

## Independent Mineral Resource Estimate Ashburton Gold Project

### 24% Gold Grade Increase to 2.7g/t Au at Mt Olympus Deposit

#### Highlights

- An independent mineral resource estimate (“MRE”) has been completed for the Ashburton Gold Project, which now stands at **16.2Mt @ 2.8g/t Au for 1.44Moz**
- **68% increase in Indicated Category** ounces reflects improved interpretation of all resources within the Project, with higher confidence in continuity of higher-grade zones, particularly at Mt Olympus
- The grade for the **Mt Olympus deposit has increased by a significant 24% to 2.7g/t Au**, with a **10% increase in grade across all deposits in the resource base to 2.8g/t Au**
- 75% of the total ounces at the Ashburton Gold Project resource hosted at Mt Olympus, on higher grade and lower tonnes for an equivalent number of ounces
- **Substantial increase of 68% in ounces at the Zeus deposit** resulting in total ounces for ‘Zoe Trend’ deposits (which contains West Olympus, Mt Olympus and Zeus) of **1.19Moz**
- Optimised pit shells have been used to constrain the global resource into Open Pit and Underground resources, reflecting current standards applied to pass the Reasonable Prospects of Extraction reporting test
- Additional drill targets below the current Open Pit resource at West Olympus/Mt Olympus have been identified as a result of this work and provide **potential for a further resource up-grade in 2023**
- Preliminary economic studies based on the updated resource will accelerate development activities at Ashburton Gold Project

**Kalamazoo’s Executive Director and Ashburton Gold Project Manager Paul Adams said today,** “The completion of an independent MRE for the Ashburton Gold Project represents a major milestone for Kalamazoo. Importantly, the major deposit, Mt Olympus, now has a significantly increased grade due to the new interpretation. The optimised pit shell constrained resource at Mt Olympus now stands at over 800,000 ounces, with additional mineralisation potentially amenable to underground mining.

*Preliminary optimisation work performed on the new resource, as part of our early development studies, provides us with the confidence to continue project development activities. We look forward to incorporating the results from the new estimate and early development work into our 2023 work program.”*

**Kalamazoo Resources Limited (ASX: KZR) (“Kalamazoo” or “the Company”)** is pleased to advise that an updated Mineral Resource Estimate (“**MRE**”) has been completed for the Company’s 100% owned Ashburton Gold Project (“**AGP**” or “**the Project**”) located 40km south of the town of Paraburdoo, in the Pilbara Region of Western Australia.

The Ashburton Gold Project was acquired from Northern Star Resources Limited (**ASX: NST**) (“**Northern Star**”) in August 2020 and has been a key focus for the Company’s West Australian gold exploration program. The MRE was prepared by independent technical consultant CSA Global Pty Ltd (“**CSA**”) and is based on reverse circulation and diamond drilling totalling 324,804 metres from 11,428 holes, completed by 8 May 2022, which was the date cut-off used for inclusion of results into the resource drilling database.

The updated MRE now stands at **16.2Mt at 2.8g/t Au for 1.44 Moz**, detailed in the Table 1 below, estimated to the nearest 10,000 tonnes and 1,000 ounces.

**Table 1: Mineral Resource Estimate for the Ashburton Gold Project**

ASHBURTON GOLD PROJECT MINERAL RESOURCES										
	INDICATED			INFERRED			TOTAL			
	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Cut off
	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	(000's)	(g/t)	(000's)	Grade g/t Au
<b>Mt Olympus<sup>1-3</sup></b>	8,896	2.9	821	3,346	2.3	252	12,242	2.7	1,073	0.5 - 1.5
<b>Peake<sup>4</sup></b>	349	5.3	60	1,571	3.0	150	1,920	3.4	210	1.5
<b>Waugh<sup>5</sup></b>	218	2.0	14	292	1.9	18	510	1.9	32	0.5
<b>Zeus<sup>6,7</sup></b>	236	2.0	15	1,282	2.6	106	1,518	2.5	121	0.5 - 1.5
<b>TOTAL RESOURCES<sup>8</sup></b>	<b>9,699</b>	<b>2.9</b>	<b>911</b>	<b>6,491</b>	<b>2.5</b>	<b>525</b>	<b>16,190</b>	<b>2.8</b>	<b>1,436</b>	

1. OP (Open Pit) resource: >0.5 g/t, inside optimised pit Rev factor = 1.2

2. UG (Underground) resource: >1.5g/t below Rev factor = 1.2 pit, inside domain wireframes

3. West Olympus OP: >0.5 g/t, inside optimised pit Rev factor = 1.2

4. UG: >1.5g/t below Rev factor = 1.2 pit, inside domain wireframes

5. OP: >0.5g/t above 395mRL (equivalent to base of current pit)

6. OP: Optimised Pit 11 with Indicated + Inferred, > 0.5g/t

7. UG: Below Optimised pit >1.5g/t

8. The previous inferred resource at Romulus remains unchanged at 329kt @ 2.6g/t for 27k oz Au. Romulus was not included in this update and is therefore in addition to the total Resource quoted in the above table

The resource includes mineralised material from four deposits, with the large and important **Mt Olympus deposit now accounting for 75% of the total resource base ounces.**

In addition, the Mt Olympus and West Olympus deposits have a combined mid-point Exploration Target of 171,000oz, within a range of 0.6Mt and 1.9Mt at between 3.5g/t and 4.5g/t Au for between 67,500 and 275,000 oz of gold (see Summary of Material Information section below for detailed methodology in the derivation of the Exploration Target). ***This exploration target’s potential quantity and grade are conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.***

Optimised pit shells have been used to constrain the resources into Open Pit and Underground resources for the first time since mining of the oxide material was completed by Sipa Resources Limited (**ASX: SRI**) (“**Sipa**”) in 2004. Details of the parameters used to derive the optimised shells are summarised in the Summary of Material Information section below and in the JORC Table 1, Section 3, at the back of this announcement.

## Comparison with Previous Resource Estimate

At the time of acquiring the AGP from Northern Star in August 2020, the reported resource estimate stood at 20.8Mt @2.5g/t for 1.65Moz (which included the 27 Koz Romulus Inferred Resource).

The updated resource now stands at 16.2Mt @ 2.8g/t for 1.44 Moz, showing a 10% uplift in grade over the previous estimate (although this represents a 13% decrease in total ounces across the four deposits). The increase has chiefly resulted from a change in the interpretation of the major lodes at the important Mt Olympus deposit, which has resulted in an increased confidence in the orientation and continuity of the higher-grade gold mineralisation.

Consequently, there is a significant increase in the proportion of Indicated material to Inferred material at Mt Olympus compared to the previous estimate and a very significant 24% increase in grade, now estimated at 2.7 g/t Au (previously 2.2g/t Au). Overall ounces at Mt Olympus remain essentially the same.

The Exploration Target mentioned above exists below the optimised pit shell and outside of the wireframed domains at Mt Olympus. This target has been estimated from drilling intersections that are currently too far apart to confidently predict the orientation and continuity of mineralisation. This mineralisation therefore remains a significant drill target at Mt Olympus and West Olympus.

A table summarising the changes in tonnes, grade and ounces between the two estimates is provided below.

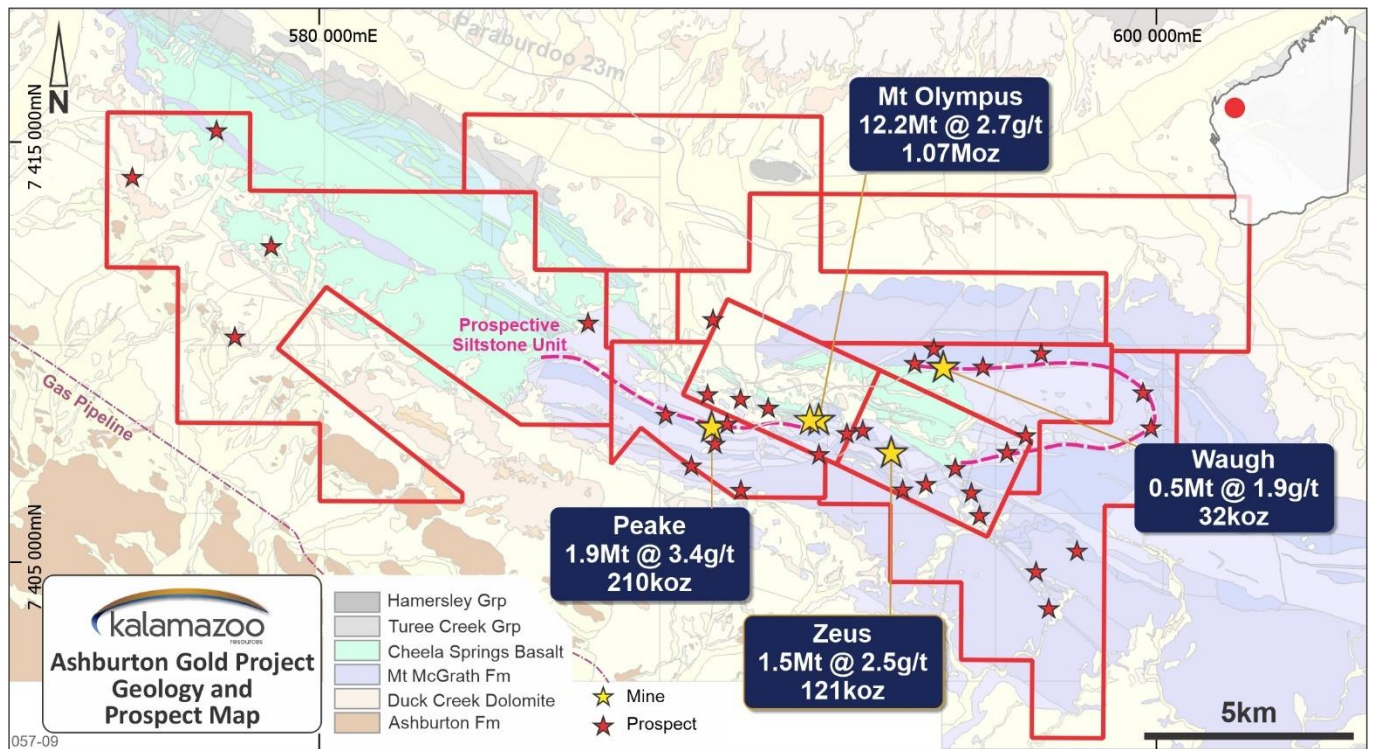
**Table 2:** Percentage Change between previous (NST) and updated Resource

ASHBURTON GOLD PROJECT MINERAL RESOURCES									
	INDICATED % Change			INFERRED % Change			TOTAL % Change		
	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
<b>Mt Olympus</b>	47%	25%	83%	-63%	6%	-60%	-19%	24%	-1%
<b>Peake</b>	209%	2%	214%	-56%	-10%	-61%	-47%	0%	-47%
<b>Waugh</b>	-37%	-44%	-65%	21%	-48%	-37%	-13%	-46%	-53%
<b>Zeus</b>	-54%	-3%	-55%	141%	17%	178%	46%	13%	68%
<b>TOTAL RESOURCES</b>	38%	22%	68%	-53%	1%	-52%	-22%	10%	-13%

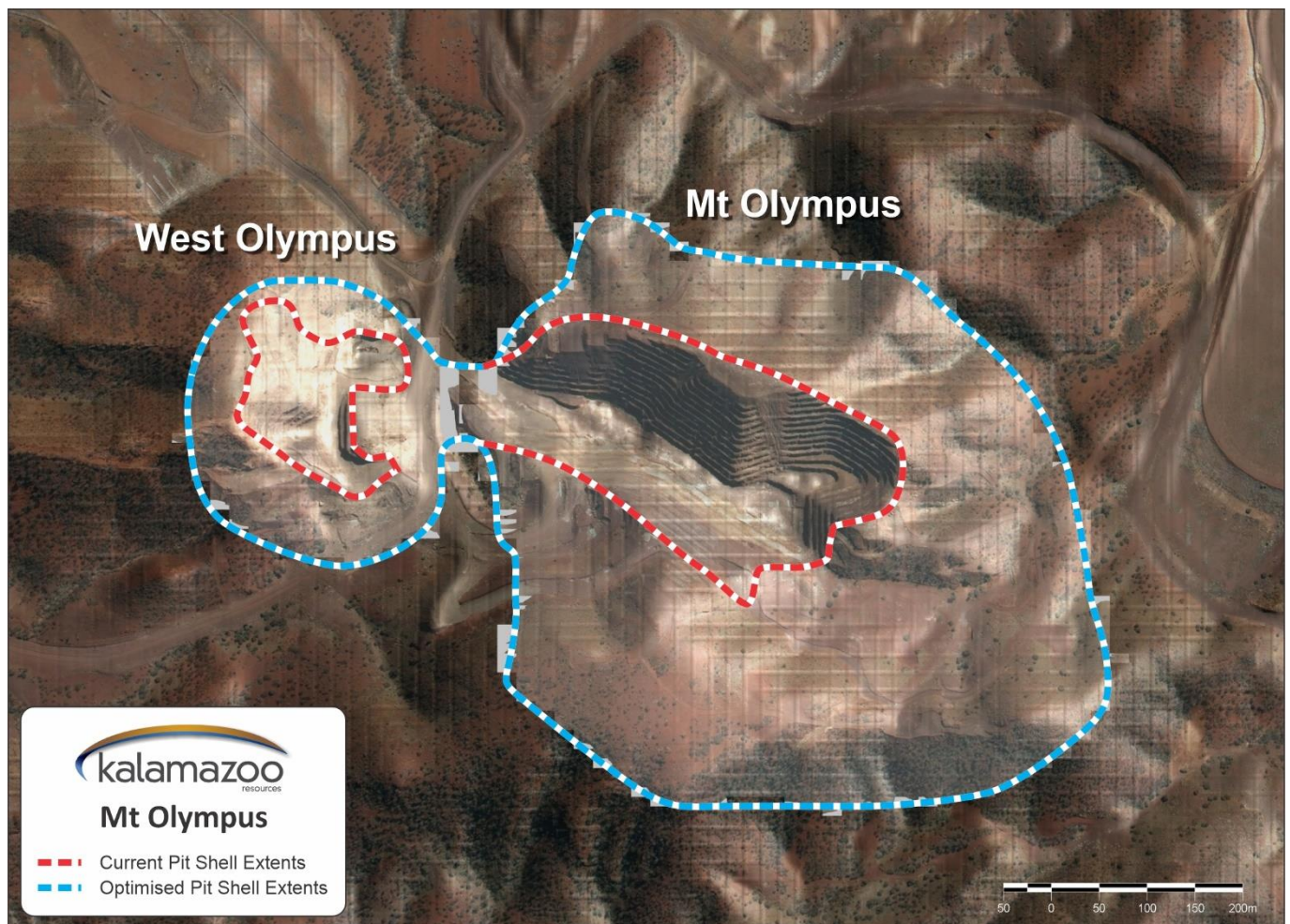
Other notable changes to the methodology that result in differences include:

1. Changes to the cut-off grade, particularly to 1.5g/t below optimised pit shells at Mt Olympus and Zeus. Previously 0.7g/t and 0.9g/t respectively
2. New geological interpretation at Peake
3. Reduction in Inferred tonnes at Peake on lack of drill density, especially in the western portion of the resource is a major contributor to 13% reduction in overall ounces. This now represents a drilling target opportunity for 2023 and beyond
4. Application of 1.5g/t cut-off grade at Peake. Previously 0.9g/t
5. A change in estimation method from nearest neighbour to ordinary kriging at Peake
6. Application of a RL cut-off at 395mRL, being the current base of the open pit, at Waugh
7. Optimised pit shells more accurately reflect current standards with respect to eventual economic extraction
8. Re-interpretation of drilling at Zeus has resulted in a significantly increased resource in both tonnes and grade and therefore ounces, with changes from Indicated to Inferred on drill density





**Figure 1:** Geology map showing the historical open pit mines and locations of mines and prospects and new resource estimate numbers for each deposit



**Figure 2:** Plan showing intersection of Optimised Pit Shell from new resource estimate with the topography at Mt Olympus

## Mineral Resource Estimate - Summary of Material Information

### Data

The drill database was set as at 8 May 2022 and contained 14,904 holes drilled by eight separate companies, for a total of 355,000 metres. Only reverse circulation and diamond drill holes were used to estimate resources, representing 77% and 91% of the total number of holes and metres respectively.

### Geology

#### Mt Olympus

The AGP is located in the Ashburton Goldfields in the Southern Pilbara region of Western Australia. Mineralisation is hosted in siltstones, sandstones, conglomerates and dolomites of the Mt McGrath Formation and the Cheela Springs Basalt. The units dip to the south and around Mt Olympus the geology becomes complicated by folding and faulting. The base of oxidation at Mt Olympus is up to 100m below the original surface. The Project is situated along an axis of a distinct SE plunging antiform which has its southern limb truncated by a large sub-vertical NW-SE striking fault known as the Zoe Fault. Mineralisation is controlled structurally and is associated with minor sulphidic quartz veins and with zones of intense sulphides. Coarse grained, highly fractured pyrite (typically 5 to 15% of the rock) is the dominant sulphide with minor arsenopyrite and small amounts of chalcopyrite, digenite, covellite and tetrahedrite. Gold occurs as veinlets and blebs in the pyrite.

#### Peake

The Peake Deposit developed within a planar and steeply south dipping fault cutting mudstones and sandstones and shows significant continuous gold mineralisation over 2,000m strike that is open to the west. Historical mining has targeted shallow supergene enriched oxide gold to a maximum depth of 30m in a single 600m long open pit.

#### Zeus

The Zeus Deposit occurs within a south dipping package of coarse clean sandstone beds in the footwall of the Zoe Fault. The mineralised lode outcrops for over 800m along strike before plunging shallowly to the southeast along the contact with the Zoe Fault.

#### Waugh

The Waugh Deposit occurs on the northern side of the Diligence Dome and is located approximately 3km north east of the Mt Olympus Deposit. It is hosted by moderately north dipping siltstones of the Mt McGrath Formation, but most of the mineralisation is within a slightly discordant ironstone breccia, which, in the very few existing drill intersections of fresh rock, are dominated by arsenical pyrite.

### Geological Interpretation

#### Mt Olympus

To interpret the mineralisation, the previous grade control data was inspected by fitch. This revealed the complex structural trends; these were digitized and formed into wireframe surfaces. These were then used to guide the interpretation of the resource drilling only (i.e. holes >30m deep) with the trends extended vertically, laterally and down plunge. The resultant wireframes are therefore based on wide spaced data but use the unique trends of the close spaced data. Multiple alternative interpretations are plausible if the resource drillhole data is viewed in isolation from the grade control data, however the use of the grade control reduces the options.

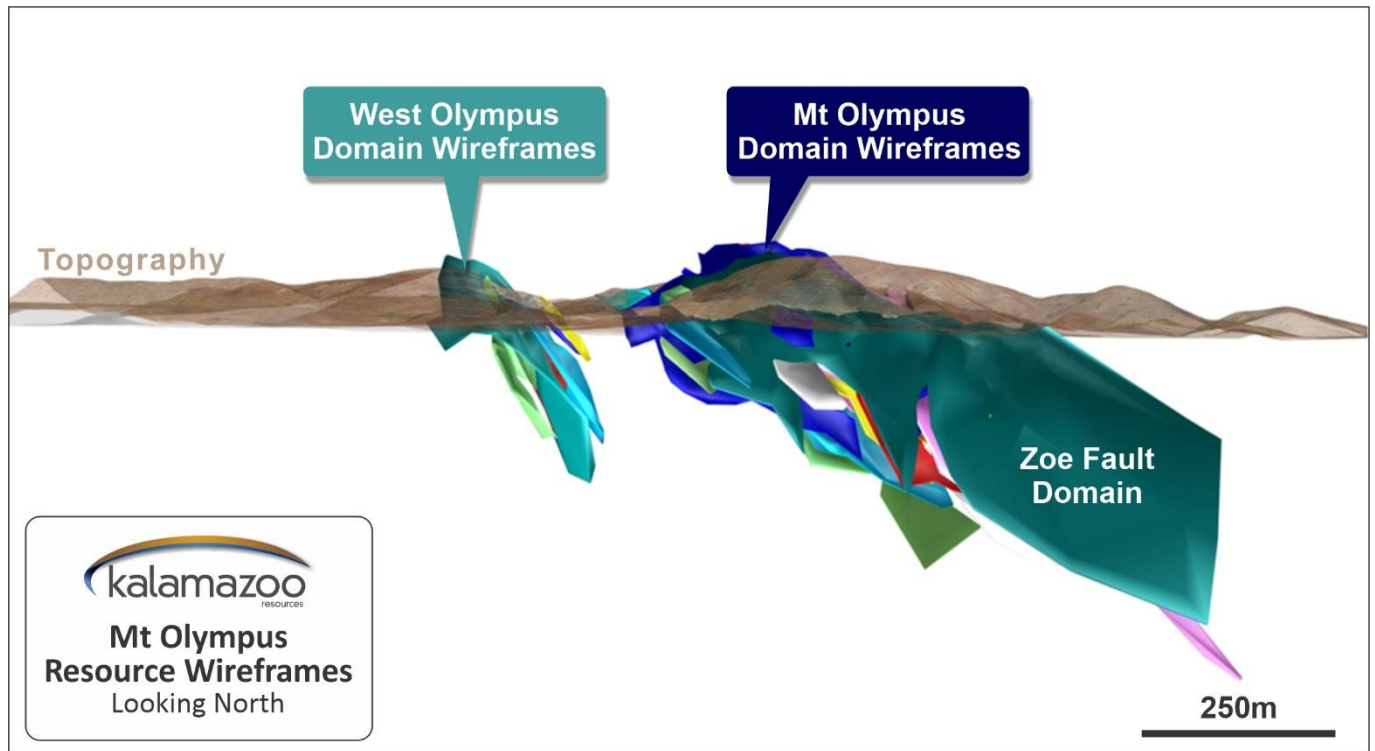
Two main trends are present. Along the Zoe Fault, steeply south dipping mineralisation is developed discontinuously. To the north of the Zoe Fault, moderately south dipping multiple lodes are developed in favourable horizons of the sedimentary package; these are truncated to the northwest by the underlying basalt. The sediment



hosted lodes tend to be thicker and higher grade in the footwall of the Zoe Fault, where the highest-grade material forms moderately southeast plunging shoots.

A minimum downhole width of 2m was used, with a nominal lower cut-off grade of 0.3g/t. Numerous intersections outside the interpreted lodes were not included due to wide spaced drilling and the uncertainty in how they should be joined to any other intersection. These have been estimated using a 0.5g/t Indicator method.

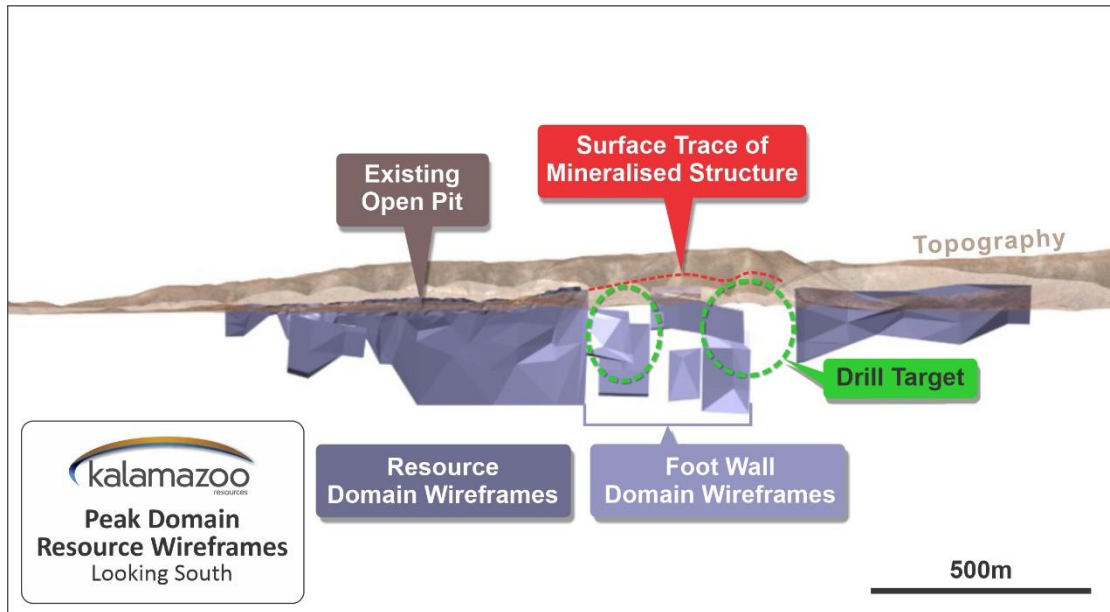
Mt Olympus extends 950m down plunge, to a maximum depth of -20mRL more than 500m below the natural surface. The lodes are parallel and sub-parallel over a width of 150m. West Olympus has a strike length of 350m and extends to 225mRL with parallel and sub-parallel lodes over a width of 130m (Figure 3).



**Figure 3:** Longitudinal Section view of Mt Olympus and new resource wireframes

### Peake

A nominal 0.3g/t cut-off and minimum 2m downhole width was used to produce sectional interpretations in Surpac. In the open pit, the closer spaced grade control data was used; away from the pit, data was extrapolated half the drillhole spacing up or down dip. The interpreted surface geology has numerous NW striking late faults; the interpreted sections were projected to these faults and terminated. A total of 9 separate wireframes were interpreted (Figure 4).



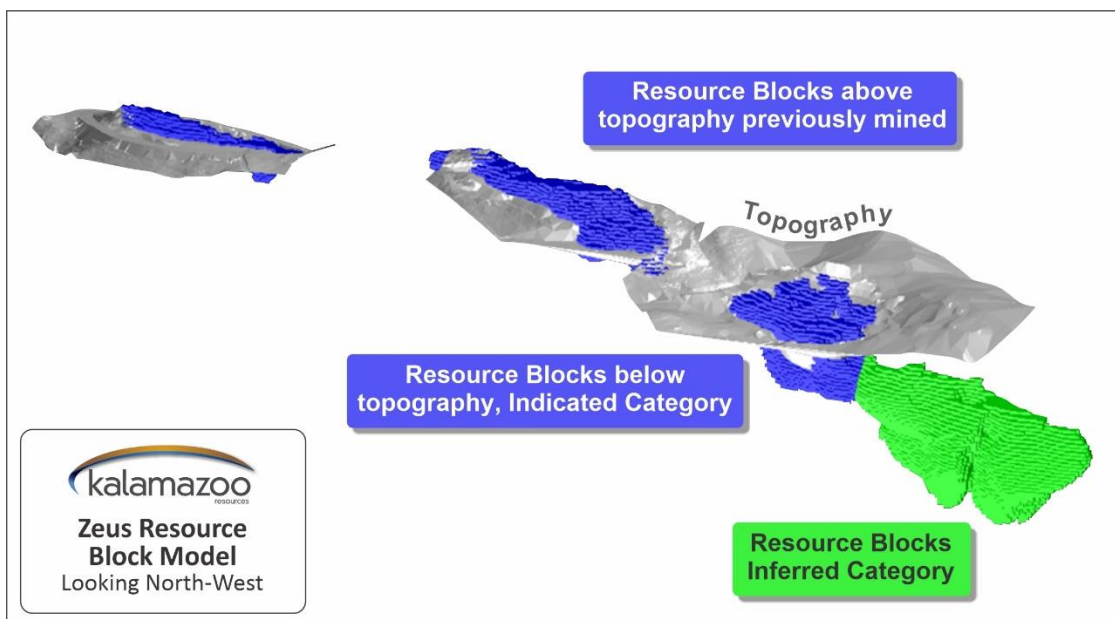
**Figure 4:** Peake Long Section of topography, resource wireframes and drill target areas

### Waugh

Leapfrog software was used to create two nested grade-based shells, at nominal cut-offs of 0.3g/t (Low Grade) and 0.5g/t (high grade). Drillhole intersections  $>0.3\text{g/t}$  were extracted from the database and used to define the mineralisation in the drillholes. To control the shapes of the shells, the centreline from the previous manual wireframe interpretation was digitised into a curved surface, with additional points to honour the intersections from recent Kalamazoo drilling. This curved surface was used as an anisotropy to allow the program to model around the structural flexure.

### Zeus

For Zeus, the mineralisation trends were digitised from the previous manual interpretations and formed into a single dipping surface. Leapfrog was used to create nested grade shells at nominal 0.5g/t (low grade) and 0.8g/t (high grade) cut-offs.



**Figure 5:** Orthogonal view of Zeus block model by resource category

## **Drilling, Sampling and Sub-Sampling Techniques**

Reverse circulation drilling to industry standards was used to obtain samples at 1m intervals with a rig-mounted static cone splitter, from which 3kg was pulverised to produce a 30g charge for fire assay. The splitter apparatus was cleaned regularly with compressed air via the sample hose between 1m samples and by washing with water at the end of each hole as a minimum. Any 4m composite samples of approximately 3kg were collected with a sampling tube from the 1m bagged RC drill cuttings. Wet, damp, or dry sample condition was recorded for each metre.

Diamond core drilling to industry standards was used to obtain diamond core from which a half core sample between 0.5m and 1.2m length was pulverised to produce a 30g charge for fire assay. Diamond core was logged and sample intervals selected based on the presence and character of mineralisation with minimum and maximum interval lengths of 0.5m and 1.2m respectively. The core sample interval was marked with a cut line by the logging geologist to define an approximate even distribution of mineralisation on each side. The core was then cut to the line with a standard core cutter and half-core sampled.

### **Sample Analysis Method**

Both reverse circulation and diamond core samples are sorted at ALS Laboratory in Perth and weights recorded in LIMS. Following drying at 105°C to constant mass, all samples below approximately 3kg are totally pulverised in LM5's to nominally 85% passing a 75µm screen. The few samples that are above 3kg are riffle split to <3kg prior to pulverisation. The same or similar sample preparation is stated in previous Resource Estimates or otherwise assumed for older pre-Kalamazoo samples.

Kalamazoo field QC procedures involve the use of high, medium and low- grade gold certified reference standards inserted at a ratio of 1:20 and crushed feldspar blanks at 1:25 for standard sampling (1m for reverse circulation or 0.5m – 1.2m for diamond core). For 1m resampling of composited intervals Kalamazoo use high, medium and low-grade gold certified reference standards inserted at a ratio of 1:20 and crushed feldspar blanks at 1:25

## **Statistics and Estimation Methodology**

### **Mt Olympus**

A Surpac block model was created to cover the volume of the Mt Olympus and West Olympus deposits, sub-blocked to honour the volume of the wireframes. Au grades were estimated into blocks inside the domain wireframes, constructed during the geological interpretation, using ordinary kriging where kriging parameters were optimised using the Kriging Neighbourhood Analysis option in Supervisor software.

1m downhole composites of Au and S were extracted for each interpreted domain. Some domains had large populations of composites; others were much smaller. After an inspection of the means of each of the smaller domains it was decided to group the Mt Olympus domains into Group 1, Group 2 and Group 3; and to group all of the West Olympus domains into a single group. Each group of Au assays (except for Domain 22) required top-cutting to reduce the excessive variability. Top cuts were chosen from inspection of log-probability and mean and variance plots; the top cuts selected gave the best reduction in variability, as measured by the co-efficient of variation, whilst not reducing the mean by more than 5%, except in the case of West Olympus where a single extreme value required severe cutting. Parent cell sizes used were 10 x 20 x 5m with sub-cell block sizes chosen at 2.5 x 2.5 x 2.5m.



For the material outside the domain wireframes, an indicator approach was chosen, using a 0.5g/t cut-off. 1m composites outside the domains were set to 1 if their grade was > 0.5g/t, and the indicator value kriged to estimate the proportion in the block as a value between 0 and 1. For reporting purposes, the proportion was converted into a block ore tonnage. The ore tonnage in the block was assigned a grade of 2.2 (Mt Olympus) or 1.6 (West Olympus), these being the mean grade of the composites > 0.5g/t for the two areas.

### Peake

A Surpac block model was created to cover the volume of the Peake deposit sub-blocked to honour the volume of the wireframes. Gold grades were estimated into blocks inside the domains using ordinary kriging and kriging parameters were optimised using the Kriging Neighbourhood Analysis option in Supervisor software. Variograms were modelled and in general the experimental variograms are poorly- structured and required a normal scores transformation for modelling. Block sizes chosen were 10 x 20 x 5m for the parent blocks and sub-cell blocks at 1.25 x 2.5 x 0.625m.

Due to the small numbers of composites, all domains in Peake were combined into a single estimation domain. A top cut was applied to reduce the variability. It is worth noting that the denser drilling inside the pit returns a higher mean grade than the wider spaced drilling below and along strike of the pit.

### Waugh and Zeus

Separate Surpac block models were created to cover the volume of the Waugh and Zeus deposits, each sub-blocked to honour the volume of the wireframes. The 1m downhole composites were extracted from the resource dataset and selected by the nested Leapfrog shells. For both, top cuts were chosen from inspection of log-probability and mean and variance plots; the top cuts selected gave the best reduction in variability (as measured by the CV) whilst not reducing mean by more than 5%.

Au grades were estimated into blocks inside the domains using ordinary kriging; kriging parameters were optimised using the Kriging Neighbourhood Analysis option in Supervisor software. Variograms were modelled in Supervisor software and, in general, the experimental variograms are poorly structured and required a normal scores transformation for modelling. Block sizes for both deposits were the same at 10 x 20 x 5m for the parent blocks and 2.5 x 2.5 x 2.5m for the sub-cell blocks.

### Bulk Density

Densities were assigned using interpreted weathering surfaces and values copied from the previous Northern Star resource models. A total of 4,440 bulk density measurements from 30 diamond drill holes have been taken from mineralised and un-mineralised intervals within the project area. Bulk Density measurements were calculated using a water dispersion technique. The bulk density for oxide and transition material was assumed due to the low number of measurements within these zones. In fresh material, a correlation between the bulk density value and gold assay grade exists and was used to assign bulk density values.

**Table 3:** Densities used for resource modelling by deposit

	Mt Olympus	Peake	Waugh	Zeus
Oxide	2.65	2.65	2.20	2.55
Transition	2.75	2.75		2.65
Fresh	3.10	3.10		2.75

## Metallurgy

The Company completed metallurgical test work on the Mt Olympus deposit in 2022, the results of which concluded that the Mt Olympus gold mineralisation was amenable to producing a clean high-grade gold-sulphide concentrate, up to 45g/t Au<sup>1</sup>. For the purpose of defining parameters used to derive open pit optimised shells to constrain the OP resource estimate, an overall recovery of 80% was used. More detailed metallurgical testwork is required to derive final recovery numbers for Mt Olympus and a substantial body of metallurgical work is required for all deposits with the potential to form ore sources for a future operating project.

## Classification

Classification was based on consideration of data spacing, confidence in the interpretation, data density, and geostatistical measures such as slope of regression.

For Mt Olympus and West Olympus, most of the resource is drilled to at least 40m spacing; this has been classified Indicated. To the east, the drill spacing is between 80m and 120m and the resource classified Inferred.

For Peake, the largest domain includes the grade control drilling near the surface; all material above 340mRL (approximately 120m from the surface) in this wireframe has been classified Indicated, the remainder is Inferred; this includes the domains that have 1 to 3 drillhole intersections and are interpreted as fault bound.

For Waugh, the base of the dense surface drilling at 400mRL was chosen as the base of the Indicated, with easting limits defined by the nominal 30m spaced drilling; the balance is classified Inferred. All of the unconstrained Indicator estimate in the resource reporting pit was classified Inferred; below the pit the uncertainty on the orientation and continuity means that it has been left as a drill target.

For Zeus, the dense surface grade control data exists west of 593 775mE; this has been classified Indicated, the volume to the east where drilling is > 40m spaced on lines was classified Inferred (see Figure 5).

## Reasonable Prospects

To assess reasonable prospects of eventual economic extraction, open pit optimisations for Mt Olympus, West Olympus and Zeus were used to constrain the resource. The optimisation parameters are presented in Table 4. For underground resources, a nominal 1.5g/t cut-off was used.

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<sup>1</sup> ASX: KZR 20 April 2022

**Table 4:** Optimisation Parameters used for Open Pit resources

Metric	Parameter	Value
Gold Price	AUD/Oz	2600
Exchange Rate	AUD:US	0.70
Whittle Pit Shell - RF	Range	0.30-1.2
Govt Royalties	%	2.50
Categories to be Optimised		Indicated & Inferred
OP Fixed Mining Costs	\$/t	3.50
Mining Recovery - OP	%	95
Mining Dilution - OP	%	5
Overall Slope Angle - oxide	°	35
Overall Slope Angle - fresh	°	40
Processing Costs	\$/t ore	16.35
Rehandle Costs	\$/t ore	0.92
G&A	\$/t ore	4.03
Ore differential costs	\$/t ore	0.10
Sustaining Capital	\$/t ore	0.60
Grade Control	\$/t ore	0.80
Recovery	%	80.00
Rehabilitation	\$/t of W	0.1
Discount Rate	%	7.00

## Exploration Target

Beneath the Mt Olympus resource reporting pit, besides the detailed interpreted domains reported as the underground resource, there are significant tonnes of mineralisation estimated in the unconstrained indicator domain (Figure 3). These are suitable for reporting as an open pit resource, as shown by the reconciliation of the model including the indicator domain to recorded production, however the lack of demonstrated continuity between drillholes, and uncertainty on the orientation of the mineralisation means that the reasonable prospects test for reporting this estimate as an underground resource cannot be met at this time.

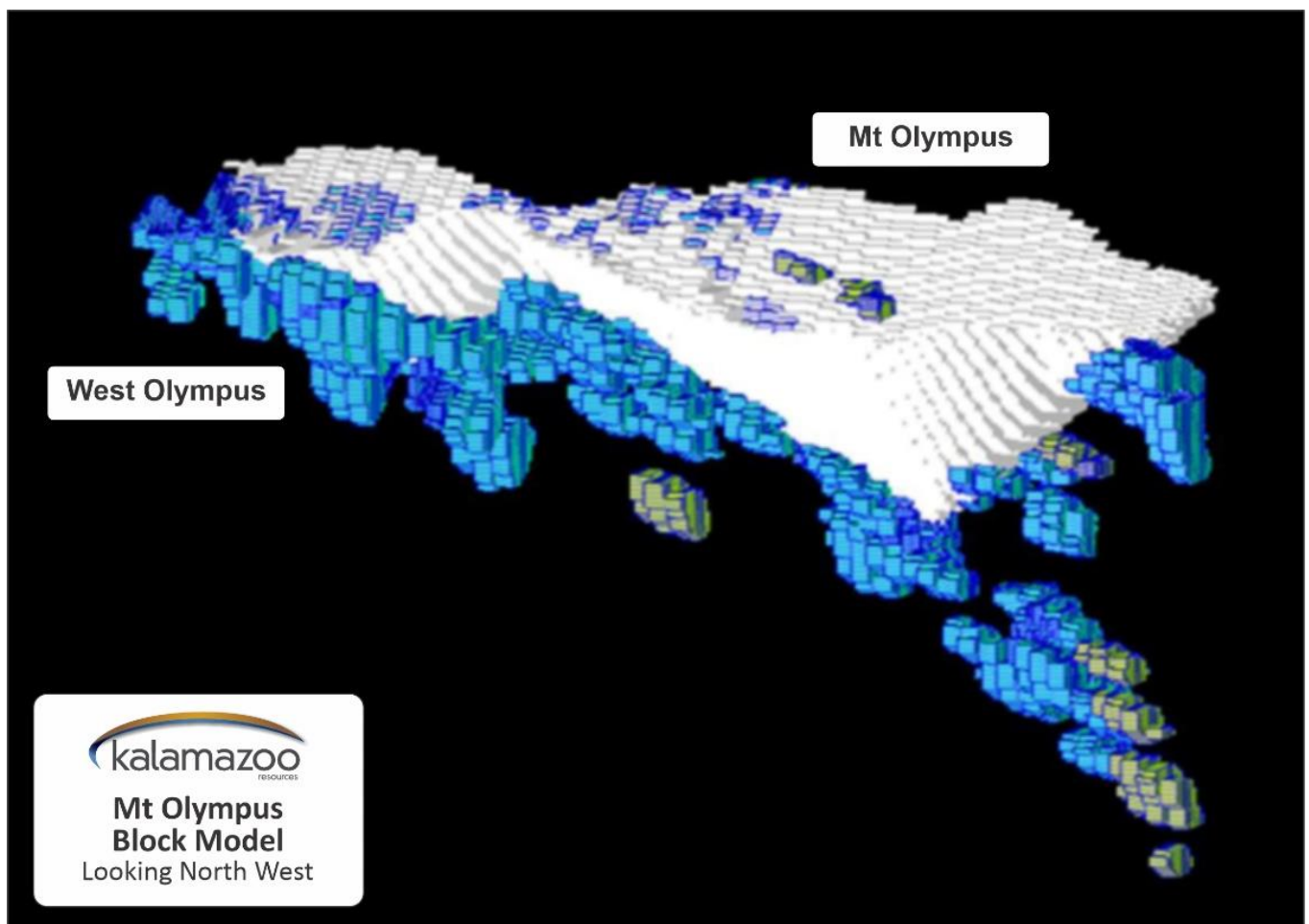
However, as it is part of the same mineralisation system as the reported resource, it can be reasonably assumed that the style of mineralisation and grade-tonnage relationships will be similar to the reported resource, and that further drilling will confirm the continuity and the orientation of the mineralised lodes. Furthermore, the very wide spacing of the drilling at depth does not show continuity between drillholes; the current dataset is probably insufficient to fully quantify the mineralisation by the indicator method. This mineralisation presents a significant target for future exploration by Kalamazoo.

The mid-point Exploration Target below the current Open Pit resource at West Olympus/Mt Olympus of 171,000oz (between 61,000 and 275,000oz, at a grade between 3.5g/t and 4.5g/t Au) provides targets for future drilling campaigns.

To quantify the Exploration Target, the following methodology was applied:

1. Report the unconstrained material below the resource reporting pit (4Mt @ 2g/t)
2. Multiply by 50% to allow for continuity and down-plunge extensions to be defined by further drilling (6Mt @ 2g/t)
3. Scale the Indicated resource grade-tonnage relationship inside the resource pit at a 0g/t from 2.9 g/t to the 2g/t grade of the 6Mt
4. From the rescaled grade-tonnage curve, read the proportion of the total mineralisation at a 4g/t grade (21%)
5. Assign 21% of 6Mt as the mid case tonnes of the Exploration Target at 4g/t (1.3Mt)
6. Apply upside and downside tonnage risk factors of 50% (+/- 0.6Mt)
7. Final quantification of the Exploration Target of 0.6 to 1.9Mt @ 3.5-4.5g/t

***This Exploration Target's potential quantity and grade are conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*** The current drilling dataset for this Exploration Target is irregularly spaced up to 200m between drillholes. Targeted drilling to reduce the spacing to less than 80m is required to confirm the orientation and continuity.



**Figure 7:** Mt Olympus Exploration Target area blocks (blue) with optimised pit (white)



## Ashburton Gold Project Resource Statement

**Table 5:** Ashburton Gold Project Mineral Resource Statement – Individual Components

ASHBURTON GOLD PROJECT MINERAL RESOURCES									
	Indicated			Inferred			Total		
	Mt	g/t gold	K ozs	Mt	g/t gold	K ozs	Mt	g/t gold	K ozs
<b>Mt Olympus OP<sup>1</sup></b>	6.62	3.0	634	2.43	2.2	172	9.05	2.8	806
<b>Mt Olympus UG<sup>2</sup></b>	0.86	4.0	112	0.52	3.5	59	1.39	3.9	171
<b>West Olympus<sup>3</sup></b>	1.41	1.7	75	0.39	1.6	20	1.81	1.7	96
<b>Peake UG<sup>4</sup></b>	0.35	5.3	60	1.57	3.0	150	1.92	3.4	210
<b>Wagh<sup>5</sup></b>	0.22	2.0	14	0.29	1.9	18	0.51	1.9	32
<b>Zeus OP<sup>6</sup></b>	0.06	1.8	4	1.23	2.6	102	1.29	2.5	105
<b>Zeus UG<sup>7</sup></b>	0.17	2.1	12	0.05	2.5	4	0.23	2.2	16
<b>Total</b>	<b>9.70</b>	<b>2.9</b>	<b>911</b>	<b>6.49</b>	<b>2.5</b>	<b>525</b>	<b>16.19</b>	<b>2.8</b>	<b>1436</b>

1. >0.5 g/t, inside optimised pit Rev factor = 1.2
2. >1.5g/t below Rev factor = 1.2 pit, inside domain wireframes
3. >0.5 g/t, inside optimised pit Rev factor = 1.2
4. >1.5g/t below Rev factor = 1.2 pit, inside domain wireframes
5. >0.5g/t above 395mRL (equivalent to base of current pit)
6. Optimised Pit 11 with Indicated + Inferred, > 0.5g/t
7. Below Optimised pit >1.5g/t

### Next Steps

Early engineering studies, including open pit optimisations, underground optimisations and mining scheduling (by CSA) based on the new resource has provided Kalamazoo with the confidence to pursue further development studies. The Company has already completed an independent desk-top environmental study (Umwelt Australia Pty Ltd) concluding that there are no identified environmental impediments to project development. Preliminary metallurgical test work (ALS Metallurgy Pty Ltd and Battery Limits Pty Ltd), reported previously 20 April 2022 “Positive Metallurgy Results from Stage 2 Test Work at Mt Olympus”, indicates that a clean, high grade (up to 45g/t gold) sulphide gold concentrate can be derived from gold mineralisation at Mt Olympus.

In the process of completing the new MRE, several opportunities have been identified for further work. Certain zones of mineralisation discussed in the Exploration Target section above, where their location is proximal to high grade Indicated and Inferred mineralisation, immediately below the open pit with potential to be included in an updated MRE, will be targeted first. The Company envisages that these targets will be drilled as part of its drill program in 2023.

Detailed analysis of the new geological interpretations and block models will occur in Q3 FY23 to identify specific and highest-value drill targets for the coming 12 months. In parallel, the Company envisages the continuation of development work, including further metallurgical testing, geotechnical studies, process flow sheet optimisations and CAPEX estimates amongst others.

In addition to the development work described above, Kalamazoo also identified several high-priority drill targets through its structural architecture review exercise with Dr Brett Davies earlier in 2022. Approximately a dozen targets were identified through this work across the tenement package. Future exploration programs, likely to include geochemistry, geophysics and drilling, will also form part of the exploration strategy for the Ashburton Gold Project going forward.

This announcement has been approved for release to the ASX by Luke Reinehr, Chairman and CEO, Kalamazoo Resources Limited.

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**Previously Released ASX Material References**

For further details relating to information in this announcement please refer to the following ASX announcements:

ASX: NST 14 February 2011

ASX: NST 28 July 2011

ASX: NST 26 July 2012

ASX: KZR 23 June 2020

ASX: KZR 24 August 2020

ASX: KZR 27 October 2020

ASX: KZR 5 January 2021

ASX: KZR 24 February 2021

ASX: KZR 3 May 2021

ASX: KZR 5 October 2021

ASX: KZR 20 April 2022

**Competent Persons Statement**

The information in this release relation to the exploration data for the Western Australian Ashburton Gold Project is based on information compiled by Mr Matthew Rolfe, a competent person who is a Member of the Australian Institute of Geoscientists. Mr Rolfe is an employee engaged as the Exploration Manager – Ashburton Gold Project for the Company and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration results, Mineral Resources and Ore Reserves'. Mr Rolfe consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to the estimation and reporting of mineral resources and Exploration Target at the Ashburton Gold Project is based on information compiled by Mr Phil Jankowski, who is a Fellow of Australasian Institute of Mining and Metallurgy. Mr Jankowski is an employee of CSA Global Ltd who are engaged as consultants to Kalamazoo Resources Limited. Mr Jankowski has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jankowski consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

**Forward Looking Statements**

Statements regarding Kalamazoo's plans with respect to its mineral properties and programs are forward-looking statements. There can be no assurance that Kalamazoo's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that Kalamazoo will be able to confirm the presence of additional mineral resources/reserves, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of Kalamazoo's mineral properties. The performance of Kalamazoo may be influenced by several factors which are outside the control of the Company and its Directors, staff, and contractors.

# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>The reverse circulation samples were taken with a rig-mounted static cone splitter with the aperture set to yield a primary sample of approximately 3kg for every metre.</li> <li>The splitter apparatus was cleaned regularly with compressed air via the sample hose between 1m samples and by washing with water at the end of each hole as a minimum.</li> <li>4m composite samples of approximately 3kg were collected with a sampling tube from the 1m bagged RC drill cuttings. Wet, damp, or dry sample condition was recorded for each metre of reverse circulation drill cuttings based on visual inspection of the offcut sample bag.</li> <li>Diamond core was logged and sample intervals selected based on the presence and character of mineralisation with minimum and maximum interval lengths of 0.5m and 1.2m respectively.</li> <li>The core sample interval was marked with a cut line by the logging geologist to define an approximate even distribution of mineralisation on each side. The core was then cut to the line with a standard core cutter and half-core sampled.</li> <li>Reverse circulation drilling to industry standards was used to obtain samples between 1m and maximum 5m length from which 3kg was pulverised to produce a 30g charge for fire assay.</li> <li>Diamond core drilling to industry standards were used to obtain diamond core from which a half core sample between 0.5m and 1.2m length was pulverised to produce a 30g charge for fire assay.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></li> </ul>	<ul style="list-style-type: none"> <li>Reverse circulation drilling was carried out using a face sampling hammer and a 5-inch diameter bit.</li> <li>Diamond drilling was carried out from surface using a HQ3 (triple tube) diameter core barrel configuration. Diamond core from the inclined hole was orientated using an electronic core orientation tool every 6m or at closer spaced intervals in broken ground.</li> <li>The resource database used was supplied on 8 May 2022, containing records of holes drilled by eight separate companies.</li> </ul>

Criteria	JORC Code explanation	Commentary																																																												
		For the resource models, only the RC and DDH data were used.																																																												
		<table><tr><th>Company</th><th>Type</th><th>Meters</th><th>Holes</th></tr><tr><td>BP</td><td>DD</td><td>340.7</td><td>4</td></tr><tr><td>BP</td><td>RC</td><td>305</td><td>5</td></tr><tr><td>Kalamazoo</td><td>DD</td><td>103.99</td><td>1</td></tr><tr><td>Kalamazoo</td><td>RC</td><td>13966</td><td>135</td></tr><tr><td>Lynas</td><td>DD</td><td>618.21</td><td>10</td></tr><tr><td>Lynas</td><td>RC</td><td>15379</td><td>452</td></tr><tr><td>Mt King</td><td>RC</td><td>547</td><td>10</td></tr><tr><td>Newcrest</td><td>DD</td><td>7822.4</td><td>18</td></tr><tr><td>Newcrest</td><td>RC</td><td>16119.2</td><td>93</td></tr><tr><td>NST</td><td>DD</td><td>16998.83</td><td>61</td></tr><tr><td>NST</td><td>RC</td><td>27079.2</td><td>155</td></tr><tr><td>RT Mining Corp</td><td>RC</td><td>1080</td><td>8</td></tr><tr><td>Sipa</td><td>DD</td><td>7016.35</td><td>27</td></tr><tr><td>Sipa</td><td>RC</td><td>217428.4</td><td>10449</td></tr></table>	Company	Type	Meters	Holes	BP	DD	340.7	4	BP	RC	305	5	Kalamazoo	DD	103.99	1	Kalamazoo	RC	13966	135	Lynas	DD	618.21	10	Lynas	RC	15379	452	Mt King	RC	547	10	Newcrest	DD	7822.4	18	Newcrest	RC	16119.2	93	NST	DD	16998.83	61	NST	RC	27079.2	155	RT Mining Corp	RC	1080	8	Sipa	DD	7016.35	27	Sipa	RC	217428.4	10449
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Drill sample recovery	<ul style="list-style-type: none"><li>Method of recording and assessing core and chip sample recoveries and results assessed.</li><li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li><li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li></ul>	<ul style="list-style-type: none"><li>Approximate recoveries for reverse circulation drill samples were recorded on formatted paper sheets as percentage ranges based on a visual estimate of the 1m offcut sample bag and entered and stored in the drillhole database.</li><li>The majority of reverse circulation samples had 100% recovery. 25% of reverse circulation samples had recoveries of 50% to 90% and 10% of reverse circulation samples had recoveries &gt;100%.</li><li>Diamond core recovery is systematically recorded by the driller on core</li></ul>																																																												



Criteria	JORC Code explanation	Commentary
		drill-run depth blocks and the length and location of core loss independently reconciled during core metre marking and the interval of core-loss recorded during logging and stored in the drillhole database.
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Core and chip samples have been logged by a qualified Geologist. Percussion hole logging were carried out on a metre by metre basis and at time of drilling. All diamond holes were photographed before cutting, both as wet and dry state. The logging is both qualitative and quantitative in nature. Historical logging is assumed of a similar standard.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Diamond core was cut with a standard core saw and half core sampled on site.</li> <li>Reverse circulation rig-mounted static cone splitter used for dry and wet 1m reverse circulation samples and a sampling tube used for dry and wet composite sampling. Pre-Kalamazoo reverse circulation sub sampling assumed to be at industry standard at that time. Both reverse circulation and diamond core samples are sorted at ALS Laboratory in Perth and weights recorded in LIMS. Any reconciliation issues (extra samples, insufficient sample, missing samples) are noted at this stage.</li> <li>Following drying at 105°C to constant mass, all samples below approximately 3kg are totally pulverised in LM5's to nominally 85% passing a 75µm screen. The few samples that are above 3kg are riffle split to &lt;3kg prior to pulverisation. The sample preparation technique is industry standard for Fire assay.</li> <li>The same or similar sample preparation is stated in previous Resource Estimates or otherwise assumed for older pre-Kalamazoo samples.</li> <li>Kalamazoo field QC procedures involve the use of high, medium and low-grade gold certified reference standards inserted at a ratio of 1:20 and crushed feldspar blanks at 1:25 for standard sampling (1m for reverse circulation or 0.5m – 1.2m for diamond core).</li> <li>For 1m resampling of composited intervals Kalamazoo use high, medium and low-grade gold certified reference standards inserted at a ratio of 1:20 and crushed feldspar blanks at 1:25.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> </ul>	<ul style="list-style-type: none"> <li>For all drill samples the total gold is determined by fire assay using the lead collection technique with a 50 gram sample charge weight. An AAS finish is used. Various multi-element suites are analysed for using a four-acid digest with an ICP-OES finish. Duplicate samples are taken from the cone splitter at an incidence of 1 in 25 samples, - Coarse blanks are inserted at an</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li><i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<p>incidence of 1 in 30 samples, - Commercially prepared certified reference materials (CRM) are inserted at an incidence of 1 in 25 samples. The CRM used is not identifiable to the laboratory, - NST's QAQC data is assessed on import to the database and reported monthly and yearly. In addition to the above, about 5% of samples are sent to an umpire laboratory. Failed standards are followed up by re-assaying a second 50g pulp sample of all samples in the fire above 0.1ppm by the same method at the primary laboratory.</p>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>There are no purpose-drilled twinned holes.</li> <li>Field data for reverse circulation drilling was recorded on restricted cell excel spreadsheets and collated into a master spreadsheet and checked for completeness before periodic digital transfer and storage in the SQL database hosted by Rock Solid Data Consultancy Pty Ltd.</li> <li>There has been no adjustment to assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>Collar positions were surveyed using a hire DGPS with better than 30cm accuracy and recorded in MGA94 Zone 50 grid. Drill rig alignment was achieved using a handheld Suunto sighting compass. Down hole surveys are taken every 30m with a True North seeking Gyro. Surveys were occasionally taken more frequently to monitor deviation. Pre-Kalamazoo survey data is available to KALAMAZOO in the SQL database but has not been reviewed at the time of this report.</li> <li>MGA94 grid, zone 50.</li> <li>Topographic control is from the Fugro 2002 and 2006 Aerial photo data.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill section and drill fan spacings vary between 40m at the Zoe Fault to 120m at Peake West. Drill fans are designed to create intercept spacings &gt;20m and with a maximum of 60m spacing between drill holes at Zeus.</li> <li>The spacing is adequate for the estimation of Mineral Resources, and the spacing is a key factor used to determine resource classification</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>The orientation of sampling is generally perpendicular to Zoe shear zone mineralisation and slightly oblique to the main sedimentary beds and mineralisation. Steep topography has also affected the orientation of drilling. The orientation achieves unbiased sampling of all possible mineralisation and the extent to which this is known.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>All samples were bagged in tied numbered calico bags at the splitter and</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>these were then bagged in larger cable tied numbered poly weave bags at the rig. The poly weave bags were put in large durable nylon bulka bags at the exploration camp and tied with a sample submission sheet affixed to the side of the bulka bag. The bulka bags are transported via freight truck to Perth with a consignment note and receipted by an external and independent laboratory.</p> <ul style="list-style-type: none"> <li>• All sample submissions were emailed to the lab and hard copies accompanied the samples. All assay results were returned in digital format via email. Sample pulp splits are returned to Kalamazoo via return freight and stored at a storage facility in Malaga, Western Australia.</li> <li>• Pre-Kalamazoo operator sample security assumed to be similar and adequate.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A thorough audit of data received from NST was performed by KZR's data management consultant prior to importation of the data into the KZR database.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>• <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <li>• <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mining tenements M52/639, M52/640, M52/734 and M52/735 and exploration tenements E52/1941, E52/3024 and E52/3025 are wholly owned by KZR and there are no heritage issues with the prospects or tenement.</li> <li>• A 2% Net Smelter Royalty on the first 250,000 oz of gold produced and a 0.75% net smelter royalty is held by Northern Star Resources and a 1.75% royalty on gold production excluding the first 250,000oz is held by SIPA Resources.</li> <li>• M52/639 was granted in 1996, renewed in 2018, now expiring on 27/05/2039.</li> <li>• M52/640 was granted in 1997, renewed in 2018, now expiring on 27/05/2039.</li> <li>• M52/734 was granted in 2001, renewed in 2022, now expiring on 08/05/2043</li> <li>• M52/735 was granted in 2001, renewed in 2022, now expiring 08/05/2043</li> <li>• E52/1941-I was granted 14/09/2007, expiring 13/09/2023.</li> <li>• E52/3024 was granted in 2015, expiring 17/06/2025</li> <li>• E52/3025 was granted in 2015, expiring 17/06/2025</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous exploration was conducted by BP Minerals and the Shell/Billiton-Austamax Mt McGrath Joint Venture between 1987 and 1989 comprising regional drainage geochemical surveys, soil geochemistry, geological mapping, costeaning and drilling. Mt Olympus was discovered by regional stream sediment sampling 1988, with assays up to 79 ppb BLEG gold and 122 ppm arsenic.</li> <li>In 1996 Sipa entered into Dublin Hill Joint Venture agreements with Mt King Mining and Arcadia Minerals NL. Follow up drilling by Sipa in 1996 delineated a substantial gold resource at Mt Olympus. Geological mapping led to the discovery of the Zeus prospect, 1 km east of Mt Olympus. The Peake deposit was also discovered during early exploration work by Sipa. The first resource drilling at Peake was completed in 1999.</li> <li>At the end of 1997, Sipa entered into the Paraburdoo Gold Project joint venture (PGP) with Lynas Gold NL, which subsequently brought the Mt Olympus Gold Mine into production late in 1998. Lynas' interests were bought-out by Sipa in late 2001. The Waugh deposit was discovered shortly after Sipa consolidated ownership. Mining operations continued through to March 2004 when the operation was placed into care and maintenance, which continued until the end of August 2005 when the plant was sold to Austindo Resources Corporation NL. The plant and associated infrastructure was removed in the first half of 2006. Full site rehabilitation was completed in 2007.</li> <li>Total production from the Mt Olympus deposit and the satellite deposits was 3.55M t of ore for the recovery of 338,000oz of gold.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation</li> </ul>	<ul style="list-style-type: none"> <li>The Mt Olympus Project is located in the Ashburton Goldfields in the Southern Pilbara region of Western Australia. Mineralisation is hosted in siltstones, sandstones, conglomerates and dolomites of the Mt McGrath Formation and the Cheela Springs Basalt. The units dip to the south and around Mt Olympus the geology becomes complicated by folding and faulting. The base of oxidation at Mt Olympus is up to 100m below the original surface. The project is situated along an axis of a distinct SE plunging synform which has its southern limb truncated by a large sub-vertical NW-SE striking fault known as the Zoe Fault. Mineralisation is controlled structurally and is associated with minor sulphidic quartz veins and with zones of intense sulphides. Coarse grained, highly fractured pyrite (typically 5 to 15% of the rock) is the dominant sulphide with minor arsenopyrite and small amounts of chalcopyrite, digenite, covellite and tetrahedrite. Gold occurs as veinlets and blebs in the pyrite.</li> <li>The Peake Deposit developed within a planar and steeply south dipping fault</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>cutting mudstones and sandstones and shows significant continuous gold mineralisation over 2,000m strike that is open to the west. Historical mining has targeted shallow supergene enriched oxide gold to a maximum depth of 30m in a single 600m long open pit with 80kt @ 7g/t Au recovered.</p> <ul style="list-style-type: none"> <li>• The Zeus Deposit occurs within a south dipping package of coarse clean sandstone beds in the footwall of the Zoe Fault. The mineralised lode outcrops for over 800m along strike before plunging shallowly to the southeast along the contact with the Zoe Fault.</li> <li>• The Waugh Deposit occurs on the northern side of the Diligence Dome and is located approximately 3km north east of the Mt Olympus Deposit. It is hosted by moderately north dipping siltstones of the Mt McGrath Formation, but most of the mineralisation is within a slightly discordant ironstone breccia, which in very few primary zone drill intersections is dominated by arsenical pyrite.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>○ easting and northing of the drill hole collar</li> <li>○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>○ dip and azimuth of the hole</li> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> </ul> </li> <li>• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are not being reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are not being reported.</li> </ul>
<b>Relationship between</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are not being reported</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Exploration results are not being reported.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Beneath the Mt Olympus OP resource, besides the detailed interpreted domains reported as the underground resource, there are significant tonnes of mineralisation estimated in the unconstrained indicator domain. These are suitable for reporting as an open pit resource, as shown by the reconciliation of the model including the indicator domain to recorded production, however the lack of demonstrated continuity between drillholes, and uncertainty on the orientation of the mineralisation means that the reasonable prospects test for reporting this estimate as an underground resource cannot be met. However, as it is part of the same mineralisation system as the reported resource, it can be reasonably assumed that the style of mineralisation and grade-tonnage relationships will be similar to the reported resource, and that further drilling will confirm the continuity and the orientation of the mineralised lodes. Furthermore, the very wide spacing of the drilling at depth does not show continuity between drillholes; the current dataset is probably insufficient to fully quantify the mineralisation by the indicator method. This mineralisation presents a target for future exploration by Kalamazoo. To quantify the Exploration Target, the following methodology was applied: <ul style="list-style-type: none"> <li>1. Report the tonnage and grade of the unconstrained material below the resource reporting pit (4Mt @ 2g/t)</li> <li>2. Multiply by 50% to allow for additional continuity and down-plunge extensions</li> </ul> </li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>to be defined by further drilling (6Mt @ 2g/t)</p> <ul style="list-style-type: none"> <li>3. Scale the Indicated resource grade-tonnage relationship inside the resource pit at a 0g/t from 2.9 g/t to the 2g/t grade of the 6Mt</li> <li>4. From the rescaled grade-tonnage curve, read the proportion of the total mineralisation at a 4g/t grade (21%)</li> <li>5. Assign 21% of 6Mt as the mid case tonnes of the Exploration Target at 4g/t (1.3Mt)</li> <li>6. Apply upside and downside tonnage risk factors of 50% (+/- 0.6Mt)</li> <li>7. Final quantification of the Exploration Target of 0.6 to 1.9Mt @ 3.5 – 4.5 g/t</li> <li><b><i>This Exploration Target's potential quantity and grade are conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.</i></b> The current drilling dataset for this Exploration Target is irregularly spaced up to 200m between drillholes. Targeted drilling to reduce the spacing to less than 80m is required to confirm the orientation and continuity</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul style="list-style-type: none"> <li>Rock Solid Data Consultancy Pty Ltd perform data QC checks before loading the data to the SQL database. Hard copies of KZR assays are kept at head office once completed. Data from previous operators thoroughly vetted and imported to SQL database.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No site visits were undertaken by the Competent Person.</li> <li>However, detailed consultation was undertaken between the Kalamazoo's Senior Geologist for the Ashburton Project and the Competent Person in order for the Competent Person to become familiar with the geology, mineralisation style and the historical context of the project activities.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on</li> </ul>	<ul style="list-style-type: none"> <li>For Mt Olympus and West Olympus, the previous grade control data was inspected by flicht. This revealed the complex structural trends; these were digitized and formed into wireframe surfaces. These were then used to guide the interpretation of the resource drilling only (i.e. holes &gt;30m deep) with the trends extended vertically, laterally and down plunge. The resultant wireframes are therefore based on wide spaced data but use the unique trends of the close spaced data.</li> <li>Multiple alternative interpretations are plausible if the resource drillhole data is viewed in isolation from</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>Mineral Resource estimation.</i></p> <ul style="list-style-type: none"> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<p>the grade control data, however the use of the grade control reduces the range of possible interpretations.</p> <ul style="list-style-type: none"> <li>• Two main trends are present. Along the Zoe Fault, steeply south dipping mineralisation is developed discontinuously. To the north of the Zoe Fault, moderately south dipping multiple lodes are developed in favorable horizons of the sedimentary package; these are truncated to the northwest by the basalt. The sediment hosted lodes tend to be thicker and higher grade progressively towards the Zoe Fault, and the highest-grade material forms moderately south plunging shoots at the intersection of the Zoe Fault lode and the sediment hosted lodes.</li> <li>• A minimum downhole width of 2m was used, with a nominal lower cutoff grade of 0.3g/t. Numerous intersections outside the interpreted lodes were not included due to wide spaced drilling and the uncertainty in how they should be joined to any other intersection. These have been estimated using a 0.5g/t Indicator method.</li> <li>• For Peake, a nominal 0.3g/t cutoff and minimum 2m downhole width was used to produce sectional interpretations in Surpac. In the open pit, the closer spaced grade control data was used; away from the pit data was extrapolated half the drillhole spacing up or down dip. The interpreted surface geology has numerous NS striking late faults; the interpreted sections were projected to these faults and terminated. A total of 9 separate wireframes were interpreted.</li> <li>• For Waugh, Leapfrog software was used to create two nested grade-based shells, at nominal cutoffs of 0.3g/t (Low Grade) and 5.0g/t (High Grade). Drillhole intersections &gt;0.3g/t were extracted from the database and used to define the mineralisation in the drillholes. To control the shapes of the shells, the centreline from the previous manual wireframe interpretation was digitised into a curved surface, with additional points to honour the intersections from recent Kalamazoo drilling. This curved surface was used as an anisotropy to allow the program to model around the structural flexure.</li> <li>• For Zeus, the mineralisation trends were digitised from the previous manual interpretations and formed into a single dipping surface. Leapfrog was used to create nested grade shells at nominal 0.5g/t (Low grade) and 0.8g/t (high Grade) cutoffs (Figure 5).</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• <i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Mt Olympus extends 950m down plunge, to a maximum depth of -20mRL more than 500m below the natural surface. The lodes are parallel and sub-parallel over a width of 150m. West Olympus has a strike length of 350m, and extends to 225mRL with parallel and sub-parallel lodes over a width of 130m.</li> <li>• Peake is a series of lodes that has a strike length of 1800m and extends to 200mRL, approximately 250m below the natural surface. The lodes have typical thicknesses of 5m to 8m.</li> <li>• Waugh has a strike length of 700m and extends to the 320mRL. The lode has a variable thickness ranging from 3m up to 15m.</li> <li>• Zeus is in four separate lodes over a 1.4km strike length; these range from 120 to 450m in strike length, and highly variable widths up to 40m.</li> </ul>



Criteria	JORC Code explanation	Commentary																																																																						
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"><li><i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li><li><i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li><li><i>The assumptions made regarding recovery of by-products.</i></li><li><i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></li><li><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li><li><i>Any assumptions behind modelling of selective mining units.</i></li><li><i>Any assumptions about correlation between variables.</i></li><li><i>Description of how the geological interpretation was used to control the resource estimates.</i></li><li><i>Discussion of basis for using or not using grade cutting or capping.</i></li><li><i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li></ul>	<ul style="list-style-type: none"><li>A Surpac block model was created to cover the volume of the Mt Olympus and West Olympus deposits, sub-blocked to honour the volume of the wireframes.</li></ul> <table><tr><td></td><td>Y</td><td>X</td><td>Z</td></tr><tr><td>Minimum Coordinates</td><td>740 7850</td><td>591 330</td><td>-100</td></tr><tr><td>Maximum Coordinates</td><td>740 8700</td><td>592 610</td><td>600</td></tr><tr><td>Parent Block Size</td><td>10</td><td>20</td><td>5</td></tr><tr><td>Subblock Block Size</td><td>2.5</td><td>2.5</td><td>2.5</td></tr></table>		Y	X	Z	Minimum Coordinates	740 7850	591 330	-100	Maximum Coordinates	740 8700	592 610	600	Parent Block Size	10	20	5	Subblock Block Size	2.5	2.5	2.5																																																		
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		<ul style="list-style-type: none"><li>1m downhole composites of Au and S were extracted for each interpreted domain. Some domains had large populations of composites; others were much smaller. After an inspection of the means of each of the smaller domains it was decided to group the Mt Olympus domains into Group 1, Group 2 and Group 3; and to group all of the West Olympus domains into a group. Each group of Au assays (except for Domain 22) required top-cutting to reduce the excessive variability. Top-cuts were chosen from inspection of log-probability and mean and variance plots; the top-cuts selected gave the best reduction in variability (as measured by the CV) whilst not reducing mean by more than 5%, except in the case of West Olympus where a single extreme value required severe cutting.</li></ul> <table><tr><th>Statistic</th><th>Domain 1</th><th>Domain 2</th><th>Domain 9</th><th>Domain 22</th><th>Group 1</th><th>Group 2</th><th>Group 3</th><th>West OI</th><th>Sulphur</th></tr><tr><td>Count</td><td>957</td><td>2693</td><td>1850</td><td>42</td><td>1141</td><td>617</td><td>589</td><td>2737</td><td>2211</td></tr><tr><td>Minimum</td><td>0.001</td><td>0.004</td><td>0.002</td><td>0.01</td><td>0.001</td><td>0.005</td><td>0.01</td><td>0.002</td><td>0</td></tr><tr><td>Maximum</td><td>536.0</td><td>138.0</td><td>77.7</td><td>7.52</td><td>36.27</td><td>134.0</td><td>116.0</td><td>2540.0</td><td>136204</td></tr><tr><td>Mean</td><td>3.89</td><td>3.38</td><td>2.71</td><td>1.00</td><td>2.86</td><td>4.27</td><td>4.78</td><td>2.73</td><td>23881</td></tr><tr><td>Median</td><td>1.50</td><td>1.59</td><td>1.34</td><td>0.55</td><td>1.46</td><td>2.17</td><td>3.24</td><td>0.91</td><td>16623</td></tr><tr><td>Standard Deviation</td><td>19.13</td><td>7.02</td><td>4.56</td><td>1.39</td><td>3.60</td><td>9.41</td><td>10.13</td><td>48.94</td><td>22950</td></tr></table>	Statistic	Domain 1	Domain 2	Domain 9	Domain 22	Group 1	Group 2	Group 3	West OI	Sulphur	Count	957	2693	1850	42	1141	617	589	2737	2211	Minimum	0.001	0.004	0.002	0.01	0.001	0.005	0.01	0.002	0	Maximum	536.0	138.0	77.7	7.52	36.27	134.0	116.0	2540.0	136204	Mean	3.89	3.38	2.71	1.00	2.86	4.27	4.78	2.73	23881	Median	1.50	1.59	1.34	0.55	1.46	2.17	3.24	0.91	16623	Standard Deviation	19.13	7.02	4.56	1.39	3.60	9.41	10.13	48.94	22950
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Criteria	JORC Code explanation	Commentary										
		CV	4.922	2.08	1.69	1.39	1.26	2.20	2.12	17.93	0.96	
			100	50	50	na	25	80	80	20	na	
		Cut Mean	3.32	3.25	2.68	na	2.85	4.10	4.59	1.62	na	
		Cut CV	2.03	1.67	1.57	na	1.23	1.80	1.81	1.44	na	
		<ul style="list-style-type: none"><li>Au grades were estimated into blocks inside the domains using ordinary kriging; kriging parameters were optimised using the Kriging Neighbourhood Analysis option in Supervisor software. Variograms were modelled in Supervisor software: in general, the experimental variograms are poorly structured and required a normal scores transformation for modelling, before being transformed back into sample space with the use of Hermite polynomials. For the material outside the domains, an indicator approach was chosen, using a 0.5g/t cutoff. 1m composites outside the domains were set to 1 if their grade was &gt; 0.5g/t, and the indicator value kriged to estimate the proportion in the block as a value between 0 and 1. For reporting purposes, the proportion was converted into a block ore tonnage by the formula Ore tonnes = x size*y size*z size*proportion&gt;0.5*density. The ore tonnage in the block was assigned a grade of 2.2 (Mt Olympus) or 1.6 (West Olympus); these being the mean grade of the composites &gt; 0.5g/t for the two areas.</li><li>For Domain 1, some blocks were not estimated in the search; a second pass of double the search distance but the same kriging parameters was used to ensure all blocks were filled.</li></ul>										
		Domain	1	2	9	22	Group 1	Group 2	Group 3	MtO >0.5 Ind	West Olympus	WO >0.5 Ind
		Search Distance	100	260	200	200	280	120	200	40	90	90
		Bearing	318	59	88	127	240	284	127	117	31	31
		Plunge	39	49	21	-19	0	29	-19	-19	-28	-28
		Dip	77	-41	-41	-47	80	-79	-49	-68	-67	-67
		Major/semi major ratio	2.4	1.63	1	2	2.33	2.5	2	2.5	1.3	1.3
		Major/minor ratio	2.4	2.17	1	5	2.33	2.5	5	1	2.1	2.1
		Minimum Composites	8	8	8	8	8	8	8	4	8	8
		Maximum Composites	30	30	24	30	24	30	30	24	24	24
		Nugget	0.67	0.73	0.66	0.42	0.48	0.5	0.42	0.55	0.64	0.64
		C1	0.21	0.11	0.26	0.29	0.24	0.26	0.29	0.15	0.32	0.32

Criteria	JORC Code explanation	Commentary										
		A1	7	5	30	2	4	3	2	6	3	3
		C2	0.1	0.1	0.06	0.12	0.15	0.13	0.12	0.06	0.02	0.02
		A2	35	20	50	20	50	6	20	30	8	8
		C3	0.02	0.06	0.02	0.17	0.13	0.11	0.17	0.24	0.01	0.01
		A3	50	65	100	65	70	30	65	60	45	45

- A Surpac block mode was created to cover the volume of the Peake deposit sub-blocked to honour the volume of the wireframes:

	Y	X	Z
Minimum Coordinates	740 7750	587 250	-200
Maximum Coordinates	740 9250	590 010	600
Parent Block Size	10	20	5
Subblock Block Size	1.25	2.5	0.625

- Due to the small numbers of composites, all domains in Peake were combined into a single estimation domain. A topcut was applied to reduce the variability. It is worth noting that the denser drilling inside the pit returns a higher mean grade than the wider spaced drilling below and along strike of the pit

Statistic	Estimation Domain	In Pit	Outside Pit
Count	1811	955	856
Minimum	0.001	0.01	0.001
Maximum	120.42	120.42	33.85
Mean	6.22	7.74	4.52
Median	4.28	6.40	2.40
Standard Deviation	6.96	8.06	4.97

Criteria	JORC Code explanation	Commentary																													
		CV	1.12	1.04	1.10																										
		Top Cut	40	na	na																										
		Cut Mean	6.14	na	na																										
		Cut CV	1.01	Na	Na																										
<ul style="list-style-type: none"><li>• Au grades were estimated into blocks inside the domains using ordinary kriging; kriging parameters were optimised using the Kriging Neighbourhood Analysis option in Supervisor software.</li><li>• Variograms were modelled in Supervisor software: in general, the experimental variograms are poorly structured and required a normal scores transformation for modelling, before being transformed back into sample space with the use of Hermite polynomials.</li></ul>																															
		<table><tr><th>Statistic</th><th>Value</th></tr><tr><td>Search Distance</td><td>200</td></tr><tr><td>Bearing</td><td>273</td></tr><tr><td>Plunge</td><td>-58</td></tr><tr><td>Dip</td><td>70</td></tr><tr><td>Major/semi major ratio</td><td>1.33</td></tr><tr><td>Major/minor ratio</td><td>6</td></tr><tr><td>Minimum Composites</td><td>4</td></tr><tr><td>Maximum Composites</td><td>26</td></tr><tr><td>Nugget</td><td>0.15</td></tr><tr><td>C1</td><td>0.52</td></tr><tr><td>A1</td><td>2</td></tr><tr><td>C2</td><td>0.16</td></tr></table>				Statistic	Value	Search Distance	200	Bearing	273	Plunge	-58	Dip	70	Major/semi major ratio	1.33	Major/minor ratio	6	Minimum Composites	4	Maximum Composites	26	Nugget	0.15	C1	0.52	A1	2	C2	0.16
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		<table><tr><td>A2</td><td>15</td></tr><tr><td>C3</td><td>0.15</td></tr><tr><td>A3</td><td>90</td></tr></table> <ul style="list-style-type: none"><li>A Surpac block mode was created to cover the volume of the Waugh deposit sub-blocked to honour the volume of the wireframes</li></ul> <table><tr><td></td><td>Y</td><td>X</td><td>Z</td></tr><tr><td>Minimum Coordinates</td><td>740 9250</td><td>594 250</td><td>0</td></tr><tr><td>Maximum Coordinates</td><td>741 0000</td><td>595 350</td><td>540</td></tr><tr><td>Parent Block Size</td><td>10</td><td>20</td><td>5</td></tr><tr><td>Subblock Block Size</td><td>2.5</td><td>2.5</td><td>2.5</td></tr></table> <ul style="list-style-type: none"><li>The 1m downhole composites were extracted from the resource dataset and selected by the nested Leapfrog shells. For both, topcuts were chosen from inspection of log-probability and mean and variance plots; the topcuts selected gave the best reduction in variability (as measured by the CV) whilst not reducing mean by more than 5%</li></ul> <table><tr><th>Statistic</th><th>High Grade</th><th>Low Grade</th></tr><tr><td>Count</td><td>1452</td><td>5387</td></tr><tr><td>Minimum</td><td>0.006</td><td>0.001</td></tr><tr><td>Maximum</td><td>473.0</td><td>378.0</td></tr><tr><td>Mean</td><td>23.68</td><td>2.15</td></tr><tr><td>Median</td><td>8.10</td><td>0.77</td></tr><tr><td>Standard Deviation</td><td>44.50</td><td>7.86</td></tr></table>	A2	15	C3	0.15	A3	90		Y	X	Z	Minimum Coordinates	740 9250	594 250	0	Maximum Coordinates	741 0000	595 350	540	Parent Block Size	10	20	5	Subblock Block Size	2.5	2.5	2.5	Statistic	High Grade	Low Grade	Count	1452	5387	Minimum	0.006	0.001	Maximum	473.0	378.0	Mean	23.68	2.15	Median	8.10	0.77	Standard Deviation	44.50	7.86
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Criteria	JORC Code explanation	Commentary		
		CV	1.88	3.65
		Top Cut	250	40
		Cut Mean	23.16	1.97
		Cut CV	1.77	1.94
<ul style="list-style-type: none"><li>• Au grades were estimated into blocks inside the domains using ordinary kriging; kriging parameters were optimised using the Kriging Neighbourhood Analysis option in Supervisor software.</li><li>• Variograms were modelled in Supervisor software: in general, the experimental variograms are poorly structured and required a normal scores transformation for modelling, before being transformed back into sample space with the use of Hermite polynomials.</li></ul>				
		Statistic	High Grade	Low Grade
		Search Distance	90	120
		Bearing	90	127
		Plunge	0	10
		Dip	25	25
		Major/semi major ratio	1	1
		Major/minor ratio	4.5	2
		Minimum Composites	16	8
		Maximum Composites	36	36
		Nugget	0.73	0.48
		C1	0.18	0.41
		A1	2	0.08
		C2	0.05	15

Criteria	JORC Code explanation	Commentary																							
		<table><tr><td>A2</td><td>8</td><td>0.02</td></tr><tr><td>C3</td><td>0.04</td><td>75</td></tr><tr><td>A3</td><td>60</td><td></td></tr></table>	A2	8	0.02	C3	0.04	75	A3	60															
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		<ul style="list-style-type: none"><li>A Surpac block mode was created to cover the volume of the Zeus deposit sub-blocked to honour the volume of the wireframes</li></ul>																							
		<table><tr><td></td><td>Y</td><td>X</td><td>Z</td></tr><tr><td>Minimum Coordinates</td><td>740 6190</td><td>592 200</td><td>120</td></tr><tr><td>Maximum Coordinates</td><td>740 8250</td><td>594 560</td><td>600</td></tr><tr><td>Parent Block Size</td><td>10</td><td>10</td><td>5</td></tr><tr><td>Subblock Block Size</td><td>2.5</td><td>2.5</td><td>2.5</td></tr></table>		Y	X	Z	Minimum Coordinates	740 6190	592 200	120	Maximum Coordinates	740 8250	594 560	600	Parent Block Size	10	10	5	Subblock Block Size	2.5	2.5	2.5			
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		<ul style="list-style-type: none"><li>The 1m downhole composites were extracted from the resource dataset and selected by the nested Leapfrog shells. For both, topcuts were chosen from inspection of log-probability and mean and variance plots; the topcuts selected gave the best reduction in variability (as measured by the CV) whilst not reducing mean by more than 5%</li></ul>																							
		<table><tr><td>Statistic</td><td>High Grade</td><td>Low Grade</td></tr><tr><td>Count</td><td>8505</td><td>2289</td></tr><tr><td>Minimum</td><td>0.003</td><td>0.002</td></tr><tr><td>Maximum</td><td>224.0</td><td>13.90</td></tr><tr><td>Mean</td><td>1.92</td><td>0.42</td></tr><tr><td>Median</td><td>1.11</td><td>0.16</td></tr><tr><td>Standard Deviation</td><td>3.61</td><td>0.75</td></tr></table>	Statistic	High Grade	Low Grade	Count	8505	2289	Minimum	0.003	0.002	Maximum	224.0	13.90	Mean	1.92	0.42	Median	1.11	0.16	Standard Deviation	3.61	0.75		
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Criteria	JORC Code explanation	Commentary		
		CV	1.88	1.79
		Top Cut	30	4
		Cut Mean	2.12	0.42
		Cut CV	1.43	1.45
		<ul style="list-style-type: none"> <li>Au grades were estimated into blocks inside the domains using ordinary kriging; kriging parameters were optimised using the Kriging Neighbourhood Analysis option in Supervisor software.</li> <li>Variograms were modelled in Supervisor software: in general, the experimental variograms are poorly structured and required a normal scores transformation for modelling, before being transformed back into sample space with the use of Hermite polynomials.</li> </ul>		
		Statistic	High Grade	Low Grade
		Search Distance	80	80
		Bearing	118	90
		Plunge	-5	0
		Dip	-60	-35
		Major/semi major ratio	1.5	2
		Major/minor ratio	2	1
		Minimum Composites	8	8
		Maximum Composites	26	26
		Nugget	0.49	0.63
		C1	0.29	0.24
		A1	3	5
		C2	0.16	0.20
		A2	6	20

Criteria	JORC Code explanation	Commentary																																							
		<table> <tr> <td>C3</td><td>0.06</td><td>0.05</td></tr> <tr> <td>A3</td><td>20</td><td>40</td></tr> </table>	C3	0.06	0.05	A3	20	40																																	
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<b>Moisture</b>	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Tonnages are reported on a dry basis</li> </ul>																																							
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>To assess reasonable prospects, open pit optimisations for Mt Olympus, West Olympus and Zeus were used to constrain the resource. The optimisation parameters are presented below. For underground resources a nominal 1.5g/t cutoff was used.</li> </ul> <table> <tr> <th>Statistic</th><th>Original</th><th>Duplicate</th></tr> <tr> <td>Gold Price</td><td>AUD/oz</td><td>2,600</td></tr> <tr> <td>Exchange Rate</td><td>AUD:US</td><td>0.70</td></tr> <tr> <td>Whittle Pit Shells (RF of 1.00 is base case)</td><td>Range</td><td>0.30-1.2</td></tr> <tr> <td>Govt Royalties</td><td>%</td><td>2.50</td></tr> <tr> <td>Resource Categories to be Optimised</td><td></td><td>Indicated and Inferred</td></tr> <tr> <td>OP Fixed Mining Costs</td><td>\$/t</td><td>3.50</td></tr> <tr> <td>Mining Recovery (Ore Loss) - OP</td><td>%</td><td>95</td></tr> <tr> <td>Mining Dilution - OP</td><td>%</td><td>5</td></tr> <tr> <td>Overall Slope Angle oxide</td><td>°</td><td>35.0</td></tr> <tr> <td>Overall Slope Angle fresh</td><td>°</td><td>40.0</td></tr> <tr> <td>Processing Costs</td><td>\$/t ore</td><td>\$16.35/t</td></tr> <tr> <td>Crusher Feed to Plant (Rehandle)</td><td>\$/t ore</td><td>\$0.92/t</td></tr> </table>	Statistic	Original	Duplicate	Gold Price	AUD/oz	2,600	Exchange Rate	AUD:US	0.70	Whittle Pit Shells (RF of 1.00 is base case)	Range	0.30-1.2	Govt Royalties	%	2.50	Resource Categories to be Optimised		Indicated and Inferred	OP Fixed Mining Costs	\$/t	3.50	Mining Recovery (Ore Loss) - OP	%	95	Mining Dilution - OP	%	5	Overall Slope Angle oxide	°	35.0	Overall Slope Angle fresh	°	40.0	Processing Costs	\$/t ore	\$16.35/t	Crusher Feed to Plant (Rehandle)	\$/t ore	\$0.92/t
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<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>Previous mining at Mt Olympus has been of the oxide ore only, using conventional drill and blast with backhoe excavators and off road dump trucks. The form and dimensions of the transition and fresh ore are similar to the oxide; previous mining was restricted by the refractory nature of the fresh ore. It is assumed that any future open pit mining would use similar methods.</li> </ul>																					
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an</li> </ul>	<ul style="list-style-type: none"> <li>KZR completed initial metallurgical test work on several zones at Mt Olympus to determine whether the resource would be amenable to the production of a high-grade gold sulphide concentrate via an industry standard crush-grind-float processing circuit. The initial results indicate, that subject to completion of a robust financial business case, production of a high-grade gold concentrate is likely to represent the most straight forward, technically least challenging, and lowest capital-intensive method of processing ore. The results were Excellent rougher concentrate gold recovery between 85% and 94%.</li> <li>High rougher sulphur recovery between 87% and 96%.</li> <li>90-95% silica rejection in rougher concentrate.</li> <li>Multi-stage cleaning resulted in increased gold grades from the rougher concentrate by an average</li> </ul>																					



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	<i>explanation of the basis of the metallurgical assumptions made.</i>	<p>of &gt;40%, with a maximum of 75.8%.</p> <ul style="list-style-type: none"><li>Gold in concentrate grade averaged 31.8 g/t across all four composites with a maximum of 39.2 g/t.</li><li>Sulphur grade consistently achieved 49-50%, representing approximately 93% sulphur recovery.</li><li>SiO<sub>2</sub> grade reduced to between 1.9% and 3.6% in the final concentrate.</li><li>Open circuit gold recovery up to 85% (gravity recovery and closed-circuit test work still to be performed).</li></ul>																				
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"><li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li></ul>	<ul style="list-style-type: none"><li>The deposits have been previously mined by open pits, and the disturbed areas have been rehabilitated. Future mining would likely re-use many of the previously disturbed areas, such as waste dumps, tailings storages and infrastructure sites.</li></ul>																				
<b>Bulk density</b>	<ul style="list-style-type: none"><li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li><li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li><li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li></ul>	<ul style="list-style-type: none"><li>Densities were assigned using interpreted weathering surfaces and values copied from the previous Northern Star resource models. A total of 4,440 bulk density measurements from 30 diamond drill holes have been taken from mineralised and unmineralised intervals within the project area. Bulk Density measurements were calculated using a water dispersion technique. The bulk density for oxide and transition material was assumed due to the low number of measurements within these zones. In fresh material, a correlation between the bulk density value and gold assay grade exists and was used to assign bulk density values.</li></ul> <table><tr><td></td><td>Mt Olympus</td><td>Peake</td><td>Waugh</td><td>Zeus</td></tr><tr><td>Oxide</td><td>2.65</td><td>2.65</td><td>2.20</td><td>2.55</td></tr><tr><td>Transition</td><td>2.75</td><td>2.75</td><td></td><td>2.65</td></tr><tr><td>Fresh</td><td>3.10</td><td>3.10</td><td></td><td>2.75</td></tr></table>		Mt Olympus	Peake	Waugh	Zeus	Oxide	2.65	2.65	2.20	2.55	Transition	2.75	2.75		2.65	Fresh	3.10	3.10		2.75
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<b>Classification</b>	<ul style="list-style-type: none"><li>The basis for the classification of the Mineral</li></ul>	<ul style="list-style-type: none"><li>Classification was based on consideration of data spacing, confidence in the interpretation, data</li></ul>																				

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	<p><i>Resources into varying confidence categories.</i></p> <ul style="list-style-type: none"> <li>• <i>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<p>density, and geostatistical measures such as slope of regression. For Mt Olympus and West Olympus, most of the resource is drilled to at least 40m spacing; this has been classified Indicated. To the east, the drill spacing is between 80m and 120m and the resource classified Inferred.</p> <ul style="list-style-type: none"> <li>• For Peake, the largest domain includes the grade control drilling near the surface; all material above 340mRL (approximately 120m from the surface) in this wireframe has been classified Indicated, the remainder is Inferred; this includes the domains that have 1 to 3 drillhole intersections and are interpreted as fault bound.</li> <li>• For Waugh, the base of the dense surface drilling at 400mRL was chosen as the base of the Indicated, with easting limits defined by the nominal 30m spaced drilling; the balance is classified Inferred.</li> <li>• All of the unconstrained Indicator estimate in the resource reporting pit at West Olympus / Mt Olympus was classified Inferred; below the pit the uncertainty on the orientation and continuity means that it has been left as an Exploration Target.</li> <li>• For Zeus, the dense surface grade control data exists west of 593 775mE; this has been classified Indicated, the volume to the east where drilling is &gt; 40m spaced on lines was classified Inferred.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Kalamazoo has performed manual checks between the CSA block model grades and the drill hole intercept grades for a number of holes located throughout the Mt Olympus deposit. Holes were chosen to provide a representative coverage across the deposit, from shallow to deep, east to west, high grade and low grade and thin and thick intersections, within CSA derived wireframes. The results from the check verified that the average of the block model grades and the average for each intercept correlated closely (3.65 g/t Au vs 3.62 g/t Au). Kalamazoo is therefore satisfied that the CSA derived block model correlates reasonably well with the grades of the intercepts. In addition, there does not appear to be any bias between the block model grades and the intercept grades.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>• <i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</i></li> <li>• <i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to</i></li> </ul>	<ul style="list-style-type: none"> <li>• For all the models, the current estimates are reasonable global estimates; due to the high amount of short-scale variability, and the relatively wide spacing of the data, none can be relied on for accurate local block estimates.</li> <li>• Further infill drilling or grade control spaced drilling would be required to increase the quality of the local estimates to allow detailed mine planning.</li> <li>• Mine production records for Mt Olympus are in summary form only, at a low level of precision. The reserve before mining was 2.15Mt @ 3.3g/t, with actual production of 2.5Mt @ 3.3 g/t (back calculated from recovered metal, assuming 92% metallurgical recovery). The present model has a total in the pit at 0g/t (Indicated and Inferred) of 2.39Mt @ 3.4g/t, with the metal content within 5% of reported production. To convert the resource to the production would require the addition of 10% dilution at 0g/t.</li> <li>• For Peake, the present model predicts 84kt@6.9g/t, compared with recorded production of 80kt@7g/t.</li> <li>• For both these comparisons, the majority of the resource compared to production is classified</li> </ul>

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	<p><i>technical and economic evaluation.</i></p> <p><i>Documentation should include assumptions made and the procedures used.</i></p> <ul style="list-style-type: none"> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<p>Indicated. It is expected that the Inferred resource would have a currently unquantified higher level of risk for predicting tonnes and grades at these scales.</p>