ASX Announcement

20 April 2022



# Positive Metallurgy Results from Stage 2 Test Work at Mt Olympus

## Highlights

- **Positive results** received from Stage 2 metallurgical test work on composites from the large Mt Olympus sulphide deposit contained within the **1.65Moz Ashburton Gold Project**, WA
- A variety of gravity and re-grind test work has been performed on Composites 3 and 4 from previous test work
- Test work resulted in improved silica rejection and **increased concentrate grade from Composite 4 from 39g/t Au to 45 g/t Au**, with lower sulphide recovery
- Test work indicates that a simple crush – grind – rougher flotation – multi-stage re-clean flotation circuit to produce a saleable concentrate provides the simplest, least capital intensive and most easily operable process route for the Mt Olympus sulphide mineralisation.
- Additional positive outcomes include:
  - Average gravity gold recovery to concentrate of 26%
  - Whole concentrate assay sampling indicates arsenic values of between 1.2% and 1.6%, falling within acceptable specification for high grade gold concentrates
  - No other deleterious elements outside acceptable specification identified
- Project Development **Scoping Study commences in Q2, 2022**

**Kalamazoo's Executive Director Paul Adams said today,** *"We are extremely pleased with this Stage 2 metallurgical test work at Mt Olympus, which sees improved silica rejection and an increased grade for drill composite 4 of 45 g/t Au, especially when combined with the excellent results from the initial test work which we announced on 11 March 2022. This work will now be used in our planned Project Development Scoping Study which is scheduled to commence shortly. We consider that a simple, easily operable, well understood process flow sheet is the preferred option for the future development of the sulphide resources at our Ashburton Gold Project.*

Kalamazoo Resources Limited **(ASX: KZR) ("Kalamazoo"** or the **"Company")** is pleased to announce further metallurgical test work results from two (Composites 3 and 4) of the initial four composites chosen for test work from Mt Olympus deposit from RC drill holes KARC035 and KARC036. Mt Olympus has an Indicated and Inferred mineral resource of **15.12Mt at 2.2 g/t gold for 1.08 million ounces** and comprises the largest component of Kalamazoo's **1.65Moz** mineral resource at the Ashburton Gold Project.

The Ashburton Gold Project is located in the southern edge of the Pilbara Craton, which has been subject to a renewed focus on major gold discoveries and project development in recent years. This includes De Grey Mining Limited's **(ASX: DEG)** world-class **9Moz** oxide/sulphide Mallina discovery, Calidus Resources Limited's **(ASX: CAI) 1.5Moz Au** Warrawoona Gold Project and Novo Resources Corp's **(TSX: NVO; OTCQX: NSRPF)** Beatons Creek Gold Project.

The aim of the Stage 2 test work was to assess the likely gravity recoverable gold as a percentage of the total gold recovered. The test work was also undertaken to assess the effect of finer grind size on cleaner concentrate grade in an open circuit test.

Composites 3 and 4 were chosen as they were the lowest gold grade composites from the previous test work and therefore deemed most representative of the four original composites to the overall grade of the Mt Olympus deposit. Composites 3 and 4 were the low gold / high sulphur and low gold / low sulphur composites respectively.

Table 1 below summarises the new re-grind test work results compared to the Stage 1 results recently reported (ASX: KZR 11 March 2022).

| Comp | Calc Head grade | | | Final Cleaner conc (open circuit) | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Au | S | SiO2 | Mass | Au | | S | | SiO2 | |
| | g/t | % | % | % | g/t | %dist | % | %dist | % | %dist |
| 3 | 4.56 | 12.42 | 41.58 | **20.9** | **19.4** | **84.8** | **49.4** | **84.1** | **2.4** | **1.2** |
| 4 | 4.08 | 4.76 | 41.81 | **6.3** | **39.2** | **71.5** | **48.9** | **68.6** | **3.6** | **0.5** |
| 3 Concentrate regrind | 4.38 | 12.39 | 41.40 | **17.7** | **17.2** | **69.4** | **50.1** | **71.5** | **1.4** | **0.6** |
| 4 Concentrate regrind | 3.75 | 4.53 | 42.90 | **5.2** | **45.4** | **62.4** | **49.5** | **56.4** | **1.3** | **0.2** |

**Table 1:** Summary of original vs new test work on composites 3 and 4

The regrind test was to assess the impact on concentrate grade. After a re-grind of the rougher concentrate to 45 microns (µm), the combined mass pull from Composites 3 and 4 was reduced from an average of 13.6% to 11.5% with an increase in average grade from 29.3 g/t to 31.3 g/t gold. The results also indicate an improved silica ($SiO_2$) rejection although this was accompanied by a loss of sulphur recovery. Composite 3 results indicated a loss in gold grade (from 19.4 g/t to 17.2g/t Au) due to lower sulphur and gold recovery.

Additional optimisation test work is planned, importantly including locked cycle testing, to assess likely overall gold recovery to concentrate.

The Stage 2 gravity test work was also conducted on all four of the original composites from Stage 1.

| Item | Comp 1 | Comp 2 | Comp 3 | Comp 4 |
|---|---|---|---|---|
| Head Grade g/t | 7.68 / 7.60 | 9.27 / 9.21 | 4.53 / 3.77 | 3.66 / 3.73 |
| Gravity Concentrate | | | | |
| Au Gravity Rec % to conc | 25.4 | 27.3 | 27.4 | 23.9 |
| Au Gravity Rec % tail | 74.6 | 72.7 | 72.6 | 76.1 |
| Concentrate leach | | | | |
| Au Gravity conc leach Rec % | 26.0 | 21.0 | 19.3 | 25.4 |
| Au overall rec % to leach | 6.6 | 5.7 | 5.3 | 6.1 |

**Table 2:** Gravity test work results from each of the four composites

In summary, the gravity results were consistent across the four composites with average gravity gold to concentrate recovery of 26%. Leach recovery of that concentrate averaged 23% and is consistent with the metallurgical test work conducted by Northern Star Resources Limited **(ASX: NST)** in 2012. Overall recoverable leachable gold from gravity concentrate averaged 5.9%.

Results from both the Stage 1 (Figure 1) and Stage 2 initial metallurgical test work conducted by Kalamazoo confirms that the current (subject to further optimisation) preferred flow sheet for these samples is the simplest. Namely:

1. Crush – grind to 106 µm
2. Rougher flotation
3. Multi-stage re-clean flotation to produce a saleable concentrate
4. Possible leach of float tail (not tested)

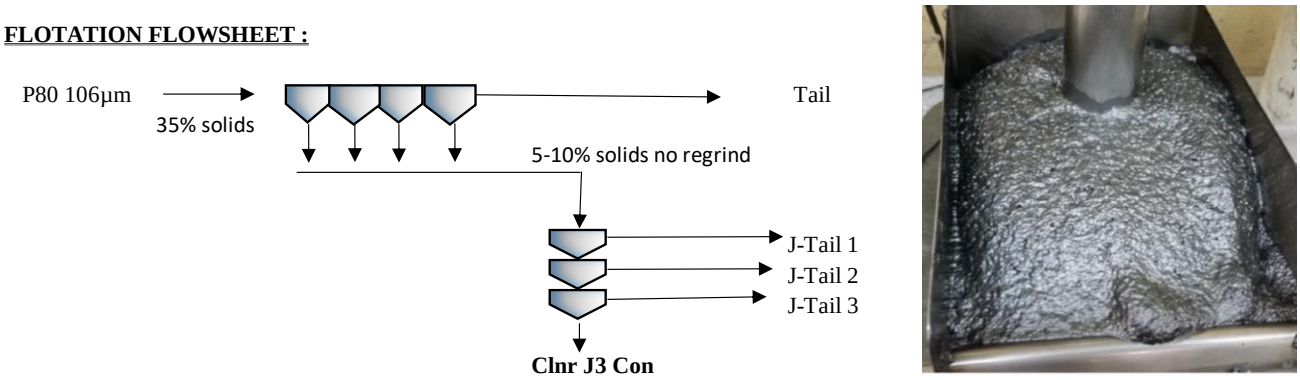


**Figure 1:** Flow sheet diagram for test work and froth float from test

Kalamazoo considers that a simple, easily operable, well understood process flow sheet is the preferred option for any potential future development of the sulphide resources at the Ashburton Gold Project. Further composites would need to be derived, particularly for the Peake deposit which contains the next largest resource base of the four deposits within the Ashburton Gold Project.

## Next steps

- Undertake lock cycle test to estimate overall flotation recovery
- Possible cyanide leach of flotation tail to estimate total recoverable gold
- Derive diamond drill core composite samples for any further test work
- Project Scoping Study to commence Q2, 2022

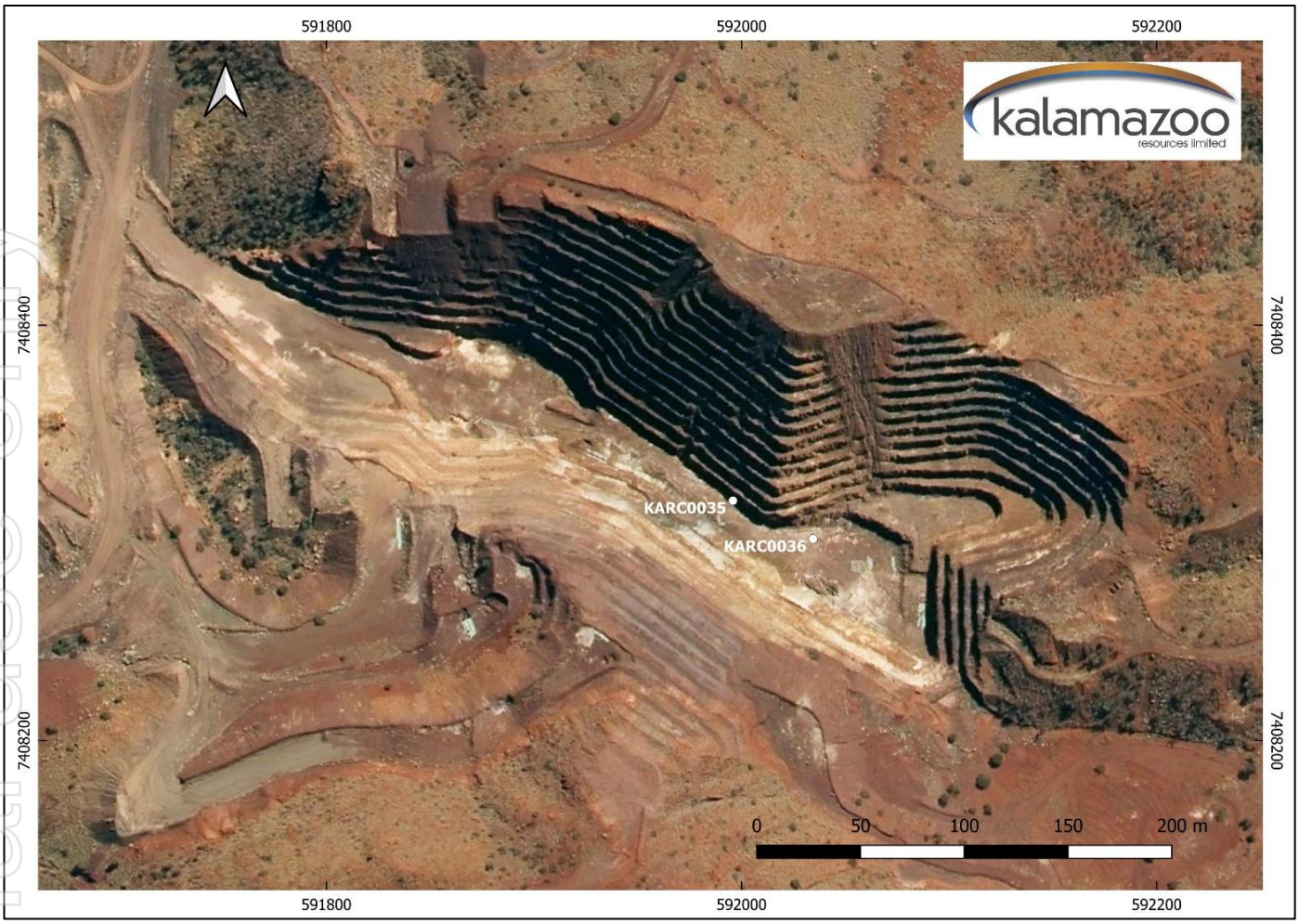


**Figure 2:** Location plan of metallurgical drill holes within the Mt Olympus open pit

| SiteID | Prospect | East | North | RL | Grid | Depth | PropDip | Azimuth |
|---|---|---|---|---|---|---|---|---|
| KARC0035 | Mt Olympus | 591996 | 7408316 | 438.6 | GDA94_50 | 162 | -80 | 35 |
| KARC0036 | Mt Olympus | 592034 | 7408297 | 434.8 | GDA94_50 | 186 | -75 | 100 |

**Table 3:** Drill hole location data for the metallurgical holes

## Previously Released ASX Material References

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

ASX: NST 5 March 2012
ASX: KZR 23 June 2020
ASX: KZR 11 March 2022

**Table 4:** Ashburton Gold Project (JORC Code 2012) Mineral Resources

| ASHBURTON GOLD PROJECT MINERAL RESOURCES | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | INDICATED | | | INFERRED | | | TOTAL | | | |
| | Tonnes (000's) | Grade (g/t) | Ounces (000's) | Tonnes (000's) | Grade (g/t) | Ounces (000's) | Tonnes (000's) | Grade (g/t) | Ounces (000's) | Cut off Grade |
| Mt Olympus | 6,038 | 2.3 | 448 | 9,138 | 2.2 | 632 | 15,176 | 2.2 | 1,080 | 0.7 g/t Au |
| Peake | 113 | 5.2 | 19 | 3,544 | 3.3 | 380 | 3,657 | 3.4 | 399 | 0.9 g/t Au |
| Waugh | 347 | 3.6 | 40 | 240 | 3.6 | 28 | 587 | 3.6 | 68 | 0.9 g/t Au |
| Zeus | 508 | 2.1 | 34 | 532 | 2.2 | 38 | 1,040 | 2.2 | 72 | 0.9 g/t Au |
| Romulus | - | - | - | 329 | 2.6 | 27 | 329 | 2.6 | 27 | 0.9 g/t Au |
| **TOTAL RESOURCES** | **7,006** | **2.4** | **541** | **13,783** | **2.5** | **1,105** | **20,789** | **2.5** | **1,646** | |

The material in this announcement that relates to the Mineral Resources for the Ashburton Gold Project is based on information announced to the ASX on 23 June 2020. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply.

This announcement has been approved for release to the ASX by the Board of Kalamazoo Resources Limited.

For further information, please contact:


**Luke Reinehr**
Chairman/CEO
luke.reinehr@kzr.com.au

**Victoria Humphries**
Media & Investor Relations
victoria@nwrcommunications.com.au

**Tom Whiting**
Taylor Collison
twhiting@taylorcollison.com.au


## About Kalamazoo Resources Limited

Kalamazoo Resources Limited (ASX: KZR) is an ASX-listed exploration company with a portfolio of high-quality gold and lithium projects in Victoria and the Pilbara, WA. Kalamazoo is exploring at its 100% owned Castlemaine Goldfield (historical production of ~5.6Moz Au) and south of the Maldon Goldfield (historical production of ~2Moz) near the world class Fosterville gold mine in Victoria. In the Pilbara, Kalamazoo's extensive exploration program is advancing the 100% owned Ashburton Gold Project to further increase the 1.65Moz Au resource and progress development plans. Kalamazoo's lithium projects include the DOM's Hill and Marble Bar Lithium Projects in an exploration joint venture with the major Chilean lithium producer Sociedad Química y Minera de Chile S.A. (**SQM**) (NYSE: SQM) and the 100% owned Pear Creek Lithium Project.

Kalamazoo has become the first gold and lithium explorer operating in Australia to be certified carbon neutral for its business operations under the Federal Government's Climate Active Program, with projected 2022 emissions fully offset achieved with a verified environmental reforestation program in Western Australia.

## 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 - Western Australia Gold Projects 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 at the Ashburton Project is based on information compiled by Dr Damien Keys, a competent person who is a Member of Australian Institute of Geoscientists. Dr Keys is an employee of Complete Target Pty Ltd who is engaged as a consultant to Kalamazoo Resources Limited. Dr Keys 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'. Dr Keys 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 report that relates to metallurgical test work results is based on information reviewed by Mr David Pass, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Pass is an employee of Battery Limits. Mr Pass has sufficient experience relevant to the mineralogy and type of deposit under consideration and the typical beneficiation thereof to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Mr Pass consents to the inclusion in the report of the matters based on the reviewed 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 a number of factors which are outside the control of the Company and its Directors, staff, and contractors.

## Response to COVID-19

Kalamazoo has been proactively managing the potential impact of COVID-19 and has developed systems and policies to ensure the health and safety of its employees and contractors, and of limiting risk to its operations. These systems and policies have been developed in line with the formal guidance of State and Federal health authorities and with the assistance of its contractors and will be updated should the formal guidance change. Kalamazoo's first and foremost priority is the health and wellbeing of its employees and contractors.

To ensure the health and wellbeing of its employees and contractors, Kalamazoo has implemented a range of measures to minimise the risk of infection and rate of transmission to COVID-19 whilst continuing to operate. All operations and activities have been minimised only to what is deemed essential. Implemented measures include employees and contractors completing COVID-19 risk monitoring, increased hygiene practices, the banning of non-essential travel for the foreseeable future, establishing strong infection control systems and protocols across the business and facilitating remote working arrangements, where practicable and requested. Kalamazoo will continue to monitor the formal requirements and guidance of State and Federal health authorities and act

## JORC Code, 2012 Edition – Table 1 Report
## Ashburton Mt Olympus Deposit
## Section 1 Sampling Techniques and Data
(Criteria in this section apply to all succeeding sections.)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Sampling techniques** | Nature and quality of sampling (e.g., cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. | Samples referred to in this report are reverse circulation drill cuttings.<br>Magnetic susceptibility measurements are taken on reverse circulation offcut sample bags using a KT-10 magnetic susceptibility meter. |
| | Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. | The RC samples were taken with a reverse circulation rig-mounted static cone splitter with the aperture set to yield a primary sample of approximately 3kg for every metre.<br>The splitter apparatus was cleaned by washing with water at the end of each hole as a minimum.<br>Wet and dry sample condition was recorded for each sample based on visual inspection. |
| | Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information. | Reverse circulation drilling to industry standards was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g charge for fire assay. |
| **Drilling techniques** | Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.). | Reverse circulation drilling was carried out using a face sampling hammer and a 5-inch diameter bit. |
| **Drill sample recovery** | Method of recording and assessing core and chip sample recoveries and results assessed. | Approximate recoveries were recorded on formatted paper sheets as percentage ranges based on a visual estimate of the offcut sample bag and entered in excel spreadsheets for transfer and storage in the SQL database. |
| | Measures taken to maximise sample recovery and ensure representative nature of the samples. | The reverse circulation drill rig used auxiliary compressors and high-pressure booster units to keep samples dry in most circumstances.<br>Where water was encountered the hole was flushed with compressed air at the end of each sample.<br>Where excessive water resulted in very wet samples with minimal recovery the drill hole was ended. |
| | 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. | Increased water was occasionally encountered around ore zones with very low to nil recoveries occurring rarely in very wet samples.<br>The relationship between sample recovery and grade has not been investigated at the time of this report writing. |
| **Logging** | Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. | Logging of reverse circulation cuttings was carried out on a metre-by-metre basis and at time of drilling.<br>The logging was completed by a qualified Geologist to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. |
| | Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. | Geological logging recorded qualitative descriptions of lithology and mineralogy and quantitative descriptions of veining, sulphides and lithology with visual estimates of percentages for sulphide and quartz.<br>All reverse circulation cuttings were washed and stored in 1m compartmentalised chip trays and photographed. The chip trays are archived on site at the Ashburton Project. |
| | The total length and percentage of the relevant intersections logged. | 100% of reverse circulation drilling is logged. |
| **Sub-sampling techniques and sample preparation** | If core, whether cut or sawn and whether quarter, half or all core taken. | No core samples are used for this report |
| | If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. | Reverse circulation rig-mounted static cone splitter used for dry and wet 1m RC samples and a sampling tube used for dry and wet composite sampling. |
| | For all sample types, the nature, quality and appropriateness of the sample preparation technique. | RC chip 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.<br>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.<br>The sample preparation technique is industry standard for Fire assay.<br>The same or similar sample preparation is stated in previous Resource Estimates or otherwise assumed for older pre- KZR samples. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | |
| | Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. | KZR 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 1m sampling<br>Pre KZR QAQC data is available to KZR but has not been reviewed at the time of this report |
| | Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate / second-half sampling. | Field duplicate reverse circulation samples are taken from the cone splitter at a ratio of 1:25 samples for standard 1m sampling.<br>Field duplicates were inserted at a ratio of 1:50 samples for composite sampling. |
| | Whether sample sizes are appropriate to the grain size of the material being sampled. | Sample sizes are considered appropriate. |
| **Quality of assay data and laboratory tests** | The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. | For all reverse circulation (RC) samples, gold concentration is determined by fire assay using the lead collection technique with a 30-gram sample charge weight. An AAS finish is used to determine total gold. |
| | 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. | Magnetic susceptibility measurements were taken with a TERRAplus KT-10v2 Magnetic Susceptibility Meter.<br>• Sensitivity: $1x10^{-6}$ SI Units<br>• Measurement range: $0.001x10^{-3}$ to $1999.99 x10^{-3}$ SI Units Auto-Ranging<br>• Operating frequency: 10 kHz<br>• Measurement frequency: 20 times per second in scan mode, 5 readings averaged together and 4 readings /second stored |
| | Nature of quality control procedures adopted (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established. | The field QAQC protocols used include the following for drill samples:<br>• Duplicate samples are taken from the cone splitter at an incidence of 1:25 samples for 1m sampling<br>• Duplicates are taken by sampling tube at an incidence of 1:50 samples for composite sampling<br>• Duplicates are taken by riffle splitter at an incidence of 1:25 samples for 1m resampling of composited intervals<br>• Coarse crushed feldspar blanks are inserted at an incidence of 1:25 samples,<br>• Commercially prepared certified reference materials (CRM) are inserted at an incidence of 1:20 samples for 1m sampling<br>• The CRM used is not identifiable to the laboratory<br>• Digital sample submission forms with sample identification numbers, number of samples and sample preparation and assay methods were provided to the lab with the samples<br>The laboratory QAQC protocols used include the following for all drill samples:<br>• Repeat analysis of pulp samples occurs at an incidence of 2 in 50 samples,<br>• Screen tests (percentage of pulverised sample passing a 85µm mesh) are undertaken on 1 in 50 samples,<br>• The laboratories own standards are loaded to the KZR database,<br>KZR's QAQC data is assessed on import to the database and QAQC reports are generated after several batches (~2000 samples) of assays have been loaded or as required.<br>QAQC reports utilise grade plots for blanks and CRM standards and XY plots for duplicates.<br>Reports on the QC sample assay results indicate that an acceptable level of accuracy and precision has been achieved.<br>The same or similar QAQC protocols of previous operators is stated in previous Resource Estimates or otherwise assumed to be industry standard for pre- KZR samples. |
| **Verification of sampling and assaying** | The verification of significant intersections by either independent or alternative company personnel. | The significant intercepts have not been verified by alternative company personnel or independently since receipt of the assay results. |
| | The use of twinned holes. | There are no purpose twinned holes. |
| | Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. | Field data for RC 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 RockSolid Data Consultancy.<br>RockSolid Data Consultancy perform data QC checks before loading the data to the SQL database<br>Hard copies of KZR assays and surveys are kept at head office once completed. |
| | Discuss any adjustment to assay data. | No adjustments are made to assay data.<br>Rare CRM swaps are identified in the QAQC process and the correct CRM sample updated in the database. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Location of data points** | Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. | Collar positions were surveyed using a hire DGPS with better than 30cm accuracy and recorded in MGA94 Zone 50 grid.<br>Drill rig alignment was achieved using a handheld Suunto sighting compass.<br>Down hole surveys are taken every 30m with a True North seeking Gyro. Surveys were occasionally taken more frequently to monitor deviation. |
| | Specification of the grid system used. | MGA94 grid, zone 50 |
| | Quality and adequacy of topographic control. | Topographic control is from the Fugro 2006 Aerial photo data. |
| **Data spacing and distribution** | Data spacing for reporting of Exploration Results. | Drill holes were placed approximately 50m apart for the purposes of this program but were designed to intersect a number of different zones (wireframes) within the Mt Olympus resource |
| | 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. | The current drill holes spacing has not been used to estimate Mineral Resource or Ore Estimates. The holes were purely designed to obtain sample for metallurgical test work. |
| | Whether sample compositing has been applied. | No compositing was applied to these holes (KARC0035 and KARC0036) |
| **Orientation of data in relation to geological structure** | Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. | The orientation of sampling was tangential to the interpreted mineralisation zones or close to it. Drilling adjacent to pit walls was a constraint but the holes were designed at steep dips to intersect as many zones as possible |
| | If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. | The orientation achieves unbiased sampling of all mineralisation to the extent that this is known. |
| **Sample security** | The measures taken to ensure sample security. | All samples are bagged in tied numbered calico bags and grouped in larger tied numbered plastic poly weave bags at the rig. The plastic poly weave bags were placed in large 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 consignment note and receipted by an external and independent laboratory.<br>All sample submissions were emailed to the lab and hard copies accompanied the samples and all assay results were returned via email.<br>Sample pulp splits are returned to KZR via return freight and stored at a storage facility in Cockburn. |
| **Audits or reviews** | The results of any audits or reviews of sampling techniques and data. | No audits or reviews of the sampling techniques were undertaken at the time of this report.<br>Previous Northern Star Resources sample data was extensively QAQC reviewed both internally and externally.<br>Northern Star Resources found data audits and QAQC by earlier operators to be minimal but at industry standards of the time. |

## Section 2 Reporting of Exploration Results

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Mineral tenement and land tenure status** | Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. | M52/639 is wholly owned by Kalamazoo Resources Limited ("KZR") and is in good standing. Along with other tnements held by KZR within the Ashburton Gold Project<br>The drilling program referred to in this announcement occured within M52/639 and there are no heritage issues with the prospect or tenement.<br>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. |
| | 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. | M52/639 was granted in 1996, renewed in 2018, now expiring on 27/05/2039. |
| **Exploration done by other parties** | Acknowledgment and appraisal of exploration by other parties. | Data relevant to this prospect was predominantly collected by SIPA who operated the Mt Olympus Mine from start up to closure in 2004 and by Northern Star Resources who completed extensive down-plunge drilling between 2010 and 2012.<br>Kalamazoo acquired a substantial drill hole and surface geochemical database from Northern Star Resources. Historical drill holes and surface stream, soil and rock chip samples within this database are regularly used by Kalamazoo and are part of its ongoing exploration activities. |
| **Geology** | Deposit type, geological setting and style of mineralisation. | The Mt Olympus deposit is the main deposit within the Ashburton Gold Project. Gold mineralisation is hosted in transitional and primary mineralisation as a result of previous mining by Sipa Resources Ltd that mined the oxide portion of the deposit. The Mount Olympus deposits is a medium grade, structurally controlled, sediment hosted epigenetic gold deposit. Mineralisation is hosted mainly by thick tensional quartz veins cross cutting bedding parallel shears. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Drill hole Information** | A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:<br>o easting and northing of the drill hole collar<br>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar<br>o dip and azimuth of the hole<br>o down hole length and interception depth<br>o hole length. | As provided for KZR drilled holes in the text of the release.<br>Historical drill hole information is provided in the drill hole database acquired from Northern Star Resources. |
| | 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. | The inclusion of other holes within the drill database is not warranted for this release as it only relates to drilling done by KZR for the purposes of obtaining samples for metallurgical test work. |
| **Data aggregation methods** | In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., cutting of high grades) and cut-off grades are usually Material and should be stated. | Significant intercepts in Table 1 are calculated by weighted averages with a minimum cut off of 0.5g/t Au.<br>No high cut was applied to the data and anomalously high maximum values were reported. |
| | 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. | See Other Substantive Exploration Data below for intercept selection criteria |
| | The assumptions used for any reporting of metal equivalent values should be clearly stated. | No metal equivalents are reported. |
| **Relationship between mineralisation widths and intercept lengths** | These relationships are particularly important in the reporting of Exploration Results: | See below |
| | If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. | Vertical drill holes intersect the mineralisation at different angles depending on the orientation of the zone intersected. However, an estimate of angle of intersection is approximately 45 degrees |
| | If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g., 'down hole length, true width not known'). | As provided |
| **Diagrams** | Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. | As provided. |
| **Balanced reporting** | Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results. | Not applicable in this case. See below for selection criteria based on gold/sulphur ratio. |
| **Other substantive exploration data** | Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. | The aim of the test work was to assess the likely gravity recoverable gold in an open circuit test environment as a percentage of the total gold recovered and to assess the effect of grind size with respect to recovered gold, with an emphasis on grade recovered to concentrate.<br>This initial testwork utilised two RC holes drilled through several zones from the floor of the Mt Olympus open pit. The holes were drilled specifically for metallurgical testwork purposes and were designed to provide a broad coverage through the deposit, targeting four (4) separate interpreted zones with multiple intersections where possible.<br>The composites where also chosen according to the gold/sulphide sulphur ratio to determine the metallurgical behaviour of the different mineralisation styles. In many refractory deposits, the gold/sulphide sulphur ratio will often determine the ability of an ore to be upgraded via flotation and therefore the value of each tonne of ore extracted.<br>For the testwork subject of his announcement, Composites 3 and 4 were chosen, being the low gold / high sulphur and low gold / low sulphur composites respectively.<br>After a re-grind of the rougher concentrate to 45 microns (µm), the combined mass pull from Composites 3 and 4 was reduced from an average of 13.6% to 11.5% with an increase in average grade from 29.3 g/t to 31.3 g/t gold. The results also indicate an improved silica ($SiO_2$) rejection. However, this was accompanied by a loss of sulphur recovery. Composite 3 results indicated a loss in gold grade (from 19.4 g/t to 17.2g/t Au) due to lower sulphur recovery. This can also be explained by the difference in gold / sulphur ratio between Composite 3 and 4, with the higher sulphur values in Composite 3 having a more pronounced effect on gold recovery as a result of the loss in sulphur recovery.<br>Stage 2 gravity testwork was also conducted on all four of the original composites from Stage 1.<br>In summary, results were consistent across the four composites with average gravity gold to concentrate recovery of 26%. Leach recovery of that concentrate averaged 23% and is consistent with the metallurgical test work conducted by Northern Star in 2012. Overall recoverable leachable gold from gravity concentrate averaged 5.9%.<br>Results from both the Stage 1 and Stage 2 initial metallurgical test work conducted by Kalamazoo confirms that the preferred flow sheet for these samples is the simplest. Namely:<br>1. Crush – grind to 106 µm<br>2. Rougher float<br>3. Multi-stage re-clean float<br>4. Possible leach of float tail (not tested) |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | Kalamazoo considers that a simple, easily operable, well understood process flow sheet is the preferred option for any potential future development of the sulphide resources at the Ashburton Gold Project. Further composites would need to be derived, particularly for the Peake deposit which contains the next largest resource base of the four deposits within the Ashburton Gold Project. |
| **Further work** | The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). | Additional work is planned<br>• Undertake lock cycle test to estimate overall flotation recovery<br>• Possible cyanide leach of flotation tail to estimate total recoverable gold<br>Derive diamond drill core composite samples for any further test work |
| | Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. | |