babel Mineral Resource and Nebo Mineral Resource by classification.







Figure 3: Babel grade tonnage curve of Classified Resources inclusive of Indicated and Inferred material



Figure 4: Nebo grade tonnage curve of Classified Resources inclusive of Indicated and Inferred material





Mining and Geotechnical

These deposits will be amenable to large open cut mining methods as demonstrated in the concurrent PFSU. Geotechnical drilling and studies have been undertaken for the PFS.

Processing

Metallurgical test work on representative samples selected via a geometallurgical study has shown that a crushing, grinding and flotation circuit would produce acceptable concentrate grades and metal recoveries as outlined in the PFS and PFSU.

Community

The WMP has been studied with a view to creating opportunities across the West Musgrave Mineral Province for OZ Minerals' stakeholders today, and for future generations of the Traditional Owners of the land. The WMP is located entirely within the Ngaanyatjarra Lands of central Western Australia, within Class A Aboriginal Reserve held by the Ngaanyatjarra Land Council on behalf of the Traditional Owners for the use and benefits of Aboriginal inhabitants, and within the Yarnangu Ngaanyatjarraku Parna (Aboriginal Corporation) Native Title Determination.

During the PFSU four days of consultation with relevant West Musgrave Traditional Owners was undertaken. This consultation consisted of on-country bush trips with groups of relevant Traditional Owners to explain the outcomes of the environmental study program and impact assessment for the project prior to submission of the Referral under Section 38 of Part IV of the *Environmental Protection Act, 1986* (WA) (EP Act).

Although regular in-person meetings with the Steering Committee have not been possible due to Covid-19 related travel restrictions, OZ Minerals has continued to provide project updates, seek feedback and check-in on the health of the community by remote means.

Environmental Regulatory Approvals

The first of three primary approvals submissions, assessment under Section 38 of Part IV of the EP Act was submitted to the Government of Western Australia on 23 October 2020. Information obtained in the environmental baseline work program to date does not indicate any material threats to the obtainment of this approval.

The remaining two primary approval submissions are a Mining Proposal under the *Mining Act, 1978* (WA) (Mining Act) and a Works Approval under Part V of the EP Act. These two submissions are planned for submission in 2021 when further detailed engineering and design have been completed. To date the planned approvals schedule indicates that all required regulatory approvals will be obtained in advance of the planned decision to mine.

Mineral Resource Classification Criteria

The basis for Mineral Resource classification is underpinned by the robustness of the geological model, quality of data and the continuity of geology and grade relative to the arrangement of data.

Both deposits display reasonable to good geological/lithological continuity between drill sections and mineralisation is strongly correlated to lithology. The quality of the estimation of grades was assessed using





the relative kriging variance, pass in which the estimate was made, the slope of regression, distance to the nearest informing composite and number of holes used in the Ni and Cu estimates.

The confidences in the interpretations and estimate were then integrated, resulting in annealing of the classification in places. Appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in the continuity of geology including weathering profiles and metal values and quality, quantity and distribution of the data). Figure 5 displays the classified models with drill holes.









Dimensions

The deposits' geometry is generally flat lying to dipping towards the south. Limits of the Mineral Resource are listed in Table 3. Dimensions are based on Mineral Resources contained within reportable pit shells. Drilling has confirmed that mineralisation can extend beyond the dimensions stated below.

Deposit	Dimension	Minimum	Maximum	Extent (m)
	Easting	368250	370100	1,850
Babel	Northing	7111130	7112475	1,345
	RL	-130	465	595
	Easting	371475	372925	1,450
Nebo	Northing	7112915	7113970	1,055
	RL	210	445	235

Table 3: Dimensions of the Mineral Resource





JORC 2012 EDITION, TABLE 1

SECTION 1 Sampling Techniques and Data

	Criteria	Comments					
	Sampling techniques	The Nebo and Bab and then BHP Billit Agreement with Ca	el deposits were a on through until assini from which	sampled using DE 2012. Cassini Reso time OZ Minerals	D and RC drill hol ources Limited (C and Cassini have	es. Drilling on the c assini) commenced e undertaken drillin	deposits commenced in the year 2000 undertaken by WMC Resources I drilling in 2014. In 2016 OZ Minerals entered a Joint Venture g in Joint Venture.
		The table below su	mmarises drilling	activities up to 2	019. No further c	frilling was carried	out in 2020.
-		Phase	Deposit	Туре	# Holes	# Metres	
14			Nebo	RC	66	11,344	
4	9	2019		DD	5	890	
6		2015	Babel	RC	156	32,969	
/_))		Baber	DD	12	1,291	
			Nebo	RC	88	14,071	
	5	2018	Nebo	DD	21	3,841	
			Babel	RC	175	29,621	
				DD	52	5,219	
		2014–2017	Naha	RC	91	13,956	
_			Nebo	DD	4	467	
			Dahal	RC	68	11,209	
U	2		Dabel	DD	6	775	
			Naha	RC	16	969	
		Dro 2014	Иево	DD	56	17,942	
		Pre-2014	Pahal	RC	6	487	
			Babei	DD	80	33,640	
7	2		Naha	RC	243	38,570	
$(\land$		Tatal	Nebo	DD	78	22,047	
1	9	Iotai	Pahal	RC	415	76,529	
			Babei	DD	137	35,742	

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Criteria	Comments
	Holes were drilled on north-south sections with dips of generally 60 degrees towards north at Nebo and 70 degrees towards north at Babel to optimally intersect the mineralised zones. Several east west holes have been drilled.
	The diamond core is commonly HQ and PQ size, sampled on visible variation in rock type and ranges from 0.05 m to 2.0 m with half core being routinely analysed. RC drilling was used to obtain 1 m and 2 m samples for Nebo and 2 m samples for Babel. Samples were crushed (DD only), dried and pulverised to produce a sub-sample for a combination of Fusion XRF, Four Acid Digest ICP and Fire Assay methods.
	A nearest neighbour evaluation comparing DD and RC data was carried out to determine the appropriateness of combining the two datasets for estimation with minimal bias towards either drill method for both Ni and Cu between the 25th and 75th percentile shown.
	Sub-sampling, sample preparation and assay methods are discussed in detail in the criteria Sub-sampling techniques and sample preparation and Quality of assay data and laboratory tests below. The methods of sampling, preparation and analysis are of acceptable quality for use with disseminated nickel-style mineralisation.
Drilling techniques	At Nebo, DD accounts for 36% of the drilling and comprises PQ, HQ and NQ2 sized core. At Babel, DD accounts for 32% of the drilling and comprises PQ, HQ and NQ2 sized core. All PQ is undertaken using triple tube and HQ is triple tube down to fresh rock.
	RC drilling comprises 140 mm diameter sampling hammer drilling. Hole depths range from 42 to 300 m.
5	For drilling post-2014, the diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Historical drill core was orientated in a similar method.
Drill sample recovery	For drilling post-2014, DD core recoveries were visually logged for every hole and recorded in the database showing >95% recovery. Actual recoveries for RC drilling were calculated (assuming a hole volume and sample bulk density) for the first two drill holes for each rig and every tenth hole after that. Overall recoveries are >95% and there have been no significant sample recovery problems.
	Of the 87 historical (pre-2014) diamond drill holes that are used in Mineral Resource estimate, Cassini has confirmed that 37 DD holes had recovery details recorded. Overall recoveries from the historical core also averaged >95%. Recovery records for the remaining holes are unknown.
	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	Drill core and chip samples have been geologically logged and the level of understanding of lithology is high. Lithology checks are undertaken by comparing original logging to geochemical analysis and changes are made in the database if required.
\sum	Logging of diamond core and RC samples at Nebo and Babel recorded lithology, mineralogy, mineralisation, structural and geotechnical data (DDH only), weathering, colour and other relevant features of the samples. Logging is both qualitative (e.g. colour) and semi-quantitative (e.g. mineral percentages). The core was photographed in both dry and wet form. RC chips and DD core were logged for the entire length of all holes.





	Criteria	Comments
\geq	Sub-sampling techniques and sample preparation	RC drilling was used to obtain 1 m and 2 m samples for Nebo (2 m from 2019) and 2 m samples for Babel through an on-rig cyclone and splitter. Approximately 3 kg samples were collected in a calico bag that was sent off to be pulverised to produce a sub-sample for analysis. Minor holes at Nebo reported wet samples. When this occurred the on-rig cyclone and splitter were routinely cleaned.
		Diamond core was PQ, HQ and NQ2 size, sampled on visible variation in rock type and range from 0.05 m to 2.0 m. The core was cut on site with half core being routinely analysed.
		The sample preparation of samples for Nebo and Babel follows industry best practice in sample preparation involving oven drying, followed by pulverisation of the entire sample (total prep) using Essa LM5 grinding mills to a grind size of 90% passing 75 microns. Diamond core required Boyd crushing after drying.
-		Quality control for sample preparation includes the use of blank samples and duplicates.
1.1		Sample sizes and sub-sampling methods are appropriate for the style and texture of the Nebo-Babel mineralisation.
4	Quality of assay data and laboratory tests	All laboratory procedures and analytical methods used are of appropriate quality and suitable to the nature of the mineralisation at Nebo-Babel. For drilling since 2014
	5	For drilling from 2014 to 2017 the analytical suite consisted of a combination of fused bead X-ray fluorescence (for whole rock elements Si, Al, Fe, Ti, Ca, Na, K, Mg, P, S, Zr, Mn, Cr, and V), four acid digest (hydrochloric, nitric, hydrofluoric and perchloric acid) followed by an ICP-AES and ICP-MS finish (for Co, Cu, Zn, Ni, Ag, As, Nb and Y). The digest approximates a "total" digest in most samples. Fire assay was used with a silver secondary collector and ICP-MS finish for Pt, Pd and Au. Loss on ignition (LOI) was measured gravimetrically at 1,000°C.
		For 2018 and 2019 drilling, the analysis was similar to the above excepting X-ray fluorescence was used instead of ICP for Co, Cu, Zn, Ni, As, Nb and Y. Both methods used have been compared; displaying immaterial bias.
		Cassini field QAQC procedures involve the use of certified reference material (CRM) as assay standards, along with blanks and duplicates. The insertion rate of all QAQC checks averaged 1:20 with an increased rate in mineralised zones.
J)	Certified reference materials, having a good range of metal values, were inserted blindly and at a rate of every 20th sample. Results highlight that sample assay values are accurate.
		Blanks were submitted at a rate of every 20th sample confirming immaterial contamination between samples processed at the lab.
		Cassini field RC duplicates were taken on 1 m and 2 m (at Nebo) and 2 m (at Babel) composites directly from the cone splitter at a rate of approximately 1 in every 50 as is quarter core DD samples as field duplicates. Pulp duplicates were submitted at the same rate. Repeat or duplicate analysis for samples reveals that the precision of samples is within acceptable limits.
		Sample measurement for fineness was carried out by the laboratory as part of their internal procedures to ensure the grind size of 90% passing 75 microns was being attained. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and duplicates as part of the in-house procedures.
1		In 2015 and 2019, 211 and 356 pulps respectively were submitted to ALS Global as Umpire assay checks. In general, the results showed no bias and an excellent correlation with only minor outliers for nickel and copper.

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Criteria	Comments
	For drilling pre-2014 Assay analysis closely matched methods outlined above for 2014–2017 drilling. Comparisons of the different phases of analysis have been undertaken using quantile plots and only minor biases have been detected. Historical QA procedures and QC results for the WMC Resources and BHP Billiton drilling have been documented in various internal reports. In general, the reports document 'industry standard' QA procedures and acceptable QC results during the reported periods. The entire dataset is acceptable for Mineral Resource Estimation.
Verification of sampling and assaying	Documented verification of significant intervals by independent personnel has not been done however both the Exploration Manager and the Technical Director of Cassini have viewed the RC chip samples and core from historical drilling. In 2016, Cassini twinned two RC holes at Nebo and three DD holes at Babel with PQ DD. In 2018, all DD metallurgical holes twinned existing RC holes. Analysis of the results suggested no particular bias in either types of samples. Cassini collected data for the West Musgrave Project using a set of standard Field Marshal Templates on laptop computers using lookup codes. The information was sent to Geobase Australia for validation and compilation into a SQL database server. Previous operators collected data electronically and stored it in an acQuire database. Where assay results are below the 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	The grid system for the West Musgrave Project is MGA_GDA94, Zone 52. Topographic control was supplied by a Lidar survey commissioned in 2018. The following describes collar and downhole survey methods: For drilling since 2014 Hole collar locations were surveyed by MHR Surveyors of Cottesloe using RTK GPS with the expected relative accuracy compared to the Control Point established by MHR. Expected accuracy is ±5 cm for easting, northing and elevation coordinates. Downhole surveys were completed every 5 m using Reflex north seeking gyroscopes after hole completion. Stated accuracy is ±0.25° in azimuth and ±0.05° in inclination. For drilling pre-2014 Previous operators surveyed drill holes by handheld and/or differential GPS. Differential GPS positions have reported accuracy of ±5 cm for easting, northing and elevation coordinates. Exact accuracy of handheld GPS is unknown. Very early drill holes were surveyed downhole by a single shot downhole camera. Many of the drill holes have a considerable deviation from the initial azimuth which is believed to be the effects of magnetic minerals within certain geological units. WMC commissioned a re-survey of these holes using a Gyro in 2002.
 Data spacing and distribution	Sample spacing is reasonably consistent at both deposits. The vast majority of Nebo is drilled on 50 m sections (north-south) with 50m spacing on the section. Two close spaced "crosses" have been drilled consisting of nine holes drilled approximately 10 m apart for each cross. At Babel, the majority is drilled on 50 m

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Criteria	Comments
	sections (north-south) with 50 m spacing on section however the most western part of the deposit consists of 100 m sections with 50 m spacing on section. As with Nebo, two close spaced "crosses" have been drilled to model short-spaced variability.
	Both deposits display relatively low to medium geological complexity, and mineralisation is strongly controlled by lithology therefore it is considered that the current data spacing and distribution is sufficient to establish geological and grade continuity appropriate for the Mineral Resource estimation.
	RC samples were composited directly from the splitter to 2 m lengths for Nebo and 2 m lengths for Babel. DD samples range from 0.05 m to 2 m.
Orientation of data in relation to geological	Holes were drilled on north-south sections and dips of generally 60 degrees towards the north at Nebo and 70 degrees towards the north at Babel to intersect the mineralised zones optimally.
structure	To date, the deposit orientation has been favourable for drilling close to or perpendicular to mineralisation and therefore sample widths (compared to actual) are not considered to have added a sampling bias.
Sample security	For drilling completed by Cassini, the sample chain of custody was managed by Cassini. Samples for the West Musgrave Project are stored on site and delivered to Perth by a recognised freight service and then to the assay laboratory by a Perth-based courier service.
	While in storage the samples are kept in a locked yard. Tracking sheets track the progress of batches of samples. No information is available for historical drilling sample security.
Audits or reviews	A review of the sampling techniques and data was carried out by CSA Global during September 2014. CSA Global considered the sampling techniques and data to be of sufficient quality to carry out Mineral Resource Estimation. The sampling and assay protocols have remained relatively consistent since this audit.
	A review and audit of the sampling and assay techniques including a site and lab visit (BV – Perth) was conducted in August 2018. The sampling techniques and data are of sufficient quality to carry out Mineral Resource Estimation.
J.	The OZ Minerals West Musgrave Site Lead (formerly Cassini Exploration Manager) visits the analytical laboratory approximately twice a year and regularly visits the project site reviewing all drilling and sampling practices and provides documented evidence of both the lab and site performance.

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SECTION 2 Reporting of Exploration Results

Criteria	Comments
Mineral tenement and land tenure status	Nebo is located wholly within Mining Lease M69/0074. Babel is located on Mining Leases M69/0072 and M69/0073. Cassini entered into an agreement to acquire 100% of the leases comprising the West Musgrave Project (M69/0072, M69/0073, M69/0074, M69/0075, E69/1505, E69/1530, E69/2201, E69/2313, E69/3412, E69/3169, E69/3163, E69/3164, E69/3165, E69/3168 and P69/64). The tenement sits within Crown Reserve 17614.
	The Nebo and Babel deposits were discovered by WMC Resources in 2000 and acquired by BHP Billiton in 2005. In 2014 Cassini Resources Limited (Cassini) acquired the project and undertook an extensive drilling and study program, completing a Scoping Study in 2015. In 2016, OZ Minerals entered into a Joint Venture Agreement with Cassini. A Further Scoping Study was completed by the Joint Venture in late 2017 and a PFS in 2020, a summary of which was released on 12 February 2020. OZ Minerals acquired Cassini on 5 October 2020 to have 100% ownership of the WMP.
	All tenements are in good standing and have existing Aboriginal Heritage Access Agreements in place. No Mining Agreement has been negotiated.
2	A Native Title and Project NSR royalty was applied on top of royalties for nickel and copper concentrates. The Native Title royalty was based on benchmarking against similar projects and is currently still under negotiation.
Exploration done by other parties	Previous exploration has been conducted by BHP Billiton, WMC Resources and Cassini. The work completed by BHP Billiton, WMC Resources and Cassini is considered by OZ Minerals to be of a good-to-high standard.
Geology	The deposits are located within the West Musgrave Province of Western Australia, which is part of an extensive Mesoproterozoic orogenic belt. The Nebo and Babel deposits are hosted in a mafic intrusion of the Giles Complex (1068Ma) that has intruded into amphibolite facies orthogneiss country rock.
2	Mineralisation is hosted within tubular chonolithic gabbronorite bodies are expressed primarily as broad zones of disseminated sulphides and co-magmatic accumulations of matrix to massive and breccia sulphides.
Drill hole Information	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.
Data aggregation methods	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	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.





	Criteria	Comments				
\geq	Diagrams	No Exploration Results have been reported in this Mineral Resource Estimate Statement; therefore no exploration diagrams have been produced. This criterion is not relevant to this report on Mineral Resources.				
	Balanced reporting	No Exploration Results have been reported in this release. This criterion is not relevant to this report on Mineral Resources.				
	Other substantive exploration data	No Exploration Results have been reported in this release. This criterion is not relevant to this report on Mineral Resources.				
	Further work	The next phase of the project will include critical path activities such as government approvals, Mining Agreement discussions, engineering partner selection and field activity preparation. The next stage of study assessment will continue through 2021 towards developing full valuation to inform a final investment decision expected in 2022.				





SECTION 3 Estimation and Reporting of Mineral Resources

Criteria	Comments							
Database integrity	The West Musgrave drillhole database is stored in a SQL Server system with a Geobank front end. Prior to OZ Minerals full ownership, Cassini maintained the drillhole database externally by Geobase Australia Pty Ltd. All data was sent directly to Geobase Australia Pty Ltd for compilation into a SQL database server. Exports in a csv format were supplied for drillhole database construction in Vulcan software. Assay data was loaded from text files supplied by the laboratory directly into the database without manual transcription.							
	Prior to Cassini, operators collected data electronically and stored it on an acQuire database.							
2	All data was regularly reviewed by Geobase, Cassini and OZ Minerals.							
Site visits	A site visit was not conducted by the Competent Person due to the travel restrictions imposed by the Covid-19 pandemic. The OZ Minerals West Musgrave Site Lead (formerly Cassini Exploration Manager) visits site regularly.							
Geological interpretation	The geological interpretation was undertaken by Cassini geologists and reviewed by the Competent Person. The geological interpretation was based on drill core data, including geochemical data, and core logs and photos. Chemical assays were used extensively to confirm individual lithological units particularly on RC holes. Detailed paper sections were produced and then digitised in Vulcan software where sectional strings were constructed before wireframing.							
D	The geological model for both Nebo and Babel deposits is interpreted to consist of a tube-like intrusion comprised of several subtlety different gabbronorites which have intruded along the same pathway. Subsequent units have generally intruded within the last, creating an inflated, concentrically ringed chonolith emplaced into the surrounding orthogneiss rock. Dolerite dykes are minor to absent at Babel but are common at Nebo and post-date mineralisation and are barren of mineralisation.							
	Interpretation and wireframes have been constructed for lithology (including dykes), weathering and estimation grade shells. Mineralisation is intimately associated with the brecciated contact of a mafic (gabbronorite) intrusive into the surrounding orthogneiss host rock and although there is a strong, almost exclusive relationship between lithology and mineralisation it was determined to construct estimation grade shells to optimise the estimation. Ni and Cu display a moderate to strong 1:1 correlation and therefore grade domains were produced that honour both Ni and Cu mineralisation. Interrogation of histograms and log-probability plots suggested a nominal 0.1% Ni cut-off to construct grade shells with geology strongly supporting the statistical cut-off. Grade domains were generally extended 50 m past the last grade intersection where geological continuity could be inferred.							
	At Nebo, "high-grade" domains were constructed to model Massive Sulphide zones using a nominal 1% Ni cut-off and guided by logging of Massive Sulphide. These zones were wireframed where continuity could be interpreted between sections and drill holes. Massive sulphide zones are rare at Babel and wireframing was not required.							
	Four weathering zones were interpreted including OX (Oxide), PV (pyrite-violarite), TR (Transitional) and PR (Primary). The oxide horizon was determined from drill hole logging and sulphur content. PV, TR and PR zones are difficult to distinguish from logging and/or geochemical assay analysis. Subsequently, thin section analysis (petrography) is undertaken on selected holes and intervals to determine the weathering state. This data is then used to create weathering surfaces.							





	Criteria	Comments
		Confidence in the geological interpretation is high on a sectional scale with generally good continuity between sections. Nebo displays a higher level of complexity related to dolerite dykes that are likely to have been emplaced within existing structures however Nebo would not be considered to be structurally "complex". Mineralisation is strongly controlled by lithology and therefore also displays good continuity on a sectional scale. Significant infill drilling in 2019 has not materially changed the previous interpretation suggesting good continuity. Massive Sulphide zones occurring at Nebo can be patchy in places and difficult to interpret however significant zones of Massive Sulphide do display continuity between sections.
	<u>]</u>	Alternative plausible interpretations on a global scale are unlikely due to the current well-defined interpretation however, alterative interpretations locally may be material on a local scale.
	Dimensions	The Nebo Mineral Resource is contained within an area defined by a strike length of 1,500 m and across-strike width of 1,050 m. Mineral Resources have been reported within a defined potentially economic pit shell that has a maximum depth of 260 m below surface.
15		The Babel Mineral Resource is contained within an area defined by a strike length of 2,020 m and across-strike width of 1,350 m. Mineral Resources have been reported within a defined potentially economic pit shell that has a maximum depth of 600 m below the surface.
	Estimation and modelling techniques	The Mineral Resource area was separated into two separate deposits; Nebo and Babel. Domain definition used a combination of assay data and geology, taking into consideration the lithological controls on the mineralisation, the mineralogy of nickel and copper and the nickel and copper grades. A strong relationship exists between nickel and copper so constructed grade domains satisfied the requirements for both elements. Nickel/copper mineralisation domains were also used for the estimation of Co, Au, Ag, Pt, Pd, Pb, Zn, As, Ca, Mg, S, Fe and Al as they were suitable and confirmed by Exploratory Data Analysis. A medium to strong association generally exists between Ni, Cu and other metals. Hard boundaries were used across all domains as contacts between mineralised and non or minor mineralisation was commonly sharp due to lithological controls. Although grade can be influenced by lithology (within the grade shell), the differences are subtle and no sub-domaining by lithology was required except for Massive Sulphide zones at Nebo where wireframes were constructed. Four oxidation or weathering zones were interpreted including OX, PV, TR and PR. Analysis of grade statistics across these boundaries showed only minor difference so no sub-domaining by weathering was required except for S in Nebo and Babel and Ca and Mg in Babel. Statistical and geostatistical analysis was completed using Supervisor software. All geological modelling and estimation were completed using Vulcan software. For both deposits, a 25 m E by 25 m N by 5 m RL parent cell size was used with sub-celling to 2.5 m E by 2.5 m N by 2.5 m RL to honour wireframe boundaries. Sub-cells were assigned parent cell grades. The block size is considered to be appropriate given the dominant drill hole spacing and style of mineralisation. No assumptions were made regarding selective mining units. Particularly at Babel, blocks having grades below the reportable cut-off surrounded by blocks having grades above cut-off constitute a reasonable proportion of the Minera





Criteria	Comments
\mathcal{A}	50 m spacing on section however the most western part of the deposit is made up of 100 m spaced sections with 50 m spacing on the section. As with Nebo, two close spaced crosses have been drilled.
	Variograms were completed for all elements in each of the main mineralised domains for both Nebo and Babel. The variogram model was applied to the other minor grade domains. The close spaced crosses assisted in modelling short range structures.
	A multiple-pass (generally three passes) search ellipse strategy was adopted whereby search ellipses were progressively increased if search criteria could not be met. The search parameters were based on the semi-variogram ranges and the drilling density.
	Ordinary Kriging (OK) was used for grade estimation. Vulcan Anisotropic Modelling was utilised to inform search ellipse and variogram axis orientations for Babel. Anisotropic Modelling involves assigning a bearing, plunge and dip to each block that represents the orientation or trend of lithology/mineralisation. At Nebo three "structural domains" were interpreted to inform search ellipse and variogram axis orientations. Independent estimations were completed for Ni, Cu, Co, Au, Ag, Pt, Pd, Pb, Zn, As, Ca, Mg, S, Fe and Al.
	Samples were composited to 2m. The impact of very high-grade composites was managed using top-cuts if required. Outliers most commonly represent Massive Sulphide intersections. Where continuous these zones were wireframed as domains however when intersected in single holes top-cuts were applied if above the selected grade threshold. Due to the relatively low-grade nature of the deposits, outliers and the method of restriction can influence the estimate on a local scale.
	The block models used for the current estimate were compared with the 2019 estimate. Both Nebo and Babel compared very closely at a range of cut-offs. For Nebo, the current estimate has a minor drop in grade for Ni and Cu while Babel displayed an increase in grade due to infill drilling confirming higher grade continuity.
	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 the relative degree of smoothing. In addition, several check estimates were run using different top-cuts and search neighbourhood parameters with results showing reasonable however not material differences, with respect to Mineral Resource classification of the reported case.
	Statistical validation included the 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 curves of estimates against grade tonnage curves derived from the previous estimate.
	There has been no historical mine production from the Nebo and Babel deposits. Ni, Cu, Co Au, Ag, Pt and Pd are assumed to be recoverable however Ni and Cu form the vast majority of assumed revenue. All other variable estimates are either penalty elements or gangue.
Moisture	Tonnages are estimated on a dry basis. Core samples are dried before SG measurements are undertaken.
Cut-off parameters	The Mineral Resource has been reported at a NSR cut-off of A\$20/t. The A\$20/t value represents the PFSU mill limited break-even cut-off of A\$17 per ore tonne mined, plus an all-inclusive mining cost of A\$2.76 per total tonne mined. Mineral Resources were further constrained within "reasonable prospects" optimised pit shells utilising a 1.2 revenue factor. Within the optimised pit shells, OZ Minerals' assumed metal prices are multiplied by 1.2 on a block-by-block basis, to allow for potential higher future revenue values and reasonable prospects for eventual economic extraction.





	Criteria	Comments			
\geq		The Table below sh	nows the assumed	prices (prior to bei	ng multiplied by 1.2). The assumed exchange rate is 0.67 (AUD/USD) and price assumptions are drawn
	Л	from OZ Minerals'	life-of-mine (LOM)	Corporate Econor	nic Assumptions updated in Second Quarter 2020.
		Revenue Assumpt	tions*		
		Parameter	Units	LOM	
	1	Nickel	US\$/lb	7.60	
		Copper	US\$/lb	2.91	
\leq)	Gold	US\$/oz	1,246	
		Silver	US\$/oz	18.10	
75		Platinum	US\$/oz	1,311	
JŲ)	Palladium	US\$/oz	633	
16		Cobalt	US\$/lb	21.90	
IJĮ)	Exchange Rate	AUD/USD	0.67	
	5	* The above metal prices	are the assumptions used	l prior to being multiplie	1 by 1.2
)	A Native Title and I against similar proj	Project NSR royalty jects and is current	was applied on to ly still under nego	p of royalties for nickel and copper concentrates. The Native Title royalty was based on benchmarking iation.
,0		sumptions including metal prices, recovery, royalties, concentrate payability, concentrate transport and 020 and align with December 2020 PFSU optimisation inputs. The calculation of NSR values in the he nickel, copper, gold, silver, platinum, palladium and cobalt metal included in the NSR calculation s the Competent Person's opinion that these methods and cut-off grades satisfy the requirements for			
		The stated Mineral	Resources do not	include oxide mat	erial based on the current understanding of oxide recovery and economic potential.
	Mining factors or assumptions	It is assumed that t and equipment. Th	he Babel and Nebo is Mineral Resource	o deposits would k e does not accoun	e mined by open pit mining methods utilising conventional blasting, loading and haulage methods t for mining recovery.
h	Metallurgical factors or assumptions	Metallurgical test w acceptable concent current as at First C	vork on representa trate grades and m Quarter 2020 and a	tive samples selec etal recoveries. M re outlined in the	ted via a metallurgical study has shown that a crushing, grinding and flotation circuit would produce etallurgical assumptions were based on recent metallurgical test work as part of the ongoing studies Table below.





Criteria	Comments								
	Metallurgical Recoveries	5							
					Recovery	%			
	Nickel concentrate	Ni	Cu	Au	Ag	Pt	Pd	Со	
	non PV ore								
	For Ni% ≥ 0.25	75.6	14.1	-	-	48.3	38.7	56.2	
	For 0.20≤ Ni% <0.25	59.5	14.8	-	-	41.0	32.9	47.8	
	For 0.15≤ Ni% <0.19	49.5	16.6	-	-	31.4	25.1	36.5	
	BV ore								
	For Ni% > 0.25	337	12 7	-	-	177	30.5	47 5	
	For 0.20≤ Ni% <0.25	27.8	15.1	-	-	15.1	25.9	40.3	
	For 0.15≤ Ni% <0.19	21.3	17.0	-	-	11.5	19.8	30.8	
	Copper concentrate								
))	non PV ore								
	For Ni% ≥ 0.25	-	79.4	55.2	54.18	15.0	32.9	-	
	For 0.20≤ Ni% <0.25	-	71.5	46.9	46.1	12.7	27.9	-	
	For 0.15≤ Ni% <0.19	-	63.5	35.9	35.21	9.73	21.4	-	
	D)/								
	For Ni% >0.25		71.2	176	26.2	12.6	25.7		
	For 0.20 < Ni% < 0.25	-	66.6	47.0	20.5	15.0	30.4	-	
	For 0.15< Ni% <0.19	-	59.1	31.0	17.1	88	23.2	_	
Environmental factors	Nobo is located wholly wi	thin Mi		M60/007	A Rabolic	located w	ithin Minir		469/0072 and M69/0072
or assumptions	A series of successful whole who			: 1009/007				iy Leases i	nos, ou z and mos, ou z.
	A series of environmental	basellr	ne studies (commence	ed in iviay 4		the aim of	characteri	sing the existing environment and identifying any associated
	project and approvals risk	s. The I	oasellne er	ivironmen	tal program	n nas incil d man incil	ided an as	sessment	of flora and vegetation, landforms, subterranean fauna,
	terrestrial environmental o	quality	(incluaing	Doth mine	eralised and	u non-min	eralised w	aste), terre	strial fauna, inland waters, air quality, neritage, archaeology,
	social surroundings and n	uman r	health. The	e baseline	environme	ental progi	am was co	Uncluded II	i March 2020, nowever due to the Covid-19 pandemic and the
	(Dart IV) access the Nga	anyatja	arra Lands	to underta	ake final co				ners, the submission was withneid. Submission of the Section 38
	(Part IV) assessment was I	many n		updoracia		ation pre-			support from the Traditional Owners was received. The Section
2	50 (Part IV) referral submi	ssion is	currently	undergolf	ig the valid	ation prod	ess with C	overnmen	
	The study program to dat	e repre	esents a tho	prough as	sessment c	of the prop	osed proj	ect area in	line with the requirements of the Western Australian EPA
	guidelines. To date no ma	iterial e	nvironmer	ntal or app	provals risk	s have bee	n identifie	ed.	





	Criteria	Comments
		A program of materials characterisation has occurred to classify potentially problematic mineralised waste rock. The materials characterisation has included both static and kinetic testing of various waste rock lithologies. To date, results indicate that waste rock material that is potentially acid forming (PAF) represents only a small portion of the overall waste rock generation and would be encapsulated in accordance with Western Australian requirements within onsite waste rock dumps. All waste rock dumps will be designed in accordance with Western Australian requirements.
		A PFS-level program to confirm water supply was carried out throughout 2019. The program included the drilling and pumping of 13 dedicated water bores. These bores were pump tested to test specific parameters about the availability of groundwater supply within this system. The study concluded that the local aquifer system has enough supply to support the anticipated water requirements of the proposed project, and that water quality meets the project specifications. Further testing will occur throughout the next stage of study to validate the findings of the PFS water supply study.
		To achieve State Government regulatory approval to proceed with mining, the project will require approval under Part IV and Part V of the EP Act, and under the Mining Act by way of an approved Mining Proposal. A program of work as detailed above to address the requirements of these approvals commenced in May 2018. The first of the three primary approvals submissions, assessment under Section 38 of Part IV of the EP Act was submitted to the Government of Western Australia on 23 October 2020. The environmental and regulatory study program to date represents a thorough assessment of the proposed project area in-line Western Australian regulatory requirements. To date, no material environmental or approvals risks have been identified and full approval under Part IV and Part V of the EP Act, and an approved Mining Proposal under the Mining Act is expected before the end of the next stage of study and the decision to mine.
	Bulk density	Within the resource area, the database contained a total of 14,721 density measurements (4,087 at Nebo and 10,634 at Babel). Density measurements were calculated using the water immersion method from dried drill core, with lengths measured matching the assay sample length, from both deposits and the various rock types and weathering zones.
1		A strong, positive correlation between density and Fe2O3 was identified at Nebo for all mineralised domains below the transitional weathering surface and all mineralised domains below the pyrite-violarite weathering surface at Babel. A linear regression was calculated and then used to calculate density values on a block-by-block basis.
		For all other domains, density values were assigned based on their averages. In general, the values within each "density domain" showed minor spread as to be expected from the homogenous host rock lithology and mineralisation style and sample numbers are sufficient to represent each determined density domain.
)	The bulk density calculations are regarded as being of appropriate quality for use in the reporting of the Nebo-Babel Resource Estimates.

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	Criteria	Comments
	Classification	The basis for Mineral Resource classification into both Indicated and Inferred categories is underpinned by the robustness of the conceptual geological model, quality of data and the continuity of geology and grade relative to the arrangement of data.
		Both deposits display reasonable to good geological/lithological continuity between drill sections and mineralisation is strongly correlated to lithology. The quality of the estimation of grades was assessed using the relative kriging variance, pass in which the estimate was made, the slope of regression, distance to the nearest informing composite and number of holes used in the Ni and Cu estimates.
		The confidences in the interpretations and estimate were then integrated, resulting in annealing of the classification in places. Appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in the continuity of geology and weathering profiles 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 Mineral Resource estimate as at 9 December 2020 underwent an internal review by a senior member of the OZ Minerals geological staff. No material issues were identified. The prior Mineral Resource estimate as at 12 February 2020 and the base estimate to the Mineral Resource estimate as at 9 December 2020 has been reviewed and audited by Douglas Corley of Mining One. The review found that there were no fundamental flaws in the Mineral Resource
<i>V</i> .) R	estimate and was found to be fit for purpose however some improvements could be made regarding local scale grade distribution particular at Nebo within the Massive Sulphide zones. Further drilling would improve the estimate in these areas and would facilitate an Indicator Estimate to probabilistically define the Massive Sulphide zones.
	9	It was stated that the classification conforms to the requirements of the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves.
	Discussion of relative accuracy/confidence	The Mineral Resource statement relates to global estimates of in-situ tonnes and grade. Factors affecting global accuracy and confidence of the estimated Mineral Resource at the selected cut-off include the following:
IJ	5	 Both deposits, particularly Babel contain significant blocks with grades estimated close to the reportable cut-off grade. Domaining was undertaken to reduce conditional biases of estimated grades caused by the use of Ordinary Kriging however smoothing of estimated grades will have some impact on block grades and potentially reported Mineral Resources. The classification of the Mineral Resource has taken this into consideration.
		 Thin section analysis is undertaken to determine the position of weathering profiles including PV. This analysis does not occur on all drill holes and can be sparse in places therefore resulting in a low confidence determination of weathering state (PV vs TR vs PR) in places. The classification of the Mineral Resource has considered this.
R		 Nebo commonly contains Massive Sulphide mineralisation distributed within lower grade disseminated mineralisation. The extent of this mineralisation between existing drill holes is variable and further drilling will be undertaken to define this distribution. There is an observed complexity with respect to the distribution of the massive sulphides and it is suggested a more probabilistic approach, such as Indicator Kriging, is adopted to define massive sulphide domains once this drilling is undertaken. This will potentially improve the Nebo estimation on a local scale particularly with respect to the predictability of tonnes and grades at higher cut-offs, above the reportable Mineral Resource cut-off.
		There has been no production from the Nebo-Babel deposits for comparison with the estimated Mineral Resource.





3. WEST MUSGRAVE ORE RESERVE STATEMENT

The Ore Reserve estimate as at 9 December 2020 was drawn from the West Musgrave Project Pre-Feasibility Study Update (PFSU) and this Reserve Statement should be read in conjunction with the ASX Release for West Musgrave Project (WMP) PFSU⁵.

The December 2020 Ore Reserve estimate supersedes the February 2020 estimates released on 12 February 2020⁶. The Ore Reserve estimates have been reported in accordance with the 2012 edition of the JORC Code.

The Ore Reserve estimate for West Musgrave as at 9th December 2020 is summarised in Table 4 and reported between the final open pit design and the original topography. All dollars are expressed as Australian Dollars unless noted.

Deposit	Classification	Ore (Mt)	Ni (%)	Cu (%)	Au (ppm)	Ag (ppm)	Co (ppm)	Pd (ppm)	Pt (ppm)	Ni Metal (kt)	Cu Metal (kt)
Nebo	Probable	33	0.41	0.36	0.04	0.8	150	0.10	0.10	140	120
Babel	Probable	220	0.31	0.35	0.06	1	120	0.10	0.10	680	770
Total ²	Probable	253	0.32	0.35	0.06	1	120	0.10	0.10	820	890

Table 4: West Musgrave Ore Reserve Estimate as at 9th December 2020⁷

Notes: NSR cut-off \$25/t ore⁸. The table are subject to rounding.

Changes in December 2020 Ore Reserve Estimate

The December 2020 Ore Reserve estimate increased by 33 million tonnes, 90 thousand tonnes of nickel metal and 100 thousand tonnes of copper metal. The changes are driven by favourable changes in the metal price and exchange rate assumptions, improved metal recovery assumptions supported by further metallurgical test work, updated operating costs based on increased processing plant throughput and partially offset by recovery/dilution factors

These changes are displayed in Figure 6, Figure 7 and Figure 8.



⁵ See OZ Minerals announcement titled 'West Musgrave value and scale uplift in Pre-Feasibility Study Update' released on 9 December 2020 and available at <u>www.ozminerals.com/media/asx/</u>

⁶ See OZ Minerals announcement titled 'West Musgrave Project Nebo-Babel Deposits Mineral Resource Statement and Explanatory Notes At as 11th Feb 2020' released on 12 February 2020 and available at <u>www.ozminerals.com/media/asx/</u>

⁷ Data are reported to significant figures to reflect appropriate precision in the estimate and this may cause some apparent discrepancies in totals.

⁸ Net smelter return (NSR) details can be found under Section "Cut-off parameters" in the attached JORC Table 1 documentation





Figure 6: Changes to Ore Tonnes in the Ore Reserve Estimate*



Figure 7: Changes to Nickel Metal in the Ore Reserve Estimate*







Figure 8: Changes to Copper Metal in the Ore Reserve Estimate*

Ore Reserve Classification

The West Musgrave Ore Reserve as at 9th December 2020 is derived from the nickel-copper Mineral Resources (Section 2 above) of the Babel and Nebo deposits. The Mineral Resource models and their construction are described in the Mineral Resource Estimate (Section 2 above). The Mineral Resources are inclusive of the Ore Reserves.

All Probable Ore Reserves have been derived from Indicated Mineral Resources in accordance with Joint Ore Reserve Committee (JORC) Code 2012 guidelines.

The Ore Reserve classification reflects the Competent Person's view of the deposits.

Mining Methods

The West Musgrave project considers the Babel and Nebo deposits (Figure 9). Both deposits are near surface and most suitable to be mined by open pit mining methods utilising conventional mining equipment with each deposit developed in multiple stages.

The selected mining method, design and extraction sequence are tailored to suit orebody characteristics, minimise dilution and ore loss, defer waste movement, utilise planned process plant capacity and expedite cash generation in a safe manner.

Mine planning including pit optimisation, mine design, scheduling and cost modelling for the two deposits was completed in collaboration with AMC Consultants Pty Ltd (AMC). This together with other studies has allowed the design of the site layout including site haul roads, pit access roads, detailed pit stage development designs, waste dumps, topsoil stockpiles, mine workshops and run of mine (ROM) ore pads (Figure 10).







Figure 9: Pit Designs for Both Deposits Showing Mineral Resource Grades >0.15%Ni

Cut-Off Grade and Metal Price

A Mining 'Hill of Value' study was undertaken to identify the optimum processing rate and mining cut-off grade. The study considered processing rates between 8 Mtpa to 26 Mtpa and tested a range of increased cut-off criteria to determine the best project value. In addition to this, a detail assessment was conducted on the processing rates between 10 and 12 Mtpa. This has determined a 12 Mtpa optimum processing rate and an elevated cut-off grade of +\$8/t ore above break-even cut-off as an optimum cut-off.

The Ore Reserve was estimated using the life-of-mine (LOM) economic parameters drawn from OZ Minerals Corporate Economic Assumptions released in Second Quarter 2020 and a Net Smelter Return (NSR) cut-off value of \$25/t ore. The revenue of the project is derived from all the elements listed in Table 5.

The cut-off value equates to the processing cost (with inclusion of general administration, sustaining capital, corporate overhead and mine rehabilitation), ore rehandle, and an elevated \$8/t ore.

NSR value for each block in resource model is calculated and evaluated against the applied cut-off. The NSR is defined as the revenue from the sale of products after deducting non-payables, treatment charges, refining charges, penalties, freight, and royalties.





Parameter	Units	LOM	
Nickel	US\$/lb	7.60	
Copper	US\$/lb	2.91	
Gold	US\$/oz	1,246	
Silver	US\$/oz	18.10	
Platinum	US\$/oz	1,311	
Palladium	US\$/oz	633	
Cobalt	US\$/lb	21.90	
Exchange Rate	AUD/USD	0.67	

Table 5: West Musgrave Ore Reserve Optimisation Economic Assumptions

Ore Reserve Estimation Methodology

The Ore Reserve estimate is based on the Mineral Resource estimates classified as Indicated after consideration of all modifying factors such as legal, environmental, geological, geotechnical, mining, metallurgical, social, economic and financial aspects.

Inferred Mineral Resources were excluded from pit optimisation, mine schedules and economic valuations utilised to validate the economic viability of the Ore Reserves. The Ore Reserve estimate is technically and economically viable without the inclusion of Inferred Mineral Resource.

Prior to pit optimisation, the Mineral Resource model was regularised to Selective Mining Unit (SMU) blocks of 10 m E x 10 m N x 5 m RL to generate a diluted mining model. The SMU block reflects expected mining equipment size, the geometry of the geology and anticipated ore loss. Planned mining dilution and ore loss were applied through regularisation of the Resource model. It is estimated that planned dilution will be approximately 2.6% and planned loss will be approximately 4.3%. Benchmarking operational practices, an assumed further unplanned dilution and loss of 5% has also been applied. The resultant total dilution and ore loss of 7.6% dilution and 9.3% loss. The modifying factors were considered to be prudent to ensure that a more conservative position was maintained while ongoing work is being undertaken. There is opportunity to further refine these factors with a greater data density in the next level of study (FVS).

The Lerchs-Grossman (LG) algorithm was applied to the Mineral Resource model using industry standard software. Nested pit shells were generated and tested with sensitivities on mining cost, processing cost, metal price, metal recoveries, and slope angles. This formed the basis of the selection of the optimal pit shell for the Babel and Nebo deposits. Interim pit shells provided guidance for pit stages to maximise value and achieve operational design requirements.

The resultant pit shells were used to develop detailed pit designs with due consideration of geotechnical slope parameters, minimum mining widths, bench heights, and ramp widths suitable for proposed mining equipment. These pit designs were used as the basis for production scheduling and economic evaluation.

The mining schedule is based on mining productivity and equipment utilisation estimates developed from both internal and external benchmarked performance data. Staged pit designs along with a stockpiling strategy were applied to ensure a continuous supply of ore while deferring waste mining for as long as practically possible.





The mining schedule is based on supplying suitable material to the processing plant with a name plate capacity of 12 Mtpa, planned to be achieved in the 2nd year after implementation as indicated in the PFSU announced together with this release.

The Ore Reserve is supported by Capital Expenditure (CAPEX) estimates from the respective original equipment manufacturers (OEM) for the proposed mining fleet, and mining Operation Expenditure (OPEX) was estimated from a first principles cost model and mine schedule physicals. Equipment hours and requirements were estimated from haul cycles, production rates, availabilities and utilisation measures. Operational and maintenance labour was estimated from equipment hours.

The mine was assumed to be contractor operated during the pre-strip phase and for the first five years of mining operations. The mining operation was assumed to be owner-operated from year six onwards. The prestrip of waste from the Babel pit was scheduled six-months prior to process plant commissioning. The schedule during this phase has targeted approximately 500 kt of Non- Pyrite-Violarite (Non-PV) ore to be stockpiled and ready for reclamation on day one of process plant commissioning.

The final pit design is the basis of the Ore Reserve estimate. The Mineral Resource within the final pit design was converted to Ore Reserve by applying a Net Smelter Return (NSR) cut-off value of \$25/t ore.



The mining layout is shown in Figure 10.



Figure 10: Mining Layout



Metallurgy and Processing Assumptions

The West Musgrave processing plant has been designed to process 12 Mtpa of nickel copper sulphide ore. The plant has been designed to operate 24 hours a day seven days per week at a nominal treatment rate of 1,500dry tph. The design milling utilisation is 91.3% or 8,000 hours per year. The processing facility utilises recognised technology for sulphide ore processing circuits and follows a processing route of:

- Crushed ore stockpiling and reclaiming
- Grinding and classification
- Bulk rougher flotation.
- Rougher concentrate re-grind
- Two stages of cleaner flotation
- Separation circuits for copper and nickel concentrates
- Copper and nickel concentrate thickening, filtration and storage
- Tailings thickening and disposal.

Metallurgical assumptions are based on recent metallurgical test work as part of the ongoing studies and broken down by weathering domain, including Pyrite-Violarite (PV), Transitional and Primary (non-PV).

Post the February 2020 PFS, a number of pilot tests were undertaken and have demonstrated improvement in Nickel recovery and concentrate grade which has been applied to metallurgical inputs for PFSU. PV ore is associated with the weathered portion of the deposits and is less amenable to the flotation process, hence lower nickel recoveries are expected in these domains.

The PV ore type contributes 6% of total tonnes, but its treatment in the mine plan has demonstrated a positive impact to project revenue. PV ore does however have a poisoning effect on fresh ore, reducing its nickel recovery. PV ore must be treated in separate batches. The current recovery assumption is that it will be batch treated approximately every ten weeks.

The metallurgical recoveries used for each ore type are shown in Table 6.

Table 6: Metallurgical Recoveries

	Matal	Recovery %						
Ore Type	Metal	Ni%>0.25	0.20≤ Ni% <0.25	0.15≤ Ni% <0.19				
Non-PV	Nickel	75.6	59.5	49.5				
	Copper	79.4	71.5	63.5				
PV	Nickel	33.7	27.8	21.3				
	Copper	71.3	66.6	59.1				

The simplified processing flowsheet is shown in Figure 11.







Figure 11: Simplified Processing Flowsheet





Environment, Social and Regulatory Approvals

A series of environmental baseline studies commenced in May 2018 with the aim of characterising the existing environment and identifying any associated project and approvals risks. The baseline environmental program has included an assessment of flora and vegetation, landforms, subterranean fauna, terrestrial environmental quality (including both mineralised and non-mineralised waste), terrestrial fauna, inland waters, air quality, heritage, archaeology, social surroundings and human health. The baseline environmental program was concluded in March 2020, however due to the Covid-19 pandemic and the inability to access the Ngaanyatjarra Lands to undertake final consultation with Traditional Owners, the submission was withheld. Submission of the Section 38 (Part IV) assessment was finally made in October 2020 following final consultation and written support from the Traditional Owners was received. The Section 38 (Part IV) referral submission is currently undergoing the validation process with Government of WA.

The study program to date represents a thorough assessment of the proposed project area in-line with the requirements of the Western Australian EPA guidelines. To date no material environmental or approvals risks have been identified.

A program of materials characterisation has occurred to classify potentially problematic mineralised waste rock. The materials characterisation has included both static and kinetic testing of various waste rock lithologies. To date, results indicate that waste rock material that is potentially acid forming (PAF) represents only a small portion of the overall waste rock generation and would be encapsulated in accordance with Western Australian requirements within onsite waste rock dumps. All waste rock dumps will be designed in accordance with Western Australian requirements and approvals conditions.

A PFS-level program to confirm water supply was carried out throughout 2019. The program included the drilling and pumping of 13 dedicated water bores. These bores were pump tested to test specific parameters about the availability of groundwater supply within this system. The study concluded that the local aquifer system has enough supply to support the anticipated water requirements of the proposed project, and that water quality meets the project specifications. Further testing will occur throughout the next stage of study to validate the findings of the PFS water supply study. The next stage of study will be prepared at the Feasibility level of Study.

Two project-related Native Titles were determined for the area in 2005 and 2008. An Indigenous Land Use Agreement (ILUA) was established in 2005. OZ Minerals currently has a deed of agreement over the proposed project Development Envelope with the Traditional Owners for exploration with provisions for this agreement to become a Mining Agreement subject to the negotiation of methods for mining and compensation.

OZ Minerals has developed and maintained a close relationship with the Traditional Owners and has ensured that the community have been involved in the ongoing development of the project.

A program of consultation for Mining Agreement making is currently ongoing and negotiations will occur throughout 2021. The Mining Agreement-making process is expected to conclude before the completion of the next stage of study. The Traditional Owners are highly supportive of the project to commence. OZ Minerals has no reason to believe that agreement will not be achieved prior to the completion of the next stage of study.

A social impact and opportunity assessment (SIOA) has been co-designed with the Ngaanyatjarra Council Aboriginal Corporation and the University of Queensland (Centre for Social Responsibility in Mining





Sustainable Minerals Institute). The SIOA was undertaken in 2020 and will form a quantitative baseline dataset to help inform decision-making for social programming and investment opportunities.

A program of work relating to tenement security, land access and regulatory approvals has been ongoing since May 2018 and expected to conclude before the completion of the next stage of study.

OZ Minerals currently has a tenement package over the proposed project Development Envelope. This tenement package includes exploration tenements, mining tenements and miscellaneous tenements. As the project progresses through the next stage of study and further definition is gained over the intended locations of infrastructure, exploration tenements will be transferred to either mining or miscellaneous tenements through the Government of Western Australia's Department of Mines, Industry Regulation and Safety (DMIRS).

To achieve State Government regulatory approval to proceed with mining, the project will require approval under Part IV and Part V of the EP Act, and under the Mining Act by way of an approved Mining Proposal. A program of work as detailed above to address the requirements of these approvals commenced in May 2018. The first of the three primary approvals submissions, assessment under Section 38 of Part IV of the EP Act was submitted to the Government of Western Australia on 23 October 2020.

The environmental and regulatory study program to date represents a thorough assessment of the proposed project area in-line Western Australian regulatory requirements. To date, no material environmental or approvals risks have been identified and full approval under Part IV and Part V of the EP Act, and an approved Mining Proposal under the Mining Act is expected before the decision to mine.

Infrastructure

West Musgrave is a greenfield site. Existing infrastructure is only sufficient for exploration work and exploration and studies personnel. While some of this existing infrastructure will remain operational during the life of the mine, additional infrastructure will be required to support mining activities.

The following infrastructure has been designed, scheduled and costed as part of the PFS and PFSU:

- Site Access Access to the site will be via public roads to the nearby community of Jameson (Mantamaru) and via a new road approximately 30 km long from Jameson to site. The new road is feasible.
- Site Development and Major Civil Infrastructure including clearing, levelling and bulk earthworks, access roads linking the various operational centres (mine, processing plant, village etc.), drainage and surface runoff capture and containment, fencing and establishment of security zones.
- An aerodrome with sealed strip and associated facilities has been included and designed for up to and including Airbus A320 or equivalent aircraft.
- A nominal 50 MW base case power supply is proposed utilising a hybrid fossil fuel-solar-wind-battery solution, although a gas pipeline remains an option. Baseline data collected since 2018 has demonstrated high quality, consistent solar and wind resource is available, with higher wind velocities at night offsetting the lack of solar. The current base case assumes that power is purchased over the fence under a power purchase agreement arrangement, however the final ownership structure for the power assets will be further considered during the next phase of project development.
- Modelling has demonstrated that circa 70 to 80% renewables penetration can be achieved for the site, with the current mix assumed to be an optimised mix of wind, solar and fossil fuel supported by a battery





installation. There remains considerable upside in power cost through matching plant power demand with the availability of renewable supply (load scheduling), haulage electrification to take advantage of curtailed energy and the continued improvement in the efficiency of renewable energy solutions.

- Water Supply water for construction, mining, processing the ore and other site activities will be sourced from groundwater in the West Musgrave area. Drilling and testing have indicated the feasibility of the source. Additional drilling and testing will be required to confirm the adequacy of the groundwater supplies.
- Ore stockpiling and ROM pad reclaiming.
- Primary Crushing, secondary crushing, processing stockpiles with automated reclaim systems, grinding, classification and recycle crushing.
- Bulk Rougher flotation.
- Concentrate regrind circuits
- Two stages of cleaner flotation.
- Separation circuits for Nickel and Copper concentration.
- Nickel and Copper Concentrate thickening, filtration and storage.
- Onsite containerised concentrate will be transported via a combination of road and/or rail and/or ship depending on the customer. The concentrate logistics chain has been modelled and demonstrated to be feasible.
- Combined tailings thickening and disposal.
- A preliminary design for a paddock style Tailings Storage Facility (TSF) has been developed and shown to be feasible. An upstream raised embankment with provision for progressive downstream rock buttressing has been selected and designed based on the process tailings deposition rate of 9.94 Mtpa. TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from locally sourced material. The embankment will then be raised in stages during the life of the operation using consolidated tailings. The TSF embankment design was based on assumed geotechnical parameters derived by the engineering consultant after review of available information including the mine slope stability geotechnical investigation undertaken by Xtract Mining Consultants Pty Ltd and review of resource drilling core logs. A site-specific geotechnical investigation of the embankment founding conditions is currently underway to confirm parameters. The TSF design was revisited as part of the PFSU to incorporate results of tailings test work which increased the settled density assumptions and investigate an alternative location to the east of Babel Pit. The alternative location was proposed to reduce the 'population at risk'. The tailings engineering consultant (Golder Associates) undertook a redesign and trade-off to assess the alternative location from an engineering and cost perspective, and the hydrogeochemical consultants (CDM Smith) undertook a solute fate and hydrogeochemical assessment to confirm the revised site as appropriate. The new location has been shown to be preferable.
- Reagent mixing, storage and distribution.





- Communications includes all onsite communications systems and infrastructure and also the connection to the national communications network offsite inclusive of microwave link to nearby fibre, hard connected fibre and back up satellite connectivity.
- Control Systems includes the hardware and systems required to integrate the mining, processing and other systems and the base for the operating area systems. Remote operation and monitoring facilities are included along with the traditional site operation control centre.
- Onsite Services including reticulation of power and water around the operational centres, provision of lighting, sewage and wastewater services, fire, compressed air and dust suppression systems, waste disposal, bulk fuel receival, storage and distribution.
- Buildings including the provision of accommodation (800–900 during construction and then 500 permanent operational village), administration, workshops, logistics hubs, warehousing and any other non-process or mining structures.
- Fixed Plant, Mobile Equipment and Vehicles including all other infrastructure systems and plant required for enabling site operations but not covered elsewhere in the PFS and PFSU.





JORC CODE, 2012 EDITION, TABLE 1

SECTION 4 Estimation and Reporting of Ore Reserves

_	Criteria	Commentary					
	Mineral resource estimate for	The JORC Mineral Resource for West Musgrave was prepared by a Competent Person, Mrs Phillippa Ormond, an employee of OZ Minerals Limited, which formed the basis of this Ore Reserve estimate.					
	conversion to Ore Reserves	There has been no additional drilling incorporated into the Nebo-Babel Resource estimates since the previous Mineral Resource update provided on the 12 February 2020. The Resource base estimate remains unchanged.					
74)	The details of the development of the Mineral Resource Estimate for December 2020 can be found above in the Explanatory Notes which accompany the Mineral Resource estimates.					
)	The Indicated Mineral Resources are reported inclusive of those Mineral Resources modified to produce the Ore Reserves.					
<i>ſ</i> .	Site visits	 The Competent Person conducted a Site visit in September 2019. The following activities were completed: Gained general familiarisation with the site including likely mining conditions, proposed pit location, waste dump location, site drainage and site access. Assessed proposed locations of mining related infrastructure relative to the designed open pit. Observed resource drilling activities. 					
	 Inspected core and drill hole sites to get an understanding of the variations in weathering profiles across the deposit. Viewed diamond drill core from selected holes. 						
IJ	Study status	This Ore Reserve has been supported by the completion of a Pre-Feasibility level of study (PFS), as described in JORC (2012). The PFSU was completed in November 2020 and determined a technical and economical viable outcome for the West Musgrave Project, inclusive of the two deposits, Babel and Nebo. The PFSU mine plan supporting the Ore Reserve is based upon a mine plan and mine designs that are deemed technically achievable, involving the application of conventional technology.					
		The mine plan has been tested for economic viability using input costs, metallurgical recovery and expected long term metal price, after due allowances for payabilities and royalties. Financial modelling completed as part of the PFSU and Ore Reserve shows that the project is economically viable under current assumptions.					
	Cut-off parameters	Mine design is based off optimised pits that include mining and processing costs. The cut-off is then applied to determine the economic material in the pits to estimate Ore Reserve.					
		The break-even cut-off used in the Ore Reserve estimate was a Net Smelter Return (NSR) based cut-off, taking into account site processing cost (with the inclusion of General Admin, sustaining capital, corporate overhead and mine rehabilitation fund) and ore rehandle cost. A range of increased cut-off criteria was tested to determine the optimal project value. This resulted in using an increased cut-off to \$8/t ore above break-even cut-off.					
11.5							





Criteria	Commentary	Commentary					
	The NSR is defined as the royalties. Mining recovery metallurgical recoveries. N Mill limited break-even cu = processing cost = \$17/t ore Increased cut-off applied = \$17/t ore + \$8.0 = \$25/t ore	revenue from the sale of prod and dilution are accounted fo ISR value for each block in res it-off: + ore rehandle : D/t ore	ducts after deducting non-payables, treatment charges, refining charges, penalties, freight, and or in the modifying factors and calculation of NSR values in the Resource model consider ource model is calculated and evaluated against the applied cut-off.				
	Applied cut-off						
	ltem	\$/ore tonne					
	Ore Processing	15.5					
	Ore Rehandle	1.5					
	Increased cut-off	8.0					
	Total	25					
Mining factors or assumptions	The Mineral Resource mo mine planning tasks of pit ore loss. Planned mining o be approximately 2.6% an of 5% has also been appli take a more conservative	del was regularised to Selective optimisation and evaluation. dilution and ore loss were app d planned loss will be approx ed. The resultant total dilution position. There is opportunity	re Mining Unit (SMU) blocks of 10 m E x 10 m N x 5 m RL to generate a diluted Mining model for The SMU block reflects expected mining equipment size, the geometry of the geology, anticipated lied through regularisation of the Mineral Resource model. It is estimated that planned dilution will mately 4.3%. Benchmarking operational practices, an assumed further unplanned dilution and loss and ore loss of 7.6% dilution and 9.3% loss. The modifying factors were considered prudent to to further refine these factors with a greater data density in the next level of study (FVS).				
The West Musgrave project considers the Babel and Nebo deposits. Both deposits are near surface and most suitable to be mined by open protection with the former of the provide the subscription of the provide the subscripti							
	The Lerchs-Grossman (LG) tested with sensitivities or shell for the Babel and Ne	Mineral Resource model using industry standard software. Nested pit shells were generated and metal price, recoveries, and slope angles. This formed the basis of the selection of the optimal pit provided guidance for pit stages to maximise value and achieve operational design requirements.					
15)							





Criteria	Commentary						
	The resultant pit shells were used to develop detailed pit designs with due consideration of geotechnical slope parameters, minimum mining widths, bench heights, and ramp widths suitable for proposed mining equipment. These pit designs were used as the basis for production scheduling and economic evaluation.						
	A minimum mining width of 80 m was applied to the final and stage pit designs.						
	The mining schedule is based on realistic mining productivity and equipment utilisation estimates, and considered the pit development requirements, the selected mining fleet productivity and the vertical rate of mining development. Staged pit designs along with the stockpiling strategy were applied to ensure a continuous supply of ore whilst deferring waste mining for as long as practically possible.						
	The mining schedule is based on supplying suitable material to the processing plant with a nameplate capacity of 12 Mtpa.						
\mathbf{D}	The mine was assumed it will be contractor operated during the pre-strip plus the first five years and owner operated from year six onward. The pre-strip was scheduled in the initial six-month pre-processing commissioning for waste stripping of the Babel pit and aiming for approximately 500 kt Non-Pyrite-Violarite (Non-PV) ore stockpiled ready for reclamation on day one of commissioning.						
Ď	In the estimation of the Ore Reserve, Inferred Mineral Resources were excluded from pit optimisation, mine schedules and economic valuations utilised to validate the economic viability of the Ore Reserves. The Ore Reserve is technically achievable and economically viable without the inclusion of the Inferred Resource.						
7	Waste material from mining activities will be disposed of as follows:						
	Topsoil will be disposed of at designated stockpiles for application in on-going rehabilitation activities;						
	Some waste rock may be utilised to construct the Run of Mine (ROM) pad;						
	 Some waste rock may be utilised to construct on-going Tailings Storage Facility (TSF) lifts; Excess waste rock will be disposed of in designated angineered surface and in hit waste dumps. 						
7	• Excess waste fock will be disposed of in designated engineered sufface and in-pit waste dumps						
\bigcirc	assumptions used in the current study. Discussion with potential customers will progress during the next study stage.						
	Geotechnical modelling was completed based on field logging and laboratory testing of selected diamond drill core samples from a total of ten (10) diamond cored boreholes within the pit shell, drilled for metallurgical (six holes) and specific geotechnical engineering purposes (four holes).						
5	The geotechnical slope design parameters used were based on work completed by Xstract Mining Consultants Pty Ltd.						
	Further peer reviews on the Geotechnical report were conducted internally by OZ Minerals Principal Geotechnical. In the review, the Principal Geotechnical Engineer considered that the development of slope design parameters is in line with industry standard. The open pit designs are based on the						
\mathcal{D}	recommended geotechnical design parameters and assume dry slopes based on the assumption of adequate dewatering and/or depressurisation ahead of mining.						
-	There has been no additional geotechnical drilling incorporated into the Nebo-Babel slope design parameters assessments since last reported in the previous PFS provided on the 12 February 2020. The geotechnical slope design parameters remain unchanged.						





Criteria	Commentary								
	There are various slope configurations based on the geotechnical rock domains and location in the mine schedule.								
	Applied Slope Designs								
	Domain	Approximate Depth Range	Slope Orientation	Batter Face Angle	Better Heights	Berm Width at Toe			
	Babel								
	Weathered/Oxide	0–30 m	All	55°	10 m	6 m			
	Transition and Fresh	30 m to base of pit	000–075	80°					
			075–165	70°	20 m	10 m			
			165–360	80°					
	Nebo								
	Cover	0–80 m west side	All	45°	10 m	5 m			
	0–40 m north-east and south								
	Weathered/Oxide	80–100 m on west side	All	60°					
		40–80 m north-east and south		55°	20 m	10 m			
	Fresh	Base oxide to base of pit	000–135	85°					
	80°	20 m	10 m						
			255–360	85°					
Metallurgical factors or assumptions	*tallurgical factors assumptions The West Musgrave process facility has been designed to process nickel copper sulphide ore. The process facility utilises recognised technolog sulphide ore processing circuits and follows a processing route of: Crushed ore stockpiling and reclaiming Grinding and classification Bulk rougher flotation Rougher concentrate re-grind Two stages of cleaner flotation Separation circuits for copper and nickel concentrates Copper and nickel concentrate thickening, filtration and storage Tailings thickening and disposal. 								





	Criteria	Commentary
		The grinding circuit consists of two stages of crushing followed by two parallel Vertical Roller Mills each treating nominally 5Mtpa each. The second stage of crushing and Vertical Roller Mills replace a traditional SAG Mill, Ball Mill and Pebble Crushing circuit. Vertical Roller Mills are widely used in the grinding of cement plant feeds and products, slag, coal and other industrial minerals, with thousands currently in operation worldwide, and are currently being introduced into the metals sector. The mill has benefits in reducing power consumption by 15%, no ball charge grinding media, higher flotation recovery and can be ramped up and down in response to the availability of low-cost renewable energy. The technology has been peer reviewed for West Musgrave by an independent expert and has been substantially de-risked through a series of pilot tests whereby 15 tonnes of West Musgrave ore has been tested.
		A Bulk Separation flotation flowsheet producing separate copper and nickel concentrates will be used. The flowsheet has been developed to minimise primary grinding requirements with the primary separation size at 165 microns, saving significant grinding capital and operating expenditure in terms of grinding consumables and power draw. The flowsheet uses bulk rougher flotation, regrinding, two stages of bulk cleaning, then copper nickel separation at elevated pH.
		The proposed metallurgical process is commonly used in international copper-nickel sulphide mining industry and is considered to be well-tested and proven technology. The flowsheet is employed in a number of operations in North America. Outside of Canada it is used at Lundin Eagle mine in the US and Norilsk's Taimyr Peninsula operation in Russia.
/.	e B	The flotation flowsheet utilises Woodgrove Direct Flotation reactors prior to the separation circuit do reduce footprint and power draw, for which a pilot plant was run to demonstrate metallurgical outcomes. Concentrate grades were improved at the same recoveries with better selectivity from the Woodgrove cells.
		The sulphide ore is further divided into Pyrite-Violarite (PV) and non-PV. Pyrite-Violarite ore is associated with the weathered portion of the deposits and is less amenable to flotation process, hence lower nickel recoveries are expected and are evident in these domains. The PV ore type contributes 6% of total tonnes, but its treatment in the mine plan has demonstrated a positive impact to project revenue. PV ore does however have a poisoning effect on fresh ore reducing its nickel recovery. PV ore must be treated in separate batches. The current recovery assumption is that it will be batch treated approximately.
U		every ten weeks. The metallurgical recoveries used for each ore type are shown in the table below.
<i>J</i> .		
14		





Criteria

West Musgrave Project – Nebo-Babel Deposits 2020 MROR Statement and Explanatory Notes

Commentary **Metallurgical Recoveries Recovery%** Ore Type Metal Ni%>0.25 0.20≤ Ni% <0.25 0.15≤ Ni% < 0.19 Non-PV Nickel 75.6 59.5 49.5 71.5 Copper 79.4 635 ΡV Nickel 33.7 27.8 21.3 Copper 71.3 66.6 59.1

Metallurgical test work was conducted on 37 representative samples from diamond drill holes. The selected samples were representative of ore type domaining in Nebo Babel deposits and grade variability for various points of time over the life of mine from the previous study stage of mine plan. Bench test work has demonstrated that a typical metallurgical crushing, grinding and flotation process would produce acceptable grades and metal recoveries for separate copper and nickel flotation concentrate streams.

Bench test work conducted to enable the development of the process design criteria for the specification of the process plant included:

- 40 comminution tests.
- 400 flotation tests, including locked cycle testing.
- Regrinding, thickening and filtration tests.
- Ore aging test work.
- Site water test work.
- Tails property test work.
- Extensive mineralogy.

Numerous comminution pilot plants confirmed the process design criteria which were used for the specification of the processing plant using the Vertical Roller Mills.

The locked cycle testing for flotation confirmed the metal recoveries and concentrate grades of all elements used in the PFS.

Resultant key metallurgical recoveries used were ~69% for nickel and ~77% for copper with concentrate grades of ~12% for nickel and ~30% for copper.

The economic analysis of West Musgrave in Ore Reserve Optimisation used these metallurgical factors.

The flotation test work has demonstrated that potential penalty elements report to the flotation concentrate at levels that do not trigger any marketing penalty payments.

Post the February 2020 PFS, a number of pilot tests were undertaken and has demonstrated improvement in Nickel recovery and concentrate grade which has been applied to metallurgical inputs for PFSU. Once full production is established at West Musgrave, ore will be mined continuously across the entire





Criteria Commentary						
	footprint of the orebody. The mine will produce a blend of the various metallurgical domains. There is reasonable metallurgical variability between the domains however the mine schedule will provide reduced variability.					
Environmental	The West Musgrave Project spans two Bioregions; the Central Ranges and the Great Victoria Desert. The northern half of the Project Area is in the Mann- Musgrave Block subregion of the Central Ranges Bioregion, which is dominated by ranges interspersed with sandplains. The southern part of the West Musgrave Project is within the Great Victoria Desert Central subregion of the Great Victoria Desert Bioregion. This subregion comprises extensive sandplains and dune fields, salt lakes, minor hills and breakaways.					
	A series of environmental baseline studies commenced in May 2018 with the aim of characterising the existing environment and identifying any associated project and approvals risks. The baseline environmental program has included an assessment of flora and vegetation, landforms, subterranean fauna, terrestrial environmental quality (including both mineralised and non-mineralised waste), terrestrial fauna, inland waters, air quality, heritage, archaeology, social surroundings and human health. The baseline environmental program was concluded in March 2020, however due to the Covid-19 pandemic and the inability to access the Ngaanyatjarra Lands to undertake final consultation with Traditional Owners, the submission was withheld. Submission of the					
	Section 38 (Part IV) assessment was finally made in October 2020 following final consultation and written support from the Traditional Owners was received. The Section 38 (Part IV) referral submission is currently undergoing the validation process with Government of WA.					
8	The study program to date represents a thorough assessment of the proposed project area in-line with the requirements of the Western Australian EPA guidelines. To date no material environmental or approvals risks have been identified.					
	A program of materials characterisation has occurred to classify potentially problematic mineralised waste rock. The materials characterisation has included both static and kinetic testing of various waste rock lithologies. To date, results indicate that waste rock material that is potentially acid forming (PAF) represents only a small portion of the overall waste rock generation and would be encapsulated in accordance with Western Australian requirements within onsite waste rock dumps. All waste rock dumps will be designed in accordance with Western Australian requirements and approvals conditions.					
	A PFS-level program to confirm water supply was carried out throughout 2019. The program included the drilling and pumping of 13 dedicated water bores. These bores were pump tested to test specific parameters about the availability of groundwater supply within this system. A model to confirm the confidence in water supply and associated impacts was developed. The model used a combination of data to develop a robust model. The model inputs included field data; textbook/benchmark values for similar systems, sensitivity ranging and modelling and an independent third-party peer review. The study concluded that the model for local aquifer system has enough supply to support the anticipated water requirements of the project, and that					
	water quality meets the project specifications. Further testing will occur throughout the next stage of study to validate the findings of the PFS water supply study.					

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	Infrastructure	West Musgrave is a greenfield site. Existing infrastructure is only sufficient for exploration work and exploration and studies personnel. While some of this existing infrastructure will remain operational during the life of the mine, additional infrastructure will be required to support mining activities.
		The following infrastructure has been designed, scheduled and costed as part of the PFSU:
		• Site Access – Access to the site will be via public roads to the nearby community of Jameson (Mantamaru) and via a new road approximately 30km long from Jameson to site. The new road has been shown to be feasible.
		• Site Development and Major Civil Infrastructure – including clearing, levelling and bulk earthworks, access roads linking the various operational centres (Mine, Process Plant, Village etc.), drainage and surface runoff capture and containment, fencing and establishment of security zones.
		 An aerodrome with sealed strip and associated facilities has been included and designed for up to and including Airbus A320 or equivalent aircraft. A nominal 50 MW base case power supply is proposed utilising a hybrid fossil fuel-solar-wind-battery solution, although a gas pipeline remains an option. Baseline data collected since 2018 has demonstrated high quality, consistent solar and wind resource is available, with higher wind velocities at night offsetting the lack of solar. The current base case assumes that power is purchased over the fence under a power purchase agreement
		 Modelling has demonstrated that circa 70–80% renewables penetration can be achieved for the site, with the current mix assumed to be an optimised mix of wind, solar and fossil fuel supported by a battery installation. There remains considerable upside in power cost through matching plant power demand with the availability of renewable supply (load scheduling), haulage electrification to take advantage of curtailed energy and the continued improvement in the efficiency of renewable energy solutions.
		 Water Supply – water for construction, mining, processing the ore and other site activities will be sourced from groundwater in the West Musgrave area. Drilling and testing have indicated the feasibility of the source. Additional drilling and testing will be required to confirm the adequacy of the groundwater supplies. Ore steeleriling and ROM and reclaiming.
		 Ore stockpling and ROM pad reclaiming. Primary Crushing, secondary crushing, processing stockpiles with automated reclaim systems, Grinding, classification and recycle crushing. Bulk Rougher flotation
		Concentrate regrind circuits.
70		 Separation circuits for Nickel and Copper Concentrate.
		Nickel and Copper Concentrate thickening, filtration and storage.
		 Onsite containerised concentrate will be transported via a combination of road and/or rail and/or ship depending on the customer. The concentrate logistics chain has been modelled and demonstrated to be feasible.
		Combined tailings thickening and disposal.
		 A preliminary design for a paddock style Tailings Storage Facility (TSF) has been developed and shown to be feasible. An upstream raised embankment with provision for progressive downstream rock buttressing has been selected and designed based on the process tailings deposition rate of 12Mtpa. TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be constructed from TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will be anticipated that the starter embankment will be anticipated TSF embankment design slopes are 1V:1.5H upstream and 1V:3H downstream. It is anticipated that the starter embankment will
	l	design was based on assumed geotechnical parameters derived by the engineering consultant after review of available information including the mine slope stability geotechnical investigation undertaken by Xtract Mining Consultants Pty Ltd and review of resource drilling core logs. A site-specific
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Criteria	Commentary
	 geotechnical investigation of the embankment founding conditions is currently underway to confirm parameters The TSF design was revisited as part of the PFSU to incorporate results of tailings test work which increased the settled density assumptions and investigate an alternative location to the east of Babel Pit. The alternative location mas proposed to reduce the 'Population at Risk'. The tailings engineering consultant (Golder) undertook a redesign and trade-off to assess the alternative location from an engineering and cost perspective, and the hydrogeochemical consultants (CDM Smith) undertook a solute fate and hydrogeochemical assessment to confirm the revised site as appropriate. The new location has been shown to be preferable. Further geotechnical investigation and tailings characterisation test work will be required to confirm the TSF design. Reagent mixing, storage and distribution. Communications – includes all onsite communications systems and infrastructure and also the connectivity. Control Systems – includes the hardware and systems required to integrate the mining, processing and other systems and the base for the operating area systems. Remote operation and monitoring facilities are included along with a traditional site operation control centre. Onsite Services – including reticulation of power and water around the operational centres, provision of lighting, sewage and wastewater services, fire, compressed air and dust suppression systems, waste disposal, bulk fuel receival, storage and distribution. Buildings – including the provision of accommodation (800–900 during construction and 500 permanent village), administration, workshops, logistics hubs, warehousing and any other non-process or mining structures. Fixed Plant, Mobile Equipment and Vehicles – including all other infrastructure systems and plant required for enabling site operations but not covered
	elsewhere in the PFSU.
Costs	MINING COST
	The Ore Reserve has been supported by CAPEX costs from original equipment manufacturers (OEM) for the proposed mining fleet, and mining OPEX was estimated from a first principles cost model, mine schedule physicals and favorable change on fuel price.
105	Equipment hours and requirements were estimated from haul cycles, production rates, availabilities and utilisation. Operational and maintenance labor was estimated from equipment hours.
	The mine was assumed to be contractor operated during the pre-strip plus the first five years and followed by owner operated from year six onward.
	The combination of update fuel price and a lower unit mining cost due to greater volume basis for the 12Mpta throughput has resulted in a lower unit mining cost for the input to ore reserve estimate.
	PROCESSING AND INFRASTRUCTURE CAPITAL COST
	The processing plant and infrastructure capital estimate including surface mining infrastructure were estimated as follows:
\mathcal{D}	• The construction capital cost estimate is compiled to a consistent and uniform structure for the various purposes to which the outputs are used. These structures include:
	 Cost components (e.g., materials, plant, labour, consumables and services), All site labours to be supplified.
1 5	All site labour nours to be quantified,





	Criteria	Commentary
\geq		Work Breakdown Structure (facility codes),
		Code of accounts (commodity codes),
		Foreign currency,
		Categorise basis of pricing,
_		Categorise basis of quantification,
		Ime-phasing for the financial model.
		The estimated accuracy is considered -25%/+25%.
1		• Earthworks
14		 The project earthworks quantities have been developed from first principles using on ground and obtained information from the site. Earthworks quantities are directly related to the final location of the plant and infrastructure.
Y)	 Concrete and structural The quantities for the process plant have been developed according to the mechanical equipment to be installed. Well-developed designs from past projects and studies and some material take-offs have been used as the basis for the major structural concrete.
Ą)	 Quantities for plant services, infrastructure and other minor areas have been developed from layout drawings based on the requirements adopting standard practice for those areas.
	5	Mechanical, Plate and Tanks
	7	 The process design criteria developed determined the mechanical, plate and tank quantities and requirements. Engineering take-offs were completed for plate and tanks, the total developed quantities were benchmarked against known quantities on past projects and studies.
	-	 Piping Operativity for the relativity intervent developed for the estimate with the total parts for two days are after a result of the result of
D)	 Quantities for the plant piping were not developed for the estimate with the total costs factored as a percentage of the process plant costs based on past project costs.
Ĭ		Overland piping requirements were estimated from first principles following engineering design.
		Electrical, Instrumentation and Control
		 The electrical requirements were estimated from first principles based on single line diagrams, layouts and the equipment to be installed. Overland powerline requirements were determined following engineering design.
		Buildings and Infrastructure
7		 The building and infrastructure requirements have been developed to OZ Minerals specifications.
Ą		 Market enquiries were sent out for camps, transportable buildings and shed structures. Returned budget pricing was evaluated and the most suitable pricing selected for the project estimate.
		 Infrastructure costs for fuel farms, fuel tanks, waste and potable water plants have been quoted.
, t		 Wash-down facilities and weighbridge costs were obtained recently on other projects with the same requirements.





Criteria	Commentary
	Transport
	 Transport requirements are determined by the source and quantity of the delivered goods.
	 The freight costs are determined by line item based on the dimensions and the source of the item.
	 International freight is included in the estimate.
	Freight rates were obtained for the project for various dimension loads primarily from Perth metro to the project site.
	Installation
	• Estimates for installation labour costs were based on estimated hours associated with installation in each area of the plant and the application of
	The construction rector is 2 on 1 off
	Ine construction roster is 3 on 1 on. Machanical
74	 Mechanical Pudget quotes were obtained from the market for the following:
	 Budget quotes were obtained from the market for the following. Crusbers (gure and cone primary and secondary)
	Crushers (gyro and cone primary and secondary) Grinding Mills
	Elotation Colls
9 1 9	Regrind Mills
	Filters
	Compressors and Blowers
	Major numps
	Thickener
	Water Treatment Plant
	• Fuel Farm.
	Electrical, Instrumentation and Control
\bigcirc	Budget guotes were obtained from the market for the following:
	• Transformers
	• 11 kV switchgear
	• 33 kV switchgear
	Low voltage VSD
	Med. Voltage VSD.
	Capital cost has incorporated appropriate contingencies for inherent risks (uncertainty due to estimate immaturity) and for contingent risks that may
\mathcal{P}	eventuate during construction.
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Criteria	Commentary						
	PROCESSING AND INFRASTRUCTURE OPERATING COST						
	• Labour costs were based on developed staffing and operational configurations and used OZ Minerals base rates from existing labour agreements.						
	 Power, fuel, reagent and consumables costs were based on budget quotations. 						
	 Process plant and surface infrastructure maintenance materials costs were calculated from benchmark data. 						
	Pre-production operating costs were capitalised.						
1	Sustaining capital costs are included in operating costs.						
	 Processing plant operating costs were developed from first principles. 						
	Updates from previous version:						
	 \$2.76/t due to reduced power and consumables consumption 						
14	Increase in labour, maintenance and assay costs						
	 Decrease in G&A and sustaining costs or per tonne basis 						
4	Minor other adjustments.						
\mathcal{L}	OTHERS						
	Royalties were applied in the LG pit optimisation and cashflow evaluation. These included:						
	Nickel royalty 2.5%						
	Copper sold as concentrate royalty 5%						
	Copper sold as Ni by-product royalty 2.5%						
	Cobalt sold in Ni concentrate royalty 2.5%						
77	Gold royalty 2.5%						
(\mathbf{U})	Silver royalty 2.5%						
	Platinoids royalty 2.5%						
	Project Nets Smelter Return royalty 2.0%						
	Native Title royalty						
	The assumption for Native Title royalty was taken into consideration in the evaluation. The assumption was based on the benchmarking against similar						
	projects and currently is still under negotiation.						
	• The closure cost estimate was developed following the Western Australia Mining Rehabilitation Fund Regulation 2013 and was estimated based on the area disturbance indicated in the mine planning. The estimation is subject to further refinement in the next stage of study.						
Revenue factors The Ore Reserve estimates are based on the life-of-mine (I OM) economic parameters. These parameters are shown in the table below and are							
	OZ Minerals Corporate Economic Assumptions released in Q2 2020.						
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1							





Criteria	Commentary					
	West Musgrave Ore F	eserve Optimisatio	n Economic As	sumptions		
Г Л	Parameter	Units	LOM			
	Nickel	US\$/lb	7.60			
	Copper	US\$/lb	2.91			
	Gold	US\$/oz	1,246			
	Silver	US\$/oz	18.10			
	Platinum	US\$/oz	1,311			
	Palladium	US\$/oz	633			
	Cobalt	US\$/lb	21.90			
	Exchange Rate	AUD/USD	0.67			
	Discount Rate	%	8.5			
Market assessment	Copper concentrates	are modelled to be	sold on the ope	n concentrate m	arket to a ra	ange of overseas smelters.
Ð	PV ore is relatively lo	wer than pavability f	rom non-PV ore	. Based on the c	urrent mine	e planning, the Nickel concentrate from PV ore accounts for
	approximately six pe	rcent of total nickel o	concentrate.			· · · · · · · · · · · · · · · · · ·
	The cost of sales incl	udes costs from mine	e to the custome	er, smelter treatr	nent and re	fining charges. The smelter treatment and refining charges are
R	typically negotiated	on an annual basis di	irectly with custo	omers at industr	/ benchmar	rk terms.
)	The Ore Reserve esti	nate optimisation us	ses assumptions	shown in the ta	ole below to	o estimate revenue.
	Transports, Payabiliti	es and Smelter Cha	rges Assumptio	ons		
Γ.	Parameter		Units	LON		
)		-1	ALICAURA	220		-
K			AU\$/WITL	220		-
))		larket	AO \$7 WITT	Non BV	PV	-
Ĺ	Nickel Davability		0/	71	67	-
			/0	12 5	0	-
Q	соррег гауаршиу		/0	12.5	÷	

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	Criteria	Commentary				
\geq	\sim	Cobalt Payability	%	12.5	0	
		Palladium Payability	%	12.5	40	-
		Platinum Payability	%	12.5	0	
		Copper Concentrate				
		Transport for International market	AU\$/wmt	220		
		Copper Payability	%	96.7	5	
	9	Copper Concentrate Smelting	US\$/dmt	85		_
		Copper Refining	US\$/lb	0.08	5	
74		Gold Refining	US\$/oz	5		
	\mathcal{O}	Silver Refining	US\$/oz	0.5		
ſ		An independent peer review of the mark Discussion with potential customers will The stated Ore Reserves do not include	et terms has been progress during th oxide material bas	undertaken ar ne next study s ed on the curre	nd confirme tage. ent underst	d the appropriateness of the assumptions used in the current study. anding of oxide recovery and economic potential.
	Economic	Gross revenue was estimated based on mine production schedule input to the r accuracy. West Musgrave is an economically robu Sensitivity analyses were carried out on sensitive to nickel prices and exchange r The Ore Reserve estimate is based on O financial modelling has since been upda to the Q2 2020 assumptions. The Q4 assumptions are shown in the ta	production schedu nodel was drawn f st project, generati commodity prices, ate on the upside Z Minerals Q2 2020 ted using OZ Mine ble below.	le yearly quant rom the PFS. C ang a positive N exchange rate and downside 0 of Life of Mir erals Q4 2020 L	ities, grade apital and c IPV and IRF capital cos cases. For a e (LOM) ec OM econor	s and metallurgical recoveries, at a constant long-term metal price. The operating costs input to the model were at a pre-feasibility level of A as reported in the Pre-Feasibility Study. At and operating cost. The results suggested that the project was most Ill sensitivity scenarios modelled project NPV remained positive. Conomic assumptions generating a positive economic outcome. PFSU nic assumptions (i.e., as of September 2020) with no material changes





interia	Commentary					
	LOM Economic Assumptions for Pre-Feasibility Study Update Economic Analysis					
	Parameter	Units	Q4 LOM			
	Nickel	US\$/lb	7.60			
	Copper	US\$/lb	2.91			
	Gold	US\$/oz	1,246			
	Silver	US\$/oz	18.1			
	Platinum	US\$/oz	1,311			
	Palladium	US\$/oz	633			
	Cobalt	US\$/lb	21.90			
	Exchange Rate	AUD/USD	0.7			
	Discount Rate	%	8.5			
ocial	Minor elements suc The proposed proje Reserve under West	h as Gold, Silver, Plat ect area is fully encom tern Australian law. T	inum, Palladium an passed within two o enable the projec	Cobalt are payable with a combined revenue less than five percent of total project rever pes of indigenous title, these include Native Title under Commonwealth law and Aborigi to proceed, an agreement must be negotiated with the title holders, the Ngaanyatjarra P		
ocial	Minor elements suc The proposed proje Reserve under West who are represented	h as Gold, Silver, Plat ect area is fully encom tern Australian law. T d by the Ngaanyatjar	inum, Palladium an passed within two o enable the projec ra Council Aborigin	Cobalt are payable with a combined revenue less than five percent of total project revenues of indigenous title, these include Native Title under Commonwealth law and Aborigito proceed, an agreement must be negotiated with the title holders, the Ngaanyatjarra P I Corporation.		
ocial	Minor elements suc The proposed proje Reserve under West who are represented Two project-related	h as Gold, Silver, Plat ct area is fully encom tern Australian law. T d by the Ngaanyatjar l Native Titles were d	inum, Palladium an npassed within two o enable the projec ra Council Aborigin etermined for the a	Cobalt are payable with a combined revenue less than five percent of total project reven ypes of indigenous title, these include Native Title under Commonwealth law and Aborigi to proceed, an agreement must be negotiated with the title holders, the Ngaanyatjarra P I Corporation. ea in 2005 and 2008. An Indigenous Land Use Agreement (ILUA) was established in 2005.		
ocial	Minor elements suc The proposed proje Reserve under West who are represented Two project-related Minerals currently h for this agreement t	h as Gold, Silver, Plat ect area is fully encom tern Australian law. T d by the Ngaanyatjar Native Titles were d have a deed of agreer to become a Mining J	inum, Palladium an npassed within two o enable the projec ra Council Aborigin etermined for the a ment over the prop Agreement subject	Cobalt are payable with a combined revenue less than five percent of total project rever pes of indigenous title, these include Native Title under Commonwealth law and Aborigit to proceed, an agreement must be negotiated with the title holders, the Ngaanyatjarra P I Corporation. ea in 2005 and 2008. An Indigenous Land Use Agreement (ILUA) was established in 2005. sed project Development Envelope with the Traditional Owners for exploration with provide the negotiation of methods for mining and compensation.		
ocial	Minor elements suc The proposed proje Reserve under West who are represented Two project-related Minerals currently h for this agreement t OZ Minerals has dev the ongoing develo	h as Gold, Silver, Plat ect area is fully encom tern Australian law. The d by the Ngaanyatjar Native Titles were du have a deed of agreer to become a Mining J veloped and maintair pment of the project	inum, Palladium an passed within two o enable the projec ra Council Aborigin etermined for the a ment over the prop Agreement subject ned a close relation	Cobalt are payable with a combined revenue less than five percent of total project rever uppes of indigenous title, these include Native Title under Commonwealth law and Aborig to proceed, an agreement must be negotiated with the title holders, the Ngaanyatjarra F I Corporation. ea in 2005 and 2008. An Indigenous Land Use Agreement (ILUA) was established in 2005. sed project Development Envelope with the Traditional Owners for exploration with prov to the negotiation of methods for mining and compensation. hip with the Traditional Owners and has ensured that the community have been involved		
ocial	Minor elements suc The proposed proje Reserve under West who are represented Two project-related Minerals currently h for this agreement t OZ Minerals has dee the ongoing develo A program of consu making process is e commence. OZ Min	h as Gold, Silver, Plat ect area is fully encom tern Australian law. To d by the Ngaanyatjar Native Titles were do have a deed of agreer to become a Mining A veloped and maintain pment of the project ultation for Mining A xpected to conclude erals has no reason t	inum, Palladium an passed within two o enable the project ra Council Aborigin etermined for the a ment over the prop Agreement subject ned a close relation greement making is before the complet o believe that agree	Cobalt are payable with a combined revenue less than five percent of total project rever pes of indigenous title, these include Native Title under Commonwealth law and Aborig to proceed, an agreement must be negotiated with the title holders, the Ngaanyatjarra F I Corporation. ea in 2005 and 2008. An Indigenous Land Use Agreement (ILUA) was established in 2005. sed project Development Envelope with the Traditional Owners for exploration with prov to the negotiation of methods for mining and compensation. hip with the Traditional Owners and has ensured that the community have been involved currently ongoing and negotiations will occur throughout 2021. The Mining Agreement- on of the next stage of study. The Traditional Owners are highly supportive of the project ment will not be achieved prior to the completion of the next stage of study.		





	Criteria	Commentary					
	Other	A program of work relating to tenement security, land access and regulatory approvals has been ongoing since May 2018 and expected to conclude before the completion of the next stage of study. OZ Minerals currently has a tenement package over the proposed project Development Envelope. This tenement package includes exploration tenements, mining tenements and miscellaneous tenements. As the project progresses through the next stage of study and further definition is gained over the intended locations of infrastructure, exploration tenements will be transferred to either mining or miscellaneous tenements through the Government of Western Australia's Department of Mines, Industry Regulation and Safety (DMIRS).					
		To achieve State Government regulatory approval to proceed with mining, the project will require approval under Part IV and Part V of the EP Act, and under the Mining Act by way of an approved Mining Proposal. A program of work as detailed above to address the requirements of these approvals commenced in May 2018. The first of the three primary approvals submissions, assessment under Section 38 of Part IV of the EP Act was submitted to the Government of Western Australia on 23 October 2020.					
		The environmental and regulatory study program to date represents a thorough assessment of the proposed project area in-line Western Australian regulatory requirements. To date, no material environmental or approvals risks have been identified and full approval under Part IV and Part V of the EP Act, and an approved Mining Proposal under the Mining Act is expected before the decision to mine.					
\int_{Ω}		OZ Minerals feels that approvals risks are manageable and is targeting a regulatory approvals schedule that aligns with the project study phase, it is recognised that an approval delay of up to 12 months still presents a risk. Delay to Regulatory approval is not deemed material.					
	5	Benchmarking several regulatory approvals programs in Western Australia (including Western Australia Environmental Protection Act Part IV, Part V and Western Australia Mining Act, Mining Proposal) the range to which projects have been shown to achieve all project approvals is between 18 months, and 40 months for highly complex projects (from the time of initial referral to receipt of all project approvals).					
	Classification	The main basis of classification of Ore Reserves is the underlying Mineral Resource classification. All Probable Ore Reserves have been derived from Indicated Mineral Resources in accordance with JORC Code (2012) guidelines.					
C		The Ore Reserve classification reflects the Competent Persons' view of the deposits. No Inferred Mineral Resource is included in the Ore Reserves.					
	Audits or reviews	Mining One has undertaken a thorough review and found no fatal flaws that relate to the input assumptions used for the Ore Reserve estimate, the outcomes of the PFSU and the Ore Reserve estimate itself. The Probable Ore Reserve classification conforms to the requirements of the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves, published by the Joint Ore Reserves Committee (JORC) of the Australasian Institute of Mining and Metallurgy (2012). OZ Minerals has used internal and independent third-party peer review extensively throughout the study, which is to be commended as a risk mitigation process.					
	Discussion of relative accuracy/confidence	The Ore Reserve estimate is based on 100 percent Probable Reserves. In the opinion of the Competent Person, the Ore Reserve estimate is supported by appropriate design, scheduling, and costing work reported to a pre- feasibility study-level of detail. Cost assumptions and modifying factors applied in the process of estimating Ore Reserves are reasonable. These are subject to further refinement in additional studies and may influence the accuracy of the Ore Reserve.					





Criteria	Commentary
	Metal price and exchange rate assumptions were set out by OZ Minerals and are subject to market forces and therefore present an area of uncertainty. Change in metal prices, exchange rate and to a lesser extent operating cost and pit design parameters in the pit optimisation, can either increase or decrease the pit size and the associated Ore Reserve estimate. Further refinement is expected during the next phase of the study. In the opinion of the Competent Person, there are reasonable prospects to anticipate that all relevant legal, environmental and social approvals to operate will be granted within the project timeframe.







4. COMPETENT PERSON STATEMENTS

Competent Person Statement – Mineral Resources

The information in this report that relates to Mineral Resources is based on and fairly represents information and supporting documentation compiled by Phillippa Ormond BSc (Hons) Geology, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM Membership No. 226746). Phillippa Ormond is a full-time employee of OZ Minerals Limited. She is a shareholder in OZ Minerals Limited and is entitled to participate in the OZ Minerals Performance Rights Plan. Phillippa Ormond 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). Phillippa Ormond consents to the inclusion in the report of the matters based on her information in the form and context in which they appear. This Mineral Resource estimate has been compiled in accordance with the guidelines defined in the Australasian Code for Reporting of Exploration.

Phillippa Ormond

Senior Geologist – West Musgrave OZ Minerals Limited

Contributors – Mineral Resources

- Overall:
 - o Phillippa Ormond, OZ Minerals Limited
- Data Quality:
 - o Phillippa Ormond, OZ Minerals Limited
 - o Colwin Lloyd, Geobase Australia Pty Ltd
 - o Zoran Seat, OZ Minerals Limited
- Geological Interpretation:
 - o Phillippa Ormond, OZ Minerals Limited
 - o Zoran Seat, OZ Minerals Limited
- Estimation:
 - o Phillippa Ormond, OZ Minerals Limited
- Economic Assumptions:
 - o Jane Wang, OZ Minerals Limited





Competent Person Statement – Ore Reserves

The information in this report that relates to Ore Reserves is based on and fairly represents information and supporting documentation compiled by Yohanes Sitorus BEng (Min), a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM Membership No. 317702).

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

Yohanes Sitorus has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC 2012). Yohanes Sitorus consents to the inclusion in the report of the matters based on his information in the form and context in which they appear.

The Ore Reserve estimates have been compiled in accordance with the guidelines defined in the JORC Code.

Yohanes Sitorus

Lead Mining Engineer – West Musgrave OZ Minerals Limited

Contributors – Ore Reserves

- Overall:
 - o Yohanes Sitorus, OZ Minerals Limited
- Mineral Resource Model:
 - o Phillippa Ormond, OZ Minerals Limited
- Mine Planning:
 - o Yohanes Sitorus, OZ Minerals Limited
 - o AMC Consultants Pty Ltd
- Non-mining Modifying Factors:
 - o James Hodkinson for Social and Community, OZ Minerals Limited
 - o Mark Weidenbach for Metallurgical Factors, OZ Minerals Limited
 - o Ben Baade for Processing Plant, OZ Minerals Limited
 - o Jane Wang for Marketing and Economic Assumptions, OZ Minerals Limited
 - o Justin Rowntree for Environment and Approvals, OZ Minerals Limited
 - o Anthony Wright for Non-Processing Infrastructures and Logistic, OZ Minerals Limited



