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**28 April 2022** **ASX/MEDIA RELEASE**

# ROUND OAK MINERALS RESERVE AND RESOURCE STATEMENTS

Aeris Resources Limited (ASX: AIS) (**Aeris** or the **Company**) is pleased to provide the Mineral Resource and Ore Reserve estimates for each of:

1. the Jaguar Operation in Western Australia, comprised of the Bentley, Turbo, Bentayga Hanging Wall, Teutonic Bore and Triumph Mineral Resource estimates (**Jaguar Operation**);

2. the operation in Mount Colin, in Northwest Queensland comprised of the resources at the active Mount Colin underground mine and the Barbara and LillyMay deposits at the Barbara Project to the south of the Mount Colin mine (**NW Queensland Operation**); and

3. the development project in Stockman, Victoria comprised of the Currawong, Wilga, Eureka and Bigfoot deposits (**Stockman Project**),

(together, the **Estimates**). These Estimates were prepared by Round Oak Minerals Pty Limited (**Round Oak**) under the ownership of Washington H. Soul Pattinson and Company Limited.

The Company's acquisition of Round Oak's operations (being the Jaguar Operation, the NW Queensland Operations and the Stockman Project) is subject to the satisfaction of conditions precedent and is currently expected to be complete by 1 July 2022 (see AIS announcement dated 28 April 2022 "Transformational Acquisition of Round Oak Minerals and $120 million Equity Raise").

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## COMPETENT PERSONS STATEMENTS

The Estimates are reported and classified in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves 2012 Edition (the **JORC Code**). Estimates are reported as per the dates in the table below. Each of the relevant Mineral Resource and Ore Reserve Estimates are detailed in Appendix 1.

The information in this document that relates to Mineral Resource Estimates and the Ore Reserve Estimates is based on information compiled by the following:

| Asset | Competent Person | Qualifications and Membership | Effective date of estimate |
|---|---|---|---|
| **Jaguar Operations** | | | |
| **Bentley** | Mineral Resources: Kelly Bennett | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| | Ore Reserves: Michael Leak | Fellow of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| **Triumph** | Mineral Resources: David Potter | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| **Turbo** | Mineral Resources: Kelly Bennett | Member of The Australasian Institute of Mining and Metallurgy | 14 December 2021 |
| **Bentayga Hanging Wall** | Mineral Resources: Kelly Bennett | Member of The Australasian Institute of Mining and Metallurgy | 18 December 2021 |
| **Teutonic Bore** | Mineral Resources: David Potter | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| **NW Queensland Operations** | | | |
| **Mt Colin** | Mineral Resources: David Potter | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| | Ore Reserves: John McKinstry | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| **Barbara (including LillyMay)** | Mineral Resources: David Potter | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| **Stockman Project** | | | |
| **Wilga and Currawong** | Mineral Resources: David Potter | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| | Ore Reserves: John McKinstry | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |
| **Eureka and Bigfoot** | Mineral Resources: David Potter | Member of The Australasian Institute of Mining and Metallurgy | 1 May 2021 |

Each of the competent persons identified above has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Each of the Competent Person's identified above has given consent to the inclusion of the Mineral Resources and/or the Ore Reserves in the form and context in which they appear.

While the Mineral Resource and Ore Reserve Estimates comply with the JORC Code, they may not comply with the relevant guidelines in other countries. You should not assume that quantities reported as 'resources' will be converted to reserves under the JORC Code or any other reporting regime.

# APPENDIX – ORE RESERVE AND MINERAL RESOURCE STATEMENTS

# Disclaimers

## Statement of Compliance with JORC Code Reporting

This Mineral Resource statement has been compiled in accordance with the guidelines defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

## Competent Persons Statement

The information in this report that relates to MREs for the Bentley, Turbo and Bentayga HW lenses within the Bentley Deposit is based on information compiled by Ms Kelly Bennett. Ms Bennett is a full-time employee of ROM and is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM), member number 320574. Ms Bennett has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person, as defined in the 2012 Edition of the JORC Code. As such, Ms Bennett, who is Principal Resource Geologist for ROM is taking the role of Competent Person and responsibility for reporting the Jaguar Operation's MRE in accordance with ASX and JORC Code requirements.

Ms Bennett has disclosed to the reporting company the full nature of the relationship between herself and the company, including any issue that could be perceived by investors as a conflict of interest.

Ms Bennett verifies that the Bentley, Turbo and Bentayga HW sections of this Report are based on and fairly and accurately reflects the form and context in which it appears, the information in the supporting documentation relating to Mineral Resources.

Mr David Potter (Head of Exploration and Geology - Round Oak Minerals) is the Competent Person for reporting the following resources in accordance with JORC Code requirements – Teutonic Bore, Triumph, Currawong, Wilga, Bigfoot/Eureka, Barbara, LillyMay and Mt Colin.  Mr Potter is a full-time employee of ROM and is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM), member number 112912. Mr. Potter 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 JORC Code.

Mr Potter has disclosed to the reporting company the full nature of the relationship between herself and the company, including any issue that could be perceived by investors as a conflict of interest.

Mr Potter verifies that the Teutonic Bore, Triumph, Currawong, Wilga, Bigfoot/Eureka, Barbara, LillyMay and Mt Colin sections of this Report are based on and fairly and accurately reflects the form and context in which it appears, the information in the supporting documentation relating to Mineral Resources.

Mr Michael Leak is the Competent Person for reporting Ore Reserve estimate for Bentley mine. Mr Leak is a full-time employee of Round Oak (Manager Mining Jaguar Operations) and is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM), member number 222700. Mr Leak has sufficient experience which is relevant to the style of mineralisation and type of deposit described in the report and the activity of underground mining to qualify as a Competent Person, as defined in the 2012 Edition of the JORC Code.

Mr Michael Leak has disclosed to the reporting company the full nature of the relationship between himself and the company, including any issue that could be perceived by investors as a conflict of interest.

Mr Michael Leak verifies that the Bentley deposit sections of this Report are based on and fairly and accurately reflects the form and context in which it appears, the information in the supporting documentation relating to Bentley deposit Ore Reserves.

Mr John McKinstry is the Competent Person for reporting Ore Reserve estimate for; Mount Colin, Wilga, and Currawong deposits. Mr John McKinstry was a full-time employee of Round Oak at time of preparing the estimates and is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM), member number 105824. Mr John McKinstry has sufficient experience which is relevant to the style of mineralisation and type of deposits described in the report and the activity of underground mining to qualify as a Competent Person, as defined in the 2012 Edition of the JORC Code.

Mr John McKinstry has disclosed to the reporting company the full nature of the relationship between himself and the company, including any issue that could be perceived by investors as a conflict of interest.

Mr John McKinstry verifies that the Mount Colin, Wilga and Currawong deposit Ore Reserve sections of this Report are based on and fairly and accurately reflects the form and context in which it appears, the information in the supporting documentation relating to Ore Reserves.

## Notes to Mineral Resource and Ore Reserve tables and quoted numbers.

1) The Mineral Resource estimates have been prepared in accordance with the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' [the JORC Code] and are set out in the attached Tables 1 to 21 and Appendices containing the relevant Table 1 information.
2) A full detailed table is presented in the Table 1 for each deposit at the end of this report
3) Mineral Resources are quoted at a A$100 Net Smelter Return (NSR) cut-off value that reflects current operational costs.
4) Where necessary they are depleted and sterilised for mining, up to 1$^{St}$ May 2021, unless stated otherwise.
5) They include Measured, Indicated and Inferred resource categories and, where reserves have been defined, are reported inclusive of Ore Reserves.
6) The NSR estimate considers metal recoveries associated with the production of copper and zinc concentrates and includes mill recoveries, road freight, wharfage, ship loading, sea freight treatment charges, refining costs and royalties. The specific formulas used are stated as a note in individual tables.
7) Contained metal does not imply process recoverable metal.
8) Variable metal recoveries have been used to reflect different material types and operational actuals and are stated as a note in individual resource estimation tables.
9) Gold is recovered and payable within the copper concentrate, whilst silver is recovered and payable within both the copper and zinc concentrates.
10) Lead is not a payable metal.
11) The NSR value is reported on value per dry metric tonne (dmt) basis.
12) Price and exchange assumptions are based on the average consensus prices derived from market data (Table 1 below). Resources are 10% over the Reserve which are based on FY23 consensus prices.
13) Minor differences in totals within tables are due to rounding.
14) Ore Reserves are quoted with A$NSR cut-off value that reflects the current operations cost or the estimate of costs in feasibility studies. The cut-off value varies with deposit.

➢ *Table 1: Assumed commodity prices and exchange rates adopted by Round Oak*

| Commodity | Units | Mineral Resources |
|---|---|---|
| Round Oak designation | | NSR_M |
| Copper | US$/t | 8,013.5 |
| Zinc | US$/t | 2,712.6 |
| Gold | US$/oz | 2,003.1 |
| Silver | US$/oz | 26.15 |
| A$:US$ exchange rate | | 0.76* |

## Executive Summary

Round Oak Metals (ROM or the Company) is the owner of a number of operating and development projects throughout Australia that includes the Jaguar Operation in Western Australia, the Mount Colin Operation in NW Queensland and the Stockman development project in Victoria.

This announcement provides an update to its resource base that supports these three Operations.

- Maiden Resource for Turbo Lens at Bentley deposit of 1.03mt @ 1.91 @ 1.91% Cu, 7.46% Zn, 38g/t Ag, 0.73g/t Au.
- Total Resources for the Jaguar Operation now stand at 6.97mt @ 1.06% Cu, 6.08% Zn, 79g/t Ag, 0.52g/t Au.
- Total Resources for the Stockman Project stand at 14.84mt @ 1.99% Cu, 4.20% Zn, 38g/t Ag, 1.09g/t Au.
- Total Resources for Northwest Queensland stand at 3.06mt @ 2.56% Cu, 1.61g/t Ag, 0.39g/t Au.
- Metal content within group mineral resource estimates of 454kt Copper, 1,047kt Zinc, 36.2Moz Silver, 675Koz Gold.

*Table 2: Total Group Resources by Operation*

| Operation | Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Jaguar | Measured | 580 | 1.04 | 7.34 | 0.58 | 119 | 0.99 | $310 | 6.0 | 43 | 3.4 | 2,219 | 18.5 |
| | Indicated | 1,888 | 0.68 | 8.36 | 0.63 | 117 | 0.69 | $292 | 12.9 | 158 | 12.0 | 7,117 | 41.9 |
| | Inferred | 4,501 | 1.23 | 4.96 | 0.26 | 58 | 0.39 | $225 | 55.2 | 223 | 11.8 | 8,399 | 56.1 |
| | **Subtotal** | **6,969** | **1.06** | **6.08** | **0.39** | **79** | **0.52** | **$250** | **74.1** | **424** | **27.2** | **17,736** | **116.4** |
| Stockman | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | Indicated | 12,400 | 2.05 | 4.34 | 0.73 | 39 | 1.02 | $244 | 253.6 | 538 | 90.8 | 15,628 | 408.4 |
| | Inferred | 2,438 | 1.73 | 3.49 | 0.69 | 34 | 1.43 | $212 | 42.2 | 85 | 16.8 | 2,652 | 111.8 |
| | **Total** | **14,838** | **1.99** | **4.20** | **0.73** | **38** | **1.09** | **$239** | **295.8** | **623** | **107.6** | **18,280** | **520.2** |
| NW QLD | Measured | 642 | 3.46 | - | - | - | 0.67 | $291 | 22.2 | - | - | - | 13.8 |
| | Indicated | 1,906 | 2.43 | - | - | - | 0.33 | $188 | 23.4 | - | - | 121 | 20.3 |
| | Inferred | 739 | 2.06 | - | - | - | 0.18 | $148 | 3.3 | - | - | 37 | 4.3 |
| | **Total** | **3,287** | **2.55** | **-** | **-** | **-** | **0.36** | **$199** | **48.9** | **-** | **-** | **159** | **38.4** |
| Total | Measured | 1,222 | 2.31 | 3.48 | 0.28 | 56 | 0.82 | $300 | 28.2 | 43 | 3 | 2,219 | 32 |
| | Indicated | 16,195 | 1.93 | 4.29 | 0.63 | 44 | 0.90 | $240 | 312.8 | 696 | 103 | 22,866 | 471 |
| | Inferred | 7,678 | 1.47 | 4.02 | 0.37 | 45 | 0.70 | $214 | 112.6 | 308 | 29 | 11,089 | 172 |
| **Total Metal** | | **25,094** | **1.81** | **4.17** | **0.54** | **45** | **0.84** | **$221** | **454** | **1,047** | **135** | **36,174** | **675** |

1) Refer to the notes in resource tables and quoted numbers.
2) Specifics for each of the individual mineral resource estimates are outlined below and within Table 1 appendices attached.

# 1. Jaguar Operation

The Jaguar Operation is located 60km north of the town of Leonora and 300km north of Kalgoorlie in Western Australia. Currently underground mining is conducted solely at the Bentley Deposit, which is one of four major base metal deposits on Round Oak's tenure.

There are three Mineral Resource estimates reported for the Jaguar Operation - Bentley (updated to include Turbo and the Bentayga Hangingwall (HW) Lenses), Teutonic Bore and Triumph. Remnant insitu material associated with the previously mined Jaguar deposit is currently not quoted as a resource.

As of 1 May 2021, the combined Mineral Resources for the Jaguar Operation, inclusive of the Ore Reserve, stood at 5.9Mt at 0.91% Cu, 5.75% Zn, 0.44% Pb, 85 g/t Ag and 0.48 g/t Au. With the recent addition of the Turbo and Bentayga HW Lenses at Bentley, this has increased to:

6.97 Mt at 1.06% Cu, 6.08% Zn, 0.39% Pb, 79 g/t Ag, 0.48 g/t Au

The recent addition of Turbo and Bentayga HW Lenses have not been subject to any depletion due to mining between 1 May 2021 and the date of their estimation at December 2021. The increased total Mineral Resource estimate is fully depleted as at the reporting date of 1 May 2021.

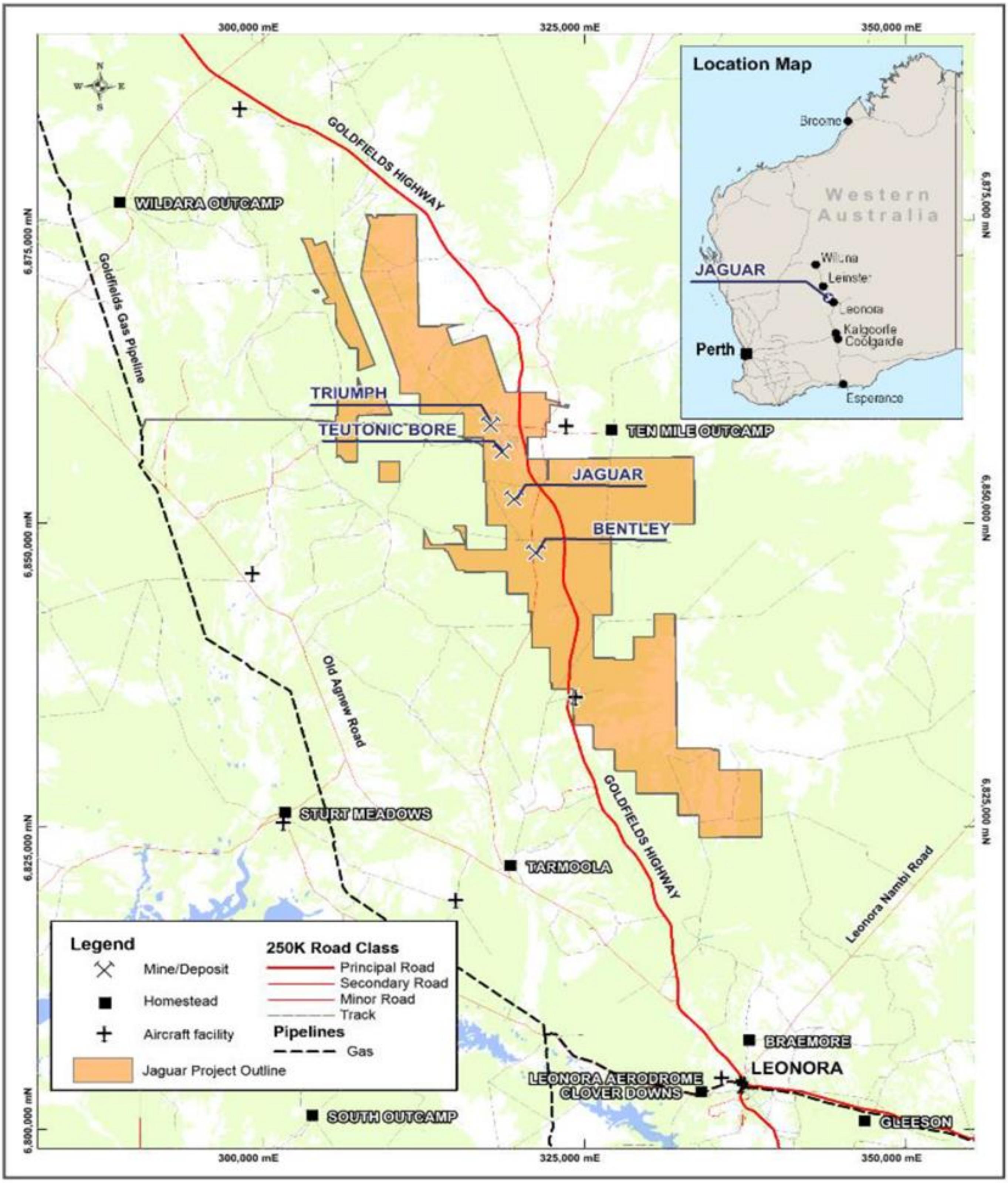
The Mineral Resource is reported relating to proportions of the Mineral Resource potentially extractable by underground and open pit mining methods and within resource confidence classification criteria as described in the JORC 2012 Code.

➢ *Table 3: Combined Mineral Resources for the Jaguar Operation at 1 May 2021 plus the new Turbo and HW Bentayga resources on a 100% equity basis*

| Resource Class | Tonnes (t) | Copper (%) | Zinc (%) | Lead (%) | Silver (g/t) | Gold (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured | 580 | 1.04 | 7.34 | 0.58 | 119 | 0.99 | $310 | 6 | 43 | 3 | 2,219 | 18.5 |
| Indicated | 1,888 | 0.68 | 8.36 | 0.63 | 117 | 0.56 | $292 | 13 | 158 | 12 | 7,117 | 34.2 |
| Inferred | 4,501 | 1.23 | 4.96 | 0.26 | 58 | 0.39 | $225 | 55 | 223 | 12 | 8,399 | 56.1 |
| **Total** | **6,969** | **1.06** | **6.08** | **0.39** | **79** | **0.48** | **$250** | **74** | **424** | **27** | **17,736** | **116.4** |

1) Resources stated at A$100_Net Smelter Return (NSR_M) where NSR is calculated from block model grades using the equation - NSR_M = cu_pct*71.16 + zn_pct*19.044 + ag_ppm*0.513 + au_ppm*38.452.
2) Processing recoveries for copper concentrate are 79% for Cu, 51.5% Ag 52.58% Au.
3) Processing recoveries for zinc concentrate are 48.3% for Zn, 21.5% Ag.
4) Processing recoveries are based on a proven blending strategy that the current operations use to process different fresh ore types and reflect the weighted average recoveries achieved.
5) Only fresh material is included

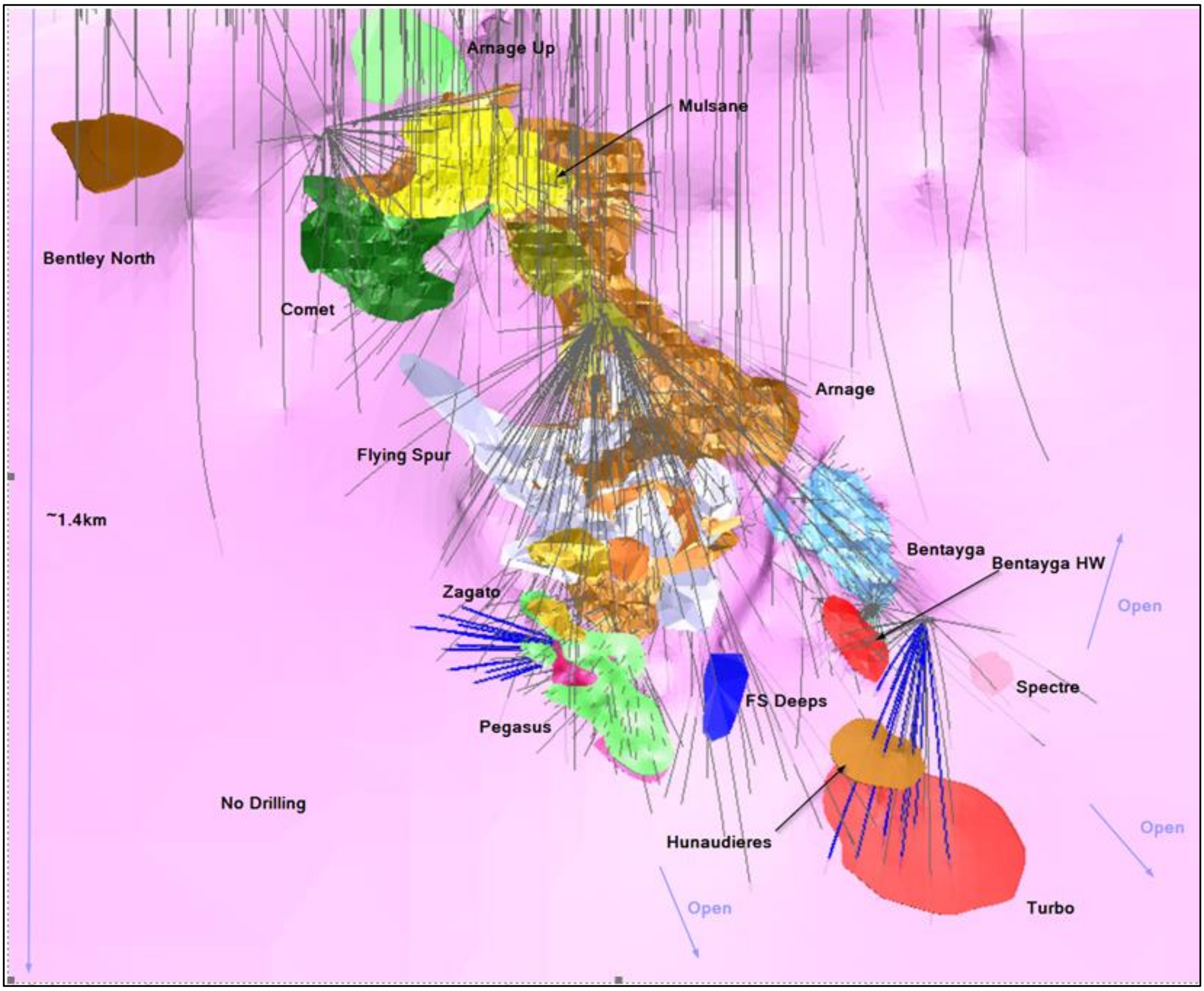
➢ *Figure 1: Location of the main mineral occurrences at the Jaguar Operations*



## 1.1. Bentley

The Bentley deposit has been continuously mined since late 2010 and consists of a number of individual massive sulphide lenses and associated stringer to disseminated material. The Turbo lens is the most recently defined lens from the company's continued exploration success, following maiden resources for Bentayga (2018) and Pegasus (2019).

➢ *Figure 2: Titled Long section (looking east) showing the various lenses and drill traces within the Bentley Deposit with the FW Rhyolite in pink*




The current quoted mineral resource estimate is a combination of an estimate as of 1[St] May 2021, depleted for mining and sterilisation, plus the unmined maiden resources for the Turbo and Bentayga HW lenses and stands at:

<u>3.15 Mt at 1.27% Cu, 7.99% Zn, 0.43% Pb, 96 g/t Ag, 0.91 g/t Au</u>

➢ *Table 4: Updated Resource for Bentley quoted at lower cut off of A$100NSR_M*

| Estimate | Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Bentley May 2021 | Measured | 580 | 1.04 | 7.34 | 0.58 | 119 | 0.99 | 313 | 6 | 43 | 3.4 | 2,219 | 18.5 |
| | Indicated | 574 | 1.07 | 9.52 | 0.70 | 139 | 1.06 | 369 | 6 | 55 | 4.0 | 2,563 | 19.5 |
| | Inferred | 924 | 0.82 | 7.57 | 0.54 | 110 | 0.94 | 295 | 8 | 70 | 5.0 | 3,268 | 27.9 |
| | **Total** | **2,078** | **0.95** | **8.04** | **0.60** | **121** | **0.99** | **320** | **20** | **167** | **12.4** | **8,050** | **66** |
| Turbo Dec 2021 | Measured | - | - | - | - | - | - | | - | - | - | - | - |
| | Indicated | - | - | - | - | - | - | | - | - | - | - | - |
| | Inferred | 1,029 | 1.91 | 7.46 | 0.03 | 38 | 0.73 | 326 | 20 | 77 | 0.3 | 1,257 | 24.2 |
| | **Total** | **1,029** | **1.91** | **7.46** | **0.03** | **38** | **0.73** | **326** | **20** | **77** | **0.3** | **1,257** | **24** |
| Bentayga HW Dec 20021 | Measured | - | - | - | - | - | - | | - | - | - | - | - |
| | Indicated | 40 | 1.66 | 18.2 | 1.77 | 324 | 1.21 | 678 | 1 | 7 | 0.7 | 412 | 1.5 |
| | Inferred | 4 | 0.89 | 16.8 | 1.78 | 315 | 1.04 | 586 | 0 | 7 | 0.1 | 37 | 0.1 |
| | Total | **43** | **1.59** | **18.1** | **1.77** | **323** | **1.20** | **670** | **1** | **7** | **0.3** | **449** | **1.7** |
| Total Bentley May 2021 | Measured | 580 | 1.04 | 7.34 | 0.58 | 119 | 0.99 | 313 | 6 | 43 | 3.4 | 2,219 | 18.5 |
| | Indicated | 613 | 1.11 | 10.1 | 0.77 | 151 | 1.07 | 389 | 7 | 62 | 4.7 | 2,975 | 21.1 |
| | Inferred | 1,957 | 1.39 | 7.53 | 0.27 | 73 | 0.83 | 312 | 27 | 153 | 5.4 | 4,562 | 52.2 |
| | Total | **3,150** | **1.27** | **7.99** | **0.43** | **96** | **0.91** | **327** | **40** | **251** | **13.0** | **9,756** | **92** |

1) Resources stated at A$100_Net Smelter Return (NSR_M) where NSR is calculated from block model grades using the equation - NSR_M = cu_pct*71.16 + zn_pct*19.044 + ag_ppm*0.513 + au_ppm*38.452.
2) Processing recoveries for copper concentrate are 79% for Cu, 51.5% Ag 52.58% Au.
3) Processing recoveries for zinc concentrate are 48.3% for Zn, 21.5% Ag.
4) Only fresh material is included.
5) The May 2021 MRE is depleted and sterilised for mining as at 1st May 2021.Turbo and Bentayga HW have not been mined.
6) Competent Person is Ms Kelly Bennett.

### 1.1.1. Bentley May 2021 MRE

The Bentley May 2021 MRE is an estimation of the various Bentley mineralisation lenses, excluding at that point in time, the undrilled Turbo and Bentayga HW lenses (Table 4 above).

The drilling database for the 2021 Bentley MRE was locked on the 23rd of March 2021. All assays up to and including hole 21BUDD042 were utilised for interpolation. All QAQC of drilling, underground and metadata was validated before the database was locked.

The estimate is based on 1,255 diamond drill holes and 6 reverse circulation (RC) holes with a combined length of 253,630 m. The majority of diamond drill holes are NQ2 (50.7 mm diameter core) or BQTK (40.7 mm diameter core) with lesser HQ (63.5 mm diameter core). The core was oriented and sample lengths were typically 1 m, ranging from 0.3 m to 1.3 m in length, with quarter core samples. Core recovery is excellent (approximately 99%).

#### 1.1.1.1. Block Model

Parent block size was assessed using Kriging Neighbourhood Analysis (KNA) whilst taking into account diamond drillhole spacing, level spacing, and the Bentley selective mining unit ‘SMU’ to deliver a parent block that is 15m in northing (Y), 1m in easting (X), and 15m in elevation (Z). The parent blocks have been divided by 8 in Y, 4 in X and 8 in Z to give a sub-block to fit the minimum mining width of 1.875m in northing, 0.25m in easting and 1.875m in elevation.

Wireframing was carried out using Surpac v6.6.2 or 2020, and statistical analysis was performed using Snowden Supervisor v8.13. A geological model has also been completed using Leapfrog Geo v5.0, to support the resource estimate.

The resource model has been depleted and sterilised up to 30th April 2021.

#### 1.1.1.2. Estimation

KNA was also performed to verify minimum and maximum number of drillholes used, and the discretisation level. All blocks require a minimum six samples and a maximum 36 samples to interpolate, with a minimum of two different drillholes being required. Variography was completed for each variable, in all domains, to inform the direction and search of the estimate.

The Bentley 2021 MRE uses an ordinary kriging (OK) estimation method, with interpolation constrained within wireframed mineralisation boundaries. Boundary analysis was completed on all domains to verify the use of hard boundaries for mineralisation estimates

Grades were estimated using the ordinary block kriging algorithms implemented in Surpac software using the top-cut composites for each respective domain, and the spatial models from variography as the inputs. A search limit by grade technique has been applied to attributes within domains, where required.

#### 1.1.1.3. Validation

Validation of the Bentley 2021 MRE was performed by production and analysis of swath plots for all variables in all domains, along with a visual inspection of the block model grade versus the diamond drill assays. All domain estimations were found to be satisfactory.

The Bentley 2021 MRE was reconciled against the CY2020 comparing the processing physicals and stockpiles against the mined voids spacing, shown in Table 5. This shows that the model generally predicted actuals within errors of margins for tonnes, zinc, silver and gold. It is felt the undercall in copper grades reflects local uplift in grades and/or unmodelled low copper grade adjacent to the mine voids is occurring as dilution material within the mined voids.

Issues with gold reconciliations are understood to be resulting from a lack of gold assays to inform the model (within these mined areas and subsequently rectified for future mining) and its notoriously nuggety mineralisation style which can make it difficult to get an accurate OK estimate to be sufficient.

➢ *Table 5: 2021 MRE reconciliation with CY20 mining physicals*

| | | Grades | | | | | Contained Metal | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tonnes | Cu (%) | Zn (%) | Pb (%) | Ag (ppm) | Au (ppm) | Cu (t) | Zn (t) | Pb (t) | Ag (kOz) | Au (Oz) |
| **Processing physicals** | 297,041 | 1.36 | 10.03 | 0.90 | 205 | 1.10 | 4,054 | 29,801 | 2,688 | 1,960 | 10,517 |
| **2021 MRE** | 289,015 | 1.19 | 10.33 | 1.05 | 192 | 1.22 | 3,425 | 29,847 | 3,043 | 1,784 | 11,362 |
| **Variance** | **103%** | **115%** | **97%** | **86%** | **107%** | **90%** | **118%** | **100%** | **88%** | **110%** | **93%** |

#### 1.1.1.4. Classification

Resource classification for the 2021 MRE is mainly dependent on the spatial density of composites informing the estimation, and the proximity of underground development drives.

• Measured mineral resource has been assigned where the drill spacing is <20m along strike and down dip, and there are development drives above and below the block.

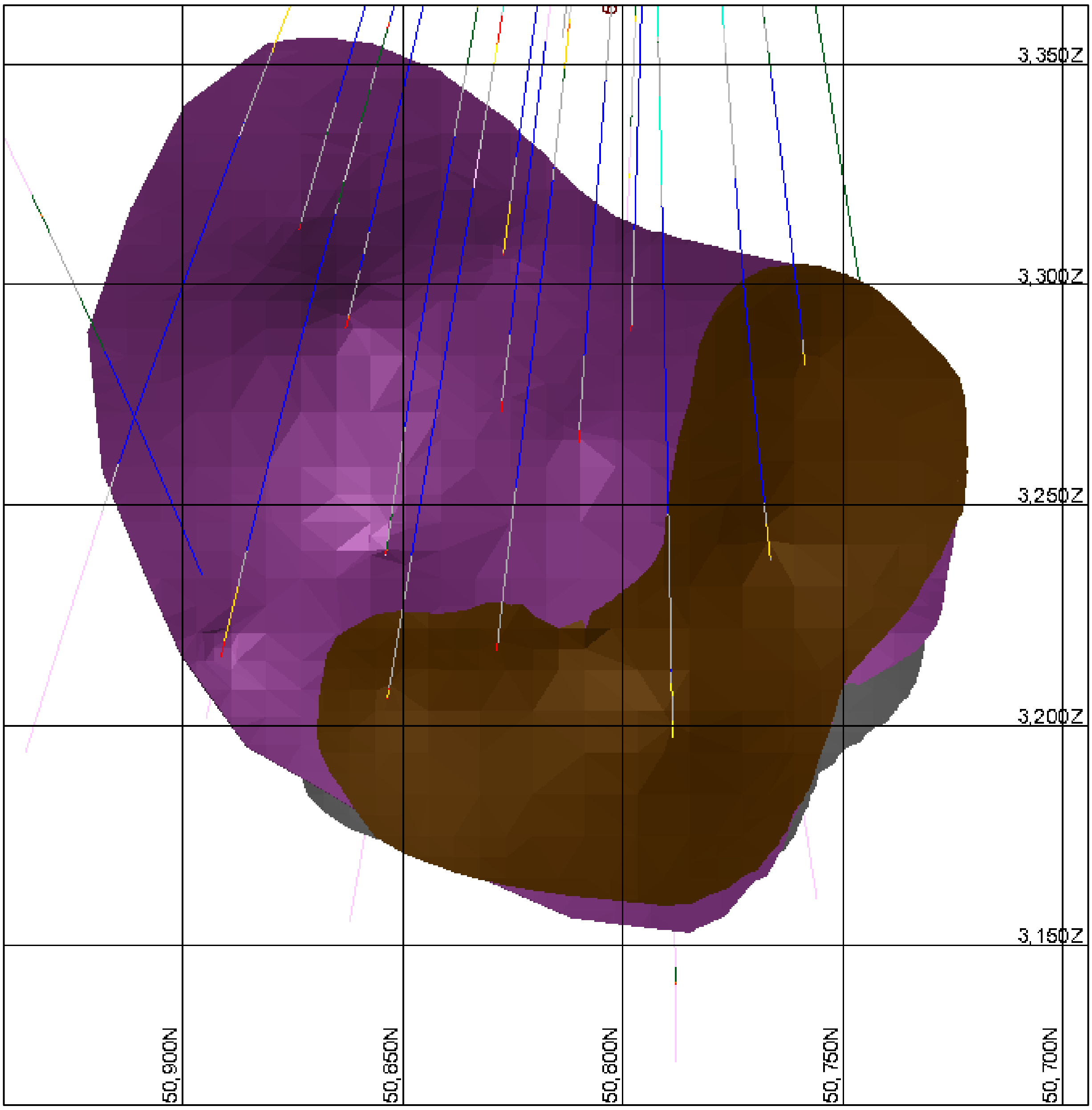
• Indicated mineral resource has been assigned where the drill spacing is <40m along strike and down dip.

• Inferred mineral resource has been assigned where drill spacing >40m along strike and down dip.

### 1.1.2. Turbo December 2021 MRE

As part of a new phase of underground exploration drilling, a follow up hole was drilled targeting favourable architecture beneath a drill hole that showed geological and geochemical indications that it was proximal to VHMS mineralisation. In November 2021, hole 20BUDD030 intersected downhole widths of 4.6m @ 2.69% Cu, 3.83% Zn, 0.01% Pb, 66g/t Ag, 1.01g/t Au from 324.5m depth, and 19.3m 9.82% Zn, 1.47% Cu, 0.3% Pb, 96g/t Ag, 0.67g/t Au from 360m depth. Follow up drilling occurred once a newly established hanging wall drill drive was completed in June 2021.

➢ *Figure 3: Long section (looking west) showing the drilling into the Turbo Lens (pink = massive, Brown = FW stringer)*




Drilling up to 4th December 2021 has delineated a maiden mineral resource estimate, reported in accordance with JORC 2012, for the Turbo Lens of:

<u>1.03mt @ 1.91% Cu, 7.46% Zn, 0.03% Pb, 38g/t Ag, 0.73g/ Au</u>

This resource was calculated independently and exclusively from the other lenses quoted in the Bentley 2021 MRE described above and the Bentayga HW below.

➢ *Table 6: Maiden Resource for Turbo lens, as at 14th December 2021*

| Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| Inferred | 1,029 | 1.91 | 7.46 | 0.03 | 38 | 0.73 | $323 | 19.7 | 76.8 | 0.31 | 1,257 | 24.2 |
| **Total** | **1,029** | **1.91** | **7.46** | **0.03** | **38** | **0.73** | **$323** | **19.7** | **76.8** | **0.31** | **1,257** | **24.2** |

1) Resources stated at A$100_Net Smelter Return (NSR_M) where NSR is calculated from block model grades using the equation - NSR_M = cu_pct*71.16 + zn_pct*19.044 + ag_ppm*0.513 + au_ppm*38.452.
2) Processing recoveries for copper concentrate are 79% for Cu, 51.5% Ag 52.58% Au.
3) Processing recoveries for zinc concentrate are 48.3% for Zn, 21.5% Ag.
4) Only fresh material is included.
5) Competent Person is Ms Kelly Bennett.

Drilling database for the 2021 Turbo MRE was locked on the 4th December 2021. All assays up to and including hole 21BUDD159 were utilised for interpolation, with the exception of holes 21BUDD152, 21BUDD156 and 21BUDD157 which do not have assays returned. All QAQC of drilling, underground and metadata was validated before the database was locked. Drill spacing is nominally on a 50m x 50m spacing. The database used contains a total of 5,666 holes, for a total of 342,364.73m.

Wireframing was carried out using Leapfrog 2021.1. Statistical analysis was performed using Snowden Supervisor v8.14. A geological model has also been completed using Leapfrog 2020.1, to support the resource estimate.

Only the Turbo position was estimated, with the Hunaudieres lens yet to be sufficiently drilled to conduct any estimation. Both lenses remain open down dip/ plunge to the north and south with excellent potential to increase tonnages.

## Block Model

Parent block size was assessed using Kriging Neighbourhood Analysis (KNA) whilst taking into account diamond drillhole spacing, level spacing, and the Bentley selective mining unit 'SMU' to deliver a parent block that is 15m in northing (Y), 1m in easting (X), and 15m in elevation (Z). The parent blocks have been divided by 8 in Y, 4 in X and 8 in Z to give a sub-block to fit the minimum mining width of 1.875m in northing, 0.25m in easting and 1.875m in elevation.

KNA has also been performed to verify minimum and maximum number of drillholes used, and the discretisation. All blocks require a minimum six samples and a maximum 36 samples to interpolate, with a minimum of two different drillholes being required.

There were no depletions required for this model.

## Estimation

The Turbo 2021 MRE has utilised ordinary kriging (OK) estimation to inform the model, with interpolation constrained within wireframed mineralisation boundaries. Boundary analysis was completed on all domains to verify the use of hard boundaries for mineralisation estimates.

Estimation was carried out using Surpac 2020, and statistical analysis was performed using Snowden Supervisor v8.14.

Variography was completed for each variable, in all domains, to inform the direction and search of the estimate. All domains were estimated successfully using OK, except density for Turbo Stringer, which was assigned using a regression calculation.

Grades were estimated using the ordinary block kriging algorithms implemented in Surpac software using the top-cut composites for each respective domain, and the spatial models from variography as the inputs.

## Validation

Validation of the Turbo 2021 MRE was performed by production and analysis of swath plots for all variables in all domains, comparing the declustered top cut composite means with the OK estimate means, along with a visual inspection of the block model grade versus the diamond drill assays. All domain estimations were found to be in line with expected error of margins (+/- 30%) relative to data accuracy, drill spacing, fill parameters and estimation method, with estimates for the primary economic metals all +/- 5% to declustered top cut composite means. No analysis back to production was done as no mining has taken place.

## Classification

- Despite the modelled grades validating very well the resource classification for the MRE, the resource has been classified as 100% Inferred reflecting the drill spacing being greater than 40m and the likelihood that the geometry of the ore (and thus tonnages) may change once infill drilling occurs.
-

### 1.1.3. Bentayga HW December 2021 MRE

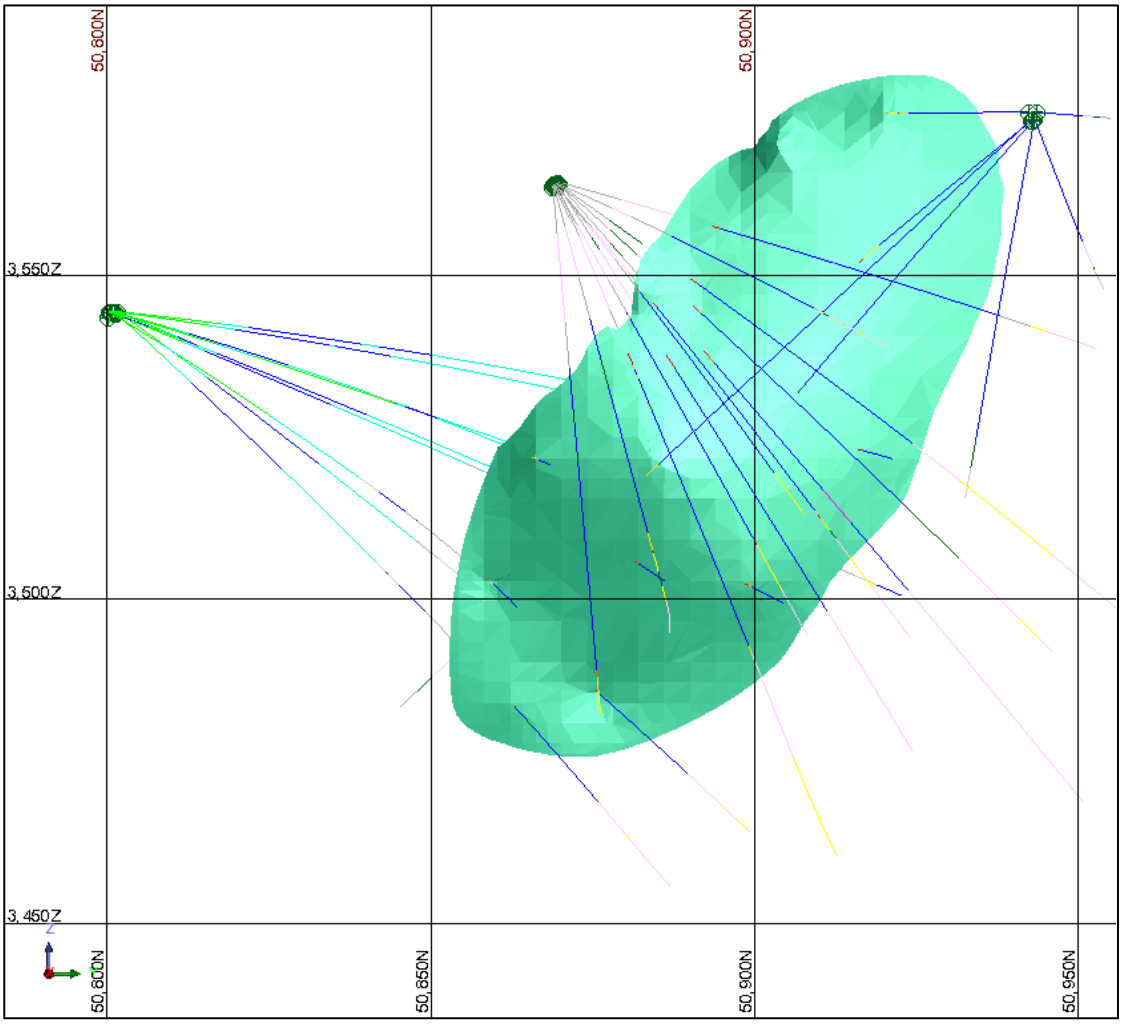
Drilling database for the 2021 Bentayga HW MRE was locked on the 18th December 2021. All QAQC of drilling, underground and metadata was validated before the database was locked.

Wireframing was carried out using Leapfrog 2021.1. Statistical analysis was performed using Snowden Supervisor v8.14. A geological model has also been completed using Leapfrog 2020.1, to support the resource estimate.

The 2021 Bentayga HW MRE wireframes are based on limited drillholes, largely drilled from the 3575 DDD. Drillhole spacing is currently variable, from ~8m x 8m up to ~30m x 30m, due to the intersecting drillholes generally targeting another lens. The database used contains a total of 5,690 holes, for a total of 345,015.27m.

A geological model has also been completed using Leapfrog Geo v5.0, to support the resource estimate.

➢ *Figure 4: Long section (looking east) showing the drilling into the HW Bentayga Lens*




➢ *Table 7: Maiden Resource for Bentayga HW Lens (estimate on 18th December 2021), valid at 1 May 2021*

| Estimate | Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bentayga HW Dec 20021 | Measured | - | - | - | - | - | - | | - | - | - | - | - |
| | Indicated | 40 | 1.66 | 18.2 | 1.77 | 324 | 1.21 | 678 | 1 | 7 | 0.7 | 412 | 1.5 |
| | Inferred | 4 | 0.89 | 16.8 | 1.78 | 315 | 1.04 | 586 | 0 | 7 | 0.1 | 37 | 0.1 |
| | Total | **43** | **1.59** | **18.1** | **1.77** | **323** | **1.20** | **670** | **1** | **7** | **0.3** | **449** | **1.7** |

1) Resources stated at A$100_Net Smelter Return (NSR_M) where NSR is calculated from block model grades using the equation - NSR_M = cu_pct*71.16 + zn_pct*19.044 + ag_ppm*0.513 + au_ppm*38.452.
2) Processing recoveries for copper concentrate are 79% for Cu, 51.5% Ag 52.58% Au.
3) Processing recoveries for zinc concentrate are 48.3% for Zn, 21.5% Ag.
4) Only fresh material is included.
5) No depletion due to mining
6) Competent Person is Ms Kelly Bennett.

## Block Model

Parent block size was assessed using Kriging Neighbourhood Analysis (KNA) whilst taking into account diamond drillhole spacing, level spacing, and the Bentley selective mining unit 'SMU' to deliver a parent block that is 15m in northing (Y), 1m in easting (X), and 15m in elevation (Z). The parent blocks have been divided by 8 in Y, 4 in X and 8 in Z to give a sub-block to fit the minimum mining width of 1.875m in northing, 0.25m in easting and 1.875m in elevation.

KNA has also been performed to verify minimum and maximum number of drillholes used, and the discretisation. All blocks require a minimum six samples and a maximum 36 samples to interpolate, with a minimum of two different drillholes being required.

- There were no depletions required for this model.
-

## Estimation

The Bentayga HW 2021 MRE has utilised ordinary kriging (OK) estimation to inform the model, with interpolation constrained within wireframed mineralisation boundaries.

Variography was completed for each variable in all domains to inform the direction and search of the estimate. All domains were estimated successfully using OK.

Bentayga HW has had a 'search limit by grade' applied to the OK estimation for Cu and Fe due to the presence of some extremely high-grade samples within the domain, to limit the smearing of those high grades into lower grade areas. The technique of limiting search distance by grade has been found to be effective at controlling the grade smearing to produce a more accurate model at a local scale. Boundary analysis was completed on all domains to verify the use of hard boundaries for mineralisation estimates.

Estimation was carried out using Surpac 2020, and statistical analysis was performed using Snowden Supervisor v8.14. Grades were estimated using the ordinary block kriging algorithms implemented in Surpac software using the top-cut composites for each respective domain, and the spatial models from variography as the inputs.

## Validation

Validation of the Bentayga HW 2021 MRE was performed by production and analysis of swath plots for all variables in all domains, along with a visual inspection of the block model grade versus the diamond drill assays. All domain estimations were found to be satisfactory. No analysis back to production was done as no mining has taken place.

## Classification

Resource classification for the 2021 MRE is mainly dependent on the spatial density of composites informing the estimation, and the fill pass for variables. As Bentayga HW is unmined, the highest resource classification assigned is Indicated.

• Indicated mineral resource has been assigned where the drill spacing is <40m along strike and down dip, and block is filled in pass one.

• Inferred mineral resource has been assigned where drill spacing >40m along strike and down dip, and block is filled in pass two or three.

### 1.2. Teutonic Bore

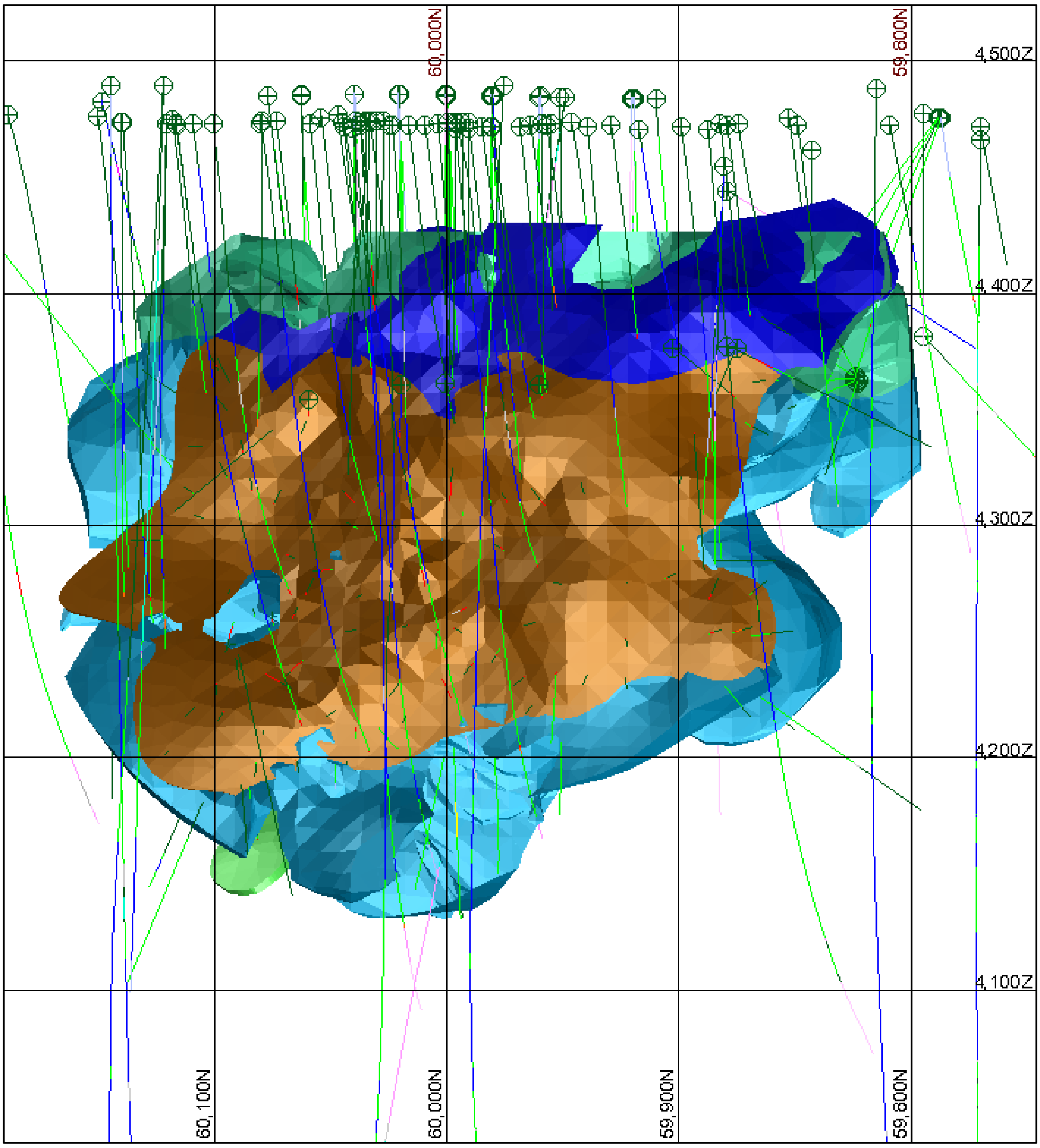
Drilling database for the 2021 Teutonic Bore (TB) update was exported from AcQuire on 16th August 2020. Surface drilling conducted since did not intercept the wireframes. Only diamond drilling assays were used for interpolation.

Wireframing was carried out using Leapfrog Geo v6.0 and estimation was carried out using Surpac 2020, geostatistical analysis was performed using Snowden Supervisor v8.13. The 2021 model captures all mineralisation envelopes at Teutonic Bore, shown below from the west, in Figure 5.

All QAQC of drilling and metadata was validated before the database was locked. Drilling has occurred from multiple locations, from both surface and underground, resulting in a variable drill spacing of 70m x 70m down to 10m x 10m.

The database used contains a total of 106,331.25m, for a total of 369 holes. Only diamond drillholes were used for interpolation.

- *Figure 5: Long Section of the different lenses at Teutonic Bore, looking east (brown = main lode fresh, dark blue = main lode weathered, light blue = fresh stringer, dark green = weathered stringer, light green = FW lode)*



➢ *Table 8: Resource for Teutonic Bore*

| Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| Inferred | 2,169 | 1.23 | 2.12 | 0.19 | 37 | 0.11 | $ 151 | 26.7 | 46 | 4.1 | 2,581 | 7.7 |
| **Total** | **2,169** | **1.23** | **2.12** | **0.19** | **37** | **0.11** | **$ 151** | **26.7** | **46** | **4.1** | **2,581** | **7.7** |

1) Resources stated at A$100_Net Smelter Return (NSR_M) where NSR is calculated from block model grades using the equation - NSR_M = cu_pct*71.16 + zn_pct*19.044 + ag_ppm*0.513 + au_ppm*38.452.
2) Processing recoveries for copper concentrate are 79% for Cu, 51.5% Ag 52.58% Au.
3) Processing recoveries for zinc concentrate are 48.3% for Zn, 21.5% Ag.
4) Competent Person is Mr David Potter.

## Block Model

Parent block size was assessed using Kriging Neighbourhood Analysis (KNA) whilst accounting for orebody geometry, diamond drillhole spacing and probable bench heights if mined in the future, to deliver a parent block that is 5m in northing (Y), 5m in easting (X), and 5m in elevation (Z). The parent blocks have been divided by 4 in in northing and elevation and 8 in easting, to give a sub-block of 1.25m in northing, 0.625m in easting and 1.25m in elevation.

KNA was performed to verify minimum and maximum number of drillholes used, and the discretisation level. All blocks require a minimum six samples and a maximum 33 samples to interpolate, with a minimum of two different drillholes being required.

The model was depleted for historical open pit and underground mining.

## Estimation

The Teutonic Bore update used an ordinary kriging (OK) estimation method, with interpolation constrained within wireframed mineralisation boundaries. Boundary analysis was completed on all domains to verify the use of hard boundaries for mineralisation estimates. Grade estimation was also restricted by weathering/copper species type using hard boundaries.

Variography was completed for each variable in the Main lode and the Stringer domains, where enough information was present, to inform the direction and search of the estimate. The Footwall lode did not have enough information to perform variography, so the variography from the Main Lode Fresh was used. All Main Lode and Stringer domains were estimated successfully using OK. The Footwall lode was assigned the average composite grades.

Grades in all domains were estimated using the ordinary block kriging algorithms implemented in Surpac software using the top-cut composites for each respective domain, and the spatial models from variography as the inputs.

## Validation

Validation of the Teutonic Bore update was performed by production and analysis of swath plots for all variables in all domains, along with a visual inspection of the block model grade versus the diamond drill assays. Domain estimations were found to validate within, or close to, +/- 10% tolerance.

## Classification

Resource classification for the update sits at 'inferred' level for all mineralisation. This is due to the lack of confidence around the historical information, and non-assayed drillholes that are modelled to be within high grade areas based off assays that are present, indicating that potentially, when the historical hole was drilled, there was not enough visual mineralisation to be deemed worth sampling. More work needs to be done in the database confidence space to bring parts of this resource to 'indicated' level.

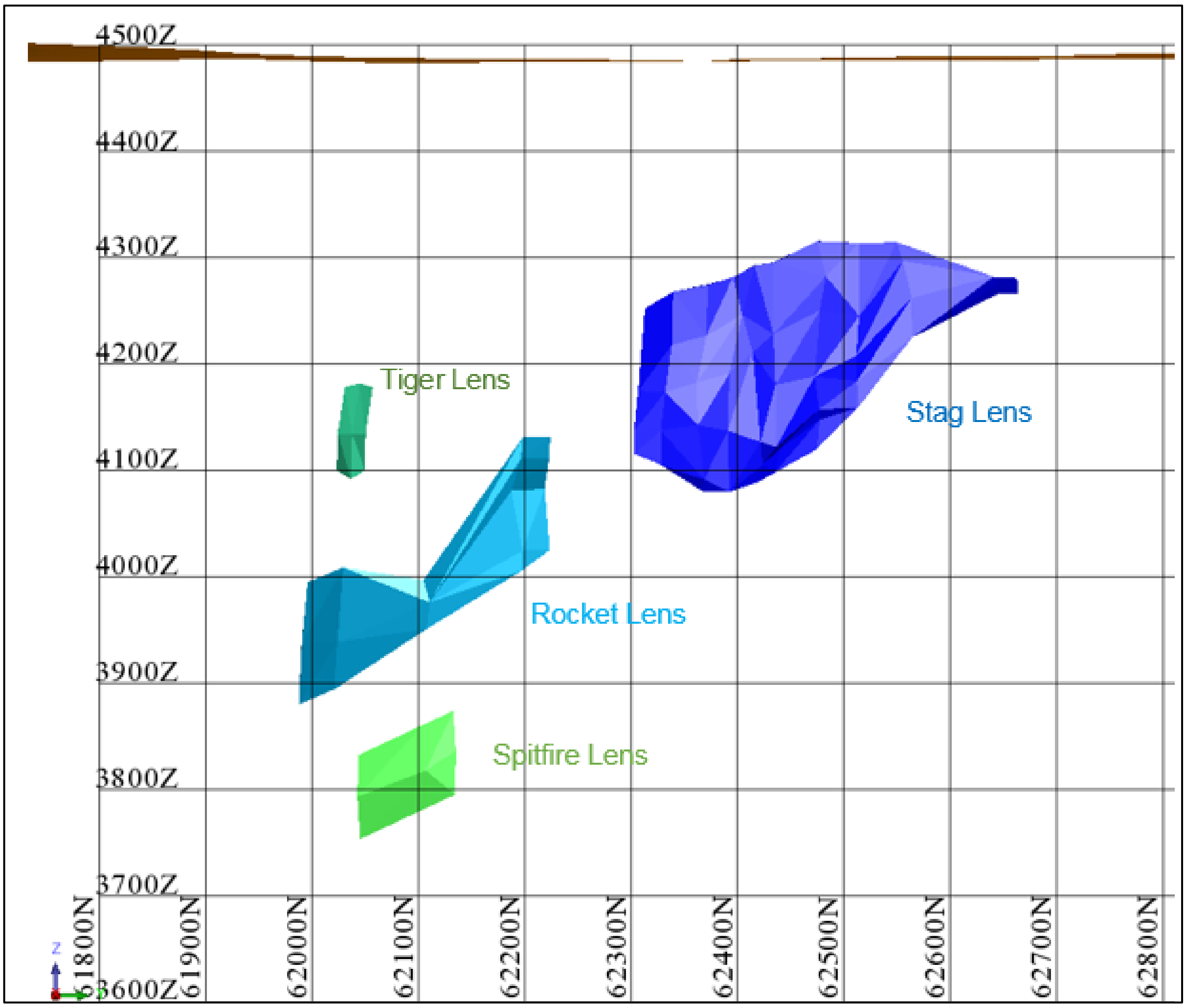
### 1.3. Triumph

The Triumph resource estimated is based on the estimation quoted by the previous owners Independence Group (IGO) to the ASX om the 23rd October 2017 titled "2017 Minerals Resources and Ore Reserves Update" but updated to reflect current NSR assumptions and requoted at a A$100 NSR_M cut-off.

The 2017 Triumph mineral resource estimate was generated from a three-dimensional block model created with Surpac Software, based on geological logging of diamond drill core to form lithological wireframe boundaries. These lithology boundaries are supported by statistical analysis as they represent the natural break in statistical domains mineralization.

The mineral resource estimate is based on 71 diamond and 19 RC drill holes, with a combined length of 40,073m. Of these, 13 holes, with a combined length of 4,435m, intersected mineralisation. The core diameter was HQ2 or HQ3 for surface drilling (63.5 mm and 61.1 mm core diameter). Core recovery averaged 98%. Core was typically oriented and sample lengths were approximately 1m, although sampling was based on geological contacts. Samples for assay were cut to quarter core, with the other half core being submitted for metallurgical testing, and the remaining quarter preserved.

➢ *Figure 6: Long Section of the different lenses at Triumph*



➢

➢ *Table 9: Resource for Triumph requoted to reflect updated NSR and new lower cut off NSR_M*

| Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| Indicated | 1,275 | 0.48 | 7.53 | 0.57 | 101 | 0.32 | 241 | 6 | 96 | 7 | 4,141 | 13 |
| Inferred | 375 | 0.34 | 8.03 | 0.59 | 107 | 0.32 | 244 | 1 | 30 | 2 | 1,289 | 4 |
| Total | 1,650 | 0.45 | 7.64 | 0.57 | 102 | 0.32 | 242 | 7 | 126 | 9 | 5,430 | 17 |

1) Resources stated at A$100 Net Smelter Return (NSR_M) where NSR is calculated from block model grades using the equation - NSR_M = cu_pct*71.16 + zn_pct*19.044 + ag_ppm*0.513 + au_ppm*38.452.
2) Processing recoveries for copper concentrate are 79% for Cu, 51.5% Ag 52.58% Au.
3) Processing recoveries for zinc concentrate are 48.3% for Zn, 21.5% Ag.
4) Competent Person is Mr David Potter.
5) The original estimations are attached as appendices.

## Block Model

Sub-blocks were set-up to reflect half the minimum mining width, with consideration of Kriging Neighbourhood Analysis (KNA). Parent block grades are assigned to sub-blocks within the parent block and the constraining wireframe. Sub-blocking is used for better volume resolution. Parent cell blocks of 15m (Y), 5m (X) and 15m (Z) with sub-blocks of 1.875m (Y), 0.625m (X) and 1.875m (Z) used.

There were no depletions required.

## Estimation

Wireframing and estimation was carried out using Surpac v6.6.2 and statistical analysis was performed using Snowden Supervisor v8.13. A geological model has also been completed using Leapfrog Geo v5.0, to support the resource estimate.

Variogram models were generated to determine parameters for appropriate orientation and distance of samples to inform the estimate.

The block model estimate for grade and bulk density used the ordinary block kriging algorithms implemented in Surpac software, using the top-cut composites for each respective domain, and the spatial models from variography as the inputs.

## Validation

Block model validation was initially completed by visually comparing the available sample and block model estimates on screen. The global sample and estimated grades were then compared, followed by swath plots to check that grade trends had been maintained. Domain estimations were found to validate within, or close to, +/-10% tolerance.

## Classification

Only the massive sulphide, stringer and disseminated sulphide lenses were considered as resource as the footwall stringer is not considered to be eventually economic.

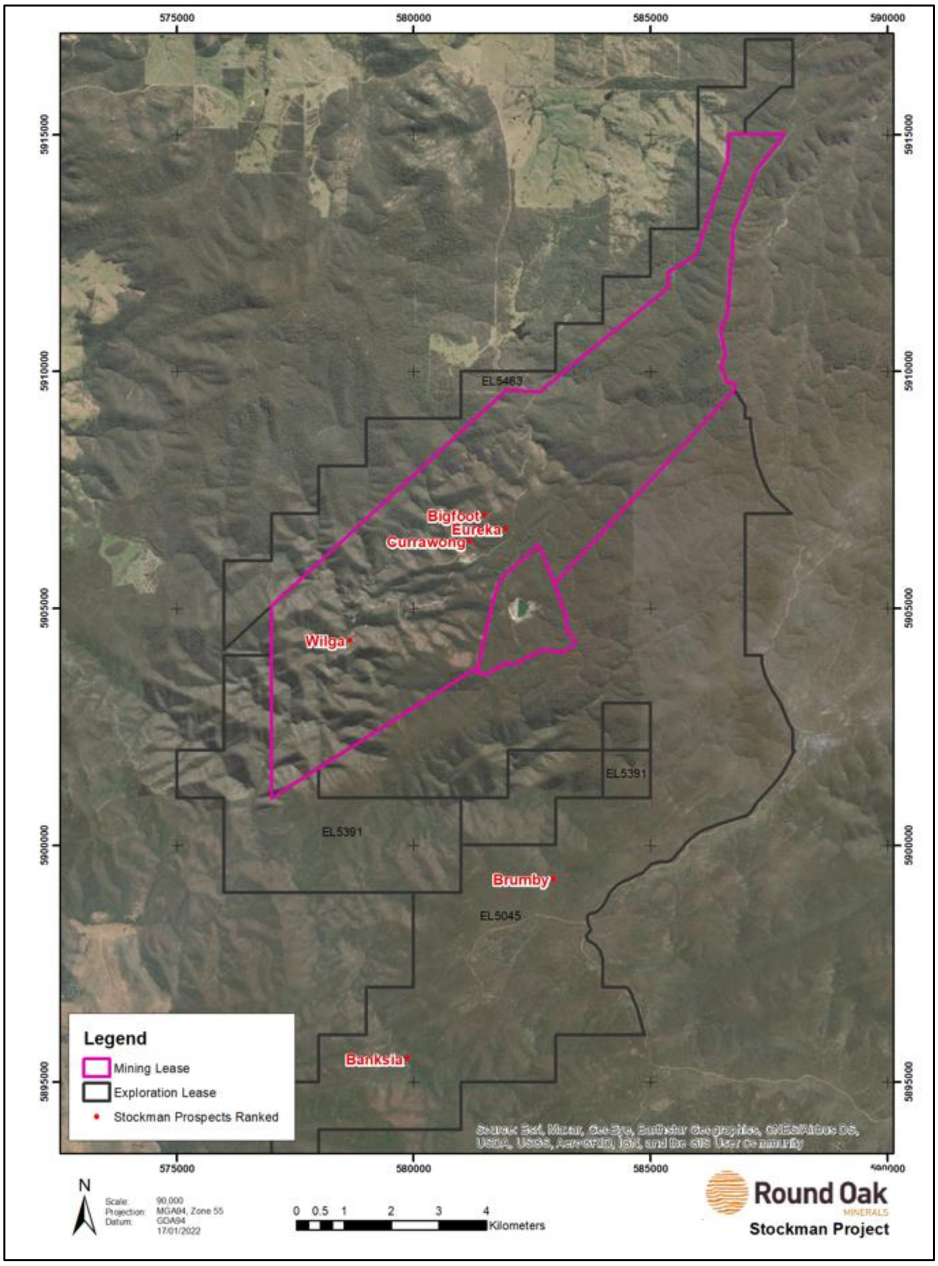
An Indicated classification was assigned where the drill spacing < 40m along strike and down dip, the kriging efficiency (KE) >0.3, regression slope (RS) >0.5, there is high to moderate confidence, and where grade and geological continuity can be assumed.

An Inferred classification was assigned where the drill spacing > 40m along strike or down dip, the KE <0.3, the RS <0.5, and where there is moderate to low confidence in grade and geological continuity. All of the Rocket and Spitfire lens massive sulphide has been classified as Inferred.

## 2. Stockman

The combined resource estimate is for the Currawong, Wilga, Eureka and Bigfoot deposits. The Currawong and Wilga resources are based on the estimations quoted by the previous owners Independence Group (IGO) in ASX Release dated 28th August 2014, titled "2014 Minerals Resources and Ore Reserves as at 30 June 2014" but updated to reflect current NSR assumptions and requoted at a A$100 NSR_M. The Eureka and Bigfoot deposits were estimated independently from this report.

➢ *Figure 7: Location of the known mineral occurrences within Stockman*



➢ *Table 10: Combined Resource for Stockman Operations requoted to reflect updated NSR*

| Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_ M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| Indicated | 12,400 | 2.05 | 4.34 | 0.73 | 39 | 1.02 | $244 | 254 | 538 | 91 | 15,628 | 408 |
| Inferred | 2,438 | 1.73 | 3.49 | 0.69 | 34 | 1.43 | $212 | 42 | 85 | 17 | 2,652 | 112 |
| **Total** | **14,838** | **1.99** | **4.20** | **0.73** | **38** | **1.09** | **$239** | **296** | **623** | **108** | **18,280** | **520** |

1) Resources stated at A$100 Net Smelter Return (NSR_M) where NSR is calculated from block model grades using an equation (70.023*Cu)+(16.648*Zn)+(0.366*Ag)+(14.054*Au)
2) Average Mill recoveries of payable metals: in copper concentrate - 80.6% Cu, 43.4% Ag, 21.3% Au. In zinc concentrate - 75.1% Zinc and 13.3% Ag.
3) The company has assumed that a stockpiling/blending strategy equivalent to that successfully used at its Bentley Operations will be implemented.
4) Competent Person is Mr David Potter.
5) The original estimations are attached as appendices.
6) See individual tables below for further details.

## 2.1. Currawong

The Currawong deposit consists of five stacked massive sulphide lenses (A, B, J, K and M), which are interpreted to have originally comprised a single lens. Subsequent thrust faulting has resulted in the current geometry. A stringer style mineralised zone exists in the footwall of the major massive sulphide lens (M Lens) as well as to the west of the M and A lenses.

The massive sulphide wireframes were constrained by geology and include both massive sulphide and semi-massive sulphide. The stringer zones at both Currawong and Wilga were defined using a cut-off grade of 0.5% Cu or 2% Zn. Wireframing was conducted in Surpac. Following completion of the massive sulphide wireframes described above, internal high grade Cu zones were created using a 1.2% Cu cut-off. These were created by digitising on section, by snapping to drillholes and were nested within the massive sulphide envelopes. The zones outside of these are termed high grade zinc zones. These wireframes were used to constrain the geostatistical and estimation process.

For resource estimation work, the database was exported to a Microsoft Access format. The database was frozen in time as at 14th May 2012. A total of 218 diamond drillholes (including wedges and abandoned holes) exist in the database totalling 62,613m of drilling.

### Block Model

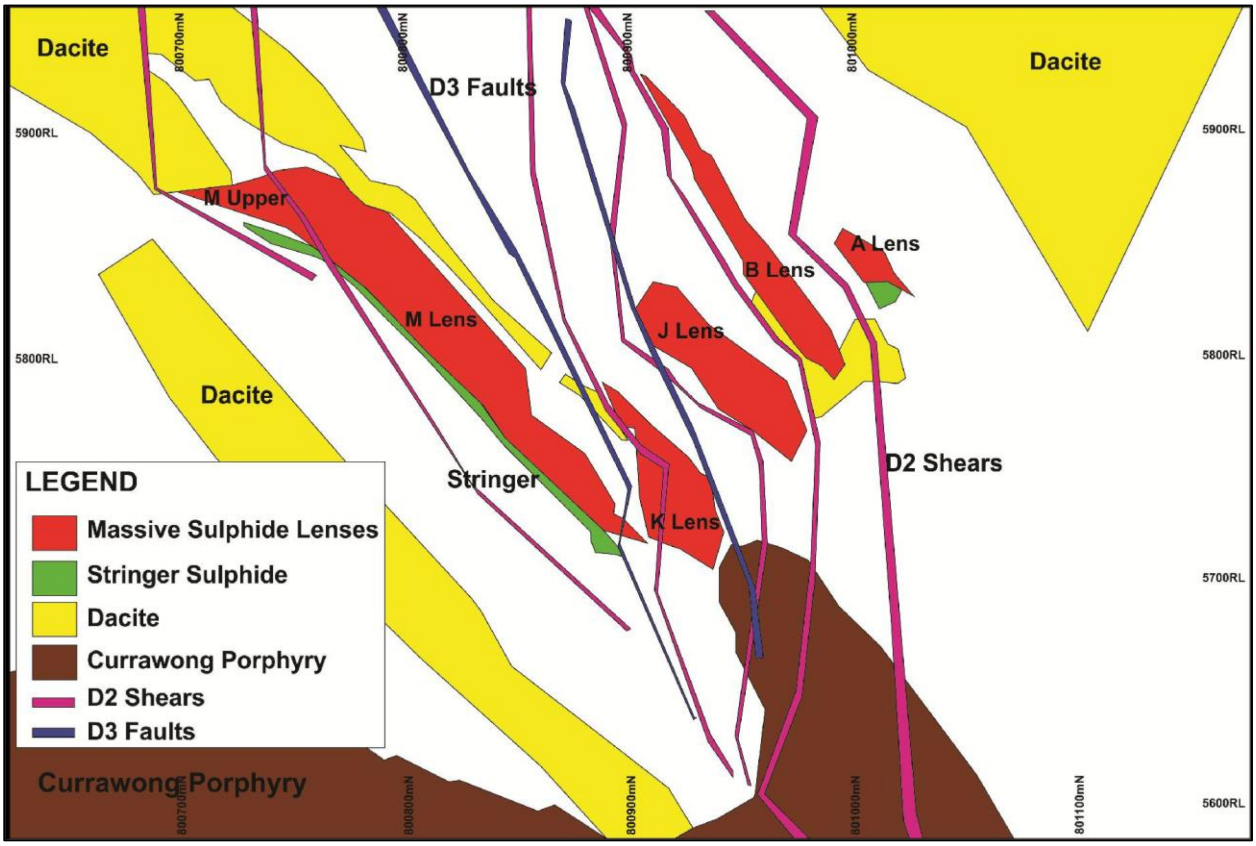
Block dimensions used in the Currawong model were 10mY x 10mX x 10mZ with sub-blocking to 0.625m in the Y direction and 1.25 in the X and Z dimensions. The primary block size of 10m x 10m x 10m was selected as it is approximately ½ of the average drill hole spacing. There were no depletions required.

### Estimation

Grade estimation for each element was interpolated into the individual domain coded blocks using the kriging parameters obtained from the variography using only those composites particular to that domain. Top cuts were used if the coefficient of variation (CV) of the density weighted composite for an element was greater than 1.

Density was kriged into the block model in a similar method as was used for all other elements. However, a density regression formula was required in order to assign densities to historical samples which did not already have a density measurement. This was achieved in excel by ascertaining a multi element regression formula based on the existing assays and their corresponding measured densities. In assessing the density data, the massive sulphide and stringer sulphide domains were treated separately both at Wilga and at Currawong. Prior to regression analysis, obviously spurious results were removed from the dataset.

➢ *Figure 8: Currawong section (43850mE looking west) showing massive sulphide lenses (red), stringer sulphide (green), dacite (yellow), Currawong Porphyry (brown), D2 Shears (magenta) and D3 faults (blue), clear (siltstone)*




➢ *Table 11: Resource for Currawong using updated NSR_M*

| Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| Indicated | 9,548 | 2.03 | 4.16 | 0.82 | 42 | 1.19 | 243 | 193 | 397 | 78 | 12,785 | 365 |
| Inferred | 781 | 1.35 | 2.03 | 0.30 | 23 | 0.46 | 143 | 11 | 16 | 2 | 572 | 12 |
| **Total** | **10,329** | **1.97** | **4.00** | **0.78** | **40** | **1.13** | **235** | **204** | **413** | **81** | **13,357** | **377** |

## Validation

The interpolated block grades in the high Cu zones and the high Zn zones were compared to the composited sample data and the declustered sample data (determined from nearest neighbour block model) for each of the lenses by easting and by elevation to check if any model bias has been introduced. All domains showed acceptable correlations for all elements.

## Classification

The major factor in determining resource classification at Currawong is drilling density. In general, drillhole spacing of less than 50m x 50m is classed as Indicated, whereas drillhole spacing greater than this is classed as Inferred. No part of the resource at Currawong is classified Measured due to the nominal required drillhole spacing of 25m x 25m in the massive sulphide, as well as existence of multiple generations of drilling. The massive sulphide lenses A, B, J, K, M and M-Upper are all classified as Indicated. The stringer zones are classified on a zone-by-zone basis.

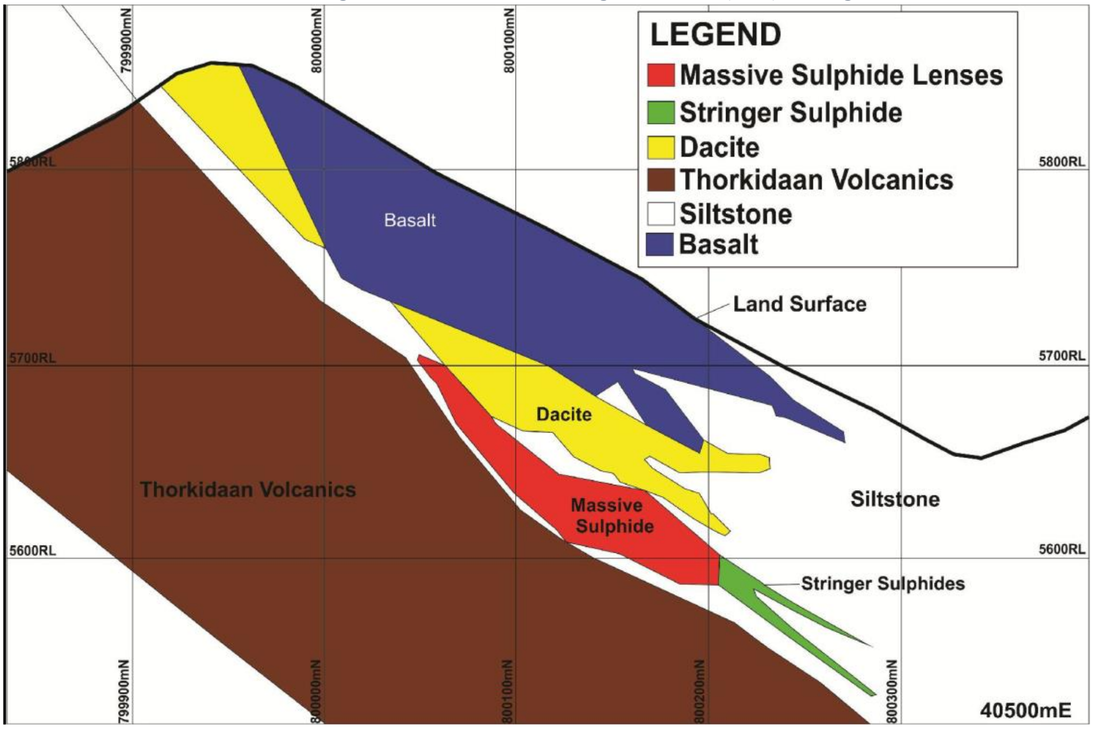
## 2.2. Wilga

Wilga massive sulphide mineralisation is hosted in one continuous lens that is approximately 400m x 220m in dimensions, narrow (less than 5m) at the margins and up to 30m thick in the centre. The footwall contact of the mineralisation is a shear zone which is immediately underlain by rhyolites of the Thorkidaan Volcanics. Stringer style mineralisation is present down dip and along strike to the west of the massive sulphide mineralisation.

The massive sulphide wireframes were constrained by geology and include both massive sulphide and semi-massive sulphide. The stringer zones at both Currawong and Wilga were defined using a cut-off grade of 0.5% Cu or 2% Zn. Wireframing was conducted in Surpac. Following completion of the massive sulphide wireframes described above, internal high grade Cu zones were created using a 1.2% Cu cut-off. These were created by digitising on section, by snapping to drillholes and were nested within the massive sulphide envelopes. The zones outside of these are termed high grade zinc zones. These wireframes were used to constrain the geostatistical and estimation process.

For resource estimation work, the database was exported to a Microsoft Access format. The database was frozen in time as at 1st June 2012. a total of 258 diamond drillholes exist in the database totalling 26,995m of drilling.

➢ *Figure 9: Cross Section through 40500mE (SRG) at Wilga*




➢ *Table 12: Resource for Wilga using updated NSR_M*

| Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t)[2] | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| Indicated | 2,852 | 2.11 | 4.93 | 0.44 | 31 | 0.47 | 247 | 60 | 141 | 13 | 2,843 | 43 |
| Inferred | 657 | 3.77 | 5.59 | 0.44 | 34 | 0.41 | 375 | 25 | 37 | 3 | 719 | 9 |
| **Total** | **3,510** | **2.42** | **5.05** | **0.44** | **32** | **0.46** | **271** | **85** | **177** | **15** | **3,561** | **52** |

1) Depleted and sterilised for historical mining.
2) Gold grades are considered to be inferred

## Block Model

Block dimensions used at Wilga were 10mY x 10mX x 5mZ and reflect approximately half the average drill spacing with sub-blocking to 1.25m in all dimensions.

The Wilga block model was subsequently depleted using previous mining void wireframes.

## Estimation

Grade estimation for each element was interpolated into the individual domain coded blocks using the kriging parameters obtained from the variography using only those composites particular to that domain. Top cuts were used if the coefficient of variation (CV) of the density weighted composite for an element was greater than 1. Estimation was done using Surpac 6.2.

Density was kriged into the block model in a similar method as was used for all other elements. However, a density regression formula was required in order to assign densities to historical samples which did not already have a density measurement. This was achieved in excel by ascertaining a multi element regression formula based on the existing assays and their corresponding measured densities. In assessing the density data, the massive sulphide and stringer sulphide domains were treated separately both at Wilga and at Currawong. Prior to regression analysis, obviously spurious results were removed from the dataset.

## Validation

The interpolated block grades in the high Cu zones and the high Zn zones were compared to the composited sample data and the declustered sample data (determined from nearest neighbour block model) for each of the lenses by easting and by elevation to check if any model bias has been introduced. All domains showed acceptable correlations for all elements.

## Classification

The major factor in determining resource classification at Currawong is drilling density. In general, drillhole spacing of less than 50m x 50m is classed as Indicated, whereas drillhole spacing greater than this is classed as Inferred. No part of the resource at Currawong is classified Measured due to the nominal required drillhole spacing of 25m x 25m in the massive sulphide, as well as existence of multiple generations of drilling.

The Wilga deposit has been previously mined and has been depleted with known voids accordingly. Further:

- Inferred material in remnant pillars have been included in the MRE. Due to the high grades of this material the company feels there are good prospects of being able to economically extract this material.
- Material in close proximity to historical mining areas has been classified as Inferred Resource. Drilling has confirmed the presence of this material, but by classifying the material as Inferred the company is acknowledging the risk associated with this material that could preclude it from being included as Reserve in the future.
- Material situated above historic mining has been included in MRE, but not Ore Reserve Estimates ("ORE"). While sufficiently delineated, and considered potentially economic, the Company has chosen not to include this material in the initial mining plans.
- Similarly, thinner lower grade peripheral material is considered potentially economically extractable, but is not include in the initial ORE
- Assay coverage for Au at Wilga is poor, so the grade should only be reported to an Inferred classification.

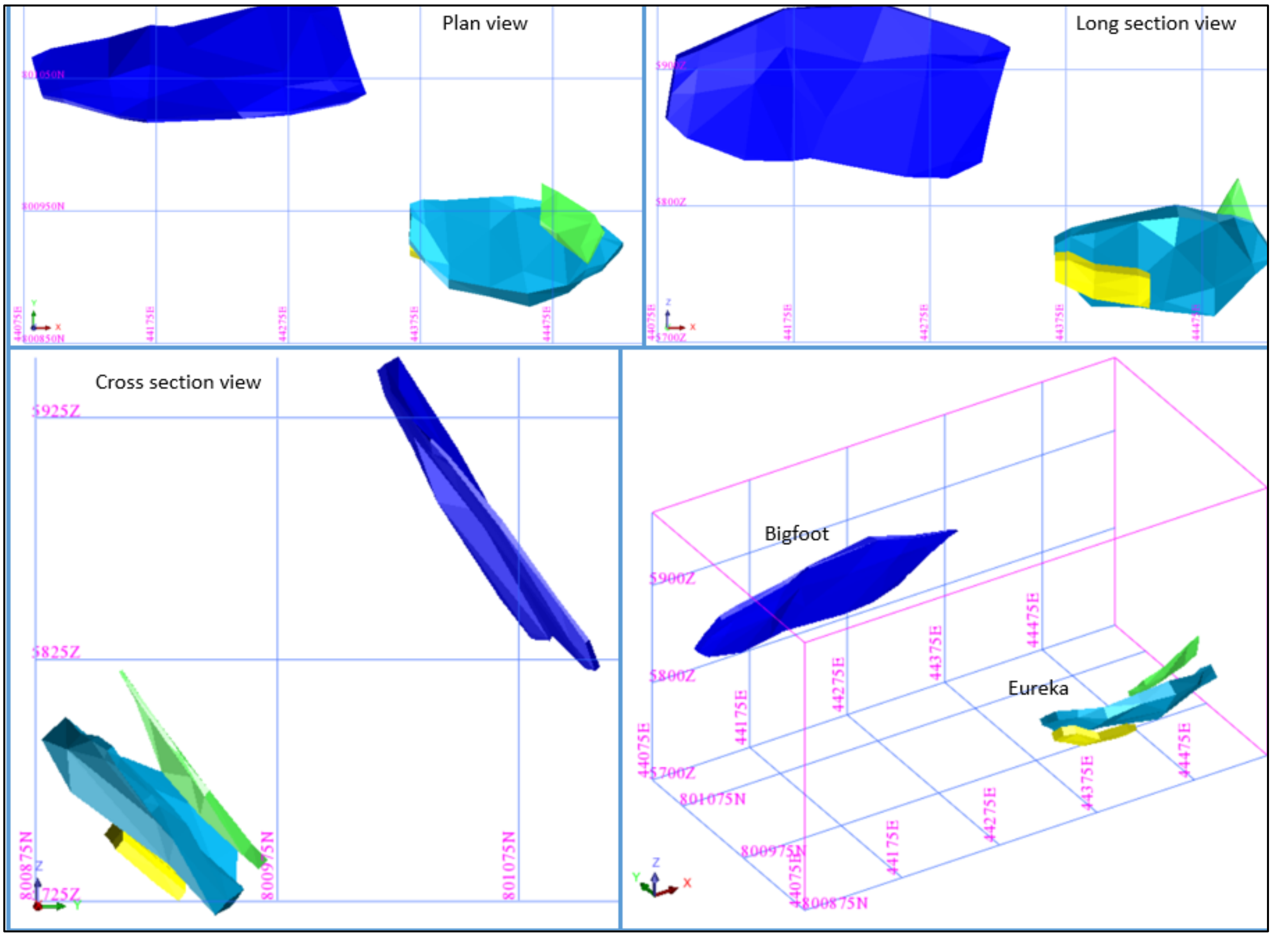
## 2.3. Bigfot and Eureka

The Bigfoot and Eureka deposits are approximately 120m and 300m respectively along strike of the well-defined multi-million tonne Currawong VHMS deposit. Eureka comprises a main zone of massive sulphides (sphalerite-chalcopyrite rich) and subordinate stringer sulphide zones mineralisation whilst Bigfoot consists of very narrow (<1m true width) massive sulphide zones are of questionable continuity interspersed within an enveloping stringer sulphide zone. Gold grade is particularly high throughout the deposit.

The combined drillhole database contains 46 DD drillholes, of which 11 holes at Eureka and 9 at Bigfoot were used for the resource calculations. Data quality for the 2018 drilling has been verified as suitable for Resource estimation work, while review of extensive work by previous operators IGO has not identified any significant quality issues with older drilling.

Domaining of the deposits comprised construction of separate wireframes for each deposit/lens and for each element Ag, As, Au, Cu, Pb and Zn. A low-grade As halo was constructed around the deposits to provide a logical boundary to local mineralisation. Ag, Au, Cu and Zn are considered to be potentially economic for the deposits at this point. A total Resource domain was constructed by combining the Ag, Au, Cu and Zn wireframes. Cut-off grades utilised for each element/lens targeted natural cut-offs with consideration of metal values (economic cut-offs) based on a provided NSR (net smelter return) calculation.

➢ *Figure 10: Final Eureka and Bigfoot mineral resource wireframes shown in various orientations. The wireframes are a composite of the four metal wireframes that contribute to project economics: Ag, Au, Cu and Zn*



➢ *Table 13: Resources for Bigfoot and Eureka using updated NSR_M*

| Estimate | Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bigfoot | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| | Inferred | 471 | 0.37 | 3.55 | 1.95 | 57 | 4.35 | 167 | 2 | 17 | 9.2 | 861 | 65.9 |
| Eureka | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| | Inferred | 528 | 0.98 | 2.97 | 0.45 | 30 | 1.51 | 150 | 5 | 16 | 2.4 | 501 | 25.6 |
| Total | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| | Inferred | 1,000 | 0.69 | 3.25 | 1.16 | 42 | 2.85 | 158 | 7 | 32 | 12 | 1,362 | 92 |
| | Total | 1,000 | 0.69 | 3.25 | 1.16 | 42 | 2.85 | 158 | 7 | 32 | 12 | 1,362 | 92 |

## Block Model

A Block Model (bigfoot_eureka_jw_ok_jan19_v1.mdl) to cover the Bigfoot and Eureka deposits was constructed with user block size 4mY x 10mX x 4mZ with sub-blocks down to 1mY x 2.5mX x 1mZ. Values were assigned to character attributes to define various domains including weathering, material type, topography. No depletion for mining was necessary.

## Estimation

The Bigfoot and Eureka (JORC 2012) Mineral Resources were estimated via ordinary kriging (OK) using Surpac 6.2, within the constructed resource wireframes. Top cutting was not considered necessary based on the CV of each element/domain and the Inferred level of resource confidence applied to the resources.

Directional controls for each element, and for each lens were investigated for Bigfoot and Eureka using various combinations of composite data, from individual lenses to total data. Variography utilised normalised semi-variogram analysis of composite files. No well-structured variograms were found, presumably due to the lack of data density currently informing the deposits. Best variograms were identified for Au using the combined BF/EU resource datasets and it was decided to use this for the estimation. Interpolation was via OK for all elements and density into each domain for each lens using the Au variogram, and informing data derived only from the lens and metal domain being estimated.

## Validation

Block model validation was initially completed by visually comparing the available sample and block model estimates on screen. The global sample and estimated grades were then compared, followed by swath plots to check that grade trends had been maintained. Domain estimations were found to validate within, or close to, +/- 20% tolerance. Thus, it is possible some grade may be overestimated, and this variation was taken into account when assessing classification.

## Classification

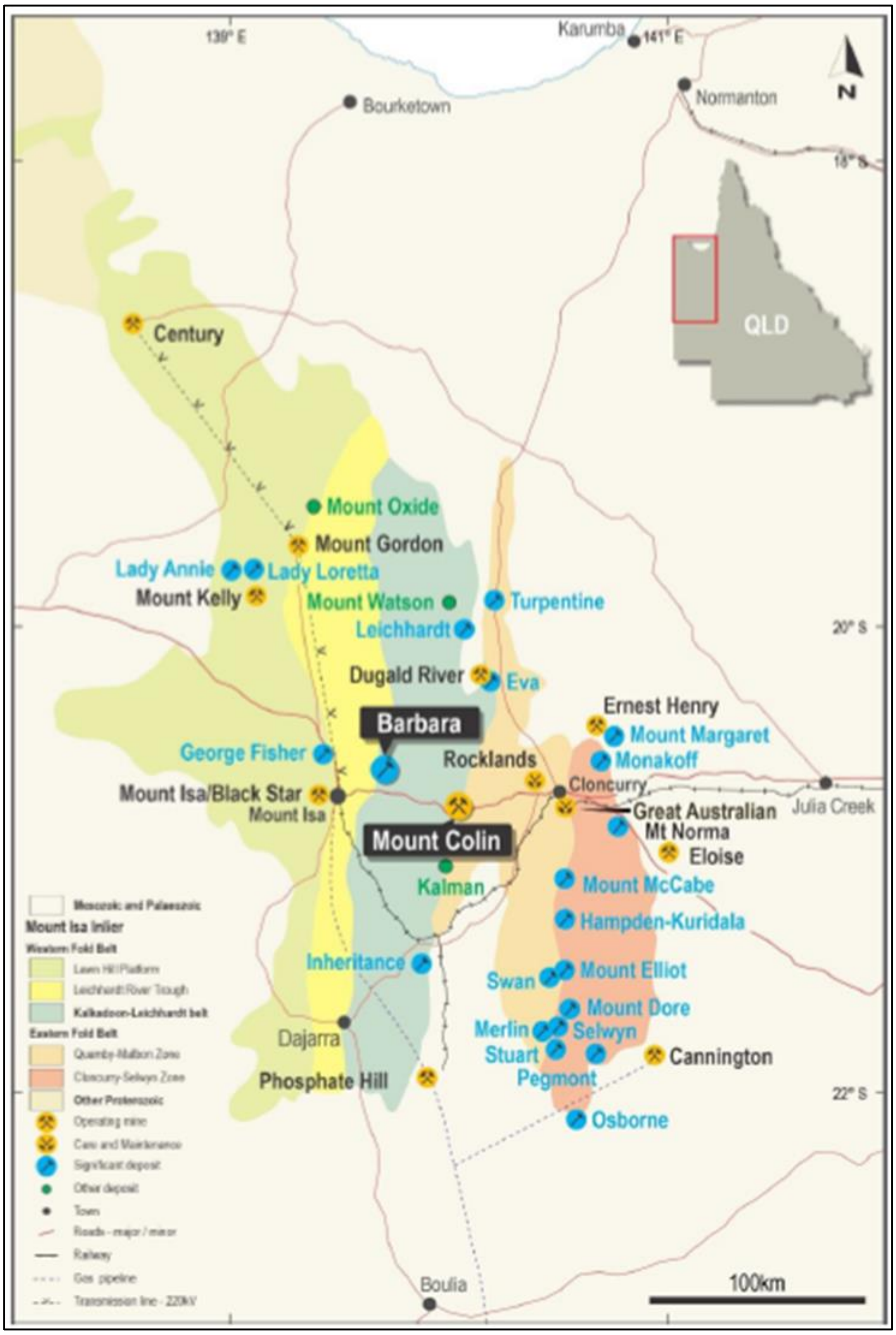
The Bigfoot and Eureka mineral resources are classified at an Inferred level of confidence (JORC 2012), mainly due to data/drillhole density and directional controls on mineralisation as chosen for model estimation are nominal, based only on Au at this point. Further drilling will firm up confidence in the resources. It is noted that projection of some

higher grades, for example Au and some Zn, may indicate some grade over-estimation. The current resources can be considered to have a nominal accuracy of +/- 30%.

# 3. Northwest Queensland

The Northwest Queensland Operations includes the active Mt Colin underground mine and the Barbara and LillyMay deposits at the Barbara Project, to the South.

*Figure 11: Location of the known mineral occurrences within NW Queensland*



The total combined resource for NW Queensland is:

3.3Mt @ 2.39% Cu. 1.50g/t Ag, 0.36g/t Au

*Table 14: Combined resource for NW Queensland includes Mt Colin, Barbara and LillyMay*

| Resource Class | Tonnes (kt) | Cu (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|
| Measured | 642 | 3.46 | - | 0.67 | $291 | 22.2 | - | 13.8 |
| Indicated | 1,906 | 2.43 | 1.98 | 0.33 | $179 | 46.3 | 121 | 20.3 |
| Inferred | 739 | 1.35 | 1.57 | 0.18 | $150 | 10.0 | 37 | 4.2 |
| **Total** | **3,287** | **2.39** | **1.50** | **0.36** | **$194** | **78.4** | **159** | **38.3** |

1) Based on Underground potential only
2) Competent Person is Mr David Potter

## 3.1. Barbara Operations

The Barbara operations are located approximately 60km Northeast of Mt Isa and consist of the Barbara deposit itself and the smaller LillyMay deposit 3km to the Southwest. Open pit mining on the Barbara deposit ceased in March 2021. The resources are considered to have reasonable economic potential to support an underground mining operation similar in size and style to Mt Colin.

*Figure 12: Long section, looking west, of the different lenses at Barbara*

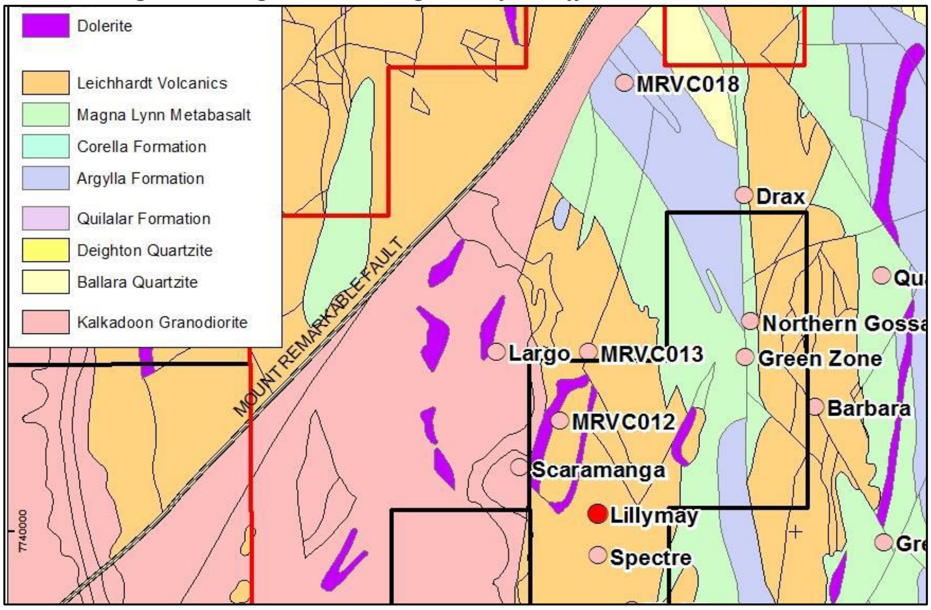


Table 15: Resource for Barbara Operations. Fresh only.

| Resource Class | Tonnes (kt) | Cu (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | - | - |
| Indicated | 1,169 | 1.96 | 3.23 | 0.18 | $137 | 22.9 | 121 | 6.8 |
| Inferred | 612 | 1.94 | 2.99 | 0.13 | $136 | 11.9 | 37 | 2.5 |
| **Total** | **1,781** | **1.95** | **3.17** | **0.16** | **$ 136** | **34.8** | **159** | **9.2** |

1) Barbara deposit stated at A$100_Net Smelter Return (NSR_M) where NSR is calculated from block model grades using the equation - NSR_M = cu_pct*65.24 + ag_ppm*0.6488+au_ppm*38.0136.
2) LillyMay cut-off is 0.5% Cu.
3) Processing recoveries for copper concentrate are 91.2% for Cu, 92.7% Ag, 68.6% Au.
4) Barbara estimate effective as at 1 May 2021, LillyMay estimate effective as at 1 November 2014.

The 2021 MRE is based on the 2020 MRE block model and has only been updated to reflect mining depletion and changes to NSR inputs. The drilling database for the 2020 Barbara MRE was locked on the 1st of June 2020. All QAQC of drilling and metadata was validated before the database was locked, with the blast hole data removed. The resultant database consisted of 388 holes for a total of 32,911.13m of core. Wireframing and estimation was carried out using Surpac v6.6.2 and v6.8, and statistical analysis was performed using Snowden Supervisor v8.12.

Figure 13: Long section, looking west, of the different lenses at Barbara

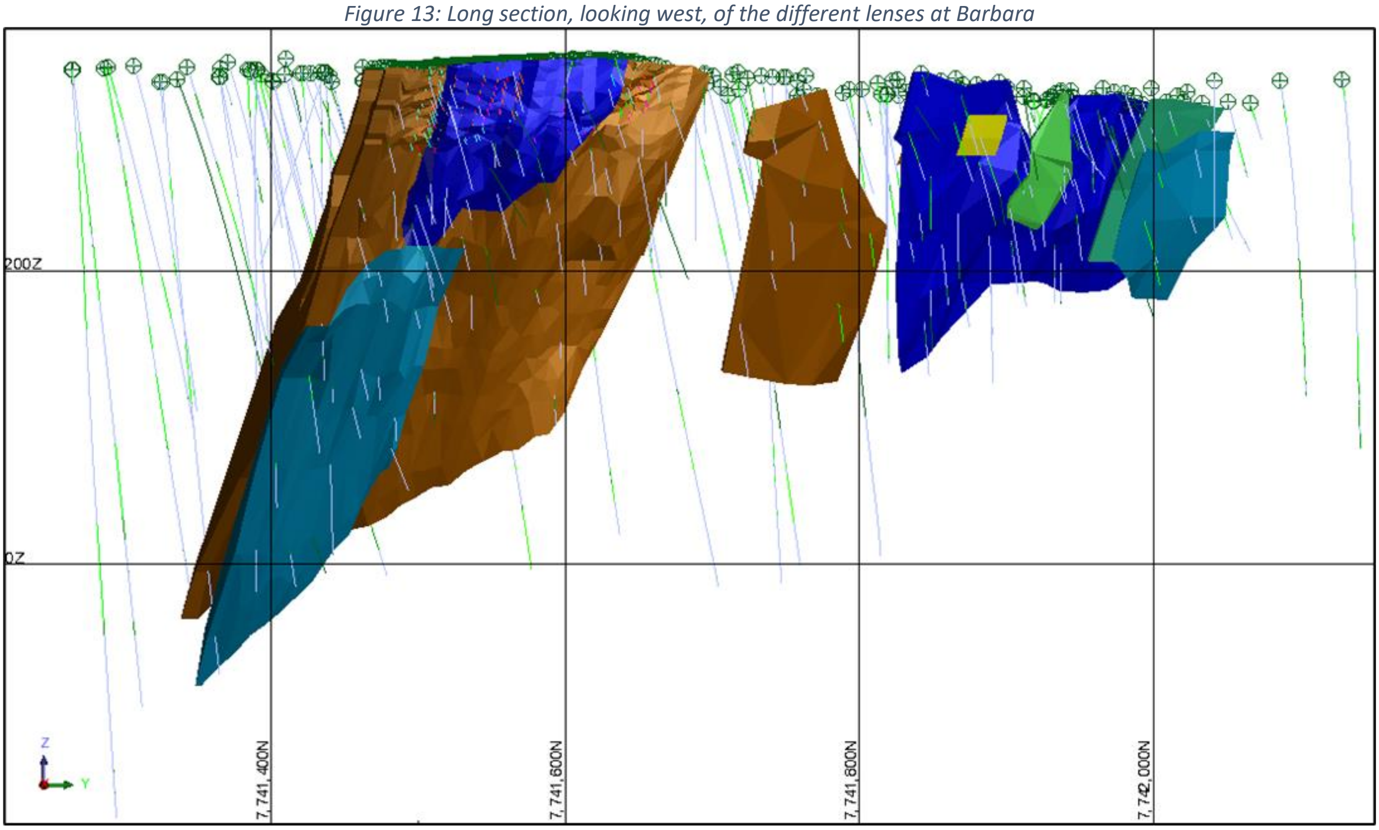



Table 16: Resource for the Barbara deposit. Fresh only.

| Resource Class | Tonnes (kt) | Cu (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | - | - |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Indicated | 1,169 | 1.96 | 3.23 | 0.18 | $137 | 22.9 | 121 | 6.8 |
| Inferred | 612 | 1.72 | 2.99 | 0.19 | $136 | 6.7 | 37 | 2.3 |
| **Total** | **1,556** | **1.90** | **3.17** | **0.18** | **$136** | **20.6** | **159** | **9.1** |

1) Depleted for open pit mining as at May 1st, 2001

## Block Model

Parent block size was assessed using Kriging Neighbourhood Analysis (KNA) whilst taking into account orebody geometry, drillhole spacing, bench heights and the Barbara selective mining unit 'SMU' to deliver a parent block that is 4m in northing (Y), 2m in easting (X), and 5m in elevation (Z). The parent blocks have been divided by 4 in all directions, to give a sub-block to fit the minimum mining width of 1m in northing, 0.5m in easting and 1.25m in elevation.

## Estimation

The Barbara 2020 MRE used an ordinary kriging (OK) estimation method, with interpolation constrained within wireframed mineralisation boundaries. Boundary analysis was completed on all domains to assess the use of hard boundaries for mineralisation estimates.

Variography was completed for each variable in all major domains to inform the direction and search of the estimate, excepting lead and zinc if there was no information in the domain. Only the Northern Stringer domain did not contain enough information to undertake variography analysis and the Northern Main variography was used instead.

All domains were estimated, except for North HW Stinger 4, where there was not enough information for OK estimation, instead the average declustered composite grade has been applied to all blocks. Density has been assigned using a regression calculation for each individual domain.

KNA has also been performed to select the optimum minimum and maximum number of drillholes used, and the discretisation level. All blocks require a minimum of six samples and a maximum 36 samples to interpolate, with a minimum of two different drillholes being required.

## Validation

Given the robust nature of the 2020 MRE to milled reconciliation (up to that point in time) and the fact no further drilling has been conducted, no changes have occurred in the modelling and estimation process between the previous MRE released in 2020 to the current release. The 2021 MRE has only been depleted for the mining that took place and quoted based on updated NSR inputs.

The Barbara 2020 MRE was reconciled against the milled physicals up to end of batch 9, as shown in Table 16, which displays robust call factors with silver being under called.

➢ *Table 17: Barbara 2020 Model predicted to Milled (up to batch 9)*

| | Tonnes (dry) | Cu % | Cu Metal | Au ppm | Au (Oz) | Ag ppm | Ag (Oz) |
|---|---|---|---|---|---|---|---|
| **Predicted** | 610,061 | 1.86 | 11,345 | 0.16 | 3,093 | 2.73 | 53,551 |
| **Milled** | 619,981 | 1.83 | 11,343 | 0.16 | 3,097 | 3.85 | 76,837 |
| **delta** | 9,920 | -0.03 | -3 | 0.00 | 4 | 1.12 | 23,286 |
| **call factor** | 102% | 98% | 100% | 99% | 100% | 141% | 143% |

Validation of the Barbara 2020 MRE was performed by creation and analysis of swath plots for all variables in all domains, along with a visual inspection of the block model grade versus the diamond drill assays. All domain estimations were found to be sufficient.

## Classification

Resource classification is mainly dependent on the spatial density of composites informing the estimation, and the proximity of underground development drives.

• Measured mineral resource has been assigned where the drill spacing is <20m along strike and down dip, and the block has been mined.

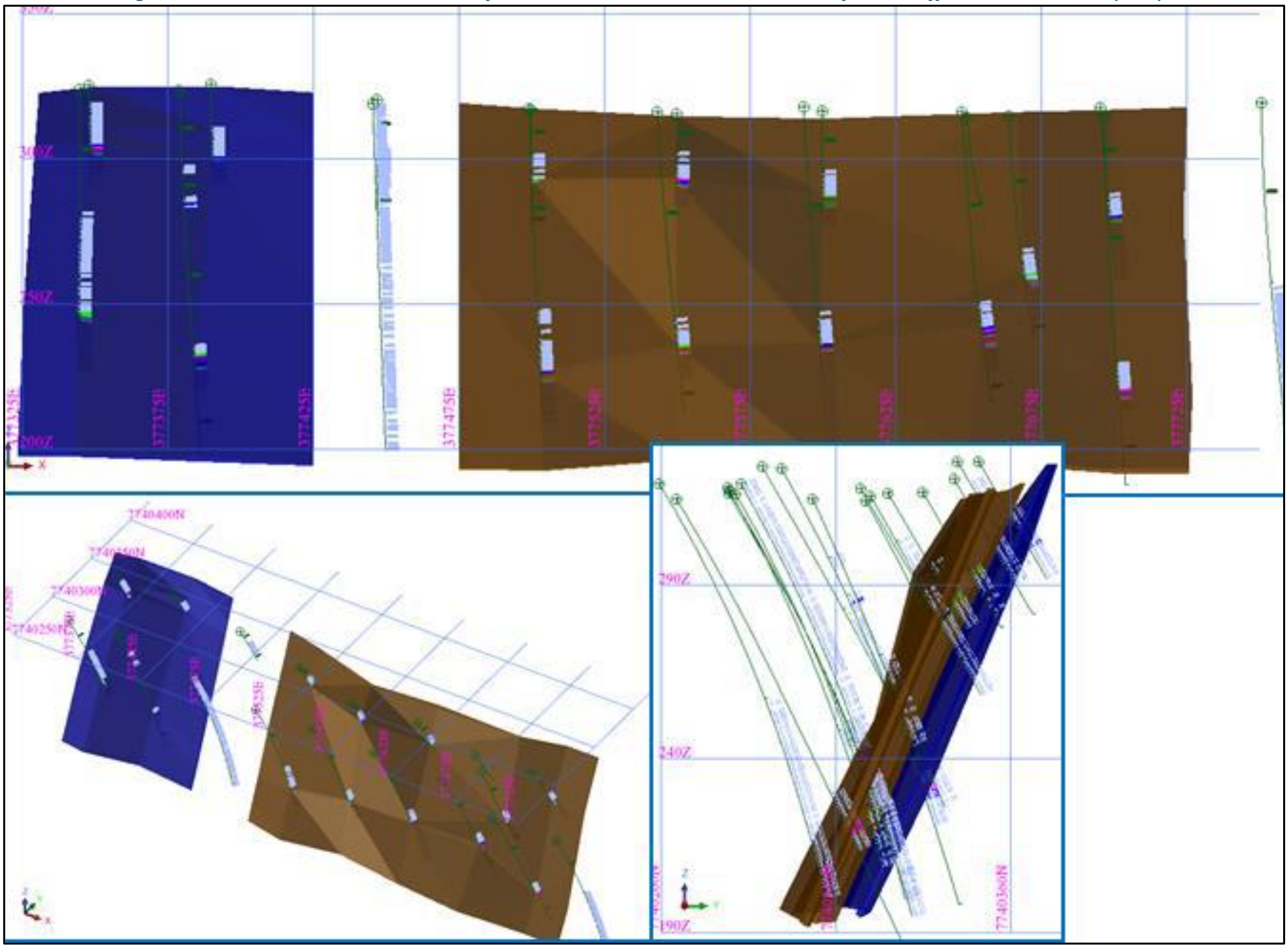
• Indicated mineral resource has been assigned where the drill spacing is <40m along strike and down dip.

• Inferred mineral resource has been assigned where drill spacing >40m along strike and down dip.

## 3.3. LillyMay Deposit

The LillyMay deposit mineral resource estimate is based on a review of work and estimate conducted in November 2014 quoted at a lower cut-off grade of 0.5% instead of a NSR cut off like the other estimates. Given the style, nature classification and ongoing assessment of the underground potential of the deposit the competent person believe this does meet J2012 ORC standards. This resource is expected to be updated after further modelling and assessment.

*Figure 14: : Final mineral resource wireframes shown in various orientations for the different lenses at LillyMay*




Copper mineralisation at LillyMay is chalcopyrite hosted in a 1-4 m wide quartz vein (figure 5.4) with strong chlorite alteration and smaller subsidiary veins and alteration in the surrounding 1 – 4 m. Chalcopyrite occurs in massive irregular pods, stringers and veins. Both lodes have a steep south-eastern plunge with mineralisation strongest underneath the old workings.

The LillyMay drillhole database contains 18 RC drillholes for 1,554m. No diamond coring has been undertaken at LillyMay

All digital interpretation, statistical and geostatistical analysis and resource calculation is undertaken with Surpac software (V 6.6). To suitably model and constrain the character of the LillyMay mineralisation via identification of individual domains, the following wireframe elements have been constructed:

1. Cu wireframes at nominal 0.02% and 0.5% Cu cut-offs, corresponding to approximate alteration/mineralisation/LillyMay Structural Zone, and potential economic cut-offs/domains respectively.
2. Weathering or oxidation wireframes, based on geological drillhole logging of the weathering profile. Two weathering profile elements were wireframed, the BOCO (base of complete oxidation) and the TOFR (top of fresh rock).

At this stage Cu speciation and lithology wireframes have not been constructed.

*Table 18: Resource for LillyMay deposit. Fresh only.*

| Resource Class | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Au koz |
|---|---|---|---|---|---|---|---|---|---|
| Measured | - | - | - | - | - | - | | - | - |
| Indicated | - | - | - | - | - | - | - | - | - |
| Inferred | 225 | 2.33 | - | - | - | 0.02 | 152 | 5.2 | 0.14 |
| **Subtotal** | **225** | **2.33** | **-** | **-** | **-** | **0.02** | **152** | **5.2** | **0.14** |

1) Depleted for historical UG workings as at November 2014

## Block Model

Detailed Neighbourhood Analysis (KNA) was not undertaken, Consideration of data density, and the narrow nature of a significant part of the resource (only 1 informing sample) has resulted in a set of parameters being chosen for model construction/interpolation. Some of the search parameters have been derived from 'trial and error' runs of the resource and analysis of results. The parent blocks are 4m in northing (Y), 25m in easting (X), and 4m in elevation (Z). The parent blocks have been divided by 4 in all directions, to give a sub-block to fit the minimum mining width of 1m in northing, 6.25m in easting and 1m in elevation.

Model was depleted for historical UG workings as at November 2014.

## Estimation

The elements Cu, Au, Fe and S have been interpolated into the model via Ordinary Kriging (OK). Top-cutting of assay data was not deemed necessary. There are no density data available for LillyMay and density has been assigned after consideration of the weathering profile and the character of the well understood nearby Barbara deposit.

A proportion of the Cu resource may be affected by weathering, and there are no weathering data within the upper levels of the mineralised zones, or sequential Cu data. The true extent of weathering and associated Cu speciation is therefore not known.

## Validation

Visual checks were conducted in sectional and plan view to compare drill assay grades to block estimated grades.

It is noted the declustered Cu grade for the Resource domain (within the 0.5% Cu wireframe) is 2.33%, the same as the modelled Cu grade. The arithmetic average Cu grade based on composites is 2.56%.

To further assess the representation of composite data within the block model, an Easting graph was generated with block and composite Cu grade. Model blocks show little smoothing of composite data, a reflection of the lack of current data within the deposit.

## Classification

The Mineral Resource (within the 0.5% Cu wireframe) is classified and reported as Inferred (JORC 2012 Code and associated guidelines), as it is felt that there is enough confidence in the character of the reasonably simple mineralised structure to warrant this level of classification. Aspects that preclude a higher level of classification (JORC 2012) include the following:

1. Insufficient drillhole density (approximately 50m x 60m, E x RL) to provide accurate grade distribution characteristics.

2. No density data for the deposit.

3. No diamond drilling data.

4. Lack of accurate drillhole collar data for 7 of the 18 current drillholes.

5. Lack of or insufficient down-hole survey data for at least 6 of the 18 current drillholes.

6. Absence of weathering profile data for the mineralised zones.

7. Incomplete lithological model.

## 3.4. Mt Colin

Drilling database for the 2021 Mt Colin MRE was locked on the 20th of April 2021. All assays up to and including MCUG309 were utilised for interpolation. All QAQC of drilling, underground and metadata was validated before the database was locked.

Modelling was carried out by the on-site team using Leapfrog Geo 6.0; and estimation was carried out using Surpac 2020, with statistical analysis was performed using Snowden Supervisor v8.13.

## Block Model

The 2021 MRE block model captures all mineralisation envelopes at Mt Colin, shown in Figure 13. Parent block size was assessed using Kriging Neighbourhood Analysis (KNA) whilst considering orebody geometry, diamond drillhole spacing, level spacing, burden and the Mt Colin selective mining unit 'SMU' to deliver a parent block that is 2m in northing (Y), 8m in easting (X), and 5m in elevation (Z). The parent blocks have been divided by 4 in all directions, to give a sub-block to fit the minimum mining width of 0.5m in northing, 2m in easting and 1.25m in elevation.

The model was depleted and sterilised for mining and natural voids up to 30th April 2021.

➢ *Figure 15: Long section, looking north, of the different lenses at Mount Colin*

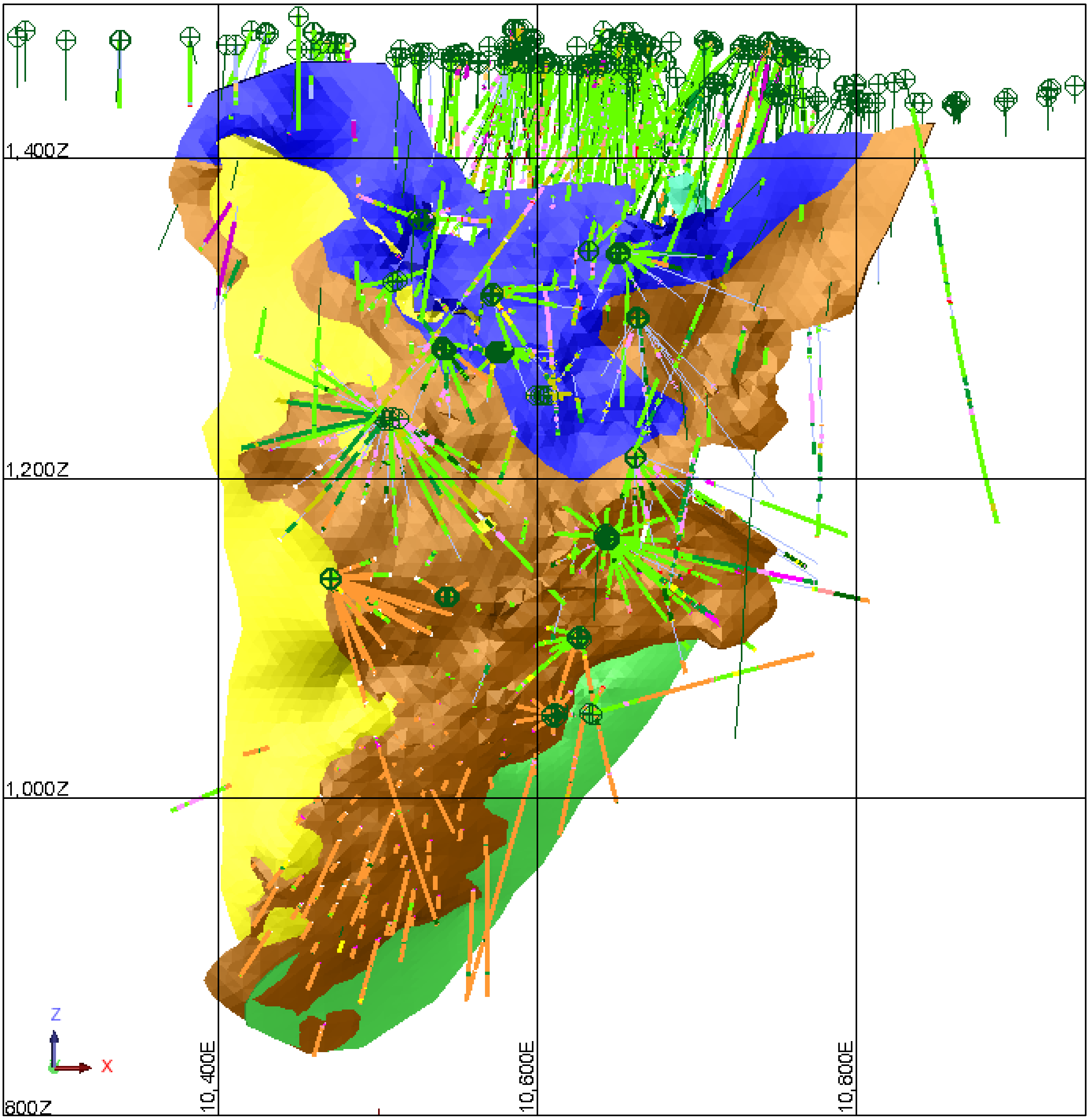


*Table 19: Resource for Mount Colin*

| Resource Class | Tonnes (kt) | Cu (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|
| Measured | 642 | 3.46 | - | 0.67 | $291 | 22.2 | - | 13.8 |
| Indicated | 737 | 3.17 | - | 0.57 | $245 | 23.4 | - | 13.5 |
| Inferred | 127 | 2.61 | - | 0.46 | $217 | 3.3 | - | 1.9 |
| Total | 1,505 | 3.25 | - | 0.60 | $272 | 49 | - | 29.2 |

1) For fresh material stated at A$100_Net Smelter Return (NSR_M) where NSR is calculated from block model grades using the equation - NSR_M = cu_pct*75.421 + au_ppm*45.364.
2) For oxide/transitional material stated at A$100_Net Smelter Return (NSR) where NSR is calculated from block model grades u sing the equation NSR_M = cu_pct*59.1646 + au_ppm*45.5n for fresh.
3) Processing recoveries for fresh material to copper concentrate are 94% for Cu, 73.0% Au.
4) Processing recoveries for fresh material to copper concentrate are 70% for Cu, 70% Au.
5) Recent process data has proven that the oxide/transitional material can be blended with the fresh material whilst at least maintaining predicted recoveries.
6) The model was depleted and sterilised for mining and natural voids

## Estimation

The Mt Colin 2021 MRE has utilised a combination of ordinary kriging (OK) and dynamic anisotropy (DA) estimation to inform the model, with interpolation constrained within wireframed mineralisation boundaries. Dynamic anisotropy was utilised to inform the Lens 1 Fresh domain, to aid in estimation in flexure areas in the domain, particularly on the eastern side of the lens. All other domains were informed using OK.

Boundary analysis was completed on all domains to verify the use of hard boundaries for mineralisation estimates.

Variography was completed for each variable in Lens 1 Fresh, Lens 1 Weathered, Quartz lens, Carbonate lens and Link 1 lens, to inform the direction and search of the estimate. The remaining domains did not have sufficient information to perform variography and have been estimated using the variography from the Lens 1 Fresh domain. All domains were estimated successfully.

Density has been assigned using a regression calculation.

## Validation

Validation of the update was performed by production and analysis of swath plots for all variables in all domains, along with a visual inspection of the block model grade versus the diamond drill assays. All domain estimations were found to be sufficient.

The differences in processed tonnes and grades is thought to be mainly to be a result of over bogging of waste backfill within the Avoca stopes as the claimed tonnes and grades from mining is closer to the processed reconciled numbers.

*Table 20: Mt Colin Model predicted to Milled (for batches 6 to 10)*

| | | Grades | | Contained Metal | |
|---|---|---|---|---|---|
| | Tonnes | Cu (%) | Au (ppm) | Cu (t) | Au (Oz) |
| **Processed** | 352,803 | 2.06 | 0.35 | 7,268 | 3,970 |
| **2021 MRE** | 315,581 | 2.32 | 0.43 | 7,321 | 4,363 |
| **Processed/MRE** | **112%** | **89%** | **81%** | **99%** | **91%** |

## Classification

Resource classifications for the MRE are mainly dependent on the spatial density of composites informing the estimation, and the proximity of underground development drives.

- Measured mineral resource has been assigned where the drill spacing is <20m along strike and down dip, and there are development drives above and below the block.
- Indicated mineral resource has been assigned where the drill spacing is <40m along strike and down dip.
- Inferred mineral resource has been assigned where drill spacing >40m along strike and down dip.
- Material within and adjacent to natural voids is not classified.

*Table 21: Detailed Operational Resource Table*

| Operation | Deposit | Res Cat | Tonnes (kt) | Cu (%) | Zn (%) | Pb (%) | Ag (g/t) | Au (g/t) | NSR_M (A$/t) | Cu kt | Zn kt | Pb kt | Ag Koz | Au koz |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Jaguar** | Teutonic Bore | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Inferred | 2,169 | 1.23 | 2.12 | 0.19 | 37 | 0.11 | 151 | 27 | 46 | 4.1 | 2,581 | 8 |
| | | **Subtotal** | **2,169** | **1.23** | **2.12** | **0.19** | **37** | **0.11** | **151** | **27** | **46** | **4.1** | **2,581** | **8** |
| | Bentley | Measured | 580 | 1.04 | 7.34 | 0.58 | 119 | 0.99 | 313 | 6 | 43 | 3 | 2,219 | 18 |
| | | Indicated | 613 | 1.11 | 10.08 | 0.77 | 151 | 1.07 | 389 | 7 | 62 | 5 | 2,977 | 21 |
| | | Inferred | 1,957 | 1.39 | 7.53 | 0.28 | 72 | 0.83 | 312 | 27 | 147 | 5 | 4,530 | 52 |
| | | **Subtotal** | **3,150** | **1.27** | **7.99** | **0.43** | **96** | **0.91** | **327** | **40** | **252** | 14 | 9,725 | 92 |
| | Triumph | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Indicated | 1,275 | 0.48 | 7.53 | 0.57 | 101 | 0.32 | 241 | 6 | 96 | 7 | 4,141 | 13 |
| | | Inferred | 375 | 0.34 | 8.03 | 0.59 | 107 | 0.32 | 244 | 1 | 30 | 2 | 1,289 | 4 |
| | | **Subtotal** | 1,650 | 0.45 | 7.64 | 0.57 | 102 | 0.32 | 242 | 7 | 126 | 9 | 5,430 | 17 |
| | Total | Measured | 580 | 1.04 | 7.34 | 0.58 | 119 | 0.99 | 310 | 6 | 43 | 3 | 2,219 | 18 |
| | | Indicated | 1,888 | 0.68 | 8.36 | 0.63 | 117 | 0.69 | 262 | 13 | 158 | 12 | 7,117 | 42 |
| | | Inferred | 4,501 | 1.23 | 4.96 | 0.26 | 58 | 0.39 | 225 | 55 | 223 | 12 | 8,399 | 56 |
| | | **Subtotal** | **6,969** | **1.06** | **6.08** | **0.39** | **79** | **0.52** | **250** | **74** | **424** | **27** | **17,736** | **116** |
| **Stockman** | Currawong | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Indicated | 9,548 | 2.03 | 4.16 | 0.82 | 42 | 1.19 | 243 | 193 | 397 | 78 | 12,785 | 365 |
| | | Inferred | 781 | 1.35 | 2.03 | 0.30 | 23 | 0.46 | 143 | 11 | 16 | 2 | 572 | 12 |
| | | **Subtotal** | **10,329** | **1.97** | **4.00** | **0.78** | **40** | **1.13** | **235** | **204** | **413** | **81** | **13,357** | **377** |
| | Wilga | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Indicated | 2,852 | 2.11 | 4.93 | 0.44 | 31 | 0.47 | 247 | 60 | 141 | 13 | 2,843 | 43 |
| | | Inferred | 657 | 3.77 | 5.59 | 0.44 | 34 | 0.41 | 375 | 25 | 37 | 3 | 719 | 9 |
| | | **Subtotal** | **3,510** | **2.42** | **5.05** | **0.44** | **32** | **0.46** | **271** | **85** | **177** | **15** | **3,561** | **52** |
| | Bigfoot | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Inferred | 471 | 0.37 | 3.55 | 1.95 | 57 | 4.35 | 167 | 2 | 17 | 9 | 861 | 66 |
| | Eureka | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Inferred | 528 | 0.98 | 2.97 | 0.45 | 30 | 1.51 | 150 | 5 | 16 | 2 | 501 | 26 |
| | | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | Total | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Indicated | 12,400 | 2.05 | 4.34 | 0.73 | 39 | 1.02 | 244 | 254 | 538 | 91 | 15,628 | 408 |
| | | Inferred | 2,438 | 1.73 | 3.49 | 0.69 | 34 | 1.43 | 212 | 42 | 85 | 17 | 2,652 | 112 |
| | | Total | **14,838** | **1.99** | **4.20** | **0.73** | **38** | **1.09** | **238** | **296** | **623** | **108** | **18,280** | **520** |
| **Mt Colin** | Main | Measured | 642 | 3.46 | - | - | - | 0.67 | 291 | 22 | - | - | - | 14 |
| | | Indicated | 737 | 3.17 | - | - | - | 0.57 | 245 | 23 | - | - | - | 14 |
| | | Inferred | 127 | 2.61 | - | - | - | 0.46 | 217 | 3 | - | - | - | 2 |
| | | **Subtotal** | **1,505** | **3.25** | **-** | **-** | **-** | **0.60** | **262** | **49** | **-** | **-** | **-** | **29** |
| **Barbara** | Barbara | Measured | - | - | - | - | - | - | | - | - | - | - | - |
| | | Indicated | 1,169 | 1.96 | - | - | 3 | 0.18 | 152 | 23 | - | - | 121 | 7 |
| | | Inferred | 387 | 1.72 | - | - | 3 | 0.19 | 134 | 7 | - | - | 37 | 2 |
| | | **Subtotal** | **1,556** | **1.90** | **-** | **-** | **3** | **0.18** | **147** | **30** | **-** | **-** | **159** | **9** |
| | Lillymay | Measured | - | - | - | - | - | - | | - | - | - | - | - |
| | | Indicated | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Inferred | 225 | 2.33 | - | - | - | 0.02 | 152 | 5 | - | - | - | 0.1 |
| | | **Subtotal** | **225** | **2.33** | **-** | **-** | **-** | **0.02** | **152** | **5** | **-** | **-** | **-** | **0.1** |
| | Total | Measured | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Indicated | 1,169 | 1.96 | - | - | - | 0.18 | 152 | 23 | - | - | 121 | 7 |
| | | Inferred | 612 | 1.94 | - | - | - | 0.13 | 141 | 12 | - | - | 37 | 2 |
| | | **Subtotal** | **1,782** | **1.95** | - | - | - | **0.16** | **148** | **35** | - | - | 159 | 9 |
| Grand Total | | Measured | 1,222 | 2.31 | 3.48 | 0.28 | 56 | 0.82 | 300 | 28 | 43 | 3 | 2,219 | 32 |
| | | Indicated | 16,195 | 1.93 | 4.29 | 0.63 | 44 | 0.90 | 240 | 313 | 696 | 103 | 22,866 | 471 |
| | | Inferred | 7,678 | 1.47 | 4.02 | 0.37 | 45 | 0.70 | 214 | 113 | 308 | 29 | 11,089 | 172 |
| | | **Total** | **25,094** | **1.81** | **4.17** | **0.54** | **45** | **0.84** | **236** | **454** | **1,047** | **135** | **36,174** | **675** |

1) Refer to the notes in resource tables and quoted numbers.

# APPENDICES

## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1)

The table below follows the requirements of JORC Table 1 sections 1, 2 and 3 as required for the estimation and reporting of Mineral Resources.

Section 1: Sampling Techniques and Data - Barbara deposit

| Criteria | JORC Code explanation | |
|---|---|---|
| **Sampling Techniques and Data** | | |
| **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.* | 49 Diamond drill holes and 118 Reverse Circulation (RC) drillholes completed by Syndicated Metals Limited (SMD) on a nominal 20m x 20m within the planned open pit increasing to 40/80m spacing at depth.<br><br>An RC grade control on a 10m x 5m pattern consisted of a further 185 holes.<br><br>The dataset used contained 388 drillholes for 32,911.13m of drilling.<br><br>RC drillholes are sampled at 1m intervals using a rig mounted cyclone with an 87.5%-12.5% riffle splitter to collect a 3.0kg to 4.0kg sample. Ore zone samples are selected based on Geology and Handheld XRF analysis and are sent to SGS laboratories in Townsville or ALS laboratories Mt Isa for multi-element analysis and Au analysis. Reject samples are bagged and will be retained on site for 12 months before discarding.<br><br>HQ and PQ sized diamond core is filleted using a diamond core saw machine. Samples of approximately 1/3 core (20 mm thick) are sampled at intervals of between 40cm and 1.2m, cut to geological boundaries. The majority of samples are 1m in length. Sample weights vary from 2.0 kg to 3.5kg for filleted HQ and PQ sized core. NQ core is half cut. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | Sampling was carried out using Syndicated Metals Limited company sampling and QAQC procedure. |
| | *Aspects of the determination of mineralisation that are Material to the Public Report.*<br><br>*In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg 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.* | RC and diamond core drilling was used to obtain a 1m in RC and 40cm to 1.2m sample in diamond core representative sample. A multi element concentration reading of each interval was taken using a Niton Portable XRF. The samples submitted for assay were given a unique sample ID and shipped to SGS Laboratories, Townsville, or ALS laboratories Mt Isa. Samples were dried, pulverised by an LM2 and analysed for Cu, Co, S, Ca, Mg, Fe, V, As, Cd, Cr, Pb, Zn, Zr, K, Ti, and Ag by four acid digest, with an ICP finish. Gold is analysed using 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).* | RC Drilling was undertaken using a face sampling percussion hammer, with 5 ¼" to 5 ½" bits.<br><br>Diamond drilling was undertaken via NQ (51mm diameter), HQ (63mm diameter) and PQ (83mm diameter) diamond core. |
| **Drill sample recovery** | *Method of recording and assessing core and chip sample recoveries and results assessed.* | RC drilling recoveries were monitored visually by approximating bag weights, and theoretically by checking sample loss through outside return and sampling equipment.<br><br>Diamond core recoveries are monitored and logged. Recoveries are uniformly high, exceeding 95%. |

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| | *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | RC holes were collared with a well-fitting stuffing box to ensure material to outside return was minimized. Drilling is undertaken using auxiliary compressors and boosters to keep the hole dry and lift the sample to the sampling equipment. Cyclone and sampling equipment was checked regularly and cleaned. Hole was flushed at end of each sample and end of each rod. Bit was pulled back after every metre to reduce contamination through the ore zone.<br><br>Diamond cores were collared from RC precollars in fresh rock ensuring no sample loss, or when collared from surface "triple tube" drilling techniques were employed to ensure maximum core recovery and integrity of the material structure. |
| | *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.* | Recovery was visually checked and sample loss of the fine or coarse fraction was minimised by following SMD drilling protocols and procedures. |
| **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 was completed by a Geologist using SMD logging procedures that were developed to accurately reflect the geology of the area and mineralisation styles. |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* | Logging was qualitative and quantitative in nature and captured downhole depth, colour, lithology, texture, alteration, sulphide type, sulphide percentage and structure. All core is digitally photographed for historical reference. |
| | *The total length and percentage of the relevant intersections logged.* | All drillholes were logged in full. |
| **Sub-sampling techniques and sample preparation** | *If core, whether cut or sawn and whether quarter, half or all core taken.* | HQ and PQ sized core was filleted using an automatic diamond core saw. Filleting took approximately 1/3 of the core sample consisting of a 20mm thick arc in HQ sized (63mm diameter) core. In PQ sized (83mm diameter) core, the 20mm thick arc of core was halved to provide a sample less than 3.5Kg in weight. NQ core was cut in half. |
| | *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* | The RC samples were split (87.5%-12.5%) by the multi-tiered riffle splitter within the cyclone of the drilling rig. Majority of the samples were recorded as dry and minimal wet samples were encountered. Sample duplicates were obtained by splitting the reject sample in the field using the multi-tier riffle splitter. |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | The samples were sent to an accredited laboratory for sample preparation and analysis. SGS and ALS Laboratories follow industry best standards in sample preparation including optimal drying of the sample (temperature and time for base metal sample), crushing and pulverization of the entire sample in a LM2 to a grind size of 85% passing at 75 microns. |
| | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | Quality Control (QC) procedures involved the use of certified reference material - Base metals standards prepared by Ore Research and Exploration Pty Ltd. |
| | *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.* | Sampling protocols and QAQC procedures varied between the different drill programs but nominally included the use of duplicate samples every 20th sample. |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | The sample sizes are believed to be appropriate to correctly represent the style and thickness of copper and gold mineralisation in the Mt Isa Inlier. |
| **Quality of assay data** | *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* | The use of Four Acid digest and Fire assay are classified as total assays.<br><br>Sequential assaying (acid soluble and cyanide soluble) assaying was undertaken on all oxide and |

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| **and laboratory tests** | | transitional ore samples submitted for assay. |
| | *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibration factors applied and their derivation, etc.* | No geophysical tools were used to determine any element concentrations used in the resource estimate.<br>A handheld XRF instrument was used to determine if samples were to be submitted for chemical analysis (assay). |
| | *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.* | Syndicated Metals inserted certified standards and duplicates into the sample sequence. Field duplicates and standard control samples have been used at a frequency of 2 field duplicates and 6 standards per 100 samples.<br>ALS and SGS Laboratories QAQC included insertion of certified standards, blanks, check replicates and fineness checks to ensure grind size of 85% passing 75 micron as part of their own internal procedures.<br>No major issues were identified during the conduct of standard QAQC checks. |
| **Verification of sampling and assaying** | *The verification of significant intersections by either independent or alternative company personnel.* | Full DB audit undertaken by site personnel as part of the MRE. |
| | *The use of twinned holes.* | Two pairs of twinned holes were analysed, one pair in the Southern Lode and one pair in the Northern Lode. Both pairs of twinned holes show acceptable correlation in geological boundary and assay results. |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Geological and sampling information was collected using an electronic logging system. |
| | *Discuss any adjustment to assay data*. | Detailed comparison of various assay sub-sets, for example RC V diamond, new V old, lab V lab, has shown that no significant differences occur. Therefore no adjustments were undertaken. |
| **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.* | Initial collar locations were determined by handheld GPS device and will be surveyed using RTK-60 GPS by licensed surveyors before resource estimates are completed. |
| | *Specification of the grid system used.* | GDA94 MGA Zone 54 datum North. |
| | *Quality and adequacy of topographic control.* | Drillholes were surveyed by licensed surveyors at the conclusion of the program. Prior to the hole being surveyed, the hole was picked up using handheld GPS. Hole collar RL differences of >0.5m between survey and the 2013 LIDAR topographical survey over the deposit were investigated and adjusted to the LIDAR data as required. Only minor adjustment was necessary. |
| **Data spacing and distribution** | *Data spacing for reporting of Exploration Results.* | Drill spacing in this program is at approximately 20m x 20m (northing x down-dip), down to a 10m x 5m spacing for grade control in the upper part of the pit. |
| | *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 drill spacing in this program is at 20m x 40m, which is believed to be sufficient to classify the Barbara Copper gold deposit as Indicated and Inferred Mineral Resource. |
| | *Whether sample compositing has been applied.* | All samples are collected at 1m sample intervals, except a small amount of diamond core samples which are between 40cm and 120cm in length and cut to geological boundaries. No compositing was necessary or completed. |

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| **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 predominant drill orientation of the drilling is –60° to local grid east. At this orientation the intercepts are close to true widths. However, there are a number of holes which have been drilled between -60° and -90° degrees to the grid east which are at an angle to the main ore zone. From the sampling to date no bias has been identified due to the orientation. |
| | *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.* | No bias is currently known. |
| **Sample security** | *The measures taken to ensure sample security.* | Samples are stored on site and transported to SGS Laboratories in Townsville or ALs laboratories in Mt Isa for preparation and multi-element and fire assay analyses. The samples were labelled from the point of collection and retained this unique number throughout the analytical process. |
| **Audits or reviews** | *The results of any audits or reviews of sampling techniques and data.* | No independent audits or reviews have been undertaken that cover the earlier drilling. Later drilling, sampling and data collection procedures were reviewed during the grade control program that found no major issues. |

Section 2 Reporting of Exploration Results Barbara deposit

| Criteria | JORC Code explanation | |
|---|---|---|
| **Reporting of Exploration Results** | | |
| **Mineral tenement and land tenure status** | *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings..* | The Barbara Project is located within the Shire of Mt Isa and West Leichhardt Station and is situated approximately 60km NE of Mt Isa.<br><br>- The Barbara deposit is wholly within Queensland mining tenement ML90241, which is held by Round Oak Minerals Pty Ltd.<br><br>- ML90241 expires on 31 May 2026, and no known impediment exists to renewal of the Mining Lease.<br><br>- The tenement resides within the Kalkadoon Native Title claim area, and an executed Ancillary Agreement is in place. |
| | *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | The security of tenure at the time of reporting is secure with no known impediments to continuing mining on the tenement. |
| **Exploration done by other parties** | *Acknowledgment and appraisal of exploration by other parties.* | A summary of work done by previous explorers in the Barbara region is given below.<br><br>Pre 1965 – Messrs Lilly and May: Barbara was first worked by Messrs Lilly and May who were also involved in mining at Manxman, Lilly May and Mt. Olive. Denaro (2004), records a production of 270 ore tonnes for 29.85 tonnes copper from the area during this early period.<br><br>1957 – Mount Isa Mines – ATP90M – CR227: MIM investigated the Barbara area as part of a regional study of mineralisation associated with the Mount Remarkable Fault. They documented Barbara as one of 13 minor copper occurrences found along the Fault Zone (Haney, 1957).<br><br>1965 to 1967 – Nippon Mining Australia Ltd – EPM269 – CR's 1841, 1890, 1945, 2150, 2164: Nippon Mining Australia conducted exploration over the area between 1965 and 1967. The company conducted a regional silt survey which, it is interesting to note, failed to pick Barbara, Mt Olive, Manxman and Lilly May. A soil sampling program over Barbara defined copper anomalies coincident with copper stained zones. Trench sampling was also carried out across the main |

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| | | Barbara lodes in the north and south. An IP survey was conducted across the Barbara deposit. Lines 2, 3 (Northern Lode) and Line 8 (Southern Lode) were across gossanous material and showed strong anomalies. Seven diamond drill holes were drilled into the Barbara Prospect. DDH4 in the Northern Lode near IP Line 3 produced down hole intersections of 2.72m @ 1.75% copper and 8m @ 1.21% copper. DDH5 drilled into the Southern Lode on IP Line 2 produced mineralisation of 29m@1.94% copper. Nippon later conducted and EM survey over the north end of the ore body (Northern Lode) but no mineralisation anomalies were located.<br><br>1970 – Placer Prospecting (Aust) Pty Ltd – ATP723M – CR3497: Placer investigated Barbara during 1970 and estimated a copper resource of 3.5Mt at 1.7% copper (with a cut-off of 0.2% copper and a density of 2.8t/m3). Placer documented reservations about some of the assumptions made during this early estimation.<br><br>1988 to 1990 – Australian Ores and Minerals (AOM) – EPM's 5501, 5502, 5503, 5504 – CR's 22154, 21456, 21029, 20864, 19985: AOM conducted exploration on all prospects within these EPMs including geological mapping, rock chip sampling and a helicopter assisted stream sediment geochemical survey. They also reviewed Placer's work on the Barbara deposit and re-calculated the resource as 1.7Mt at 0.9% copper (with a cut-off of 0.2% copper and a density of 2.8t/m3).<br><br>1991 to 1993 – Bruce Resources NL (later to be called Pan Australian Resources NL) EPM's 8252, 8524 – CR 24600: Bruce Resources joint ventured the Barbara tenements to Cyprus Gold Australia Corporation. In 1992, Northern Exploration Surveys conducted (on BR's behalf), a SIROTEM survey and ground magnetics survey at Barbara. The SIROTEM survey was conducted at 25 metre interval readings on 300 metre long lines spaced at 100 metre intervals over three loops. The shear zone produced a conductive response on all lines with two main conductive zones being defined. Where schorl dominates to the south the response is weaker. They noted that there could be three explanations for this. Firstly, the conductive zone could simply be deeper; secondly, there could be less sulphide; and lastly that the main zone was being shielded by a western conductor. The geophysicist suggested two proposed holes neither of which was drilled. No south plunge was inducted by the SIROTEM.<br><br>March 1993 to April 1995 – Cyprus Gold Corporation EPM's 8252, 8524 and EPM9681 – CR's 25383, 26864, 29586: Cyprus reviewed results from the ground magnetics and SIROTEM surveys conducted by Bruce Resources in 1992. Two main conductors were reported. Firstly a zone from (9950E/10900N to 10000E/11200N) and secondly a stronger but less extensive conductor centred on 9900E/10500N). The latter conductor has a strike length of less than 200m and an interpreted depth to top of 120m with a southerly plunge. Cyprus drilled two RC holes with diamond core tails at Barbara.<br><br>Down hole EM was conducted in BAQ93-03. The Z component showed a strong response at 160m associated with sulphide occurrences down hole. It was thought possible that there may be a zone of more conductive material to the north of this hole but the distance to that feature was not determined. Based on this work the company decided to cease all work at Barbara.<br><br>April 1995 – June 2000 - Murchison United – EPM9681 – CR's 26864, 27465, 28360, 29586, 31384: Murchison conducted geological mapping and a shallow percussion drill program of nine shallow holes at Barbara. Ore grade material was intersected in all holes. From these holes and those of Cyprus they undertook resource estimation within the shallow limits of the drilling. |

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|---|---|---|
| | | June 2000 to 2007 – Matrix Metals Limited – EPM9681 – CR's 32211, 33155, 33731, 36049, 44272, 44709: Matrix conducted limited work on the Barbara prospect. The focus of the company was identifying oxide resources and as the Barbara mineralisation contains little or no oxide potential it was of limited value to Matrix. |
| **Geology** | *Deposit type, geological setting and style of mineralisation.* | The Barbara Project covers part of the Eastern Succession of the Mt Isa Inlier. The key components in the area include:<br>• The northeast controlling Mt Remarkable Fault.<br>• A series of north-south structures interpreted as major thrust faults.<br>• The presence of the regionally significant Kalkadoon Granite. It is interpreted that the granite body has played a significant role in the lithostructural control within the area.<br>• The Wonga Batholith which potentially provided the driving heat cell for the mineralising event; and<br>• A thrust repeated target stratigraphy of the Magna Lynn Metabasalt Formation and the Leichhardt Volcanic Succession.<br>• A network of intruded dolerite/mafic dykes crosscutting and infilling the Barbara Fault.<br>These core geological components provide the key tectono-stratigraphic setting for the potential formation of a significant copper-gold mineralising system.<br>The Barbara deposit is hosted by acid volcanics of the Proterozoic-aged Leichhardt Volcanics, within the Kalkadoon-Leichhardt Domain of the Mt Isa Inlier. Locally within the Leichhardt Volcanic Succession, a series of mafic intrusive sills and dykes are believed to play a significant part in the focusing of copper-gold mineralisation. The Barbara Deposit is hosted on what is interpreted to be the intersection of a northwest trending second-third order structure interacting with a suite of mafic intrusive rocks.<br>The lode occurs within a structure obliquely cross cutting the regional N-S strike and is characterised by quartz-tourmaline (+chlorite) alteration, which forms a distinct surface ridge. The NW striking lode has been traced from surface mapping over distance of 600m and dips at approximately 60° to the southwest and varies from 2m to 30m true thickness. Host rock lithologies consist of predominantly of felsic rhyolitic to rhyodacite rocks with lesser amphibolitic units which appear to focus shearing into an anastomosing shear array. Metamorphic grade is considered to be lower greenschist facies. |
| **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>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.*<br>*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.* | N/A - the report relates to a mineral resource estimate and does not refer to individual results. The Mineral resources are based on all available data and as such provides the best balanced view of the deposit. |

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|---|---|---|
| **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.*<br><br>*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.*<br><br>*The assumptions used for any reporting of metal equivalent values should be clearly stated.* | N/A - no individual results are reported.<br><br>No metal equivalent values are considered in the Mineral Resource estimate other than NSR values which have been used to quote the resources themselves.<br><br>The NSR cut off values are described in section 3 and are based partially on commercially confident information in concentrate sales contracts. |
| **Relationship between mineralisation widths and intercept lengths** | *These relationships are particularly important in the reporting of Exploration Results.*<br><br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br><br>• *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').* | N/A - no individual results are reported. |
| **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.* | Diagrams showing resource outlines are included in the body text.<br><br>N/A - no individual results are reported. |
| **Balanced reporting** | *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | N/A - no individual results are reported. The Mineral resources are based on all available data and as such provides the best balanced view of the deposit. |
| **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.* | N/A |

## Section 3: Estimation and Reporting of Mineral Resources Barbara

| **Criteria** | **JORC Code explanation** | |
|---|---|---|
| **Estimation and reporting of Mineral Resources** | | |
| **Database Integrity** | *Measures taken to ensure that data has not been corrupted by, for example transcription or keying errors, between its initial collection and its use for Mineral resource estimation purposes.* | A limited but detailed audit of the Barbara drillhole database was undertaken and has established that the contained data is within acceptable error limits and has been transcribed and manipulated appropriately to provide a representative dataset of the Barbara deposit based on collected data. The database has been constructed and maintained to an appropriate standard, reflected in the identified low proportion of contained errors. Some potential issues exist with historic data, although most 'fit' into the whole data set. Where historic data could not be matched with new data, those holes were excluded. The Barbara drillhole database is considered suitable for resource estimation work. Of note is the high proportion (>90%) of 'recent' data within the database, that is, drilled by SMD since 2008 and ROM in 2019. |
| | *Data validation procedure's used* | Initial visual inspection of spatial data in Surpac to identify any 'non-conforming' data, for example, collar, downhole survey, resource grade assay intersections, etc. A minor number of historic drillholes presented some potential ambiguity. These issues were investigated and 4 drillholes were excluded from the |

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| | | dataset. A selection of approximately 10 drillholes were checked for data integrity and transcription errors between initial reported results, for example, laboratory assay files, collar survey files, down-hole survey files; and data contained within the database. No significant differences were found. Conversion of MGA co-ordinates to local grid of all drillhole collars were checked via transforming original MGA data contained within the database to local co-ordinates as an independent exercise. No errors were found. |
| **Site Visits** | *Comment on any site visits undertaken by the Competent Persons and the outcome of those visits*<br><br>*If no site visits have been undertaken indicate why this is the case.* | Previous senior company personal visited the Barbara site on several occasions leading up to and during the 2013/2014 MR estimation process and during the grade control drilling.<br><br>An initial orientation visit was followed with visits during infill drilling to observe sample collection protocol and resource character. A final visit coincided with data hand-over for resource estimation.<br><br>The competent person visited the site on several occasions during open pit mining operations. |
| **Geological Interpretation** | *Confidence in (or conversely the uncertainty of) the geological interpretation of the mineral deposit.* | The Barbara deposit comprises 3 main mineralized zones: Southern, Central and Northern, approximately along the same line of strike within the Barbara Shear Zone. Geological interpretation is reasonably straightforward, although some local ambiguity still exists, as reflected in the resultant JORC classification of the deposit. The Southern Lode is by far the most robust, consisting of a SW-plunging higher-grade (Cu/Au/Ag/Co) shoot within a lower-grade mineralised halo contained in the Barbara Shear Zone. Geological confidence in the Southern Lode is high, and similar geological trends accord well for a variety of elements, for example, Cu, Au, Co, Ag, Fe, S, density variography, magnetic susceptibility, and lithology. Lithological controls are well understood on a broad scale, for example the influence of dolerite intrusions. Most of the MR is contained within the Southern Lode. The Central and Northern lower tenor (all metals) zones are less consistent and robust, and while the same primary Barbara Shear Zone control is evident, secondary controls are less obvious. Notwithstanding this, both Central and Northern Lodes are well defined within current drilling limits. |
| | *Nature of the data used and any assumptions made* | Surface mapping of the Barbara deposit area is supported and projected into 3 dimensions with drillhole data. Careful lithological logging of all SMD collected data has resulted in an appropriately detailed model of Barbara Geology, following the 2 main controls: Barbara Shear Zone, and lithology. Two main rock-types occur, light-coloured rhyodacite and darker-coloured dolerite intrusions. Being a metamorphic and altered terrane some assumption of metamorphic/alteration products of the primary rock-types have been made (for example, biotite schist = dolerite precursor), and while some local ambiguity may occur, overall there is good agreement between surface geological expression and projection into the 3-d model. |
| | *The effect, if any, of any alternative interpretations on the Mineral Resource estimate* | None made, reasonably straightforward primary control (Barbara Shear Zone) and secondary control (lithology). |
| | *The use of geology in guiding and controlling the Mineral resource estimation* | Primary geological control (Barbara Shear Zone) used to guide estimation wireframing. Secondary geological control over mineralization within the Barbara Shear Zone relates to contacts between Dolerite and Rhyodacite, matching well in the Southern Lode with the SW plunge and therefore variography. Variation to this plunge (intersection lineation) is noted in the Mid/Northern Lodes and validated with estimation results.<br><br>The new model wireframes were updated and required minor adjustments to reflect the final dig plans. |

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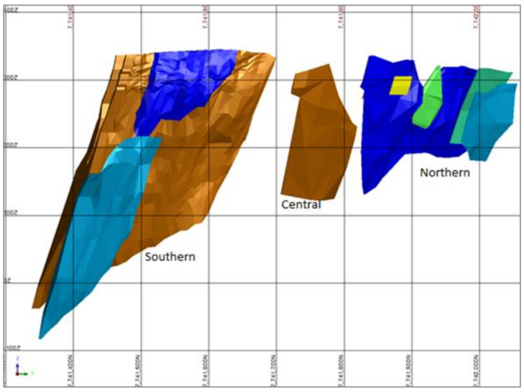
| | *The factors affecting the continuity both of grade and geology* | Within the Barbara Shear Zone lithology (contacts) are seen to guide mineralization continuity and tenor, especially obvious in the Southern Lode. Dolerite/rhyodacite contacts appear to have less influence in the Mid/Northern Lodes resulting in less continuous and overall lower tenor resources.<br><br>The “Footwall stringer” zone adjacent to the main southern lodes consist of quartz, carbonate and chalcopyrite veinlets of variable orientations and were domained and modelled as a separate domain of sub-economic material. |
| **Dimensions** | *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, And depth below surface to the upper and lower limits of the Mineral Resource* | The deposit can be broken into main areas North, Central and South. Southern Lode of Barbara mineralization (+0.5% Cu) extends for approximately 230m in strike length (local N-S), averaging approximately 15m in true width (between 1m to >25m). As modelled it extends at least 580m down-plunge (550m below surface). The Mid and Northern Lodes average 3-5m in width over a combined strike length of 400m and to 180m below surface.<br><br> |
| **Estimation and modelling Technique** | *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 description of computer software and parameters used.* | Estimation process guided by Cu, the most valuable commodity within the deposit. Domaining undertaken at nominal grades of 0.1%, 0.5% and 2% Cu. 0.1% Cu corresponds approximately to the Barbara Shear Zone, or main anomalous Cu zone. 0.5% Cu corresponds to approximate economic Cu cut-off (open pit) and 2% Cu corresponds approximately to the high-grade Cu shoot within the Southern Lode.<br><br>Geostatistics and variography was undertaken using Snowden Supervisor v8.11 and Surpac Software 2020.<br><br>Grade interpolation was undertaken using Surpac Software 2020 and OREPack Estimation Manager v 17.04<br><br>Assay data composited to 1m, appropriate from statistical analysis.<br><br>Statistical analysis of composite data to investigate stationarity, data distribution and character, and outlier grades.<br><br>Statistical analysis within various sub-domains, for example, weathering and lithology domains. Outlier grades assessed using histograms, log-probability plots, spatial distribution and CV. Top-cutting minimal based on analysis.<br><br>Variographical analysis of different elements: Cu, Au, Ag, Co, As, Fe, S and density within different domains/sub-domains. Strong correlation between variography and geological controls in most cases, boosting confidence in the estimate.<br><br>Density techniques compared, specifically between down-hole gamma and Archimedes methods. Density estimation protocol developed from confidence levels between techniques and strong correlation between Fe and density.<br><br>Comparison between the use of Ordinary Kriging as the interpolation or calculation via assay (Cu, Fe) |

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| | | regression to assign density to blocks. Subsequent reconciliation to mining and process data shows the use of a simple regression to be more accurate.<br><br>QKNA identified appropriate parent block size to be 4 x 2 x 5 with sub blocks to 1 x 0.5 x 1.25. Discretisation 4x1x4.<br><br>Interpolation of Cu, Au, Ag, Co, As, Fe, S within various domains outlined above as hard boundaries utilizing calculated variograms/ ellipsoids/anisotropies for each.<br><br>Material above final pit surveys was depleted and labelled as mined. |
| | *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral resource estimates appropriately account for such data* | Detailed reconciliations between mined and milled to date (final processing for last batches yet to be received and processed) to the model have been done. Overall this shows 619,981 dry tonnes @ 1.83% Cu and 0.16g/t Au has been processed versus predicted from the model of 610,061 dry tonnes at 1.86% Cu and 0.16g/t Au. At call factors of 102%, 98%, 100% respectively. |
| | *The assumptions made regarding recovery of by-products.* | Au, Ag and Co potential by-products. Each interpolated as for Cu and above defined techniques. No separate domaining of by-product elements undertaken. Processing data is available for Ag and Au with average mill recoveries of 92.4% and 68.7% respectively.<br><br>Sequential Cu (acid soluble, cyanide soluble and residual Cu) modelled within the weathered horizons and 'process type' attribute calculated based on favoured metallurgical recovery process. |
| | *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation* | S, As and Fe estimated. S and As modelled as potential AMD contributors. S depletion zone at surface domained/modelled separately. Further work with S may be warranted, for further definition of waste characterization. |
| | *In the case of Block Model interpolation the Block size in relation to the average sample spacing and the search employed* | Estimation runs were initially made using various search parameters and results compared. Final search parameters identified. Three search passes were made for each element with changing search distance and/or informing sample number. Search distances were 1st pass 100m, 2nd pass 200, 3rd pass 300 with semi-major = Major/2 and Minor = Major /10. |

| Number of Composites | | | | |
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| Search Pass | Min | Max | Limit by HoleID | Max composites per hole |
| 1 | 6 | 36 | Y | 3 |
| 2 | 6 | 36 | Y | 3 |
| 3 | 6 | 36 | Y | 3 |

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| | *Any assumptions behind modelling of selective mining units* | QKNA of block size undertaken on a range of block sizes with consideration for assessment to open pit SMU (2.5m E x 2.5m RL) or underground. |
| | *Any assumptions about correlation between variables* | Bivariate statistics undertaken between a range of elements. Reasonable correlation between Cu/Au/Ag/Co/As/Fe/S. Density correlation with Fe utilized in density estimation. Other relationships noted and aided in variographical analysis/ chosen interpolation directions. |
| | *Description of how the geological interpretation was used to control the resource estimates.* | Grade domains created within primary mineralization control (Barbara Shear Zone), and maximum continuity controls influenced strongly by lithological contacts. Density estimation guided by lithological units. Weathering profile used for S interpolation and sequential Cu interpolation. |
| | *Discussion of basis for using or not using grade cutting or capping.* | Consideration of various statistical parameters and visual inspection of grade distribution resulted in top-cutting of elements by domain to a minor amount. Log-probability plots, data histograms, spatial grade distribution and CV were all used to analyse the need for top-cutting. All top-cutting (or not) was design to |

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| | | bring the CV below 1.7 which is considered appropriate for the kriging method utilised. |
| | *The process of validation, the checking process used, the comparison of the model data to drillhole data, and use of reconciliation data if available.* | Detailed validation of modelled estimate: visual inspection between drillhole grade and model grade by plan and section.<br><br>Moving window mean comparisons using swath plots of input and output grades by northing, easting and elevation slices through the model.<br><br>Density validation comparing density measurement techniques and Fe calculation results.<br><br>Wireframe/domain volume and declustered grade comparison to modelled results.<br><br>Comparison between top-cut and uncut composite/model results.<br><br>All discordances investigated and resolved to acceptable limits.<br><br>Detailed reconciliations between mined and milled to date (final processing for last batches yet to be received and processed) to the model have been done. Overall this shows 619,981 dry tonnes @ 1.83% Cu and 0.16g/t Au has been processed versus predicted from the model of 610,061 dry tonnes at 1.86% Cu and 0.16g/t Au. At call factors of 102%, 98%, 100% respectively. |
| **Moisture** | *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | All tonnages estimated on a dry basis. |
| **Cut-off Parameters** | *The basis for adopted cut-off grade(s) or quality parameters applied.* | \$A/100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Term and conditions (TCs). A\$100 NSR represents material that is currently considered economic to mine and process.<br><br>US Metal Prices used were \$8,013.5 copper and \$2003.1 gold with an FX rate of 0.76.<br><br>Mill Recovery assumptions used were 94% Copper and 40% Gold.<br><br>TCs and payables are based on contract details. |
| **Mining Factors or Assumptions** | *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made* | Some inclusion of material that will not have reasonable prospect for mining is included within the Barbara deposit. These narrow and/or low-grade intersections have been included to enable sensible continuity in mineralization. Upon completion of the open pit (finished Feb 2021) optimisation studies show the primary considered mining method is now underground with possible limited extension to the open pit along strike. |
| **Metallurgical factors or Assumptions** | *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made while reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made* | Cu modelling has included sequential analyses to allow a reasonable prediction of metallurgical processing, either leaching or flotation. Acid and cyanide solubility analyses have been undertaken on all weathered resource material, and these attributes interpolated into the block model, based on percentage of total Cu. Future analysis of interpolated data will enable some confidence in predicting process stream.<br><br>Processing data has shown the ore to average 91.15% Cu recovery. |
| **Environmental Factors or assumptions** | *Assumptions made regarding possible waste and residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential environmental impacts of mining and processing operations. While at this stage the potential environmental impacts, particularly at a greenfields* | S and As modelled within all domains, including S for weathered (depletion) zones. All other elements have been modelled external to resource domains |

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| | *project, may not always be well advanced, the status of early consideration of these environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | |
| **Bulk Density** | *Whether assumed or determined. If assumed, the basis for the assumption. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples* | BD measurements at the Barbara deposit have been via a variety of methods but can be divided into 2 distinct groups: Water displacement (Archimedes) and downhole Gamma. Of the nearly 60,000 readings, the vast proportion is from downhole Gamma methodology. BD measurements from the variety of methods covers a representative sample of the Barbara deposit. Nearly 6,000 x 1m density composites have been utilized to estimate bulk density into the Barbara model. The strong correlation between Fe and BD has also featured in BD estimation. |
| | *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 rocks and alteration zones within the deposit* | BD measurements within weathered domains are via waxed water displacement methodology, where core samples are waxed prior to BD measurement to incorporate pore space influence within the weathering environment. All domains and lithologies are represented. Extensive comparison of results with other methods enabled an informed confidence level protocol to be developed. |
| | *Discuss assumptions for Bulk Density estimates used in evaluation processes of the different materials* | Extensive comparison of methodologies, relationships and BD results/statistics has defined the estimation protocol:<br>1. Ordinary Kriging of water displacement (WD) derived data within the fresh horizons.<br>2. Fe calculation utilizing estimated Fe values within fresh resource domains.<br>3. Ordinary Kriging of downhole Gamma data (GT) into unfilled blocks using nominal search distances.<br>4. Assignment of BD values based on average kriged values for lithology and oxidation domains. |
| **Classification** | *The basis for the classification of the Mineral Resource into varying categories* | Various Cu-based geostatistical and statistical parameters were used to classify the Barbara Mineral Resource. Kriging Variance, Distance to Nearest Sample, Cu Fill Sequence and Drill Spacing are the primary considerations used for resource classification. All parameters have similar distribution. Drill spacing is the most informative statistic, and the approximate 20m (northing) by 40m (RL) spacing allows much of the resource within the main Southern, Central and Northern Lodes to be classified as Indicated. Although some minor areas may have statistics that would allow a Measured level of classification, these areas are not continuous. |
| | *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* | Extensive consideration of the character and distribution of all the various elements that make up the Barbara Mineral Resource has been undertaken. Within the higher confidence areas of the deposit, especially within the Southern Lode, confidence in the Cu resource is high, and while local variation may still exist, the resource presents as a relatively straightforward and robust zone of mineralization. |
| | *Whether the result appropriately reflects the Competent persons view of the deposit* | The estimated Mineral Resource for the Barbara deposit reflects the Competent Persons' views of the character and metal distribution as presented by the raw data. |

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| **Audits or Reviews** | *Results of any Audits or reviews of the Mineral resource Estimates* | A third-party audit is planned for this new Barbara Mineral Resource estimate.<br><br>Previous resources have been conducted by external parties Runge (2010) and H&S (2008). |
| | *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.* | Based on the current level of data density and geological understanding of the Barbara deposit the Competent Persons' have tentatively placed the following confidence limits on the resource.<br><br>Indicated Resource: +/- 15% at a 90% confidence level<br><br>Inferred Resource: +/- 30% at a 90% confidence level<br><br>These limits are based on a detailed validation and investigation process through the whole estimated Mineral Resource (+0.5% Cu) and past production.<br><br>Factors that may affect the estimate's accuracy include local geological and therefore grade variation, local density variation, and for the Inferred Resource the projection distance and of available data and confidence in this projection. High accuracy is expected for the global resource figure. |
| | *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* | The estimate whilst taking into account local variations is not suitable for predicting local mine production but will be the basis for producing such an estimation. |
| | *These Statements of relative accuracy and confidence of the estimate should be compared with production data, where available* | N/A |

## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1)

The table below follows the requirements of JORC Table 1 sections 1, 2 and 3 as required for the estimation and reporting of Mineral Resources.

Section 1: Sampling Techniques and Data LillyMay deposit

| Criteria | JORC Code explanation | |
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| **Sampling Techniques and Data** | | |
| **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.* | 18 Reverse Circulation (RC) drill holes completed by Syndicated Metals Limited (SMD) .<br><br>RC drillholes were sampled 1m intervals using a rig mounted cyclone with an 87.5-12.5% riffle splitter to collect a 3.5kg to 4kg sample. All 1m samples are analysed using handheld XRF and then all samples over 0.05% copper were sent to ALS laboratories (Mt Isa and Townsville) for multi-element analysis and Au analysis. |
| | *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* | Sampling was carried using Syndicated Metals Limited (SMD) sampling protocols and QAQC procedures. |
| | *Aspects of the determination of mineralisation that are Material to the Public Report.*<br><br>*In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg 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.* | RC drilling was used to obtain a 1 m sample from a 3.5 to 4 kg sample. A multi element concentration reading of each interval was taken a Niton Portable XRF. Samples where the Cu reading was in excess of 1000 ppm were selected for assay. The samples submitted for assay were given a unique sample ID and shipped to the Laboratory. Samples were dried, pulverised by an LM2 (ALS Laboratories, Mt Isa) a sample split was taken for ICP ME-ICP41 multielement method and Au by AA25 fire assay at ALS in Townsville. |
| **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).* | RC Drilling has been undertaken using a face sampling percussion hammer with 5 ¼" to 5 ½" bits. |
| **Drill sample recovery** | *Method of recording and assessing core and chip sample recoveries and results assessed.* | RC drilling recoveries were monitored visually by means approximating bag weight to theoretical weight followed by checking sample loss through outside return and sampling equipment. A review of the bulk reject bags suggests the RC drill sample recoveries were also excellent. |
| | *Measures taken to maximise sample recovery and ensure representative nature of the samples.* | RC holes were collared with a well-fitting stuffing box to ensure material to outside return is minimized. Drilling is undertaken using auxiliary compressors and boosters to keep the hole dry and lift the sample to the sampling equipment. Cyclone and sampling equipment is checked regularly and cleaned. Hole is flushed at end of each sample and end of each rod. Bit is pulled back after every metre to reduce contamination through the ore zone. |
| | *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.* | Recovery is visually checked and sample loss of the fine or coarse fraction is minimised by following SMD drilling protocols and procedures. |
| **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 is completed by a Geologist using SMD logging procedures that are developed to accurately reflect the geology of the area and mineralisation styles. |
| | *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* | Logging is qualitative and quantitative in nature and captured downhole depth, colour, lithology, texture, alteration, sulphide type, sulphide percentage and |

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| | | structure. All core is digitally photographed for historical reference. |
| | *The total length and percentage of the relevant intersections logged.* | All drillholes are logged in full. |
| **Sub-sampling techniques and sample preparation** | *If core, whether cut or sawn and whether quarter, half or all core taken.* | N/A No core available |
| | *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* | The RC sample were split (87.5%-12.5%) by the multi-tiered riffle splitter within cyclone of the drilling rig. Majority of the samples were recorded as dry and minimal wet samples were encountered. Wet samples were assessed and if the recovery was poor the complete sample was split in the field using a 3 tiered riffle splitter (after the sample dried). Sample duplicates were obtained by splitting the reject sample in the field using the 3 tier riffle splitter. Rarely was a scoop used to obtain a sample for assay. |
| | *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* | The samples are sent to an accredited laboratory for sample preparation and analysis. SGS and ALS Laboratory follows industry best standards in sample preparation including optimal drying of the sample (temperature and time for base metal sample), crushing and pulverization of the entire sample in a LM2 to a grind size of 85% passing at 75 microns. |
| | *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | Quality Control (QC) procedures involved the use of certified reference material such as assay standards for base metals, along with blanks and field sample duplicates. |
| | *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.* | RC field sample duplicates were taken in each ore zone or twice in every 100 samples. |
| | *Whether sample sizes are appropriate to the grain size of the material being sampled.* | The sample sizes are believed to be appropriate to correctly represent the style, thickness of copper and gold mineralisation in the Mt Isa Inlier. |
| **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.* | Analysis of Cu, Fe and S was completed at ALS in Townsville using the ICP41 scheme which is partial use of the total sub-sample. Au was analysed by ALS in Townsville using fire assay AA25 utilising the total sample. |
| | *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibration factors applied and their derivation, etc.* | No geophysical tools were used to determine any element concentrations used in the resource estimate.<br><br>A handheld XRF instrument is used to determine if samples are to be submitted for chemical analysis (assay). |
| | *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.* | Syndicated Metals inserted certified standards and duplicates into the sample sequence. Field duplicates and standard control samples have been used at a frequency of 2 field duplicates and 6 standards per 100 samples.<br><br>ALS and SGS Laboratories QAQC included insertion of certified standards, blanks, check replicates and fineness checks to ensure grind size of 85% passing 75 micron as part of their own internal procedures.<br><br>No major issues were identified during the conduct of standard QAQC checks.<br><br>The standard control charts have a number of samples plotting beyond 3 standard deviations these have been Identified as being miss labels. |

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| **Verification of sampling and assaying** | *The verification of significant intersections by either independent or alternative company personnel.* | The data used for the LillyMay estimate was checked by Jim Whitelock before the estimation process was completed. |
| | *The use of twinned holes.* | N/A no twinned holes have been drilled |
| | *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* | Geological and sampling information was collected using an electronic logging system and device (Panasonic Toughbooks). |
| | *Discuss any adjustment to assay data.* | No adjustments or calibrations were made to any assay data used in the estimate. |
| **Location of data points** | *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* | The coordinates of the supplied drill hole collars have been generated derived from DGPS. There have been a mixture of downhole surveys, ranging from collar surveys to downhole survey, measurements are greater than 30m from the bottom. |
| | *Specification of the grid system used.* | GDA94 MGA Zone 54 datum North. |
| | *Quality and adequacy of topographic control.* | The LillyMay topographic control is very accurate derived from LIDAR survey acquired in November 2013 |
| **Data spacing and distribution** | *Data spacing for reporting of Exploration Results.* | Drill spacing within the Inferred Mineral Resource of approximately 50m by 70m was considered adequate to establish both geological and grade continuity. The Inferred Mineral Resource areas have sparser drill spacing, and the mineralisation is of limited continuity. |
| | *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 Drill spacing was considered adequate to establish both geological and grade continuity to classify the resource as Inferred. |
| | *Whether sample compositing has been applied.* | Samples haven't been composited |
| **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 drill orientation has been optimal. One direction of drilling was completed. Sections with ore grade intercepts have more than one hole in the same direction confirming true orientation. |
| | *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.* | No bias is currently known. |
| **Sample security** | *The measures taken to ensure sample security.* | Samples are stored on site and transported to ALS laboratories in Mt Isa by Syndicated Metals for Preparation. The samples are labelled from the point of collection and retained this unique number throughout the analytical process. |
| **Audits or reviews** | *The results of any audits or reviews of sampling techniques and data.* | None except for this estimate. |

| Criteria | JORC Code explanation | |
|---|---|---|
| **Reporting of Exploration Results** | | |
| **Mineral tenement and land tenure status** | *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings..* | The Barbara Project is located within the Shire of Mt Isa and West Leichhardt Station and is situated approximately 60km NE of Mt Isa.<br>- The LillyMay deposit is wholly within Queensland mining EPM16112 (granted 3rd November 2008)., which is held by Round Oak Minerals Pty Ltd.<br>- EPM16112 expires on 2nd November 2023, and no known impediment exists to renewal of the Lease.<br>- The tenement resides within the Kalkadoon Native Title claim area, and an executed Ancillary Agreement is in place |
| | *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.* | The security of tenure at the time of reporting is secure with no known impediments to continuing explore on the tenement |
| **Exploration done by other parties** | *Acknowledgment and appraisal of exploration by other parties.* | |
| **Geology** | *Deposit type, geological setting and style of mineralisation.* | The Barbara Project which contains the LillyMay deposit covers part of the Eastern Succession of the Mt Isa Inlier. The key components in the area include:<br>• The northeast controlling Mt Remarkable Fault.<br>• A series of north-south structures interpreted as major thrust faults.<br>• The presence of the regionally significant Kalkadoon Granite. It is interpreted that the granite body has played a significant role in the lithostructural control within the area.<br>• The Wonga Batholith which potentially provided the driving heat cell for the mineralising event; and<br>• A thrust repeated target stratigraphy of the Magna Lynn Metabasalt Formation and the Leichhardt Volcanic Succession.<br>• A network of intruded of dolerite/mafic dykes crosscutting and infilling the LillyMay Fault.<br>These core geological components provide the key tectono-stratigraphic setting for the potential formation of a significant copper-gold mineralising system.<br>The LillyMay deposit is hosted by acid volcanics of the Proterozoic-aged Leichhardt Volcanics, within the Kalkadoon-Leichhardt Domain of the Mt Isa Inlier. Locally within the Leichhardt Volcanic Succession, a series of mafic intrusive sills and dykes are believed to play a significant part in the focusing of copper-gold mineralisation. The LillyMay Deposit is hosted on what is interpreted to be the intersection of a northwest trending second-third order structure interacting with a suite of mafic intrusive rocks.<br>The lode occurs within a structure obliquely cross cutting the regional N-S strike and is characterised by quartz-tourmaline (+chlorite) alteration, which forms a distinct surface ridge. Host rock lithologies consist of predominantly of felsic rhyolitic to rhyodactitc rocks with lesser amphibolitic units which appear to focus shearing into an anastomosing shear array. Metamorphic grade is considered to be lower greenschist facies |

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| **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>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.*<br>*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.* | N/A the report relates to a mineral resource estimate and does not refer to individual results. The Mineral resources are based on all available data and as such provides the best balanced view of the deposit. |
| **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.*<br>*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.*<br>*The assumptions used for any reporting of metal equivalent values should be clearly stated.* | N/A no individual results are reported.<br>No metal equivalent values are considered in the Mineral Resource estimate other than NSR values which have been used to quote the resources themselves.<br>The NSR cut off values are described in section 3 and are based partially on commercially confident information in concentrate sales contracts. |
| **Relationship between mineralisation widths and intercept lengths** | *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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').* | N/A no individual results are reported |
| **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.* | Diagrams showing resource outlines are included in the body text.<br>N/A no individual results are reported |
| **Balanced reporting** | *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | N/A no individual results are reported. The Mineral resources are based on all available data and as such provides the best balanced view of the deposit. |
| **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.* | Geological surface mapping as per below |

Section 3: Estimation and Reporting of Mineral Resources LillyMay

| Criteria | JORC Code explanation | |
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| **Estimation and reporting of Mineral Resources** | | |
| **Database Integrity** | *Measures taken to ensure that data has not been corrupted by, for example transcription or keying errors, between its initial collection and its use for Mineral resource estimation purposes.* | RC Data is collected using electronic logging system. Data is loaded into an access based database.<br><br>A limited audit of the LillyMay drillhole database was undertaken and has established that although several issues relating to spatial accuracy of some of the drillholes exist, these issues are manageable at this low-level estimation stage. No assay data transcription audit was undertaken. All drillholes within the database have been drilled during 2014 by SMD. Spatial location and tenor of assay data as encountered during interpretation does not suggest any major issues. |
| | *Data validation procedure's used* | Validation checks including Hole ID, depth checks, overlapping intervals. Assay results plotted and checked on section. Initial visual inspection of spatial data in Surpac to identify any 'non-conforming' data, for example, collar, downhole survey, resource grade assay intersections, etc. 7 of the 18 holes do not have DGPS collar surveys, and approximately half of the holes have some issues with down-hole survey accuracy. |
| **Site Visits** | *Comment on any site visits undertaken by the Competent Persons and the outcome of those visits*<br><br>*If no site visits have been undertaken indicate why this is the case.* | Previous senior company personal visited the LillyMay site on several occasions leading up to previous MR estimation process.<br><br>The competent person visited the site during open pit mining operations at the nearby Barbara deposit. |
| **Geological Interpretation** | *Confidence in (or conversely the uncertainty of) the geological interpretation of the mineral deposit.* | Felsic volcanics of the Leichhardt Volcanics are the main lithology present in the LillyMay area. These are intruded by mafic and intermediate dykes with NW to NE trends. The mineralised zone lies<br><br>approximately 300 m NE of the NW trending Spectre Fault which shows up as a significant linear magnetic and geochemical anomaly. Porphyritic intrusives of the Kalkadoon Granodiorite are present ~ 500 m west of the prospect.<br><br>Copper mineralisation at LillyMay exists as chalcopyrite hosted in a 1-4 m wide quartz vein with strong chlorite alteration and smaller subsidiary veins and alteration in the surrounding 1 – 4 m. Chalcopyrite occurs in massive irregular bunches, stringers and veins. The vein strikes E-W (070-090) and dips at around 60-70° to the south. It is slightly curved along strike and convex to the south. The thickness of the vein and the degree to which it is mineralised varies along strike with two main lodes known from the historical workings and recent drilling. Both lodes have a steep south eastern plunge with mineralisation strongest underneath the old workings. A barren zone occurs between the two main lodes where the vein is present but chalcopyrite is largely absent.<br><br>Cu wireframes at nominal 0.05% and 0.5% were determined by geological and economic considerations respectively. The LillyMay mineralisation structure appears reasonably consistent in orientation (strike and dip) over known extent. The immediate enveloping structure is reasonably defined by anomalous (relative to surrounding rock) Cu and/or S content. Wireframing of the mineralised zone followed as closely as possible the recognition of anomalous Cu grade (generally +0.05%).<br><br>The LillyMay deposit presents as a relatively simple mineralised quartz vein structure. There is excellent |

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| | | understanding of regional geology by SMD geologists, associated with considerable local exploration and development of the adjacent Barbara project. Recognition of the various lithologies has resulted from local geological understanding, careful logging of drillholes and from geochemical analysis, especially Ti/Zr ratios. Some uncertainty still exists with respect to small scale lithological distribution, however this has little apparent effect on the resource, and reflects the required level of geological knowledge/confidence for an Inferred Resource. |
| | *Nature of the data used and any assumptions made* | Surface mapping of the LillyMay deposit area is supported and projected into 3 dimensions with drillhole data. Careful lithological logging of all SMD collected data has resulted in an appropriate level of geological understanding. Geochemical analysis, for example Ti:Zr ratios are also utilised. A 3-d mineralisation model has been constructed at various Cu cut-offs, and a 3-d lithological model is yet to be constructed.. |
| | *The effect, if any, of any alternative interpretations on the Mineral Resource estimate* | None made, reasonably straightforward primary control , LillyMay quartz vein/structure. |
| | *The use of geology in guiding and controlling the Mineral resource estimation* | Primary geological control is the LillyMay quartz vein/structure, well defined as a reasonably planar structure, and easily recognised as a geological entity. Local lithology only secondary control at best, as the lode cross-cuts local stratigraphy. |
| | *The factors affecting the continuity both of grade and geology* | Shear zone/quartz vein primary control on mineralisation. Cu grade distribution is variable through the structure, and plunge components are not yet resolved with current level of data. Faults appear to define E and W extents or offset the structure. A grade gap is present between the E and W lodes where Cu tenor is below the utilised cut-off (0.5%), although the structure is still present. |
| **Dimensions** | *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, And depth below surface to the upper and lower limits of the Mineral Resource* | The Inferred Resource outcrops at surface and has been defined over a strike length of 400m, and down-dip for 140m. The larger E Lode is approximately 250m in strike length, separated from the 100m W lode by a 50m sub-grade zone. Resource widths vary from <1m to ~5m in true width. . |
| **Estimation and modelling Technique** | *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 description of computer software and parameters used.* | Estimation process guided by Cu, the most valuable commodity within the deposit. Domaining<br><br>undertaken at nominal grades of 0.05% and 0.5% Cu corresponds approximately to the LillyMay quartz vein anomalous zone, and approximate economic Cu cut-off (open pit) respectively.<br><br>All estimation related work undertaken with Surpac Software V6.6.<br><br>Assay data composited to 1m, all samples 1m in length<br><br>Statistical analysis of composite data to investigate data distribution and character, and outlier grades.<br><br>Outlier grades assessed using histograms, log probability plots, spatial distribution and CV (<1). Top-cutting not required.<br><br>Variographical analysis of different elements: Cu, Au, Fe, S within different domains. Poor directional control, best for Cu down-dip. This to be used for all elements.<br><br>No density data available. Density obtained from model of nearby Barbara deposit, with extensive data. Density assigned as oxide, transitional and fresh.<br><br>Analysis results support the use of Ordinary Kriging as the interpolation method.<br><br>Interpolation of Cu, Au, Fe and S within mineralisation and economic domains outlined above as hard |

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| | | boundaries utilizing calculated variograms/ ellipsoids/anisotropies for each.<br><br>No QKN analysis, trial and error used to obtain best results. Block size based on geological character and data spacing: 25 x 4 x 4m (E x N x RL), sub block to 6.25 x 1 x 1m.<br><br>Estimation runs were initially made using various search parameters and results compared. Final search parameters identified. 2 'fill runs' made for Cu changing search distance and/or informing sample number, as a measure of confidence in the final estimate.<br><br>Discretisation 3x3x3, search distance 45m then 70m (variogram range 60m), informing samples 1-15, to account for single sample areas. 15 samples never required.<br><br>Cu fill sequence runs recorded within the model. |
| | *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral resource estimates appropriately account for such data* | First estimate and unmined. |
| | *The assumptions made regarding recovery of by-products.* | Au, Ag and Co potential by-products. Each interpolated as for Cu and above defined techniques. No separate domaining of by-product elements undertaken. Processing data is available for Ag and Au with average mill recoveries of 92.4% and 68.7% respectively.<br><br>Sequential Cu (Acid soluble, cyanide soluble and residual Cu) modelled within the weathered horizons and 'process type' attribute calculated based on favoured metallurgical recovery process. |
| | *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation* | S, As and Fe estimated. S and As modelled as potential AMD contributors. S depletion zone at surface domained/modelled separately. Further work with S may be warranted, for further definition of waste characterization. |
| | *In the case of Block Model interpolation the Block size in relation to the average sample spacing and the search employed* | Parent block size: 25m x 4m x 4m (E x N x RL), sub blocking to 6.25m x 1m x 1m. Average sample spacing: 50m easting spaced drill sections, 1m down-hole sampling intervals (approximates northing/RL), and 60m RL. First search 45m, most blocks filled after 1st search/run. Subsequent searches 70m, all blocks filled.<br>. |
| | *Any assumptions behind modelling of selective mining units* | None made, block/sub block size based on data/geological resolution. |
| | *Any assumptions about correlation between variables* | Bivariate statistics undertaken between a range of elements. Good correlations for all: Cu, Au, Fe and S. Excellent relationship between Cu and S. |
| | *Description of how the geological interpretation was used to control the resource estimates.* | Grade domains created within primary mineralization control (LillyMay quartz vein), and maximum continuity controls estimated as down-dip based on 'best' variograms. Weathering profile used for S interpolation and density assignment. |
| | *Discussion of basis for using or not using grade cutting or capping.* | Consideration of various statistical parameters and visual inspection of grade distribution resulted in no top-cutting of elements. Log-probability plots, data histograms, spatial grade distribution and CV were all used to analyse the need for top-cutting. |
| | *The process of validation, the checking process used, the comparison of the model data to drillhole data, and use of reconciliation data if available.* | Detailed validation of modelled estimate: visual inspection between drillhole grade and model grade by plan and section. |

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| | | Calculated comparison between composite and model grade by Easting.<br>Wireframe/domain volume and declustered grade comparison to modelled results.<br>All discordances investigated and resolved to acceptable limits, model re-runs in first instance, |
| **Moisture** | *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.* | All tonnages estimated on a dry basis. |
| **Cut-off Parameters** | *The basis for adopted cut-off grade(s) or quality parameters applied.* | $A/100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Term and conditions (TCs). A$100 NSR represents material that is currently considered economic to mine and process.<br>US Metal Prices used were $8,013.5 copper and $2003.1 gold with an FX rate of 0.76.<br>Mill Recovery assumptions used were 94% Copper and 40% Gold.<br>TCs and payables are based on contract details |
| **Mining Factors or Assumptions** | *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made* | Cu cut-off (0.5% Cu) based on open-pit mining scenario, however no minimum width utilised for wireframe construction, and as a result some areas contain resource of low Cu grade and <1m in width.<br>Suitable for initial project analysis of Inferred level. |
| **Metallurgical factors or Assumptions** | *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made while reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made* | Cu modelling has included sequential analyses to allow a reasonable prediction of metallurgical processing, either leaching or flotation. Acid and cyanide solubility analyses have been undertaken on all weathered resource material, and these attributes interpolated into the block model, based on percentage of total Cu. Future analysis of interpolated data will enable some confidence in predicting process stream.<br>Processing data has shown the ore to average 91.15% Cu recovery. |
| **Environmental Factors or assumptions** | *Assumptions made regarding possible waste and residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential environmental impacts of mining and processing operations. While at this stage the potential environmental impacts, particularly at a greenfields project, may not always be well advanced, the status of early consideration of these environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | S and As modelled within all domains, including S for weathered (depletion) zones. All other elements have been modelled external to resource domains |
| **Bulk Density** | *Whether assumed or determined. If assumed, the basis for the assumption. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples* | Bulk density has been assumed . This method will provide a biased bulk density value for the model because of the volume variance difference between the Fe%/S% block values and the sample density point values.<br>No density data available for LillyMay, density assignment via weathering profile, based on approximate averages for waste at nearby Barbara deposit, where density data are abundant. |

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| | *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 rocks and alteration zones within the deposit* | No density data. Density set to zero within known historic underground workings. The use of the assumed method of SG determination does not take in to account porosity or cavities. |
| | *Discuss assumptions for Bulk Density estimates used in evaluation processes of the different materials* | Based on nearby Barbara deposit averages: oxide-2.2, transitional- 2.5, fresh- 2.75 |
| **Classification** | *The basis for the classification of the Mineral Resource into varying categories* | Level of data spacing/density, accuracy and completeness; and level of geological understanding allows for an Inferred classification for all the resource. |
| | *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* | Geological logging has defined structural and lithological controls that provide confidence to an inferred level in the interpretation of mineralisation boundaries.<br>The model has been classified using the guidelines outlined in the JORC Code (2004) as Inferred. The criteria included in 'Table 1' of the JORC Code were considered when deciding on classification categories.<br>Geology is simple and appropriately understood. Evenly spaced drilling allows even confidence in the resource extents.<br>Data deficiencies include the following:<br>1. Insufficient drillhole density (approximately 50m x 60m, E x RL) to provide accurate grade distribution characteristics.<br>2. No density data for the deposit.<br>3. No diamond drilling data.<br>4. Lack of accurate drillhole collar data for 7 of the 18 current drillholes.<br>5. Lack of or insufficient down-hole survey data for at least 6 of the 18 current drillholes.<br>6. Absence of weathering profile data for the mineralised zones.<br>7. Incomplete lithological model.<br>Deficiencies at a manageable high level and geological understanding allows for Inferred classification. |
| | *Whether the result appropriately reflects the Competent persons view of the deposit* | The estimated Mineral Resource for the Lillymay deposit reflects the Competent Persons' views of the character and metal distribution as presented by the raw data. |
| **Audits or Reviews** | *Results of any Audits or reviews of the Mineral resource Estimates* | No audit has been undertaken by a independent 3rd party |
| | *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.* | Based on the current level of data density and geological understanding of the Barbara deposit the Competent Persons' have tentatively placed the following confidence limits on the resource.<br>Indicated Resource: +/- 15% at a 90% confidence level<br>Inferred Resource: +/- 30% at a 90% confidence level |

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| | | These limits are based on a detailed validation and investigation process through the whole estimated Mineral Resource (+0.5% Cu) and past production.<br><br>Factors that may affect the estimate's accuracy include local geological and therefore grade variation, local density variation, and for the Inferred Resource the projection distance and of available data and confidence in this projection. High accuracy is expected for the global resource figure. |
| | *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* | The estimate whilst taking into account local variations is not suitable for predicting local mine production but will be the basis for producing such an estimation. |
| | *These Statements of relative accuracy and confidence of the estimate should be compared with production data, where available* | N/A no production has taken place |

# Mt Colin: JORC 2012, Table 1, s.1, s.3

## Section 1. Sampling techniques and data.

| Criteria | Explanation |
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| Sampling Techniques | Mt Colin drillhole Resource database contains 549 drillholes, 365 diamond, 63 percussion, 105 RC, 16 sludge holes (where no other information was available for a domain) of total 61,484.12m drilled.<br>59% of all sampling @ 1m intervals. 18% of sampling is below 1m, with the other 23% above 1m. Drilling since 2006 has been sampled to geological boundaries.<br>Assaying details of pre-2006 holes not available. The majority of drilling/sampling prior to 2006 by MIM/CEC, suggesting reasonable QAQC on data collection/despatch/security/assaying, not verified.<br>Exco/Round Oak Minerals drilling accounts for 90% of all drilling metres. |
| Drilling techniques | Geological interpretation based mainly on NQ2 diamond core, RC percussion chips, and blasthole data; the 2013 diamond program had a portion drilled at WL66 (50.5mm core, comparable to NQ2 50.67mm). Minor HQ coring.<br>Total to-date drilling 549 holes, 61,484.12m.<br>*Historical Drilling (pre-2006):*<br>Glindemann and Kitching: 1967, percussion- type unknown, 16 holes, 691m<br>CEC: 1968, percussion- type unknown, 47 holes, 1,183m<br>MIM/CEC: 1968-1972, DDH, 18 holes, 2,219m<br>MIM/CEC: 1986, DDH, 2 holes, 362m<br>MIM: 1991, DDH, 3 holes, 922m<br>Murchison United: 1995, RC, 8 holes, 421m<br>Murchison United: 1995, DDH, 6 holes, 454m<br>Tennant: 2005, blast-hole, 12 holes, 181m<br>*Exco and Round Oak Drilling:*<br>2006: RC, 13 holes, 1,765m<br>2007: RC pre-collar/DDH through mineralised zone, 16 holes, 2,560m<br>2010: RC pre-collar/DDH through mineralised zone, 21 holes, 5,238m<br>2012: RC pre-collar/DDH through mineralised zone, 19 holes, 6,041m<br>2014: DDH, 23 holes, 3,586m<br>2014: RC grade control, 57 holes, 4,649m<br>2018: DDH, 17 holes, 2,376m<br>2019: DDH, 105 holes, 8,377m<br>2020: DDH underground grade control, 114 holes, 13,025m<br>Round Oak Minerals: 2021; 52 holes, 7,435m (end of April) |
| Sample Recovery | Limited data available for historic drilling.<br>Murchison program reports vughs/water in areas. |

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| | From logged sample condition, majority of Exco samples were dry.<br>Exco core recovery very high, although variable in weathering zone.<br>Core/sample recovery from the void/cavity zone varies upwards from 0- full void.<br>No specific method of recording chip sample (RC) recoveries, visual only.<br>Relationship between chip recovery and grade unquantified.<br>Round Oak grade control RC samples logged for sample recovery and wet samples. Very few wet samples. |
| Geological logging of drillholes | Matrix database contained no lithological data.<br>Paper logs available for all historic holes excluding 1968 percussion holes drilled by CEC.<br>Lithological description, weathering and core recoveries, where available, entered into MRG database.<br>Exco and Round Oak Minerals lithological logging data entered from paper logs, or via a field computer.<br>Recent drill holes are logged in full. Logging is completed by a Geologist using logging procedures and templates developed to accurately reflect the geology of the area and mineralisation styles.<br>2006-2019 Surface Diamond Drilling: Drill core is logged for geological and basic geotechnical information, following core jig-sawing, mark-up and recovery checks performed by competent field staff. Level of geological logging is appropriate for Mineral Resource estimation. Both qualitative and quantitative logging is undertaken, following established and consistent Exco protocol.<br>2019 Underground Diamond Drilling: Drill core is logged for geological and basic geotechnical information, following core jig-sawing, mark-up and recovery checks performed by competent field staff. Level of geological logging is appropriate for Mineral Resource estimation. Both qualitative and quantitative logging is undertaken, following established and consistent ROM protocol.<br>Core is logged for orientated structure where orientations are available.<br>All core is photographed with appropriate labelling for future reference. The photos are contained within a central database.<br>Logging is both qualitative and quantitative in nature and captured measurements include downhole depth, colour, lithology, texture, alteration, sulphide type and structure; all recorded into the project database.<br>All core is digitally photographed (both wet and dry) for reference, following sample interval and geotechnical mark-up. |
| Sub-sampling techniques and Sample Preparation | *Percussion Drilling:*<br>Rig/hole type unknown.<br>No data on sampling collection methods available for holes drilled in 1967/1968.<br>Glindemann and Kitching program (1967) selectively sampled using inconsistent sampling intervals.<br>CEC holes (1968) generally sampled at 10 feet intervals.<br>Round Oak Minerals 2014 RC grade control drilling sampled at 1m intervals.<br>*Blast Hole Drilling:*<br>No data on sampling collection methods for the 2005 Tennant blast hole drilling program. |

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| | Holes were selectively sampled at 1m intervals to capture Cu mineralisation.<br><br>Round Oak blastholes collar sampled, approximately 3-5 kg via a scoop.<br><br>*RC Drilling:*<br><br>Limited data on sampling collection methods available for holes drilled prior to 1995.<br><br>Pre-collars were sampled by MIM at 2m intervals for 1991 program.<br><br>1995 Murchison sampling at 1m intervals, following cyclone, commencing within 2-5m of lode, collected with a poly spear.<br><br>Exco RC sampling at 1m intervals through cyclone into PVC bags prior to spear sampling.<br><br>Similar RC sampling protocol across programs: primarily with PVC spear, into plastic bag, left to right, right to left, then down the centre. Where mineralisation not obvious, 6m composites taken, 1-2m composites in visual mineralised zones.<br><br>First pass 6m composites were re-assayed in mineralised zones. Samples riffle split via multiple passes through a single riffle splitter to produce a final ~2kg sample for each 1m interval, for assay.<br><br>Exco RC drilling utilising face-sampling bit.<br><br>Exco 2010 1m spear sampling re-sampled via riffle splitting for mineralised intervals.<br><br>PVC chip trays used to collect and store RC chips, geologically logged by a geologist, to a level appropriate for Mineral Resource estimation.<br><br>Duplicate sampling of the initial sample (field duplicate) is undertaken as routine.<br><br>Round Oak grade control RC drilling riffle splitter on drill rig, 1m intervals.<br><br>*Diamond Drilling:*<br><br>No data available on sampling procedures for historic diamond drilling.<br><br>Core is marked for cutting/sampling to geological boundaries with intervals ranging from 0.1-2m intervals selected by geological staff.<br><br>Core is half-cut slightly to left of orientation lines or metre marks. Half of core is placed back into tray, other half placed into labelled calico bag for lab submission.<br><br>Duplicate samples are utilised as appropriate as quarter cut core samples.<br><br>Underground grade control holes are whole core sampled after review of data captured. |
| Quality of Assay Data and Laboratory Tests | *Analytical Laboratories:*<br><br>No data available for historic drilling.<br><br>Amdel Mt Isa and Adelaide for Murchison drilling program.<br><br>ALS Townsville principally used by Exco up to 2013.<br><br>SGS Townsville used for 2013/2014/2019 drilling programs.<br><br>ALS Mt Isa used for 2019 drilling, post November.<br><br>All three laboratories ISO 9001 accredited<br><br>Round Oak Blasthole samples assayed at Round Oak Great Australia Operations laboratory (SGS run), total Cu and ASCu only.<br><br>*Analytical Procedures:*<br><br>For analysis undertaken at Amdel: Cu – Aqua Regia Digest with ICP-AES finish and samples with values greater than 1% were re-assayed employing ore grade method for total Cu. |

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| | Both ALS/SGS laboratories similar sample preparation process:<br><br>Samples received, bar-coded and weighed.<br><br>Core samples crushed with a jaw crusher.<br><br>Samples >3.2kg spilt using a stainless steel 50:50 riffle splitter (<6kg samples) or stacked mild steel riffle splitter, 75:25 (>6kg samples). Residue retained.<br><br>Split pulverised to >85% passing 75um in LM5 ring mill.<br><br>Mills housed in negative pressure containment, reducing carry-over contamination, and vacuumed between samples.<br><br>Split taken from the sample; the remainder (pulp) retained for storage.<br><br>All equipment cleaned periodically, following laboratory protocol, or specifically at request of client.<br><br>Laboratory in-house QAQC protocol followed (standards, blanks, duplicates, repeats, etc) and reported periodically to client.<br><br>ALS analytical methods utilised:<br><br>Aqua regia/ICP-AES, Cu, other elements; aqua regia/HCl leach/ICP-AES for over-range Cu; 4-acid digest with ICP-AES finish for anomalous Cu only; 50g fire assay with AAS finish for Au.<br><br>SGS analytical methods utilised:<br><br>4-acid digest/ICP-AES or AAS, Cu, other elements; 50g fire assay/AAS finish for Au; specific sample prep for native Cu testing/AAS; sequential Cu analysis H2SO4 digest/cyanide digest/AAS for weathered Cu.<br><br>Density determined by SGS for 2013 drilling program (138 readings) only, via Archimedes method on drill core. Core was not waxed, so density data accurate for this method for fresh material only.<br><br>Density determination has been completed on site at the Round Oak Exploration compound (previously Exco) in Cloncurry for 2006 onwards. Procedure is well documented and trained staff undertake the work. Density determination is via Archimedes method. The database contains a total approximately 3,253 readings including 375 within the mineralised zone.<br><br>Utilised analytical methods are entirely appropriate for required outcomes, especially in 2013 program, where the importance of native Cu and process type speciation (sequential Cu analyses) is recognised.<br><br>*Quality Assurance:*<br><br>No QA data for drilling pre-2016 available.<br><br>ROM has a developed QAQC protocol to ensure regular insertion of various standards/blanks/duplicates etc. and that these are recorded appropriately as QAQC material.<br><br>For Exco, the following QAQC measures utilised:<br><br>Coarse and pulp blanks. Coarse blank either an acid wash silicate from ALS, or 'blue metal' basalt assayed by SGS. Pulp blank is OREAS 90 CRM.<br><br>CRM materials are from either OREAS or Geostats Pty Ltd. They are industry standard pulverised, pre-packed and certified.<br><br>CRM (standards) for Cu and Au, various grade ranges and standard types, for example weathered Cu for sequential Cu analyses.<br><br>Field RC chip and core (1/4 core and lab) duplicates.<br><br>RC field duplicates are collected in the same manner as the original sample. |

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| | Drill core duplicates are inserted at the laboratory into labelled provided calico bags provided by Exco.<br><br>Standards/blanks are placed at regular intervals, and type based on surrounding mineralisation character.<br><br>2013 program submitted QAQC samples in the ratio 1:5.9. Standards/blanks inserted into the sampling run with sample number starting with Q.<br><br>2014 RC grade control program submitted QAQC samples in the ratio 1:20.8. Standards/blanks inserted into the sampling run with sample number starting with Q.<br><br>2018 Round Oak surface diamond program submitted QAQC samples in the ratio 1:6.4. Standards/blanks inserted into the sampling run with sample number starting with Q.<br><br>2019 Round Oak surface diamond program submitted QAQC samples in the ratio 1:6.7. Standards/blanks inserted into the sampling run with sample number starting with Q.<br><br>2019 Round Oak underground diamond program submitted QAQC samples in the ratio of 1:26 for certified reference material and 1:69 for blank material.<br><br>2020 Round Oak underground diamond program submitted QAQC samples in the ratio 1:12.8.<br><br>2021 Round Oak underground diamond program submitted QAQC samples in the ratio 1:8.8.<br><br>Umpire assays are being undertaken presently.<br><br>*Quality Control:*<br><br>Exco 2011:<br><br>Cu:<br><br>Both Exco internal blanks and Laboratory Blanks are acceptable, reporting very low values for Cu of below 60ppm.<br><br>Most of the internal standards returned values within expected limits.<br><br>The laboratory standards are generally reporting values within acceptable ranges with the exception of one or two samples.<br><br>Field duplicates show some scatter across all grade ranges, probably due to the spear sampling method.<br><br>Laboratory repeats show favourable correlation.<br><br>Au:<br><br>Internal Blanks submitted with the batches are mostly reporting below detection.<br><br>Laboratory Blanks are acceptable with one exception.<br><br>All certified standards are laboratory standards. Most values are within acceptable limits.<br><br>Correlation of Field Duplicates is poor and may be reflecting the spear sampling method.<br><br>Laboratory repeats are acceptable, with some scatter at the lower grades.<br><br>Exco 2012:<br><br>7 different CRMs including coarse blank submitted.<br><br>Internal and laboratory Cu standards generally performed well. Noted that the average grade of all Cu standards above expected values, suggestion of slight ICP calibration error. |

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| | ALS standards for Au generally within expected limits.<br><br>Approximately 1/3 of submitted blanks returned significant values for Cu. Acceptable correlation with high-Cu previous sample, suggesting contamination. Values deemed insignificant for Resource Estimation affect.<br><br>Laboratory blanks performed as expected.<br><br>Some variance with coarse crush diamond core duplicates at levels below 0.5% Cu. Perhaps related to Cu distribution in the mineralised zone.<br><br>Check between aqua regia and HF digestion confirmed acceptable correlation and sufficient digestion by aqua regia.<br><br>Exco 2013:<br><br>10 different CRMs including a coarse blank submitted.<br><br>All standards have average assayed grade above the expected grade for Cu. Most within 2SD, however near upper limits.<br><br>Coarse blanks returned results that suggest low-level sample preparation contamination, trends with previous sample Cu grade.<br><br>Pulp blanks returned some results that suggest low-level contamination.<br><br>Limited number of Au standards were within acceptable limits.<br><br>Round Oak 2014 RC grade control program:<br><br>9 different CRMs including a pulp blank, and a coarse blank utilised.<br><br>Overall, the results from QAQC monitoring of analytical process shows an acceptable level of accuracy and precision, although no inter-laboratory monitoring was undertaken. Blanks and standards have performed well, with most results within 2SD of expected, and many within 1SD. Some of the spurious results are probably a result of mis-labelled standards. More significant concerns include potential trends and perhaps cyclical results. Trends and cycles cannot be substantiated, and appear reasonably inconsequential, but warrant future monitoring. Coarse Blank performance at the Townsville laboratory is of some concern, again future monitoring is warranted. Based on the results of QAQC monitoring of assaying process presented in this section, the assay data from this program is considered suitable for Resource Estimation<br><br>Round Oak 2018-2019 surface diamond programs:<br><br>7 different CRMs including a pulp blank, and a coarse blank utilised.<br><br>All standards returned within 2 std dev of the certified values.<br><br>Pulp and coarse blanks performed acceptably with a stand-out results comprising a 280ppm Cu coarse blank result from the 2019 program and a 180ppm pulp blank result from the 2018 program. Both indicate contamination from the previously pulverised mineralised sample; however, these results are considered insignificant for Resource Estimation affect.<br><br>Laboratory repeats indicate limited variability in gold results potentially a function of gold grain size.<br><br>Round Oak 2019 underground diamond programs:<br><br>Twelve different CRMs, including a coarse blank, utilised.<br><br>Standards performed acceptably, with results generally within 3 standard deviations of certified value. Where results were out of this range, results looked to be potential standard swaps.<br><br>Coarse blanks performed acceptably, with seven failures occurring, after high grade samples. This indicates contamination from the previously pulverised mineralised |

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| | sample; however, these results are considered insignificant for Resource Estimation affect. |
| Verification of Sampling and Assaying | All database data managed by MRG; database extracts provided to Exco geologists as available.<br><br>Glindemann and Kitching, 1968 assays were re-entered and uploaded to the MRG database from a combination of drilling logs and a technical report.<br><br>CEC, 1968 data could not be located external to the Matrix provided database. Data are not verified.<br><br>MIM/CEC, 1968-1986: no external data available. Data not verified. Mineralised intervals were broadly checked against lithological logs, appear to support relative intensity of mineralisation.<br><br>Some holes contained Au in the Ag field. Following checks and verification of this, the issue was fixed.<br><br>MIM, 1991: No external data available. Data not verified. A 1991 drilling report by MIM supported an intersection, with minor error.<br><br>Murchison, 1995: Excel file with Cu and oxide Cu values located. Data verified.<br><br>Running checks performed on Exco assay data, data verified as accurate.<br><br>2013 program Cu assay priority checked: Tot Cu/AAS40G > Cu/AAS40G > Cu/AAS41Q > Cu/ICP41Q.<br><br>2013 program diamond drilling results were compared to a ‘similar’ group of earlier Exco diamond holes, validated well for Cu, exhibiting similar population statistics, not as well for Au.<br><br>2018-2019 surface diamond drilling assay results imported directly to the Round Oak master Acquire database. Assay results supported by tenor of mineralisation identified in geological logging.<br><br>2019 underground diamond drilling assay results copied into sampling spreadsheet and verified against logging. Copied from here into Microsoft Access database sampling tab.<br><br>2021 Underground diamond drilling assay results imported directly to the Round Oak Acquire Database. Results are verified against visual record of mineralisation. |
| Location of Data Points | *Drillhole Collars:*<br><br>Pre-1995 holes located using a Local Grid (CEC/MIM, 1968). No detailed data on grid establishment exists. Imperial co-ordinates.<br><br>In 1995 Murchison transformed grid to metric. 2013 resource estimate utilises MGA94 zone 54 co-ordinate system. Transformation between local and MGA well established, 2-point transformation (no RL shift).<br><br>Exco collars established with DGPS with sub-metre horizontal accuracy, <2.5m vertical accuracy.<br><br>All holes north of 15,280m N up to 2013 program draped over GeoEye DEM surface and adjusted for elevation. Original co-ordinates preserved in database.<br><br>2013 drilling program collar RL not adjusted to DEM surface, as drill-pad modification for the program is not captured with DEM.<br><br>Round Oak Minerals drilling during open pit mining collar surveyed with Trimble RTK DGPS.<br><br>Round Oak Minerals 2018-2019 surface collars established with DGPS with sub-metre horizontal accuracy, <2.5m vertical accuracy. |

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| | Round Oak Minerals underground collars surveyed by ROM surveyors using TR15 equipment.<br>*Topographical control:*<br>Satellite derived Digital Elevation Model (DEM) from Geoimage Pty Ltd.<br>GeoEye-1 satellite in August 2012, 1m resolution.<br>Exco provided control points via OmniStar DGPS with horizontal and vertical accuracies up to 10cm.<br>DEM vertical accuracy of 0.5-0.7m.<br>Existing pit not captured appropriately; DEM was merged with 'end-of-mine' survey pick-up (Round Oak Minerals Pty Ltd).<br>New site survey in August 2013 (Meridian Mining Services) utilising RTK GPS, cm accuracy. New survey checked with DEM, found to be appropriately similar.<br>Pit survey with Trimble RTK DGPS by Operational Surveying staff.<br>*Downhole Surveying:*<br>Historic details on down-hole surveying methods very limited. Matrix database had all DH data, limited data on methodology.<br>Exco drilling: 30-50m regular magnetic down-hole surveys utilising an Eastman single-shot tool.<br>2006 RC holes utilised gyroscopic down-hole surveying but was limited to 25m down-hole.<br>2013 DD program: ~30m regular Eastman single-shot magnetic readings, spurious readings omitted/adjusted.<br>All Round Oak grade control RC drilling downhole surveyed with Gyro tool.<br>2018 DD program: nominal 50m magnetic down-hole surveys using a Reflex single-shot tool.<br>2019-2021 underground DD program: nominal 12m north-seeking Gyro down-hole surveys along with azimuth aligner tool (TN14) for hole azimuth set -up before drilling. |
| Data spacing and distribution | Data density highest in upper higher-grade Cu mineralisation. Spacing at least 20 x 20m in this area.<br>Data density decreases with depth and laterally into lower grade regions, ~50 x 50m.<br>No sample compositing has been applied at the database stage. Sample composites exist; however, priority listing omits them from resource estimation work.<br>Approximately 4,320 assays for Cu exist within the mineralised zones at Mt Colin, and approximately 3,540 for Au.<br>The Mt Colin mineralisation is well understood and geologically relatively simple and straightforward. |
| Orientation of data in relation to geological structure | The majority of surface drillhole data intersects the well understood steeply dipping relatively planar Mt Colin mineralised structure from hangingwall to footwall, producing favourable intersection orientation. Drilling from underground has been conducted from both the footwall and hangingwall. Footwall drilling was from twelve drill locations. These holes have been drilled as fans; however, this is not expected to influence the Resource. The hanginwall drilling was conducted from a dedicated drill drive that provided well orientated holes. |

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| | Surface drilling intersection angle with mineralised zone varies, as drill-sites are restricted in the steep rocky terrain. Underground drilling has been designed to have good intersection angles. Drill fans rather than fences utilised. |
| Sample Security | No data available for historic drilling.<br>Well established Exco protocols and procedures for recording, labelling and reconciling sample submissions.<br>All Exco samples placed in calico bags, and batches into zip-tied polyweave bags, dispatched to laboratory.<br>On arrival at lab, samples are reconciled with submission documents provided from Exco.<br>Round Oak grade control RC samples dispatched to Townsville SGS under normal (industry standard) SGS/CCL protocol.<br>Reference data retained and stored on-site at Round Oak Exploration compound in Cloncurry including retained core, diamond core photographs, duplicate pulps and residues of all submitted RC samples. Pulps are returned from lab to site after ~90 days. Bulk residues destroyed by the laboratory after ~45 days.<br>Round Oak grade control DD samples dispatched to Mt Isa ALS under normal protocol. Reference data stored on Mt Colin server and onsite, including retained core and diamond core photographs. Pulps are returned from lab to site after ~90 days. Bulk residues are also returned to site. |
| Audits and reviews | MRG staff undertake assay QAQC audits periodically. The most recent was in November 2013, reviewing QAQC for the previous 6 months, covering a range of projects. Minor contamination issues and labelling errors were highlighted by this audit.<br>Snowden reviewed the AM2012 resource estimate in August 2013, with no significant issues being highlighted.<br>ROM Senior Geologist Alex Nichol conducted a drill holes audit in early 2021; no significant issues were highlighted. |

## Section 3. Estimation and Reporting of Mineral Resources.

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| Database integrity | The Mt Colin drillhole database was a DataShed SQL system, managed by Mitchell River Group (MRG) for Exco, in Perth, from 2006 - 2014. Over this period:<br>Data was imported by a database administrator only, as sent in electronic form from the Exco site in Cloncurry.<br>The database was adapted from that procured from Matrix Minerals Pty Ltd (Matrix) by Exco in 2006.<br>Most likely originally compiled in 1990's by MIM, with Murchison and Tennant added by Matrix.<br>Following initial validation, the Matrix database was electronically transferred to the MRG managed DataShed SQL database.<br>New data was validated upon import, and Exco geologists checked the database extracts as provided by MRG.<br>The central database, containing data for numerous Exco projects was secured against external corruption by MRG.<br>In 2014 Round Oak (then Copperchem Ltd) took ownership of the Exco database to commence in-house database management. This continued using Datashed software until mid-2019 when the Exco database was imported to the Round Oak master Acquire database.<br>The surface drilling at Mt Colin has been entered into The Round Oak Minerals Acquire database; and is managed internally by the company's Geological Database Administrator. Where appropriate, data was imported directly from source files (Lab assay certificates) without manual entry or editing of files. Historical data migrated into the Acquire database from external sources (historical datasets and ongoing joint ventures) is checked and validated post import by the company's geologists and database administrator.<br>Prior to 2021 underground drilling conducted at Mt Colin was entered into the site Access database. This has been audited by the ROM Geological Database Administrator before use in the Resource update.<br>In 2021 the site changed to Acquire, and the database has the same management protocols as the Round Oak Minerals master database. |
| Site visits | The Competent Person (David Potter) has attended the Mt Colin project area several times.<br>Site familiarisation, geological observation and mapping, including mapping of the underground ore drives were the subject of site visits.<br>Observations made during visits include:<br>Steep, rocky nature of the terrain.<br>Friable nature and poor ground conditions within the Mt Colin Fault.<br>Extreme competence of ground of wall rock Corella Formation calc-silicate rocks.<br>Weathering profile difficult to interpret with rocky areas interspersed with soil areas.<br>Mt Colin Fault is discordant with Corella Formation rocks.<br>Corella Formation rocks are tightly folded around the Mary Kathleen Syncline. |
| Geological interpretation | The deposit is considered an ISCG (iron sulphide copper gold) classification. On account of the reduced nature of ore sulphides, absence of iron-oxide minerals, strong EM response, limited alteration halo, and tabular geometry, Mt Colin bears |

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| | strongest similarity with other deposits in the Mount Isa Eastern Fold Belt of this type: Eloise; Kulthor; Artemis and Jericho.<br><br>The deposit strikes approximately 295° (MGA), and dips approximately 75° NNE. It is hosted by metasomatised calc-silicates of the Corella Formation (1750-1738Ma), at surface, and by the Wonga-suite Burstall Granite (1745-1726Ma) at depth.<br><br>Understanding of deposit geology is high, with mineralisation principally controlled and essentially contained within the WNW-ESE striking planar Mt Colin fault. The broad-scale geology appears relatively simple and straightforward.<br><br>The mineralised zone is dominated by pyrrhotite gangue to the east, and carbonate dominated gangue to the west.<br><br>A karst-like void/cavity zone exists principally in areas of the carbonate-rich portion, a function of acid-dissolution from weathering of sulfidic lode rocks, and extents of this zone may not be well described.<br><br>Secondary controls may include a small dilational jog within the Fault.<br><br>The mineralised zone has been intersected to >500m below surface, where it cuts the Burstall Granite.<br><br>Lower order controls on mineralisation include at least 1 high grade Cu shoot, perhaps several; and weathering.<br><br>Confidence in the extents of the deposit diminishes with depth (data spacing). |
| Dimensions | Known extent of +1.5% Cu mineralisation is approximately 400m in strike length, 500m down-dip, and up to ~10m in true width. The Mineral Resource extends to these limits.<br><br>The Mineral Resource starts at surface (and base of open pit). |
| Estimation and modelling techniques | Interpretation was undertaken using Leapfrog Geo 6.0, statistical analysis was performed with Snowden Supervisor v8.13 and the estimation was performed in Surpac V6.7 software.<br><br>In broad terms, the Mt Colin deposit Mineral Resource has been estimated within various hard boundaries for various elements via Ordinary Kriging (OK) following substantial statistical and geostatistical analyses to determine appropriate interpolation parameters.<br><br>*Wireframing:*<br><br>Wireframes constructed for the following:<br><br>Lithology: granite, mineralisation zone (0.1% Cu) and calc-silicate wireframes were constructed using database lithology logging/codes. The granite was modelled with the mineralised zone cutting it. The remainder of the model area was defined as calc-silicate.<br><br>Mineralisation: wireframes constructed at nominal 0.5% Cu, based on assay grades within the database. Internal dilution solids were generated based on a combination of lithology and grade information. These domains are continuous and distinctly different from the main lens. Peripheral areas lacking in data were modelled as best as possible, with maximum projection of ½ the adjacent drillhole spacing.<br><br>Weathering: wireframes were constructed to approximate the BOML and BOCO utilising database logging codes for weathering. Core photos were consulted, and it was noted there is some subjectivity in the logged codes. Essentially 'extremely' and 'highly' weathered zones were interpreted as above the BOCO, 'moderately' and 'slightly' weathered zones within the transitional zone, and 'fresh' logged material was outside of the weathering solids. Some deviation from this was necessary to |

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| | produce continuous wireframes. Of note is the steep and deep weathering profile (up to 200m) that follows the Mt Colin mineralisation<br><br>The existing void zone was modified based on new evidence, especially from open pit and underground operations and DD, underground probe drilling and RC grade control drilling. The Interpretation of the Void was conservative in that it inferred void continuity through some highly weathered sections that did contain recovered material. This aided in the interpretation and accounted for variations in drilling (recovery) quality. As a result, the Void model does contain mineralised material, however the geotechnical character, density, continuity and tenor of this mineralisation can not be established to any reasonable degree of confidence.<br><br>The small volume of the transitional and oxide wireframes does not warrant the wireframing of individual Cu species. The oxidisation state wireframes adequately define the supergene grade population for separate estimation, classification, metallurgical and mining assessment.<br><br>*Compositing:*<br><br>Assay data were composited to best fit 1m ±30% (64% of data at 1m sampling interval) for Cu, Au, Fe, S and bulk density (where available), within the mineralised wireframes.<br><br>*Statistical analysis:*<br><br>General statistics for each domain investigated via Snowden Supervisor v8.13.<br><br>Top-cutting of Cu, Au, Fe and S investigated via log-probability plots, CV, and spatial distribution of outlier grades. Au grades only variously cut where required to bring CV below 1.7.<br><br>Elemental correlation statistics exhibit some relationships between elements, not good/detailed enough for use in estimation work.<br><br>*Density statistics:*<br><br>Previous estimations utilised density as a function of Fe content for calculating density into the model.<br><br>Statistics of updated database exhibits the same acceptable correlation.<br><br>Relationship investigated for various domains; calculations derived.<br><br>*Estimation:*<br><br>Block model not rotated. Block size was chosen based on QKNA work with test models. Parent block sized chosen is 2Y x 8X x 5Z. Parent blocks have been divided by four in all directions to give a sub-block size of 0.5Y x 2X x 1.25Z.<br><br>Estimation was constrained into domains via wireframes.<br><br>OK is considered appropriate for interpolating at Mt Colin. This is based on the statistical and variographical results of the domains to be interpolated. A dynamic anisotropy method was used as this has been demonstrated to achieve better informed models that reconcile well against reconciled processing data.<br><br>Interpolation over a maximum 3 passes:<br><br>First pass for 40m, second pass for 80m and third pass for 400m.<br><br>Minimum/maximum samples required to estimate a block is 6 and 36, respectively.<br><br>Model coded for void, lithology, and others by respective wireframes.<br><br>Density calculated via developed correlation formulae.<br><br>Density within the waste zone assigned a nominal density of 2.77t/m3<br><br>Values above the topography zeroed. |

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| | Geostatistical attributes interpolated into the model include kriging variance, block variance, kriging efficiency, distance to samples. These attributes are useful in resource classification.<br><br>Model was depleted to reflect known voids at 30/4/2021.<br><br>*Model validation:*<br><br>Volume checks between blocks and wireframes.<br><br>Spatial checks between block grades and drillhole grades by elevation and easting.<br><br>Graphical sectional comparisons by easting and elevation between block and composite grade, for Cu, Au, Fe, S for various domains.<br><br>The model was modified several times via minor modifications to interpolation parameters etc, following identification of small issues during validation. The final model is felt to be representative of the resource and was reconciled back to known processing data which reconciled within +/- 1% for copper and 10% for gold, after accounting for production over bogging. |
| Moisture | Tonnages are estimated on a dry basis. |
| Cut-Off Parameters | > $A100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Term and conditions (TCs). A$100 NSR represents material that is currently considered economic to mine and process.<br><br>US Metal Prices used were $8,013.5 copper and $2003.1 gold with an FX rate of 0.76.<br><br>Mill Recovery assumptions used were 94% Copper and 40% Gold.<br><br>TCs and payables are based on contract details |
| Mining factors or assumptions | The current Mt Colin mining is from underground using a modified AVOCA method with 25m spaced levels.<br><br>No mining factors or assumptions have been used in the generation of this resource. |
| Metallurgical factors or assumptions | Division of the mineralisation into Cu species is an important consideration for processing, notwithstanding the relatively small proportion of remaining weathered Resource. This classification will be indicated at best.<br><br>Processing of fresh material has a weighted average recovery for copper of 94% |
| Environmental factors or assumptions | ROM's Mt Colin Operation operates under an Environmental Management Plan, which meets or exceeds legislative requirements.<br><br>Rock waste is trucked to surface waste dumps or used as stope backfill. |
| Bulk density | Within the mineralised zones bulk density has been calculated via reasonably well-supported formulae that considers Fe +/- Cu content.<br><br>Background densities are assigned to the model in the waste domain.<br><br>The bulk density data can be divided into three campaigns:<br><br>Exco surface drilling using the well-documented and valid method of Archimedes density determination (weight in air/weight in water).<br><br>A small proportion of density data (2013 drilling data) was undertaken by SGS in Townsville, via the Archimedes method. Unfortunately, weathered samples were not waxed, and cannot give a completely accurate result.<br><br>Underground diamond drilling dispatched to ALS Mt Isa (2020 onwards) used the Archimedes method. |

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| | While there will be high confidence in fresh material density estimation, with increased variation in the weathered material, although the constructed weathering profiles may themselves over-state a proportion of oxide material, due to the rocky nature of the terrain. |
| Resource classification | Mt Colin JORC Code classifications are predominantly based on the data spacing informing the interpolation, and proximity of resources to underground development drives:<br>- Measured Mineral Resources having a nominal 20x20m data spacing in the plane of the lode or less and ore drive development completed above and below.<br>- Indicated Mineral Resources having a nominal 40x40m data spacing in the plane of the lode or less.<br>- Inferred Mineral Resources having a data spacing exceeding 40x40m in the plane of the lode.<br>The Competent Person considers the classifications described above consider all relative factors such as reliability and quality of the input data, the confidence in estimation, the geological and grade continuity and the spatial distribution of the data. The classifications applied reflect the view of the Competent Person. |
| Audits and reviews | The 2021 Mineral Resource estimate was reviewed and endorsed by Optiro Pty Ltd. |
| Discussion of relative accuracy/ confidence | Conditional simulation was conducted by Optiro on the 2020 Mineral resource to quantify the accuracy and precision of the estimates which confirms that at a 90% CI Measured and Indicated have a range of +/-0.2% Copper and +/-0.035ppm gold. This compares to +/- 0.37% Copper and +/-0.072ppm for gold for the Inferred Mineral resource. Given there has been no major changes to how grade interpolation has been conducted in the 2021 it is assumed similar deviations occur within the new model.<br>The Competent Person considers that the Measured is a good local estimate, the Indicated is a global estimate with narrow error bands (but wider than Measured), and the Inferred Resource is a good global estimate within wider error bands.<br>Inferred Mineral Resource estimates have global estimation precision and are not suitable for conversion to an Ore Reserve.<br>**1** The estimates for Mt Colin have been compared to the production on a processing batch basis, and results to date have been satisfactory with processing returning with 1% less copper and 10% less gold. |

## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1) – BENTLEY 2021

The table below follows the requirements of JORC Table 1 sections 1, 2 and 3 as required for the estimation and reporting of Mineral Resources.

### Section 1 Sampling Techniques and Data

| Criteria | Commentary |
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| **Sampling techniques** | - The sampling techniques used for the definition of the Bentley Resource is principally diamond core (DD) drilling. Refer to the subsections below for details relating to this drilling and sampling. |
| **Drilling techniques** | - The Mineral Resource of the Bentley deposit has been defined using DD drilling. A few reverse circulation percussions (RC) pre-collar holes are found in the deposit database.<br>○ Drilling from surface is a mixture of 63.5mm (HQ) and 47.6mm (NQ) core diameters, typically with holes first drill with RC pre-collars.<br>○ Underground drilling is predominantly 50.6mm (NQ2) diameter or 63mm (HQ2) diameter. 36.5 mm (BQ) diameter core is used for grade control purposes where whole core is submitted for assay.<br>○ Core was oriented where possible using electronic (ACT) tools or using the spear method in older drill holes. |
| **Drill sample recovery** | - During drilling, rod counting used to verify the lengths drilled and downhole depths.<br>- Post drilling down hole interval accuracy was monitored through reconstruction of the core into a continuous length and verification against the core blocks. One metre intervals were marked on the core.<br>- Core recovery in all drill programs was quantified as percentage of the core length recovered compared to the drill hole advance length. There were no core recovery issues during the drilling.<br>- Core recovery is reported to be high from all drilling with minimal losses except in highly fractured ground.<br>- Average core recovery was >98% for fresh rock in Bentley.<br>- There were no relationships between sample recovery and grades with no sample biases due to the preferential loss or gain core. |
| **Logging** | - RC cuttings and DD cores have been logged geologically and geotechnically with reference to standard logging schemes, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies.<br>- Qualitative logging for both RC and DD includes codes for lithology, oxidation (if any), veining and mineralisation.<br>- DD cores were photographed both wet and dry after logging had taken place, and qualitatively and structurally logged with reference to orientation measurements where available.<br>- The total lengths of all drill holes in all deposits have been logged, with greater detail captured through zones of mineralization and the footwall and hangingwall rocks found within 30m of main lodes. |
| ***Sub-sampling techniques and sample preparation*** | - Only geological information was included from percussion drilling and no percussion sample grade information was used for Mineral Resource estimation purposes, with the exception of the Arnage Up-plunge lens, as only RC information was available for estimation.<br>DD primary sampling:<br>- A geologist marked out DD core for sampling intervals based on geological units, with intervals ranging no less than 0.3m and no greater than 1.3m, with a target sample interval of 1m.<br>- The sample intervals were then cut in half longitudinally with a wet diamond blade, with the laboratory dispatch half collected from the same side of the core.<br>- Certified reference materials (CRMs) and duplicates were placed in pre-numbered calico bags for laboratory dispatch.<br>RC sampling<br>- Certified reference materials (CRMs) and duplicates were placed in pre-numbered calico bags for laboratory dispatch.<br>Quality controls to ensure sample representability included:<br>- Coarse blanks and standard (CRMs) were inserted into routine sample stream to monitor cross contamination and accuracy at a nominal rate of 1:20.<br>- Variable standards were chosen in line with the predicted grades. Coarse blanks were inserted in and around the high-grade samples.<br>- CRMs for each individual hole must be at or above the nominal rates.<br>- Ensuring the laboratory used compressed air and barren rock washes to clean crushing and grinding equipment between each routine sample preparation.<br>- Crusher duplicate samples were collected at a nominal rate of 1:20 to monitor the repeat precision at various stages of comminution.<br>- Sieve tests were completed at the pulverization stage to confirm particle size distribution (PSD) compliance.<br>- Monitoring of quality results confirmed the sample preparation was acceptable in terms of accuracy, precision, and minimisation of sample cross contamination.<br>- Umpire laboratory checks were routinely undertaken at a rate of 10% of the primary samples. |

Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| | Laboratory DD cut-core preparation:<br>- Core samples were oven dried for 4-6 hours at 105ºC then crushed in a jaw-crusher to a nominal 5-10mm particle size. The jaw-crush lot was then fine crushed to a PSD <2mm in a Boyd crusher-rotary splitter unit.<br>- The whole sample was then pulverized in Essa LM5 grinding mills to a PSD of 85% passing 75 microns with a final 200g sub-sample collected from the pulp into a paper packet for assay.<br>- The sample preparation laboratory was conducted by Intertek Genaylsis laboratory in Perth.<br>- No specific heterogeneity tests have been carried out, but the Competent Person considers that the sub-sample protocols applied, and masses collected, are consistent with industry standards for the styles of mineralization under consideration. |
| **Quality of assay data and laboratory tests** | - No geophysical tools were used to determine any element concentrations estimated in the Mineral Resource.<br>Laboratory Assay processes for Bentley was conducted by Intertek Genalysis in Perth as follows:<br>- Digest a 0.2g sample of the pulp in a four-acid (hydrofluoric, nitric, perchloric and hydrochloric – 4AH) mixture and heated to dryness. The four-acid digestion is considered a total extraction all variables of interest.<br>- The digestion salts were then re-dissolved, and the prepared solution was then analysed by ICP-OES or ICP-MS analysis of an elemental suite (Cu, Pb, Zn, Ag, Fe, As, Sb and S).<br>- Gold was assayed using 25g fire-assay digestion then AAS assay of the dissolved bead solution.<br>- Quality control samples were included by the laboratory in the form of standards, blanks, and replicates. |
| **Verification of sampling and assaying** | - Massive-sulphide drill intersections are visually conspicuous in the core and as such, assay results have been readily cross-verified by Round Oak Minerals (ROM) geologists through re-inspection of the core or core photographs.<br>- Drill hole sample numbers and logging information are captured at source using laptop computers with standardized database templates to ensure consistent data entry.<br>- Data records (logs, sample dispatched, core photographs) are downloaded daily to ROM's main AcQuire database system, which is an industry recognized tool for management and storage of geoscientific data.<br>- The databases are backed up off site daily.<br>- Upon receipt of the assay results both the company's and the laboratory's CRMs are verified and checked to see that are with acceptable standard deviations from the expected mean values.<br>- Assay data is merged electronically from the laboratories into a central database, with information verified spatially in Surpac software.<br>- ROM maintains standard work procedures for all data management steps.<br>- An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the main database.<br>- There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for Mineral Resource estimation work.<br>- No twin-holes have been drilled at Bentley.<br>- The Competent Person considers that acceptable levels of precision and accuracy has been established and cross-contamination has been minimized for the results received. |
| **Location of data points** | - The collar locations of underground holes have been surveyed by ROM's Mine Survey teams using total station survey equipment to accuracy better than 2mm in three dimensions.<br>- Initial collar directions are aligned using industry standard azimuth aligner tools.<br>- Down hole paths have been surveyed using a north seeking Reflex Gryo SPRINT-IQ electronic tool that have high azimuth and dip precision with readings taken every ≈4m downhole. Prior to 9 November 2017, holes were surveyed using a Downhole Survey DeviFlex tool.<br>- The grid system for is a local grid tied to MGA Zone51, GDA94 datum with 311,465.6mE and 6,796,594.3mN subtracted from MGA coordinates and 4000m added to GDA elevation, followed by a +23.52 clockwise grid rotation.<br>- All other mine surveys have high precision and are prepared by ROM's mine surveyors using total station equipment. |
| **Data spacing and distribution** | - Most drilling was conducted from cuddy locations underground, with a minimal amount being drilled from the surface. Drilling is targeting a 15m x 20m spacing.<br>- Down-hole sample intervals are targeted to be 1m down hole but vary in length as a function of geological contact spacings.<br>- The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures used, and the JORC Code classifications applied to each deposit. |
| **Orientation of data in relation to geological structure** | - Drill platforms and drillholes are designed as such to intercept the mineralization at 90°, or as close to as possible. |

Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| **Sample security** | - Sample dispatches have been prepared by ROM's field personnel and tracked for delivery to the laboratory and progress through the laboratory.<br>- Samples are sealed for transport and transport is direct.<br>- Sample dispatch sheets have been verified against samples received at the laboratory and any issues such as missing samples and so on are resolved before sample preparation commences.<br>- The Competent Person considers that the likelihood of deliberate or accidental loss, mix-up or contamination of samples is very low. |
| **Audits or reviews** | - ROM's geological staff have confirmed all significant intercepts in assay results against geological log expectations.<br>- An independent audit of ROM's sampling was completed in 2015 on drilling and sampling at the Jaguar operations with some procedural improvements recommended and implemented into current procedures. |

Section 2: Reporting of Exploration Results – Bentley

| Criteria | Explanation |
|---|---|
| Mineral tenement and land tenure status | - The tenements hosting the Bentley deposit is 100% owned by Round Oak Jaguar Limited, which is a ROM 100%-owned subsidiary. The Bentley deposit is within M37/1290 WA Mining Lease, which has an expiry date of 2 Feb 2031.<br>- All tenements are in good standing with rents paid and expenditure commitments met.<br>- Any ore mined from the tenements listed is subject to WA State royalties as prescribed in the WA Mining Act.<br>- There are no other material issues relating to agreements, third parties, joint ventures, partnerships, other royalties, native title interests, historic sites, wilderness or national parks, or environmental settings. |
| Exploration done by other parties | - In 1972 the GSWA mapped the area and identified volcanic rocks in the region.<br>- In 1974, CEC sampled surface gossans in the area and found Zn-Cu-Pb anomalism.<br>- In 1976, Seltrust/CEC discovered the Teutonic Bore deposit through follow up drilling of the gossan.<br>- From 1975 to 1978 Esso and Aquitaine explore the region, find some stringer type mineralisation in the Jaguar region.<br>- In 1984, Chevron drilled an EM target and missed the Jaguar deposit by 50 m.<br>- In 1991, MIMEX defined a 700-m long anomaly in the Bentley area with follow up drilling intersection stringer mineralisation 170 m below surface, but a deeper planned hole cancelled.<br>- In 1994, Pancontinental Mining rediscovered the anomaly and intersected 6 m grading 2.4% Zn.<br>- In 2001, Inmet-Pilbara identified a 1.8 km long conductor and intersected 7.7 m of Jaguar mineralisation in the second test hole at 485.5 m.<br>- In 2003, Inmet drilled an EM conductor at Bentley but stopped in a graphic shale zone in the hangingwall shale.<br>- In 2008, Bentley is discovered when a hole by Jabiru Metals Ltd (JML) intersected 10.5 m of high grade at 370 m depth.<br>- In 2008, IGO acquired JML.<br>- During 2010 to 2014, many in-mine discoveries have been made using systematic drilling and down hole geophysical targeting.<br>- Extension lenses discovered included the Bubble lens at Jaguar and the Comet, Azure, Bentayga and Flying Spur lenses at Bentley.<br>- ROM purchased the tenements holding the Bentley, Jaguar, Triumph and Teutonic Bore deposits, as well as all Exploration tenements, in May 2018. |

Section 2: Reporting of Exploration Results – Bentley

| Criteria | Explanation |
|---|---|
| Geology | - Jaguar Operation is centred on a cluster of Volcanic Hosted Massive Sulphides (VHMS) deposits that are located within the Gindalbie Terrane, which is part of the late Archaean Eastern Goldfields Superterrane of the Yilgarn Craton of Western Australia.<br>- The area is dominated by rocks of volcanic, intrusive, volcano-sedimentary origin and lesser sedimentary rocks.<br>- The local sequences have undergone tilting to sub-vertical positions and regional metamorphism to a lower greenschist facies.<br>- The principal deposits forming the known VHMS cluster are Bentley, Jaguar, Teutonic Bore and the Triumph deposit.<br>- The Jaguar Operation deposits are interpreted to have formed by sub-seafloor replacement, principally of shales and volcanoclastic sediments, with mineralisation located in a similar stratigraphic position near a transition from calc-alkaline to tholeiitic volcanism.<br>- The Teutonic Bore deposit originally cropped out as a gossan and is characterised by a massive sulphide lens (pyrite-sphalerite-chalcopyrite) with an extensive footwall feed zone of stringer sulphides. The mineralisation dips steeply west and plunges shallowly to the north.<br>- The Bentley VHMS mineralisation occurs at the contact of a thick basal rhyolitic sequence with an overlying andesite. The rhyolitic sequence is overlain by a sequence of carbonaceous mudstones and siltstones. The sequence is steeply dipping.<br>- The Bentley massive sulphide mineralisation is banded and consists of pyrite, sphalerite, chalcopyrite, galena and minor pyrrhotite. The upper contact of the massive sulphide is typically sharp. The footwall to the massive sulphide zone consists typically of stringer and disseminated sulphide mineralisation comprising pyrite, chalcopyrite, and minor sphalerite.<br>- A dolerite sill has intruded the Bentley region, cutting the mineralisation into eight main lenses (Arnage, Mulsanne, Bentayga, Brooklands, Comet, Flying Spur, Pegasus and Zagato).<br>- The Bentayga lens has been structurally offset from the main Arnage lens, pushed 80m into the footwall from the rest of the Bentley mineralisation. |
| Drill hole Information | - A summary of the many holes used to prepare the Mineral Resource estimates for Bentley and Teutonic Bore is not practical for this public report.<br>- The Mineral Resource estimates give the best-balanced view of all the drill hole information. |
| Data aggregation methods | - No drill hole related exploration results are included in this report.<br>- No metal equivalent values are considered in the Mineral Resource estimate other than NSR values which are based partially on commercially confident information in concentrate sales contracts. |
| Relationship between mineralisation widths and intercept lengths | - No drill hole related exploration results are included in this report.<br>- Generally Mineral Resource definition drilling intersects the mineralisation at a high angle and as such approximate or allow estimation of true thicknesses. |
| Diagrams | - Examples sections and/or long sections and/or perspective view diagrams are included in the main body of this report. |
| Balanced reporting | - The Mineral Resources are based on all available data and as such provides the best-balanced view of the Jaguar Operation deposits. |
| Other substantive exploration data | - Information relating to other exploration data, such as density and metallurgical assumptions are detailed in Section 3 and Section 4 further below. |
| Further work | - Follow up drilling is planned on extensional targets at Bentley. |

Section 3: Estimation and Reporting of Mineral Resources – Bentley

| **Criteria** | **Commentary** |
|---|---|
| **Database integrity** | - ROM's geologists capture field data and drill hole logging directly at source into handheld devices or laptop computers using standard logging templates.<br>- Logging data is transferred daily to ROM's central acQuire database system which is an industry recognised software for management of geoscientific data.<br>- All data is validated on site by ROM's geologists with quality samples checked and accepted before data is merged into the central database from laboratory digital assay reports.<br>- Drill logs are printed from the database for further verification and the merged geology and assay results are then cross checked spatially in mining software, with further checks against core photography or retained cores if required.<br>- The historic data for the Teutonic Bore estimate was validated by JML geologists in 2006 and entered in the central database at that time.<br>- The Competent Person considers that there is minimal risk of transcription of keying errors between initial collection and the final data used for Mineral Resource estimation work, and |

| Criteria | Commentary |
|---|---|
| | the database is of suitable quality for Mineral Resource estimation purposes. |
| **Site visits** | - The Competent Person was the Geology Manager at Jaguar Operations and has an intimate understanding of the respective deposit geologies and the data used for Mineral Resource estimation work. |
| **Geological interpretation** | - The data used for geological interpretation is from DD and RC drilling and includes logging and assay results, which are augmented by underground exposure mapping to confirm the interpreted geological units and zones of mineralisation.<br>- Lithological controls are used to interpret the footwall and hangingwall contacts of the Mineral Resource mineralisation and the cross-cutting dykes.<br>- The interpreted geological controls described above are used to control the grade estimation process.<br>- Confidence in the interpretation is moderate to high, with the mineralisation and geological setting being well understood.<br>- No alternative interpretations have been prepared or considered necessary. |
| **Dimensions** | - Bentley has eight main mineralised lenses of known dimensions as follows:<br>○ Arnage Lens has a ≈400m strike length, a down plunge length (to the south) of ≈900m and maximum thickness of ≈30m. The top of Arnage is ≈160m below natural surface and the known vertical extent is ≈1000m below surface.<br>○ Mulsanne Lens has a ≈300m strike length, a vertical extent of ≈180m and maximum thickness of ≈3m.<br>○ Brooklands Lens has a ≈100m strike length, a vertical extent of ≈180m and average thickness of ≈2m.<br>○ Flying Spur Lens has been split into five smaller lenses, and has a total strike length of ≈370m, a vertical extent of ≈300m and average thickness of ≈2m and occurs adjacent to the Arnage lens at 1000m below surface.<br>○ Bentayga Lens has a ≈150m strike length, a vertical extent of ≈260m and average thickness of ≈7m.<br>○ Pegasus Lens is split into two smaller lenses and has a ≈200m strike length, a down plunge length (to the south) of ≈320m and maximum thickness of ≈5m.<br>○ Comet Lens has a ≈200m strike length, a vertical extent of ≈180m and average thickness of ≈4m.<br>○ Zagato Lens is split into two smaller lenses has a ≈100m strike length, a vertical extent of ≈80m and average thickness of ≈3m. |
| **Estimation and modelling techniques** | - Exploratory statistics and continuity analyses were completed using Snowden Supervisor (v8.13) software.<br>- Ordinary Block Kriging (OK) implemented in Surpac mining software 2020, was used to estimate block model grades (Zn, Cu, Ag, Au, Fe, Pb, As, Sb, S) and density. Dynamic anisotropy was employed for the Pegasus massive sulphide domain.<br>- Search limit by grade was used for some elements in Arnage massive sulphide, and Bentayga massive sulphide.<br>- All estimates were made from drill hole data composited (best fit) to a 1.0 m composite length.<br>- For OK estimates, the search neighbourhood parameters were set based on the results of continuity modelling (variography). Sample search distances varied by domain.<br>- A kriging neighbourhood analysis (KNA) was prepared to select the optimum parent block size for grade estimation, which was set to dimensions of 15mN×1mE×15mRL. Sub-blocks were permitted to give finer boundary resolution in the model.<br>- The grade and density estimates were constrained to within each respective massive sulphide or stringer sulphide domains using 3D domain digital model, with estimation boundaries treated as ‘hard’ boundaries so that only the composites within each respective domain were used to estimate grades in the corresponding blocks of each domain.<br>- No assumptions have been made regarding the recovery of by-products with all grades estimated independently.<br>- As, and Sb deleterious elements have been estimated.<br>- No modelling of selective mining units has taken place.<br>- Top-cuts were applied to the estimation composites on a domain basis to reduce the local influence of extreme values, with top-cuts determined from a review of the composite sample data statistics, histograms, and log-probability plots.<br>- The block model estimates were validated by on-screen inspection of the input composites and output block estimates drilling data using plan and cross section views.<br>- The inputs and output were then compared in terms of global mean grades and on moving window “swath” plots to confirm the grade trends in the input data had been correctly reproduced in the block estimates.<br>- No reconciliation factors were applied to the estimate. |

Section 3: Estimation and Reporting of Mineral Resources – Bentley

| Criteria | Commentary |
|---|---|
| **Moisture** | - The Mineral Resource tonnages are estimated on a dry basis. |
| **Cut-off parameters** | - $A100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Terms and Conditions (TCs). A$100 NSR represents material that is currently considered economic to mine and process.<br>- US Metal Prices used were $8,013.5 copper, $2,712.6 zinc, $26.15 silver, and $2,003.1 gold with an FX rate of 0.76.<br>- Mill Recovery assumptions used were 79% copper, 88.5% zinc, 51.5% silver, and 52.8% gold.<br>- TCs and payables are based on contract details |
| **Mining factors or assumptions** | - The current mining method at Bentley is a modified Avoca method between 20m spaced levels, with long-hole open stoping in other areas. |
| **Metallurgical factors or assumptions** | - The Jaguar processing plant is a conventional crush, grind and differential flotation plant that has been treating the VHMS ores from the nearby deposits for 10+ years.<br>- No metallurgical factors or assumptions have been used in the generation of this resource. |
| **Environmental factors or assumptions** | - ROM's Jaguar Operation operates under an Environmental Management Plan, which meets or exceeds legislative requirements.<br>- Rock waste is trucked to surface waste dumps or used as stope backfill.<br>- Environmental rehabilitation plans are in place and progressively executed, with costs included in operating budgets and forward plans.<br>- Disposal of concentrator residues is in a conventional tailing storage facility. |
| **Bulk density** | - *In situ* bulk density measurements from more recent drilling have been made on geologically representative sections of core with density determined using the Archimedes Principle (water-displacement) method.<br>- Density is estimated into the Mineral Resource models using ordinary kriging interpolation.<br>- In 2018, density standard measurements presented a low bias, indicating all measurements from 2018 were low. As such, the affected domains have been investigated and a calculated density regression has been applied. |
| **Classification** | - Bentley JORC Code classifications are predominantly based on the data spacing informing the interpolation, and proximity of resources to underground development drives:<br>o Measured Mineral Resources having:<br>▪ Data spacing nominally 20m×20m in the plane of the lode or less.<br>▪ Ore drive development has been completed above and below.<br>o Indicated Mineral Resources having<br>▪ Data spacing nominally 40m×40m in the plane of the lode or less.<br>o Inferred Mineral Resources having:<br>▪ Data spacing exceeds 40m×40m in the plane of the lode.<br>- The Competent Person considers the classifications described above consider all relative factors such as reliability and quality of the input data, the confidence in estimation, the geological and grade continuity, and the spatial distribution of the data.<br>- The classifications applied reflect the view of the Competent Person. |
| **Audits or reviews** | - The most recent Bentley resource audit was completed by Optiro in 2018.<br>- No audits have been completed on the most recent Bentley estimates, but consultants Optiro consultants assisted in the estimation process and provided mentoring guidance in the preparation of the estimate. |
| **Relative Accuracy/Confidence** | - No geostatistical methods such as conditional simulation have been prepared to quantify the accuracy or precision of the estimates.<br>- The Competent Person considers that the Measured and Indicated Mineral Resource estimates have local precision that is suitable for planning quarterly and annual targets respectively, and as such, are suitable for Ore Reserve conversion.<br>- Inferred Mineral Resource estimates have global estimation precision and are not suitable for Ore Reserve conversion.<br>- The estimates for Bentley have been compared to the production a monthly, quarterly, and annual basis, and results to date have been satisfactory and found to be marginally conservative. |

## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1)

The table below follows the requirements of JORC Table 1 sections 1, 2 and 3 as required for the estimation and reporting of Mineral Resources.

Section 1 Sampling Techniques and Data – Teutonic Bore

| Criteria | Commentary |
| --- | --- |
| **Sampling techniques** | - The sampling techniques used for the definition of the Teutonic Bore (TB) Resource is principally diamond core (DD) drilling. Refer to the subsections below for details relating to this drilling and sampling. |
| **Drilling techniques** | - The Mineral Resource of the TB deposit has been defined using DD drilling.<br>o Drilling from surface is a mixture of 63.5mm (HQ) and 47.6mm (NQ) core diameters, typically with holes first drill with RC pre-collars.<br>o Underground drilling is predominantly 36.5 mm (BQ) diameter core is used for grade control purposes, with half core submitted for assay.<br>o Core was oriented where possible using electronic (ACT) tools or using the spear method in older drill holes. |
| **Drill sample recovery** | - Post drilling down hole interval accuracy was monitored through reconstruction of the core into a continuous length and verification against the core blocks. One metre intervals were marked on the core.<br>- Core recovery in all drill programs was quantified as percentage of the core length recovered compared to the drill hole advance length. There were no core recovery issues during the drilling.<br>- Core recovery is reported to be high from all drilling with minimal losses except in highly fractured ground.<br>- Average core recovery was >98% for fresh rock in TB.<br>- There were no relationships between sample recovery and grades with no sample biases due to the preferential loss or gain core. |
| **Logging** | - RC cuttings and DD cores have been logged geologically and geotechnically with reference to standard logging schemes, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies.<br>- Qualitative logging for both RC and DD includes codes for lithology, oxidation (if any), veining and mineralisation.<br>- DD cores were qualitatively and structurally logged with reference to orientation measurements where available.<br>- The total lengths of all drill holes have been logged, with greater detail captured through zones of mineralization and the footwall and hangingwall rocks found within 30m of main lodes. |
| ***Sub-sampling techniques and sample preparation*** | - Only geological information was included from percussion drilling and no percussion sample grade information was used for Mineral Resource estimation purposes.<br><br><u>DD primary sampling:</u><br>- A geologist marked out DD core for sampling intervals based on geological units.<br>- The sample intervals were then cut in half longitudinally with a wet diamond blade, with the laboratory dispatch half collected from the same side of the core.<br>- Certified reference materials (CRMs) and duplicates were placed in pre-numbered calico bags for laboratory dispatch.<br><br><u>Quality controls to ensure sample representability included:</u><br>- Limited information is known about historical quality control.<br>- Coarse blanks and standard (CRMs) were inserted into routine sample stream to monitor cross contamination and accuracy at a nominal rate of 1:20.<br>- Variable standards were chosen in line with the predicted grades. Coarse blanks were inserted in and around the high-grade samples.<br>- CRMs for each individual hole must be at or above the nominal rates.<br>- Ensuring the laboratory used compressed air and barren rock washes to clean crushing and grinding equipment between each routine sample preparation.<br>- Crusher duplicate samples were collected at a nominal rate of 1:20 to monitor the repeat precision at various stages of comminution.<br>- Sieve tests were completed at the pulverization stage to confirm particle size distribution (PSD) compliance.<br>- Monitoring of quality results confirmed the sample preparation was acceptable in terms of accuracy, precision, and minimisation of sample cross contamination.<br>- Umpire laboratory checks were routinely undertaken at a rate of 10% of the primary samples.<br><br><u>Laboratory DD cut-core preparation</u>:<br>- Core samples were oven dried for 4-6 hours at 105°C then crushed in a jaw-crusher to a nominal 5-10mm particle size. The jaw-crush lot was then fine crushed to a PSD <2mm in a Boyd crusher-rotary splitter unit.<br>- The whole sample was then pulverized in Essa LM5 grinding mills to a PSD of 85% passing 75 microns with a final 200g sub-sample collected from the pulp into a paper packet for assay.<br>- The sample preparation laboratory was conducted by Intertek Genaylsis laboratory in Perth. |

Section 1 Sampling Techniques and Data – Teutonic Bore

| Criteria | Commentary |
|---|---|
| | - No specific heterogeneity tests have been carried out, but the Competent Person considers that the sub-sample protocols applied, and masses collected, are consistent with industry standards for the styles of mineralization under consideration. |
| **Quality of assay data and laboratory tests** | - No geophysical tools were used to determine any element concentrations estimated in the Mineral Resource.<br>Laboratory Assay processes for TB was conducted by Intertek Genalysis in Perth as follows:<br>- Digest a 0.2g sample of the pulp in a four-acid (hydrofluoric, nitric, perchloric and hydrochloric – 4AH) mixture and heated to dryness. The four-acid digestion is considered a total extraction all variables of interest.<br>- The digestion salts were then re-dissolved, and the prepared solution was then analysed by ICP-OES or ICP-MS analysis of an elemental suite (Cu, Pb, Zn, Ag, Fe, As, Sb and S).<br>- Gold was assayed using 25g fire-assay digestion then AAS assay of the dissolved bead solution.<br>- Quality control samples were included by the laboratory in the form of standards, blanks, and replicates.<br>- No information is available for historical samples; however, it is assumed they followed the standard practices at the time. |
| **Verification of sampling and assaying** | - Massive-sulphide drill intersections are visually conspicuous in the core and as such, assay results have been readily cross-verified by Round Oak Minerals (ROM) geologists through re-inspection of the core or core photographs.<br>- Drill hole sample numbers and logging information were captured on graphical logging sheets and compiled into Microsoft Excel spreadsheets in 2006. These were uploaded onto the AcQuire database, with standardized database templates to ensure consistent data entry.<br>- The databases are backed up off site daily.<br>- Upon receipt of the assay results both the company's and the laboratory's CRMs are verified and checked to see that are with acceptable standard deviations from the expected mean values.<br>- Assay data is merged electronically from the laboratories into a central database, with information verified spatially in Surpac software.<br>- ROM maintains standard work procedures for all data management steps.<br>- An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the main database.<br>- There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for Mineral Resource estimation work.<br>- No twin-holes have been drilled at TB.<br>- The Competent Person considers that acceptable levels of precision and accuracy has been established and cross-contamination has been minimized for the results received. |
| **Location of data points** | - In 2006, drillholes collar coordinates and azimuths were compiled from historic drillhole trace plans, sections, and long sections. This information was verified and uploaded into the company AcQuire database.<br>- Down hole paths have been surveyed using a north seeking Gryo tool, with readings taken every ≈5m downhole.<br>- The grid system for is a local grid tied to MGA Zone51, GDA94 datum with 311,465.6mE and 6,796,594.3mN subtracted from MGA coordinates and 4000m added to GDA elevation, followed by a +23.52 clockwise grid rotation.<br>- All other surveys have high precision and are prepared by ROM's mine surveyors using total station equipment. |
| **Data spacing and distribution** | - Most drilling was conducted from the surface, with a minimal amount of historical drilling from cuddy locations underground. Drillhole spacing is variable, ranging from 10m x 10m in some areas, up to 50m x 50m.<br>- Down-hole sample intervals are targeted to be 1m down hole but vary in length as a function of geological contact spacings.<br>- The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures used, and the JORC Code classifications applied to each deposit. |
| **Orientation of data in relation to geological structure** | - Drill platforms and drillholes are designed as such to intercept the mineralization at 90°, or as close to as possible. |
| **Sample security** | - Sample dispatches have been prepared by ROM's field personnel and tracked for delivery to the laboratory and progress through the laboratory.<br>- Samples are sealed for transport and transport is direct.<br>- Sample dispatch sheets have been verified against samples received at the laboratory and any issues such as missing samples and so on are resolved before sample preparation commences.<br>- The Competent Person considers that the likelihood of deliberate or accidental loss, mix-up or |

Section 1 Sampling Techniques and Data – Teutonic Bore

| Criteria | Commentary |
|---|---|
| | contamination of samples is very low.<br>- No information is available for historical samples; however, it is assumed they followed the standard practices at the time. |
| **Audits or reviews** | - ROM's geological staff have confirmed all significant intercepts in assay results against geological log expectations.<br>- An independent audit of ROM's sampling was completed in 2015 on drilling and sampling at the Jaguar operations with some procedural improvements recommended and implemented into current procedures. |

Section 2: Reporting of Exploration Results – Teutonic Bore

| Criteria | Explanation |
|---|---|
| Mineral tenement and land tenure status | - The tenements hosting the TB deposit is 100% owned by Round Oak Jaguar Limited, which is a ROM 100%-owned subsidiary. The TB deposit is within M37/1290 WA Mining Lease, which has an expiry date of 2 Feb 2031.<br>- All tenements are in good standing with rents paid and expenditure commitments met.<br>- Any ore mined from the tenements listed is subject to WA State royalties as prescribed in the WA Mining Act.<br>- There are no other material issues relating to agreements, third parties, joint ventures, partnerships, other royalties, native title interests, historic sites, wilderness or national parks, or environmental settings. |
| Exploration done by other parties | - In 1972 the GSWA mapped the area and identified volcanic rocks in the region.<br>- In 1974, CEC sampled surface gossans in the area and found Zn-Cu-Pb anomalism.<br>- In 1976, Seltrust/CEC discovered the Teutonic Bore deposit through follow up drilling of the gossan.<br>- From 1975 to 1978 Esso and Aquitaine explore the region, find some stringer type mineralisation in the Jaguar region.<br>- In 1984, Chevron drilled an EM target and missed the Jaguar deposit by 50 m.<br>- In 1991, MIMEX defined a 700-m long anomaly in the Bentley area with follow up drilling intersection stringer mineralisation 170 m below surface, but a deeper planned hole cancelled.<br>- In 1994, Pancontinental Mining rediscovered the anomaly and intersected 6 m grading 2.4%Zn.<br>- In 2001, Inmet-Pilbara identified a 1.8 km long conductor and intersected 7.7 m of Jaguar mineralisation in the second test hole at 485.5 m.<br>- In 2003, Inmet drilled an EM conductor at Bentley but stopped in a graphic shale zone in the hangingwall shale.<br>- In 2008, Bentley is discovered when a hole by Jabiru Metals Ltd (JML) intersected 10.5 m of high grade at 370 m depth.<br>- In 2008, IGO acquired JML.<br>- During, 2010 to 2014 many in-mine discoveries have been made using systematic drilling and down hole geophysical targeting.<br>- Extension lenses discovered included the Bubble lens at Jaguar and the Comet, Azure, Bentayga and Flying Spur lenses at Bentley.<br>- ROM purchased the tenements holding the Bentley, Jaguar, Triumph and Teutonic Bore deposits, as well as all Exploration tenements, in May 2018. |
| Geology | - Jaguar Operation is centred on a cluster of Volcanic Hosted Massive Sulphides (VHMS) deposits that are located within the Gindalbie Terrane, which is part of the late Archaean Eastern Goldfields Superterrane of the Yilgarn Craton of Western Australia.<br>- The area is dominated rocks of volcanic, intrusive, volcano-sedimentary origin and lesser sedimentary rocks.<br>- The local sequences have undergone tilting to sub-vertical positions and regional metamorphism to a lower greenschist facies.<br>- The principal deposits forming the known VHMS cluster are Bentley, Jaguar, Teutonic Bore and the Triumph deposit.<br>- The Jaguar Operation deposits are interpreted to have formed by sub-seafloor replacement, principally of shales and volcanoclastic sediments, with mineralisation located in a similar stratigraphic position near a transition from calc-alkaline to tholeiitic volcanism.<br>- The Teutonic Bore deposit originally cropped out as a gossan and is characterised by a massive sulphide lens (pyrite-sphalerite-chalcopyrite) with an extensive footwall feed zone of stringer sulphides. The mineralisation dips steeply west and plunges shallowly to the north. |
| Drill hole Information | - A summary of the many holes used to prepare the Mineral Resource estimate for Teutonic Bore is not practical for this public report.<br>- The Mineral Resource estimates give the best-balanced view of all the drill hole information. |
| Data aggregation methods | - No drill hole related exploration results are included in this report.<br>- No metal equivalent values are considered in the Mineral Resource estimate other than NSR values which are based partially on commercially confident information in concentrate sales contracts. |

Section 2: Reporting of Exploration Results – Teutonic Bore

| Criteria | Explanation |
|---|---|
| Relationship between mineralisation widths and intercept lengths | - No drill hole related exploration results are included in this report.<br>- Generally Mineral Resource definition drilling intersects the mineralisation at a high angle and as such approximate or allow estimation of true thicknesses. |
| Diagrams | - Examples sections and/or long sections and/or perspective view diagrams are included in the main body of this report. |
| Balanced reporting | - The Mineral Resources are based on all available data and as such provides the best-balanced view of the Jaguar Operation deposits. |
| Other substantive exploration data | - Information relating to other exploration data, such as density and metallurgical assumptions are detailed in Section 3 and Section 4 further below. |
| Further work | - Follow up drilling is planned for the stringer lens at TB. |

Section 3: Estimation and Reporting of Mineral Resources – Teutonic Bore

| Criteria | Commentary |
|---|---|
| **Database integrity** | - The historic data for the Teutonic Bore estimate was validated by JML geologists in 2006 and entered in the central database at that time.<br>- ROM's geologists capture field data and drill hole logging directly at source into handheld devices or laptop computers using standard logging templates.<br>- Logging data is transferred daily to ROM's central acQuire database system which is an industry recognised software for management of geoscientific data.<br>- All data is validated on site by ROM's geologists with quality samples checked and accepted before data is merged into the central database from laboratory digital assay reports.<br>- Drill logs are printed from the database for further verification and the merged geology and assay results are then cross checked spatially in mining software, with further checks against core photography or retained cores if required.<br>- The Competent Person considers that there is minimal risk of transcription of keying errors between initial collection and the final data used for Mineral Resource estimation work, and the database is of suitable quality for Mineral Resource estimation purposes. |
| **Site visits** | - The Competent Person is the Chief Company Geologist for Round Oak Minerals and has an intimate understanding of the respective deposit geologies and the data used for Mineral Resource estimation work. |
| **Geological interpretation** | - The data used for geological interpretation is from DD and RC drilling and includes logging and assay results.<br>- Lithological controls are used to interpret the footwall and hangingwall contacts of the Mineral Resource mineralisation and the cross-cutting dykes.<br>- The interpreted geological controls described above are used to control the grade estimation process.<br>- Confidence in the interpretation is moderate, with the mineralisation and geological setting being well understood.<br>- No alternative interpretations have been prepared or considered necessary. |
| **Dimensions** | - TB has three mineralised lenses of known dimensions as follows:<br>○ Main Lode Lens has a ≈300m strike length, a down plunge length (to the west) of ≈200m and maximum thickness of ≈20m.<br>○ Footwall Stringer Lens has a ≈350m strike length, a vertical extent of ≈280m and maximum thickness of ≈50m.<br>○ Footwall Lode Lens has a ≈45m strike length, a vertical extent of ≈85m and average thickness of ≈8m. |

Section 3: Estimation and Reporting of Mineral Resources – Teutonic Bore

| Criteria | Commentary |
|---|---|
| **Estimation and modelling techniques** | - Exploratory statistics and continuity analyses were completed using Snowden Supervisor (v8.13) software.<br>- Ordinary Block Kriging (OK) implemented in Surpac mining software 2020, was used to estimate block model grades (Zn, Cu, Ag, Au, Fe, Pb, As, Sb, S) and density.<br>- All estimates were made from drill hole data composited (best fit) to a 1.0 m composite length.<br>- For OK estimates, the search neighbourhood parameters were set based on the results of continuity modelling (variography). Sample search distances varied by domain.<br>- A kriging neighbourhood analysis (KNA) was prepared to select the optimum parent block size for grade estimation, which was set to dimensions of 5mN×5mE×5mRL. Sub-blocks were permitted to give finer boundary resolution in the model.<br>- The grade and density estimates were constrained to within each respective massive sulphide or stringer sulphide domains using 3D domain digital model, with estimation boundaries treated as 'hard' boundaries so that only the composites within each respective domain were used to estimate grades in the corresponding blocks of each domain.<br>- No assumptions have been made regarding the recovery of by-products with all grades estimated independently.<br>- As, and Sb deleterious elements have been estimated.<br>- No modelling of selective mining units has taken place.<br>- Top-cuts were applied to the estimation composites on a domain basis to reduce the local influence of extreme values, with top-cuts determined from a review of the composite sample data statistics, histograms, and log-probability plots.<br>- The block model estimates were validated by on-screen inspection of the input composites and output block estimates drilling data using plan and cross section views.<br>- The inputs and output were then compared in terms of global mean grades and on moving window "swath" plots to confirm the grade trends in the input data had been correctly reproduced in the block estimates.<br>- No reconciliation factors were applied to the estimate. |
| **Moisture** | - The Mineral Resource tonnages are estimated on a dry basis. |
| **Cut-off parameters** | - $A100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Terms and Conditions (TCs). A$100 NSR represents material that is currently considered economic to mine and process.<br>- US Metal Prices used were $8,013.5 copper, $2,712.6 zinc, $26.15 silver, and $2,003.1 gold with an FX rate of 0.76.<br>- Mill Recovery assumptions used were 79% copper, 88.5% zinc, 51.5% silver, and 52.8% gold.<br>- TCs and payables are based on contract details. |
| **Mining factors or assumptions** | - The proposed mining method at TB is a surface open-pit cutback. |
| **Metallurgical factors or assumptions** | - The Jaguar processing plant is a conventional crush, grind and differential flotation plant that has been treating the VHMS ores from the nearby deposits for 10+ years.<br>- No metallurgical factors or assumptions have been used in the generation of this resource. |
| **Environmental factors or assumptions** | - ROM's Jaguar Operation operates under and environmental management plan, which meets or exceeds legislative requirements.<br>- Rock waste is trucked to surface waste dumps or used as stope backfill.<br>- Environmental rehabilitation plans are in place and progressively executed, with costs included in operating budgets and forward plans.<br>- Disposal of concentrator residues in in a conventional tailing storage facility. |
| **Bulk density** | - *In situ* bulk density measurements from more recent drilling have been made on geologically representative sections of core with density determined using the Archimedes Principle (water-displacement) method.<br>- Density is estimated into the Mineral Resource models using ordinary kriging interpolation. |
| **Classification** | - TB JORC Code classifications are predominantly based on the data spacing informing the interpolation, and proximity of resources to underground development drives:<br>o Measured Mineral Resources having:<br>▪ Data spacing nominally 20m×20m in the plane of the lode or less.<br>▪ Ore drive development has been completed above and below.<br>o Indicated Mineral Resources having: |

| Criteria | Commentary |
| --- | --- |
| | ▪ Data spacing nominally 40m×40m in the plane of the lode or less.<br>o Inferred Mineral Resources having:<br>▪ Data spacing exceeds 40m×40m in the plane of the lode.<br>- The Competent Person considers the classifications described above consider all relative factors such as reliability and quality of the input data, the confidence in estimation, the geological and grade continuity, and the spatial distribution of the data.<br>- The classifications applied reflect the view of the Competent Person. |
| **Audits or reviews** | - The most recent TB resource audit was completed by Runge Limited in 2009.<br>- No audits have been completed on the most recent TB estimates, but consultants Optiro consultants assisted in the estimation process and provided mentoring guidance in the preparation of the estimate. |
| **Relative Accuracy/Confidence** | - No geostatistical methods such as conditional simulation have been prepared to quantify the accuracy or precision of the estimates.<br>- The TB resource update is entirely Inferred material, and as such has global estimation precision and is not suitable for Ore Reserve conversion. |

## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1) – TURBO 2021

The table below follows the requirements of JORC Table 1 sections 1, 2 and 3 as required for the estimation and reporting of Mineral Resources.

Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| **Sampling techniques** | - The sampling techniques used for the definition of the Turbo Resource are principally for diamond core (DD) drilling. Refer to the subsections below for details relating to this drilling and sampling. |
| **Drilling techniques** | - The Mineral Resource of the Turbo deposit has been defined using DD drilling.<br>o Underground drilling is predominantly 50.6mm (NQ2) diameter or 63mm (HQ2) diameter.<br>o Core was oriented where possible using electronic (ACT) tools. |
| **Drill sample recovery** | - During drilling, rod counting used to verify the lengths drilled and downhole depths.<br>- Post drilling down hole interval accuracy was monitored through reconstruction of the core into a continuous length and verification against the core blocks. One metre intervals were marked on the core.<br>- Core recovery in all drill programs was quantified as percentage of the core length recovered compared to the drill hole advance length. There were no core recovery issues during the drilling.<br>- Core recovery is reported to be high from all drilling with minimal losses except in highly fractured ground.<br>- Average core recovery was >98% for fresh rock in Turbo.<br>- There were no relationships between sample recovery and grades with no sample biases due to the preferential loss or gain core. |
| **Logging** | - DD cores have been logged geologically and geotechnically with reference to standard logging schemes, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies.<br>- Qualitative logging for DD includes codes for lithology, oxidation (if any), veining and mineralisation.<br>- DD cores were photographed both wet and dry after logging had taken place, and qualitatively and structurally logged with reference to orientation measurements where available.<br>- The total lengths of all drill holes in all deposits have been logged, with greater detail captured through zones of mineralization and the footwall and hangingwall rocks found within 30m of main lodes. |
| ***Sub-sampling techniques and sample preparation*** | DD primary sampling:<br>- A geologist marked out DD core for sampling intervals based on geological units, with intervals ranging no less than 0.3m and no greater than 1.3m, with a target sample interval of 1m.<br>- The sample intervals were then cut in half longitudinally with a wet diamond blade, with the laboratory dispatch half collected from the same side of the core.<br>- Certified reference materials (CRMs) and duplicates were placed in pre-numbered calico bags for laboratory dispatch.<br><br>Quality controls to ensure sample representability included:<br>- Coarse blanks and standard (CRMs) were inserted into routine sample stream to monitor cross contamination and accuracy at a nominal rate of 1:20.<br>- Variable standards were chosen in line with the predicted grades. Coarse blanks were inserted in and around the high-grade samples.<br>- CRMs for each individual hole must be at or above the nominal rates.<br>- Ensuring the laboratory used compressed air and barren rock washes to clean crushing and grinding equipment between each routine sample preparation.<br>- Crusher duplicate samples were collected at a nominal rate of 1:20 to monitor the repeat precision at various stages of comminution.<br>- Sieve tests were completed at the pulverization stage to confirm particle size distribution (PSD) compliance.<br>- Monitoring of quality results confirmed the sample preparation was acceptable in terms of accuracy, precision, and minimisation of sample cross contamination.<br>- Umpire laboratory checks were routinely undertaken at a rate of 10% of the primary samples.<br><br>Laboratory DD cut-core preparation:<br>- Core samples were oven dried for 4-6 hours at 105ºC then crushed in a jaw-crusher to a nominal 5-10mm particle size. The jaw-crush lot was then fine crushed to a PSD <2mm in a Boyd crusher-rotary splitter unit.<br>- The whole sample was then pulverized in Essa LM5 grinding mills to a PSD of 85% passing 75 microns with a final 200g sub-sample collected from the pulp into a paper packet for assay.<br>- The sample preparation laboratory was conducted by Intertek Genaylsis laboratory in Perth or Adelaide.<br>- No specific heterogeneity tests have been carried out, but the Competent Person considers that the sub-sample protocols applied, and masses collected, are consistent with industry standards for the styles of mineralization under consideration. |

## Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| **Quality of assay data and laboratory tests** | - No geophysical tools were used to determine any element concentrations estimated in the Mineral Resource.<br><br>Laboratory Assay processes for Turbo was conducted by Intertek Genalysis in Perth or Adelaide as follows:<br>- Digest a 0.2g sample of the pulp in a four-acid (hydrofluoric, nitric, perchloric and hydrochloric – 4AH) mixture and heated to dryness. The four-acid digestion is considered a total extraction all variables of interest.<br>- The digestion salts were then re-dissolved, and the prepared solution was then analysed by ICP-OES or ICP-MS analysis of an elemental suite (Cu, Pb, Zn, Ag, Fe, As, Sb and S).<br>- Gold was assayed using 25g fire-assay digestion then AAS assay of the dissolved bead solution.<br>- Quality control samples were included by the laboratory in the form of standards, blanks, and replicates. |
| **Verification of sampling and assaying** | - Massive-sulphide drill intersections are visually conspicuous in the core and as such, assay results have been readily cross-verified by Round Oak Minerals (ROM) geologists through re-inspection of the core or core photographs.<br>- Drill hole sample numbers and logging information are captured at source using laptop computers with standardized database templates to ensure consistent data entry.<br>- Data records (logs, sample dispatched, core photographs) are downloaded daily to ROM's main AcQuire database system, which is an industry recognized tool for management and storage of geoscientific data.<br>- The databases are backed up off site daily.<br>- Upon receipt of the assay results both the company's and the laboratory's CRMs are verified and checked to see that are with acceptable standard deviations from the expected mean values.<br>- Assay data is merged electronically from the laboratories into a central database, with information verified spatially in Surpac software.<br>- ROM maintains standard work procedures for all data management steps.<br>- An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the main database.<br>- There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for Mineral Resource estimation work.<br>- No twin-holes have been drilled into Turbo.<br>- The Competent Person considers that acceptable levels of precision and accuracy has been established and cross-contamination has been minimized for the results received. |
| **Location of data points** | - The collar locations of underground holes have been surveyed by ROM's Mine Survey teams using total station survey equipment to accuracy better than 2mm in three dimensions.<br>- Initial collar directions are aligned using industry standard azimuth aligner tools.<br>- Down hole paths have been surveyed using a north seeking Reflex Gryo SPRINT-IQ electronic tool that have high azimuth and dip precision with readings taken every ≈4m downhole.<br>- The grid system for is a local grid tied to MGA Zone51, GDA94 datum with 311,465.6mE and 6,796,594.3mN subtracted from MGA coordinates and 4000m added to GDA elevation, followed by a +23.52 clockwise grid rotation.<br>- All other mine surveys have high precision and are prepared by ROM's mine surveyors using total station equipment. |
| **Data spacing and distribution** | - Most drilling was conducted from cuddy locations underground, with a minimal amount being drilled from the surface. Drilling is targeting a 50m x 50m spacing.<br>- Down-hole sample intervals are targeted to be 1m down hole but vary in length as a function of geological contact spacings.<br>- The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for an Inferred Mineral Resource. |
| **Orientation of data in relation to geological structure** | - Drill platforms and drillholes are designed as such to intercept the mineralization at 90°, or as close to as possible. |
| **Sample security** | - Sample dispatches have been prepared by ROM's field personnel and tracked for delivery to the laboratory and progress through the laboratory.<br>- Samples are sealed for transport and transport is direct.<br>- Sample dispatch sheets have been verified against samples received at the laboratory and any issues such as missing samples and so on are resolved before sample preparation commences.<br>- The Competent Person considers that the likelihood of deliberate or accidental loss, mix-up or contamination of samples is very low. |
| **Audits or reviews** | - ROM's geological staff have confirmed all significant intercepts in assay results against geological log expectations.<br>- An independent audit of ROM's sampling was completed in 2015 on drilling and sampling at the Jaguar operations with some procedural improvements recommended and implemented into current procedures. |

## Section 2: Reporting of Exploration Results – Turbo

| Criteria | Explanation |
|---|---|
| Mineral tenement and land tenure status | - Turbo is within the Bentley deposit, where the tenements are 100% owned by Round Oak Jaguar Limited, which is a ROM 100%-owned subsidiary. The Bentley deposit is within M37/1290 WA Mining Lease, which has an expiry date of 2 Feb 2031.<br>- All tenements are in good standing with rents paid and expenditure commitments met.<br>- Any ore mined from the tenements listed is subject to WA State royalties as prescribed in the WA Mining Act.<br>- There are no other material issues relating to agreements, third parties, joint ventures, partnerships, other royalties, native title interests, historic sites, wilderness or national parks, or environmental settings. |
| Exploration done by other parties | - In 1972 the GSWA mapped the area and identified volcanic rocks in the region.<br>- In 1974, CEC sampled surface gossans in the area and found Zn-Cu-Pb anomalism.<br>- In 1976, Seltrust/CEC discovered the Teutonic Bore deposit through follow up drilling of the gossan.<br>- From 1975 to 1978 Esso and Aquitaine explore the region, find some stringer type mineralisation in the Jaguar region.<br>- In 1984, Chevron drilled an EM target and missed the Jaguar deposit by 50 m.<br>- In 1991, MIMEX defined a 700-m long anomaly in the Bentley area with follow up drilling intersection stringer mineralisation 170 m below surface, but a deeper planned hole cancelled.<br>- In 1994, Pancontinental Mining rediscovered the anomaly and intersected 6 m grading 2.4% Zn.<br>- In 2001, Inmet-Pilbara identified a 1.8 km long conductor and intersected 7.7 m of Jaguar mineralisation in the second test hole at 485.5 m.<br>- In 2003, Inmet drilled an EM conductor at Bentley but stopped in a graphic shale zone in the hangingwall shale.<br>- In 2008, Bentley is discovered when a hole by Jabiru Metals Ltd (JML) intersected 10.5 m of high grade at 370 m depth.<br>- In 2008, IGO acquired JML.<br>- During 2010 to 2014, many in-mine discoveries have been made using systematic drilling and down hole geophysical targeting.<br>- Extension lenses discovered included the Bubble lens at Jaguar and the Comet, Azure, Bentayga, Flying Spur, Pegasus, Java and Turbo lenses at Bentley.<br>- ROM purchased the tenements holding the Bentley, Jaguar, Triumph and Teutonic Bore deposits, as well as all Exploration tenements, in May 2018. |
| Geology | - Jaguar Operation is centred on a cluster of Volcanic Hosted Massive Sulphides (VHMS) deposits that are located within the Gindalbie Terrane, which is part of the late Archaean Eastern Goldfields Superterrane of the Yilgarn Craton of Western Australia.<br>- The area is dominated by rocks of volcanic, intrusive, volcano-sedimentary origin and lesser sedimentary rocks.<br>- The local sequences have undergone tilting to sub-vertical positions and regional metamorphism to a lower greenschist facies.<br>- The principal deposits forming the known VHMS cluster are Bentley, Jaguar, Teutonic Bore and the Triumph deposit.<br>- The Jaguar Operation deposits are interpreted to have formed by sub-seafloor replacement, principally of shales and volcanoclastic sediments, with mineralisation located in a similar stratigraphic position near a transition from calc-alkaline to tholeiitic volcanism.<br>- The Teutonic Bore deposit originally cropped out as a gossan and is characterised by a massive sulphide lens (pyrite-sphalerite-chalcopyrite) with an extensive footwall feed zone of stringer sulphides. The mineralisation dips steeply west and plunges shallowly to the north.<br>- The Bentley VHMS mineralisation occurs at the contact of a thick basal rhyolitic sequence with an overlying andesite. The rhyolitic sequence is overlain by a sequence of carbonaceous mudstones and siltstones. The sequence is steeply dipping.<br>- The Bentley massive sulphide mineralisation is banded and consists of pyrite, sphalerite, chalcopyrite, galena and minor pyrrhotite. The upper contact of the massive sulphide is typically sharp. The footwall to the massive sulphide zone consists typically of stringer and disseminated sulphide mineralisation comprising pyrite, chalcopyrite, and minor sphalerite.<br>- A dolerite sill has intruded the Bentley region, cutting the mineralisation into nine main lenses (Arnage, Mulsanne, Bentayga, Brooklands, Comet, Flying Spur, Pegasus, Turbo and Zagato).<br>- The Bentayga lens has been structurally offset from the main Arnage lens, pushed 80m into the footwall from the rest of the Bentley mineralisation. |
| Drill hole Information | - A summary of the many holes used to prepare the Mineral Resource estimate for Turbo is not practical for this public report.<br>- The Mineral Resource estimates give the best-balanced view of all the drill hole information. |
| Data aggregation methods | - No drill hole related exploration results are included in this report.<br>- No metal equivalent values are considered in the Mineral Resource estimate other than NSR values which are based partially on commercially confident information in concentrate sales contracts. |
| Relationship between mineralisation widths and intercept lengths | - No drill hole related exploration results are included in this report.<br>- Generally Mineral Resource definition drilling intersects the mineralisation at a high angle and as such approximate or allow estimation of true thicknesses. |

## Section 2: Reporting of Exploration Results – Turbo

| Criteria | Explanation |
|---|---|
| Diagrams | - Examples sections and/or long sections and/or perspective view diagrams are included in the main body of this report. |
| Balanced reporting | - The Mineral Resources are based on all available data and as such provides the best-balanced view of the Jaguar Operation deposits. |
| Other substantive exploration data | - Information relating to other exploration data, such as density and metallurgical assumptions are detailed in Section 3 and Section 4 further below. |
| Further work | - Follow up grade control drilling is planned for the Turbo lens. |

## Section 3: Estimation and Reporting of Mineral Resources – Turbo

| Criteria | Commentary |
|---|---|
| **Database integrity** | - ROM's geologists capture field data and drill hole logging directly at source into handheld devices or laptop computers using standard logging templates.<br>- Logging data is transferred daily to ROM's central acQuire database system which is an industry recognised software for management of geoscientific data.<br>- All data is validated on site by ROM's geologists with quality samples checked and accepted before data is merged into the central database from laboratory digital assay reports.<br>- Drill logs are printed from the database for further verification and the merged geology and assay results are then cross checked spatially in mining software, with further checks against core photography or retained cores if required.<br>- The historic data for the Teutonic Bore estimate was validated by JML geologists in 2006 and entered in the central database at that time.<br>- The Competent Person considers that there is minimal risk of transcription of keying errors between initial collection and the final data used for Mineral Resource estimation work, and the database is of suitable quality for Mineral Resource estimation purposes. |
| **Site visits** | - The Competent Person was previously the Geology Manager at Jaguar Operations and has an intimate understanding of the respective deposit geologies and the data used for Mineral Resource estimation work. |
| **Geological interpretation** | - The data used for geological interpretation is from DD drilling and includes logging and assay results, which are augmented by underground exposure mapping to confirm the interpreted geological units and zones of mineralisation.<br>- Lithological controls are used to interpret the footwall and hangingwall contacts of the Mineral Resource mineralisation and the cross-cutting dykes.<br>- The interpreted geological controls described above are used to control the grade estimation process.<br>- Confidence in the interpretation is moderate to high, with the mineralisation and geological setting being well understood.<br>- No alternative interpretations have been prepared or considered necessary. |
| **Dimensions** | - Turbo Lens has a ≈200m strike length, a down plunge length (to the south) of ≈190m and maximum thickness of ≈25m. |

Section 3: Estimation and Reporting of Mineral Resources – Turbo

| Criteria | Commentary |
|---|---|
| **Estimation and modelling techniques** | - Exploratory statistics and continuity analyses were completed using Snowden Supervisor (v8.14) software.<br>- Ordinary Block Kriging (OK) implemented in Surpac mining software 2020, was used to estimate block model grades (Zn, Cu, Ag, Au, Fe, Pb, As, Sb, S) and density.<br>- Search limit by grade was used for Zn and Ag in Turbo disseminated sulphide.<br>- All estimates were made from drill hole data composited (best fit) to a 1.0 m composite length.<br>- For OK estimates, the search neighbourhood parameters were set based on the results of continuity modelling (variography). Sample search distances varied by domain.<br>- A kriging neighbourhood analysis (KNA) was prepared to select the optimum parent block size for grade estimation, which was set to dimensions of 15mN×1mE×15mRL. Sub-blocks were permitted to give finer boundary resolution in the model.<br>- The grade and density estimates were constrained to within each respective massive sulphide or stringer sulphide domains using 3D domain digital model, with estimation boundaries treated as ‘hard’ boundaries so that only the composites within each respective domain were used to estimate grades in the corresponding blocks of each domain.<br>- No assumptions have been made regarding the recovery of by-products with all grades estimated independently.<br>- As, and Sb deleterious elements have been estimated.<br>- No modelling of selective mining units has taken place.<br>- Top-cuts were applied to the estimation composites on a domain basis to reduce the local influence of extreme values, with top-cuts determined from a review of the composite sample data statistics, histograms, and log-probability plots.<br>- The block model estimates were validated by on-screen inspection of the input composites and output block estimates drilling data using plan and cross section views.<br>- The inputs and output were then compared in terms of global mean grades and on moving window “swath” plots to confirm the grade trends in the input data had been correctly reproduced in the block estimates.<br>- No reconciliation factors were applied to the estimate. |
| **Moisture** | - The Mineral Resource tonnages are estimated on a dry basis. |
| **Cut-off parameters** | - $A100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Terms and Conditions (TCs). A$100 NSR represents material that is currently considered economic to mine and process.<br>- US Metal Prices used were $8,013.5 copper, $2,712.6 zinc, $26.15 silver, and $2,003.1 gold with an FX rate of 0.76.<br>- Mill Recovery assumptions used were 79% copper, 88.5% zinc, 51.5% silver, and 52.8% gold.<br>- TCs and payables are based on contract details |
| **Mining factors or assumptions** | - The current mining method at Bentley is a CRF backfilled long hole stoping method between 20m spaced levels, with long-hole open stoping, and modified Avoca, in other areas. |
| **Metallurgical factors or assumptions** | - The Jaguar processing plant is a conventional crush, grind and differential flotation plant that has been treating the VHMS ores from the nearby deposits for 10+ years.<br>- No metallurgical factors or assumptions have been used in the generation of this resource. |
| **Environmental factors or assumptions** | - ROM’s Jaguar Operation operates under an Environmental Management Plan, which meets or exceeds legislative requirements.<br>- Rock waste is trucked to surface waste dumps or used as stope backfill.<br>- Environmental rehabilitation plans are in place and progressively executed, with costs included in operating budgets and forward plans.<br>- Disposal of concentrator residues is in a conventional tailing storage facility. |
| **Bulk density** | - *In situ* bulk density measurements from more recent drilling have been made on geologically representative sections of core with density determined using the Archimedes Principle (water-displacement) method.<br>- Density is estimated into the Mineral Resource models using ordinary kriging interpolation. |
| **Classification** | - Turbo JORC Code classifications are predominantly based on the data spacing informing the interpolation, and proximity of resources to underground development drives. As such, the highest resource classification assigned to Turbo at this time is inferred.<br>o Inferred Mineral Resources having:<br>▪ Data spacing exceeds 40m×40m in the plane of the lode.<br>- The Competent Person considers the classifications described above consider all relative factors such as |

| Criteria | Commentary |
| --- | --- |
| | reliability and quality of the input data, the confidence in estimation, the geological and grade continuity, and the spatial distribution of the data.<br>- The classifications applied reflect the view of the Competent Person. |
| **Audits or reviews** | - This Resource update has been reviewed by Optiro Pty Ltd in December 2021. It has been found to be of a high quality, with no fatal flaws. |
| **Relative Accuracy/Confidence** | - No geostatistical methods such as conditional simulation have been prepared to quantify the accuracy or precision of the estimates.<br>- The Competent Person considers that no part of the Turbo MRE has been assigned a Measured or Indicated Mineral Resource classification, and as such is not suitable for planning quarterly and annual targets respectively, or suitable for Ore Reserve conversion.<br>- As the Turbo lens is at the start of its mine life, the estimates have not been compared to the production. |

## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1) – BENTAYGA HW 2021

The table below follows the requirements of JORC Table 1 sections 1, 2 and 3 as required for the estimation and reporting of Mineral Resources.

### Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| **Sampling techniques** | - The sampling techniques used for the definition of the Bentayga Hangingwall (Bentayga HW) Resource are principally for diamond core (DD) drilling. Refer to the subsections below for details relating to this drilling and sampling. |
| **Drilling techniques** | - The Mineral Resource of the Bentayga HW deposit has been defined using DD drilling.<br>o Underground drilling is predominantly 50.6mm (NQ2) diameter or 63mm (HQ2) diameter.<br>o Core was oriented where possible using electronic (ACT) tools. |
| **Drill sample recovery** | - During drilling, rod counting used to verify the lengths drilled and downhole depths.<br>- Post drilling down hole interval accuracy was monitored through reconstruction of the core into a continuous length and verification against the core blocks. One metre intervals were marked on the core.<br>- Core recovery in all drill programs was quantified as percentage of the core length recovered compared to the drill hole advance length. There were no core recovery issues during the drilling.<br>- Core recovery is reported to be high from all drilling with minimal losses except in highly fractured ground.<br>- Average core recovery was >98% for fresh rock in Bentayga HW.<br>- There were no relationships between sample recovery and grades with no sample biases due to the preferential loss or gain core. |
| **Logging** | - DD cores have been logged geologically and geotechnically with reference to standard logging schemes, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies.<br>- Qualitative logging for DD includes codes for lithology, oxidation (if any), veining and mineralisation.<br>- DD cores were photographed both wet and dry after logging had taken place, and qualitatively and structurally logged with reference to orientation measurements where available.<br>- The total lengths of all drill holes in all deposits have been logged, with greater detail captured through zones of mineralization and the footwall and hangingwall rocks found within 30m of main lodes. |
| ***Sub-sampling techniques and sample preparation*** | <u>DD primary sampling:</u><br>- A geologist marked out DD core for sampling intervals based on geological units, with intervals ranging no less than 0.3m and no greater than 1.3m, with a target sample interval of 1m.<br>- The sample intervals were then cut in half longitudinally with a wet diamond blade, with the laboratory dispatch half collected from the same side of the core.<br>- Certified reference materials (CRMs) and duplicates were placed in pre-numbered calico bags for laboratory dispatch.<br><br><u>Quality controls to ensure sample representability included:</u><br>- Coarse blanks and standard (CRMs) were inserted into routine sample stream to monitor cross contamination and accuracy at a nominal rate of 1:20.<br>- Variable standards were chosen in line with the predicted grades. Coarse blanks were inserted in and around the high-grade samples.<br>- CRMs for each individual hole must be at or above the nominal rates.<br>- Ensuring the laboratory used compressed air and barren rock washes to clean crushing and grinding equipment between each routine sample preparation.<br>- Crusher duplicate samples were collected at a nominal rate of 1:20 to monitor the repeat precision at various stages of comminution.<br>- Sieve tests were completed at the pulverization stage to confirm particle size distribution (PSD) compliance.<br>- Monitoring of quality results confirmed the sample preparation was acceptable in terms of accuracy, precision, and minimisation of sample cross contamination.<br>- Umpire laboratory checks were routinely undertaken at a rate of 10% of the primary samples.<br><br><u>Laboratory DD cut-core preparation</u>:<br>- Core samples were oven dried for 4-6 hours at 105ºC then crushed in a jaw-crusher to a nominal 5-10mm particle size. The jaw-crush lot was then fine crushed to a PSD <2mm in a Boyd crusher-rotary splitter unit.<br>- The whole sample was then pulverized in Essa LM5 grinding mills to a PSD of 85% passing 75 microns with a final 200g sub-sample collected from the pulp into a paper packet for assay.<br>- The sample preparation laboratory was conducted by Intertek Genaylsis laboratory in Perth or Adelaide.<br>- No specific heterogeneity tests have been carried out, but the Competent Person considers that the sub-sample protocols applied, and masses collected, are consistent with industry standards for the styles of mineralization under consideration. |

Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| **Quality of assay data and laboratory tests** | - No geophysical tools were used to determine any element concentrations estimated in the Mineral Resource.<br><br>Laboratory Assay processes for Bentayga HW was conducted by Intertek Genalysis in Perth or Adelaide as follows:<br><br>- Digest a 0.2g sample of the pulp in a four-acid (hydrofluoric, nitric, perchloric and hydrochloric – 4AH) mixture and heated to dryness. The four-acid digestion is considered a total extraction all variables of interest.<br>- The digestion salts were then re-dissolved, and the prepared solution was then analysed by ICP-OES or ICP-MS analysis of an elemental suite (Cu, Pb, Zn, Ag, Fe, As, Sb and S).<br>- Gold was assayed using 25g fire-assay digestion then AAS assay of the dissolved bead solution.<br>- Quality control samples were included by the laboratory in the form of standards, blanks, and replicates. |
| **Verification of sampling and assaying** | - Massive-sulphide drill intersections are visually conspicuous in the core and as such, assay results have been readily cross-verified by Round Oak Minerals (ROM) geologists through re-inspection of the core or core photographs.<br>- Drill hole sample numbers and logging information are captured at source using laptop computers with standardized database templates to ensure consistent data entry.<br>- Data records (logs, sample dispatched, core photographs) are downloaded daily to ROM's main AcQuire database system, which is an industry recognized tool for management and storage of geoscientific data.<br>- The databases are backed up off site daily.<br>- Upon receipt of the assay results both the company's and the laboratory's CRMs are verified and checked to see that are with acceptable standard deviations from the expected mean values.<br>- Assay data is merged electronically from the laboratories into a central database, with information verified spatially in Surpac software.<br>- ROM maintains standard work procedures for all data management steps.<br>- An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the main database.<br>- There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for Mineral Resource estimation work.<br>- No twin-holes have been drilled into Bentayga HW.<br>- The Competent Person considers that acceptable levels of precision and accuracy has been established and cross-contamination has been minimized for the results received. |
| **Location of data points** | - The collar locations of underground holes have been surveyed by ROM's Mine Survey teams using total station survey equipment to accuracy better than 2mm in three dimensions.<br>- Initial collar directions are aligned using industry standard azimuth aligner tools.<br>- Down hole paths have been surveyed using a north seeking Reflex Gryo SPRINT-IQ electronic tool that have high azimuth and dip precision with readings taken every ≈4m downhole.<br>- The grid system for is a local grid tied to MGA Zone51, GDA94 datum with 311,465.6mE and 6,796,594.3mN subtracted from MGA coordinates and 4000m added to GDA elevation, followed by a +23.52 clockwise grid rotation.<br>- All other mine surveys have high precision and are prepared by ROM's mine surveyors using total station equipment. |
| **Data spacing and distribution** | - Most drilling was conducted from cuddy locations underground, with a minimal amount being drilled from the surface. Drilling is targeting a 20m x 20m spacing, however drilling from the 3575 Diamond Drill Drive targeting the Bentayga Massive (located behind the Bentayga HW) has caused an area of the Bentayga HW lens to have a density of ~8m x 8m.<br>- Down-hole sample intervals are targeted to be 1m down hole but vary in length as a function of geological contact spacings.<br>- The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for an Inferred Mineral Resource. |
| **Orientation of data in relation to geological structure** | - Drill platforms and drillholes are designed as such to intercept the mineralization at 90°, or as close to as possible. |
| **Sample security** | - Sample dispatches have been prepared by ROM's field personnel and tracked for delivery to the laboratory and progress through the laboratory.<br>- Samples are sealed for transport and transport is direct.<br>- Sample dispatch sheets have been verified against samples received at the laboratory and any issues such as missing samples and so on are resolved before sample preparation commences.<br>- The Competent Person considers that the likelihood of deliberate or accidental loss, mix-up or contamination of samples is very low. |
| **Audits or reviews** | - ROM's geological staff have confirmed all significant intercepts in assay results against geological log expectations.<br>- An independent audit of ROM's sampling was completed in 2015 on drilling and sampling at the Jaguar operations with some procedural improvements recommended and implemented into current procedures. |

Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| | |

Section 2: Reporting of Exploration Results – Bentayga HW

| Criteria | Explanation |
|---|---|
| Mineral tenement and land tenure status | - Bentayga HW is within the Bentley deposit, where the tenements are 100% owned by Round Oak Jaguar Limited, which is a ROM 100%-owned subsidiary. The Bentley deposit is within M37/1290 WA Mining Lease, which has an expiry date of 2 Feb 2031.<br>- All tenements are in good standing with rents paid and expenditure commitments met.<br>- Any ore mined from the tenements listed is subject to WA State royalties as prescribed in the WA Mining Act.<br>- There are no other material issues relating to agreements, third parties, joint ventures, partnerships, other royalties, native title interests, historic sites, wilderness or national parks, or environmental settings. |
| Exploration done by other parties | - In 1972 the GSWA mapped the area and identified volcanic rocks in the region.<br>- In 1974, CEC sampled surface gossans in the area and found Zn-Cu-Pb anomalism.<br>- In 1976, Seltrust/CEC discovered the Teutonic Bore deposit through follow up drilling of the gossan.<br>- From 1975 to 1978 Esso and Aquitaine explore the region, find some stringer type mineralisation in the Jaguar region.<br>- In 1984, Chevron drilled an EM target and missed the Jaguar deposit by 50 m.<br>- In 1991, MIMEX defined a 700-m long anomaly in the Bentley area with follow up drilling intersection stringer mineralisation 170 m below surface, but a deeper planned hole cancelled.<br>- In 1994, Pancontinental Mining rediscovered the anomaly and intersected 6 m grading 2.4% Zn.<br>- In 2001, Inmet-Pilbara identified a 1.8 km long conductor and intersected 7.7 m of Jaguar mineralisation in the second test hole at 485.5 m.<br>- In 2003, Inmet drilled an EM conductor at Bentley but stopped in a graphic shale zone in the hangingwall shale.<br>- In 2008, Bentley is discovered when a hole by Jabiru Metals Ltd (JML) intersected 10.5 m of high grade at 370 m depth.<br>- In 2008, IGO acquired JML.<br>- During 2010 to 2014, many in-mine discoveries have been made using systematic drilling and down hole geophysical targeting.<br>- Extension lenses discovered included the Bubble lens at Jaguar and the Comet, Azure, Bentayga (of which Bentayga HW is a part of), Flying Spur, Pegasus, Java and Turbo lenses at Bentley.<br>- ROM purchased the tenements holding the Bentley, Jaguar, Triumph and Teutonic Bore deposits, as well as all Exploration tenements, in May 2018. |
| Geology | - Jaguar Operation is centred on a cluster of Volcanic Hosted Massive Sulphides (VHMS) deposits that are located within the Gindalbie Terrane, which is part of the late Archaean Eastern Goldfields Superterrane of the Yilgarn Craton of Western Australia.<br>- The area is dominated by rocks of volcanic, intrusive, volcano-sedimentary origin and lesser sedimentary rocks.<br>- The local sequences have undergone tilting to sub-vertical positions and regional metamorphism to a lower greenschist facies.<br>- The principal deposits forming the known VHMS cluster are Bentley, Jaguar, Teutonic Bore and the Triumph deposit.<br>- The Jaguar Operation deposits are interpreted to have formed by sub-seafloor replacement, principally of shales and volcanoclastic sediments, with mineralisation located in a similar stratigraphic position near a transition from calc-alkaline to tholeiitic volcanism.<br>- The Teutonic Bore deposit originally cropped out as a gossan and is characterised by a massive sulphide lens (pyrite-sphalerite-chalcopyrite) with an extensive footwall feed zone of stringer sulphides. The mineralisation dips steeply west and plunges shallowly to the north.<br>- The Bentley VHMS mineralisation occurs at the contact of a thick basal rhyolitic sequence with an overlying andesite. The rhyolitic sequence is overlain by a sequence of carbonaceous mudstones and siltstones. The sequence is steeply dipping.<br>- The Bentley massive sulphide mineralisation is banded and consists of pyrite, sphalerite, chalcopyrite, galena and minor pyrrhotite. The upper contact of the massive sulphide is typically sharp. The footwall to the massive sulphide zone consists typically of stringer and disseminated sulphide mineralisation comprising pyrite, chalcopyrite, and minor sphalerite.<br>- A dolerite sill has intruded the Bentley region, cutting the mineralisation into nine main lenses (Arnage, Mulsanne, Bentayga, Brooklands, Comet, Flying Spur, Pegasus, Turbo and Zagato).<br>- The Bentayga lens has been structurally offset from the main Arnage lens, pushed 80m into the footwall from the rest of the Bentley mineralisation. |
| Drill hole Information | - A summary of the many holes used to prepare the Mineral Resource estimate for Bentayga HW is not practical for this public report.<br>- The Mineral Resource estimates give the best-balanced view of all the drill hole information. |

## Section 2: Reporting of Exploration Results – Bentayga HW

| Criteria | Explanation |
|---|---|
| Data aggregation methods | - No drill hole related exploration results are included in this report.<br>- No metal equivalent values are considered in the Mineral Resource estimate other than NSR values which are based partially on commercially confident information in concentrate sales contracts. |
| Relationship between mineralisation widths and intercept lengths | - No drill hole related exploration results are included in this report.<br>- Generally Mineral Resource definition drilling intersects the mineralisation at a high angle and as such approximate or allow estimation of true thicknesses. |
| Diagrams | - Examples sections and/or long sections and/or perspective view diagrams are included in the main body of this report. |
| Balanced reporting | - The Mineral Resources are based on all available data and as such provides the best-balanced view of the Jaguar Operation deposits. |
| Other substantive exploration data | - Information relating to other exploration data, such as density and metallurgical assumptions are detailed in Section 3 and Section 4 further below. |
| Further work | - Follow up grade control drilling is planned for the extents of the Bentayga HW lens. |

## Section 3: Estimation and Reporting of Mineral Resources – Bentayga HW

| Criteria | Commentary |
|---|---|
| **Database integrity** | - ROM's geologists capture field data and drill hole logging directly at source into handheld devices or laptop computers using standard logging templates.<br>- Logging data is transferred daily to ROM's central acQuire database system which is an industry recognised software for management of geoscientific data.<br>- All data is validated on site by ROM's geologists with quality samples checked and accepted before data is merged into the central database from laboratory digital assay reports.<br>- Drill logs are printed from the database for further verification and the merged geology and assay results are then cross checked spatially in mining software, with further checks against core photography or retained cores if required.<br>- The historic data for the Teutonic Bore estimate was validated by JML geologists in 2006 and entered in the central database at that time.<br>- The Competent Person considers that there is minimal risk of transcription of keying errors between initial collection and the final data used for Mineral Resource estimation work, and the database is of suitable quality for Mineral Resource estimation purposes. |
| **Site visits** | - The Competent Person was previously the Geology Manager at Jaguar Operations and has an intimate understanding of the respective deposit geologies and the data used for Mineral Resource estimation work. |
| **Geological interpretation** | - The data used for geological interpretation is from DD drilling and includes logging and assay results, which are augmented by underground exposure mapping to confirm the interpreted geological units and zones of mineralisation.<br>- Lithological controls are used to interpret the footwall and hangingwall contacts of the Mineral Resource mineralisation and the cross-cutting dykes.<br>- The interpreted geological controls described above are used to control the grade estimation process.<br>- Confidence in the interpretation is moderate to high, with the mineralisation and geological setting being well understood.<br>- No alternative interpretations have been prepared or considered necessary. |
| **Dimensions** | - Bentayga HW Lens has a ≈70m strike length, a down plunge length (to the south) of ≈120m and maximum thickness of ≈6m. |

Section 3: Estimation and Reporting of Mineral Resources – Bentayga HW

| Criteria | Commentary |
|---|---|
| **Estimation and modelling techniques** | - Exploratory statistics and continuity analyses were completed using Snowden Supervisor (v8.14) software.<br>- Ordinary Block Kriging (OK) implemented in Surpac mining software 2020, was used to estimate block model grades (Zn, Cu, Ag, Au, Fe, Pb, As, Sb, S) and density.<br>- Search limit by grade was used for Zn and Ag in Bentayga HW disseminated sulphide.<br>- All estimates were made from drill hole data composited (best fit) to a 1.0 m composite length.<br>- For OK estimates, the search neighbourhood parameters were set based on the results of continuity modelling (variography). Sample search distances varied by domain.<br>- A kriging neighbourhood analysis (KNA) was prepared to select the optimum parent block size for grade estimation, which was set to dimensions of 15mN×1mE×15mRL. Sub-blocks were permitted to give finer boundary resolution in the model.<br>- The grade and density estimates were constrained to within each respective massive sulphide or stringer sulphide domains using 3D domain digital model, with estimation boundaries treated as 'hard' boundaries so that only the composites within each respective domain were used to estimate grades in the corresponding blocks of each domain.<br>- No assumptions have been made regarding the recovery of by-products with all grades estimated independently.<br>- As, and Sb deleterious elements have been estimated.<br>- No modelling of selective mining units has taken place.<br>- Top-cuts were applied to the estimation composites on a domain basis to reduce the local influence of extreme values, with top-cuts determined from a review of the composite sample data statistics, histograms, and log-probability plots.<br>- The block model estimates were validated by on-screen inspection of the input composites and output block estimates drilling data using plan and cross section views.<br>- The inputs and output were then compared in terms of global mean grades and on moving window "swath" plots to confirm the grade trends in the input data had been correctly reproduced in the block estimates.<br>- No reconciliation factors were applied to the estimate. |
| **Moisture** | - The Mineral Resource tonnages are estimated on a dry basis. |
| **Cut-off parameters** | - $A100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Terms and Conditions (TCs). A$100 NSR represents material that is currently considered economic to mine and process.<br>- US Metal Prices used were $8,013.5 copper, $2,712.6 zinc, $26.15 silver, and $2,003.1 gold with an FX rate of 0.76.<br>- Mill Recovery assumptions used were 79% copper, 88.5% zinc, 51.5% silver, and 52.8% gold.<br>- TCs and payables are based on contract details |
| **Mining factors or assumptions** | - The current mining method at Bentley is a CRF backfilled long hole stoping method between 20m spaced levels, with long-hole open stoping, and modified Avoca, in other areas. |
| **Metallurgical factors or assumptions** | - The Jaguar processing plant is a conventional crush, grind and differential flotation plant that has been treating the VHMS ores from the nearby deposits for 10+ years.<br>- No metallurgical factors or assumptions have been used in the generation of this resource. |
| **Environmental factors or assumptions** | - ROM's Jaguar Operation operates under an Environmental Management Plan, which meets or exceeds legislative requirements.<br>- Rock waste is trucked to surface waste dumps or used as stope backfill.<br>- Environmental rehabilitation plans are in place and progressively executed, with costs included in operating budgets and forward plans.<br>- Disposal of concentrator residues is in a conventional tailing storage facility. |
| **Bulk density** | - *In situ* bulk density measurements from more recent drilling have been made on geologically representative sections of core with density determined using the Archimedes Principle (water-displacement) method.<br>- Density is estimated into the Mineral Resource models using ordinary kriging interpolation. |
| **Classification** | - Bentayga HW JORC Code classifications are predominantly based on the data spacing informing the interpolation, and proximity of resources to underground development drives. There is no development into the Bentayga HW lens as yet, as such the highest Resource Classification assigned is 'indicated'.<br>o Indicated Mineral Resources having<br>▪ Data spacing nominally 40m×40m in the plane of the lode or less.<br>o Inferred Mineral Resources having: |

Section 3: Estimation and Reporting of Mineral Resources – Bentayga HW

| Criteria | Commentary |
|---|---|
| | ▪ Data spacing exceeds 40m×40m in the plane of the lode.<br><br>- The Competent Person considers the classifications described above consider all relative factors such as reliability and quality of the input data, the confidence in estimation, the geological and grade continuity, and the spatial distribution of the data.<br>- The classifications applied reflect the view of the Competent Person. |
| **Audits or reviews** | - No reviews have been completed on this Mineral Resource estimate. |
| **Relative Accuracy/Confidence** | - No geostatistical methods such as conditional simulation have been prepared to quantify the accuracy or precision of the estimates.<br>- The Competent Person considers that the Indicated Mineral Resource estimates have local precision that are suitable for planning quarterly and annual targets respectively, and as such, are suitable for Ore Reserve conversion.<br>- Inferred Mineral Resource estimates have global estimation precision and are not suitable for Ore Reserve conversion.<br>- As the Bentayga HW lens has not been mined as yet, the estimates have not been compared to the production. |

## JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

| Criteria | Commentary |
|---|---|
| ***Sampling techniques*** | • The following companies have undertaken drilling within the area: St Barbara Limited prior to 2008, Jabiru Metals post 2011 and IGO 2012 to2018. The resource area consists of drilling solely conducted by IGO. Round Oak Minerals has not conducted any drilling on the prospect but has reviewed all historical data.<br>• Drilling was undertaken using HQ2 and HQ3 diamond holes which were quarter-core sampled over the prospective mineralisation intervals as determined by the geologist selecting visible zinc and copper mineralisation, along with a 5m waste zone either side of the mineralised interval.<br>• Core is orientated, meter marked, photographed, geologically logged, geotechnically logged and structurally logged before sampling takes place.<br>• All sampling was conducted in fresh rock. Sampling intervals range from 0.3-1.3m and selected based on lithology. Average sampling intervals were 1.0m.<br>• Core was cut with an Almonte automated core saw. Core was initially halved along the orientation line, and then quartered. In areas where an orientation line was not possible, a cut line was extended through the interval to aid cutting and sampling. The same quarter of core was always selected for assay to ensure consistency, half core was submitted for metallurgical testing and the remaining quarter core sample retained for historical reference. |
| ***Drilling techniques*** | • Diamond drilling was conducted from surface as either HQ2 or HQ3 diameter core. HQ3 is employed in the weathered clay saprolite zones to ensure sufficient sample return, before reducing to HQ2 in competent saprock and fresh rock zones. Core was oriented using a Reflex ACT II tool and the orientation line was drawn on core prior to mark-up for cutting and sampling. |
| ***Drill sample recovery*** | • Core is measured and marked up on angle iron in continuous runs. Core recovery was good to excellent, being consistently >98%. Measured core lengths and core losses was compared with driller's blocks and recorded in the database. The measured lengths was compared with expected lengths to calculate recovery. Most core was competent and cuts well with minimal loss of fines. No sample bias from core drilling or core recovery is expected. |
| ***Logging*** | • All core holes were logged via laptop into an AcQuire SQL database using standardised logging codes. Geological logging included lithology, deformation, structure, alteration, mineralisation, veining, RQD, and recovery. All diamond drill holes were orientated +/-30m before and after mineralised zones, photographed and geotechnically logged. The SQL database utilises referential integrity to ensure data tables were consistent and restricted to defined logging codes. All mineralised zones were logged in high detail with the waste zones logged in less detail (distances greater than 30m from economic zones of mineralisation structural and geotechnical data is not collected). |
| ***Sub-sampling techniques and sample preparation*** | Intertek Genalysis (Intertek) in Maddington, Perth performed all sample preparation and assay analyses. The sample preparation steps are outlined below;<br>• Primary sample weights submitted to Intertek range between 0.7-3.2kg with an average weight of 1.8kg<br>• Samples are received by Intertek and cross checked against the submission to ensure no discrepancies. If discrepancies occur the job is stopped and client (IGO) is contacted to remediate<br>• All samples received by Intertek are dried in ovens prior to sample preparation for a minimum of 2 hours at 105°C<br>• Samples are crushed to minus 10mm via a jaw crusher and then crushed to a minus 2mm via a Boyd crusher<br>• After crushing, samples split to a maximum of 3kg via rotary splitter prior to pulverising. Any residual material (over 3kg) is retained as a coarse crush sample and stored<br>• Samples are pulverised for 6 minutes in a puck mill to obtain 85% passing 75 micron<br>• QC in the form of a coarse crush wash (blue metal wash) has been implemented between each sample during the crushing stage to reduce carry over contamination<br>• QC in the form of sieve passing tests is performed on 10% of the sample population. This is used to ensure 85% of the pulp passes 75 micron that is deemed appropriate for successful liberation for digestion. Any samples that fail the 85% passing 75 micron sieve test are recombined with remaining residues and re-pulverised to ensure 85% passes 75 microns |
| ***Quality of assay data and laboratory tests*** | • Intertek inserts internal standards and blanks randomly through each batch.<br>• IGO tested precision of the primary analysis by inserting field duplicates at a rate of 1 in 50 primary samples. The paired data results enabled assessment of analysis precision.<br>• Contamination between samples was assessed by the insertion of blank samples after mineralised intervals at a rate of 1 in 20 primary samples.<br>• Assessment of the accuracy of the analysis was carried out by inserting certified reference material (CRM) standards at a rate of 1 in 20 primary standards. IGO used custom made CRM material produced by GeoStats from concentrate and mine ore feed from Jaguar and Golden Grove Operations. Custom made CRM's are developed to cover the grade ranges at Jaguar and are in the form of pulverised <2mm material in 50g packets.<br>• Laboratory repeats and cross laboratory (umpire laboratory) checks were undertaken for resource updates however this being the maiden resource estimate for Triumph no umpire samples have been submitted.<br>• No sample or analytical quality issues with the assay data was identified.<br>• QAQC results were reviewed on a batch-by-batch basis. Any deviation from acceptable precision or indication of bias were acted on immediately with the laboratory with re-reads |

| Criteria | Commentary |
|---|---|
| | and repeat assays. Overall performance of primary laboratory Intertek Genalysis was satisfactory. |
| ***Verification of sampling and assaying*** | • On receipt of the assay results the senior mine geologist and the logging geologist validate the assay against the geological logging via graphical logs produced by AcQuire log reporter. This was to ensure results match the expected logging domains.<br>• QAQC was carried out on each batch to ensure blanks, standards and duplicates pass IGO protocol.<br>• No twinned holes have been drilled to date. |
| ***Location of data points*** | • All holes for this campaign were pegged using a GPS then surveyed by on-site surveyors once the hole was commenced using RTK GPS equipment. Collars were picked-up whilst drilling to ensure a reliable azimuth could be taken of the hole from the orientation of the drill rig to assist with downhole reference gyro survey that requires a starting azimuth to calculate downhole azimuth drift.<br>• A Reflex Reference Gyro was used for full end of hole surveys. An in-run and out-run survey is performed at station intervals of 5m.<br>• Post-processing and QAQC validation of the downhole surveys is carried out by the onsite geologists before the information is imported into the SQL AcQuire database<br>• A regional Digital Terrane Model was generated in 2008 by 25m grid pattern from photogrammetry conducted on aerial photography. Horizontal datum is MGA GDA94 Zone 51. |
| ***Data spacing and distribution*** | • Drill hole spacing has achieved 40 x 40m sections of the central zone of the Stag Lens. Outside Stag Lens drill spacing is nominally 40 x 80m across the deposit. |
| ***Orientation of data in relation to geological structure*** | • The majority of drilling was orientated to intersect normal to mineralisation. The risk of a bias being introduced by sample orientation is thus considered minimal. |
| ***Sample security*** | • All samples were securely contained and sealed during transport to and from the laboratory in Perth and site. All transportation was direct with corresponding sample submission forms and consignment notes travelling with the samples, and which were also recorded on site. The laboratory received samples and checks them against dispatch documents. IGO staff were advised of any missing or additional samples. All storage is secure on site, at the laboratory, and when the samples returned to site after assay. |
| ***Audits or reviews*** | • Field quality control and assurance was assessed on a daily, monthly and quarterly basis. There have been no external audits carried out on the quality of sample data. The same procedures have been used to sample Triumph material that are currently used for the operating Bentley mine. These procedures are appropriate for the purpose of Mineral Resource Estimate. |

## Section 2 Reporting of Exploration Results

| Criteria | Commentary |
|---|---|
| ***Mineral tenement and land tenure status*** | The Triumph deposit is within mining lease M37/1301 held 100% by Independence Jaguar Limited, a wholly owned subsidiary of Independence Group NL (IGO). There is no native title claim over the area. There are no known heritage or environmental impediments over the leases. The tenure is secure at the time of reporting. No known impediments exist to operate in the area. |
| ***Exploration done by other parties*** | IGO through acquisition of Jabiru Metals have been the sole company exploring the Triumph area after 2008. Previous to 2008, St Barbara Limited conducted exploration near the prospect. Various exploration companies have carried out exploration activities in the area since Teutonic Bore was discovered by Seltrust in 1976. |
| ***Geology*** | Triumph is a VHMS style prospect located within the Gindalbie Terrane, occurring as polymetallic (pyrite-sphalerite-chalcopyrite-galena) massive sulfide mineralisation within a volcano-sedimentary succession overlain by mafic sequences. |
| ***Drill hole Information*** | Drillhole information for the latest drilling released to the market on the form the maiden resource estimate is tabled in Appendix 1 |
| ***Data aggregation methods*** | Reported intercepts have been determined using the following parameters:<br>• No minimum intercept widths have been applied<br>• Mineralised zones with greater than 5m of <1% Zn (waste) have been reported separately as individual intervals<br>• No minimum grades cut-off has been applied for the reported intercepts. Excluding the 5m <1% Zn rule to break up mineralised zones described in the previous point.<br>• No top-cuts have been applied to reported intercepts |
| ***Relationship between mineralisation widths and intercept lengths*** | • Mineralised intercepts are calculated as approximate true widths with grades estimated by length weighted and bulk density. All available data has been publicly disclosed to the ASX |
| ***Diagrams*** | • Longsection diagram with annotated drilling intercepts for the Stag Lens can be found in Appendix 2 |
| ***Balanced reporting*** | • All mineralised intercepts as reported are provided in Appendix 1. Competent person believes that the information complied for this report is comprehensive and avoids misleading reporting of exploration results. |
| ***Other substantive exploration data*** | • Geochemical targeting via soil and aircore drilling have been used at the Triumph deposit. Downhole Electromagnetic surveys (DHEM) have been carried out over the Triumph area to assist with drill targeting. |

| Criteria | Commentary |
|---|---|
| ***Further work*** | • Further infill drilling of the Stag lens will be required to assist with grade control purposes. Metallurgical testing of Triumph core is being conducted to help optimise processing parameters.<br>• Exploration drilling of potential down plunge extension and increase confidence of Rocket, Spitfire and Tiger Lenses |

## Section 3 Estimation and Reporting of Mineral Resources

| Criteria | Commentary |
|---|---|
| ***Database integrity*** | • The parent database for all collar, survey, geology and assay data is a SQL database with the acQuire software as the front end. This acQuire database has several built-in fields and reports to ensure data are entered correctly and conform to validation rules. Assay data are imported directly from laboratory files and merged with sampling data. All data is captured digitally and imported directly to the database with few opportunities for keying errors. All data with the parent Triumph project code are exported to a Microsoft Access database which is frozen in time as a permanent record of the database used for that resource estimate.<br>• All data is validated before the database was locked prior to the mineral resource estimate. |
| ***Site visits*** | • The competent person, Mr David Potter, is the Chief group geologist (previously geology manager Jaguar). He regularly checks procedures and processes used to collect data for resource estimation. |
| ***Geological interpretation*** | • Confidence in the geological interpretation for Triumph is moderate to high, with the mineralisation and geological setting being well understood. Geological interpretations were prepared using Leapfrog software and was used to control the interpretation of the mineralisation.<br>• Interpretation of the mineralisation was carried out on section from drilling data, and used a combination of the sulfide texture, and the net smelter return (NSR) variable. The main factors controlling continuity at Triumph is a post-mineralisation rhyodacite intrusive which bifurcates the mineralisation in the northern part of the main Stag lens. |
| ***Dimensions*** | • Triumph consists of four massive sulfide lenses each with a corresponding basal stringer sulfide and upper disseminated sulfide domains. The basal stringer and upper disseminated domains are incremental to the massive sulfide domains. Multiple footwall stringer domains have been identified and modelled.<br>• Stag massive sulfide lens is the largest of the massive sulfide lenses and has a strike length of 350m (north-south) with a shallow, southerly down plunge extent of 400m and a maximum thickness of 40m. Stag lens sits 170m below the surface and extends 400m vertically.<br>• Rocket massive sulfide lens has a strike length and down plunge extent of 230m and a maximum thickness of 6m. Rocket lens sits 355m below surface and has a vertical extent of 250m.<br>• Spitfire massive sulfide lens has a strike length of 90m, shallow down plunge extent of 100m and a maximum thickness of 6m. Spitfire lens sits 730m below surface and has a vertical extent of 90m.<br>• A forth small massive sulfide lens has been identified as the Tiger Lens which sits above the Rocket lens and has the dimension of 90m in height and 30m in strike length and a maximum width of 5m. Tiger lens is 300m below surface. |
| ***Estimation and modelling techniques*** | • Statistics and variography were completed using Snowden Supervisor 8 software. Ordinary Kriging (OK) and inverse distance squared ($ID^2$) estimation methods were used for grade and density estimation and block modelling was completed utilising Surpac 6.6.2 software. Zn, Cu, Ag, Au, Fe, Pb, As, Sb, S and density have been estimated.<br>• Ordinary Kriging was performed on the Stag massive, stringer and disseminated sulfide lenses due to the availability of closer spaced sampling compared to the other mineralised lenses that do not have enough data for meaningful variography to be undertaken. All other mineralisation was estimated using an $ID^2$ method. Due to data limitations the lenses estimated via $ID^2$ have received a lower resource classification than the Stag lenses.<br>• All estimates used 1.0m composite length that is length-density weighted.<br>• For OK estimate the search parameters were derived from variogram models for each element with Kriging Neighbourhood Analysis (KNA) used to select the optimum block size.<br>• Each variable was interpolated independently. No correlation between estimated variables was assumed in the grade interpolation stage. However, highly correlated variables (iron-sulphur-density and lead-antimony) used variography based on the variable with the most sampling.<br>• Grade and density estimation were constrained to each massive sulfide and stringer sulfide lens by wireframe shells, with all boundaries treated as hard boundaries.<br>• Search dimensions and orientations were set from variography.<br>• Extrapolation distance for the Stag massive sulfide lens is 40m with all other lenses having a maximum extrapolation distance of 70m.<br>• Search distances were up to 150m for Pass 1 and up to 250m for Pass 3. Pass 1 used between 8 and 36 samples for estimation. The minimum number of samples was reduced to 4 for the lenses in Pass 2 and Pass 3, while the maximum number of samples was maintained at 36.<br>• This is the maiden resource estimate for Triumph and therefore no reconciliation can be performed.<br>• No assumptions have been made regarding the recovery of by-products. |

| Criteria | Commentary |
| --- | --- |
| | • Drill intercept spacing of the Stag lens is nominally 40 x 40m. Drill spacing increases to 40 x 80m outside the immediate Stag lens area.<br>• Kriging Neighbourhood Analysis was used to determine block model parameters. The parent block size was set to 20mY x 2mX x 40mZ. Parent block grades are assigned to sub-blocks within the parent block and the constraining wireframe. Sub-celling of 5mY x 0.5mX x 5mZ has been used with discretisation of 5Y, 5X, and 5Z.<br>• No modelling of selective mining units has taken place.<br>• Mild top-cuts were used to reduce the impact of extremely high outliers in the grade population.<br>• Top-cut grades were determined from a review of the composite sample data statistics, histograms and log-probability plots.<br>• Massive sulfide domain top-cuts Cu (4.5%), Pb (4.5%), Ag (1300ppm), Au (2ppm), As (4500ppm), Sb (1000ppm).<br>• Stringer sulfide domain top-cuts Cu (3%), Pb (0.25%), Zn (8.8%), Ag (125ppm), As (1600ppm).<br>• Disseminated sulfide domain top-cuts Cu (1.3%), Pb (1.5%), Zn (13%), Ag (140ppm), Au (0.6ppm), As (2900ppm), Sb (160ppm).<br>• The block model was checked visually first, in Surpac, and compared with drilling data, then checked on a X and Y sections on a lens by lens basis by comparing raw average composite grade, declustered average grade and estimated model grades via swath plots.<br>• No reconciliation factors are applied to the resource estimate. |
| ***Moisture*** | • No samples were tested for moisture content. All sampled core was from well below the base of oxidation. Samples are considered to be impermeable with an inherent moisture content expected below 1%. On this basis the tonnage estimate is considered to have been estimated with natural moisture. A 1% moisture for fresh material has used in mining at Bentley since 2010 with no reconciliation issues. |
| ***Cut-off parameters*** | • The reporting of the Mineral Resource was based on a combination of mineralisation type and Net Smelter Return (NSR) that was derived from estimated future mining and processing costs, applied on a fully costed basis for the massive sulfide domain. The report cut-off for stringer and disseminated domains also used an NSR cut-off but was applied on an incremental cost basis. For massive sulfide domains, a reporting cut-off of $100 NSR was employed. Stringer and disseminated sulfide domains employed a reporting cut-off of $45 NSR. |
| ***Mining factors or assumptions*** | • Modelling was conducted based on the knowledge gained from current mining practices at Bentley and from other similar operations. Various studies indicate that Triumph could be economically extracted via underground mining methods. |
| ***Metallurgical factors or assumptions*** | • Metallurgical recovery factors are included within the NSR calculation and considered when forming reporting cut-off parameters. Recovery factors are based on regression formulas that have been developed from actual processing data.<br>• The Jaguar processing facility has been treating similar ores proficiently for 10 years and similar metal recovery has been assumed for the Triumph deposit pending metallurgical testing.<br>• Metallurgical test work is underway and will for part of the ore reserve estimate. |
| ***Environmental factors or assumptions*** | • Pending completion of environmental studies, it has been assumed that existing environmental management protocols derived from the Jaguar and Bentley operations will be appropriate for the mining and treatment of the Triumph mineralisation. |
| ***Bulk density*** | • JML/IGO performed density test work on almost all core samples that were submitted to the laboratory for assay. All density measurements have been determined using the simple water immersion technique, on uncoated core and for the entire sample interval. Core was uncoated because it was deemed to be impervious.<br>• Validation of the density measurements is carried out by the combined assays for Cu, Pb, Zn and Fe compared with the measured densities. A regression curve is used to determine if spurious measurements have been taken. Outliers (outside a nominal +/-10% from the regression curves) are removed from the dataset and a calculated density, using the appropriate regression formula, is assigned only to those samples without an actual correct density measurement. Density is estimated via OK and $ID^2$.<br>• Density is used to weight each of the sample composite in the estimation. |
| ***Classification*** | Classification for the 2017 Triumph Mineral Resource Estimate incorporates all aspects of data quality, including intersection orientation, sample spacing as well as understanding of the grade and geological continuity.<br>• Indicated resources: drill spacing < 40m along strike and down dip, kriging efficiency (KE) >0.3, regression slope (RS) >0.5, high to moderate confidence, where grade and geological continuity can be assumed.<br>• Inferred resources: drill spacing > 40m along strike and down dip, KE <0.3, RS <0.5, moderate to low confidence where grade and geological continuity has been implied but cannot be assumed.<br>• Unclassified resources: minimum drill intercepts with no confidence in geological continuity |
| ***Audits or reviews*** | • Optiro Pty Ltd have completed an audit on the 2017 resource model and is documented within the 2017 Mineral Resource Report. No material issues were identified. |
| ***Discussion of relative accuracy/confidence*** | • Moderate confidence of the Mineral Resource within the Indicated resource envelope with a likelihood of eventual economic extraction.<br>• Low confidence has been assumed for the Inferred Mineral Resource envelope with further work required to give confidence on economic viability of the mineralisaiton. |

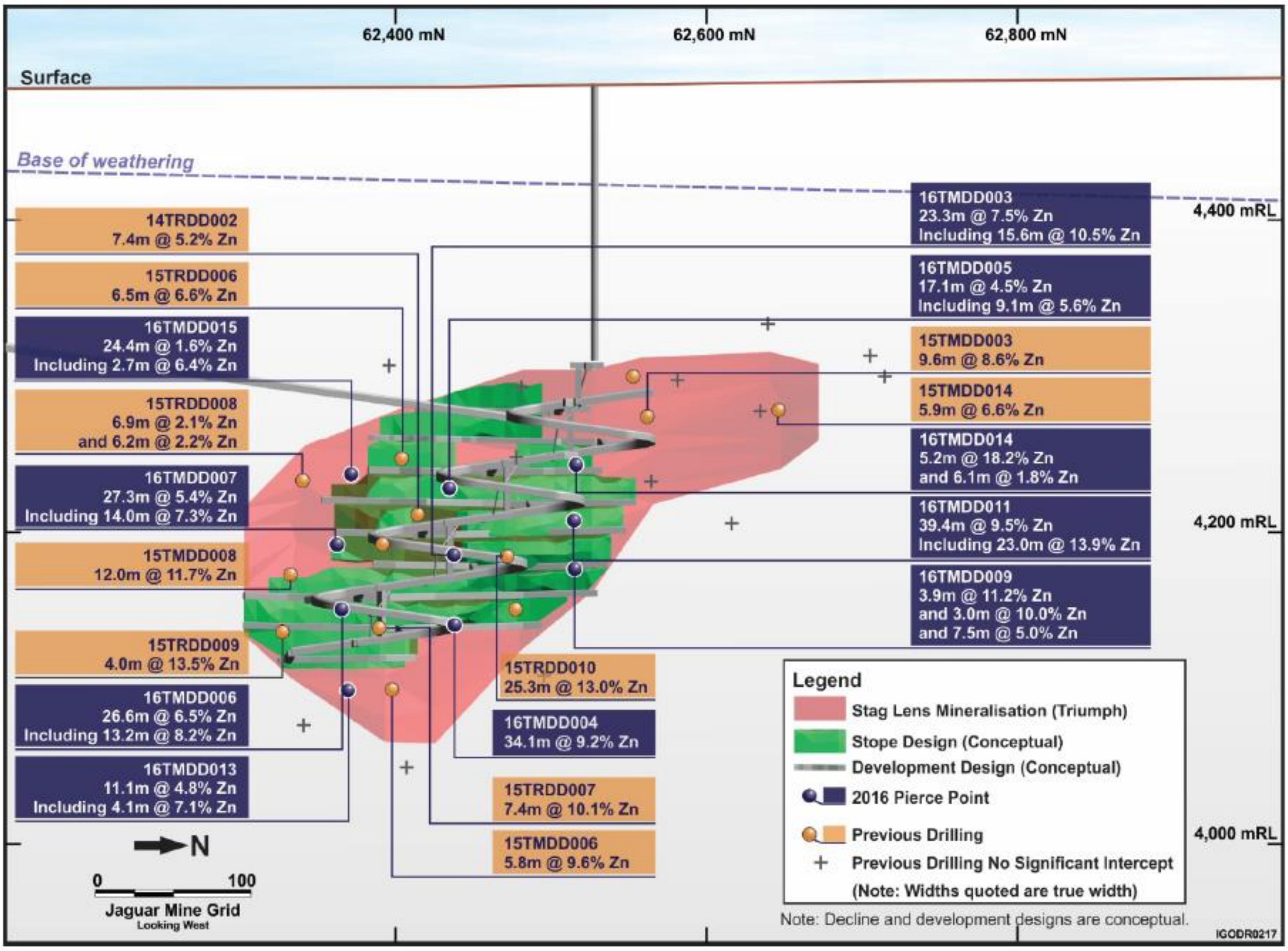
| Criteria | Commentary |
|---|---|
| | • Factors considered in classifying the resource estimate were geological continuity, drill spacing, estimators of Kriging Efficiency (KE), slope of regression (RS), number of samples informing the block, average distance of samples informing the block and mineralisation intersection angles. Sample quality was excellent which has been reflected in the classification.<br>• The estimate is a global estimate and is suitable for mine planning within areas classified as Indicated Mineral Resources.<br>• As this is the maiden resource for the Triumph deposit, no mining and subsequent reconciliation has been performed. |
| ***Resource Model number*** | TR_RSC_2017_01 |

# Appendix 1. 2016 Triumph Drilling Results

| HOLE ID | Jaguar Mine Grid | | | Azi (Degr) | Dip (Degr) | Total Depth | From (m) | To (m) | Width (m) | Zn (%) | Cu (%) | Pb (%) | Ag (g/t) | Au (g/t) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Easting | Northing | RL | | | | | | | | | | | |
| 16TMDD001 | 10124.3 | 62032.5 | 4480.8 | 90.0 | -60.0 | 757.00 | 683.10 | 696.48 | 11.53 | 7.9 | 0.1 | 0.3 | 76 | 0.2 |
| | | | | | | | | | Including | | | | | |
| | | | | | | | | | 5.86 | 14.3 | 0.2 | 0.4 | 129 | 0.4 |
| | | | | | | | | | | | | | | |
| 16TMDD002 | 10163.3 | 62188.6 | 4481.5 | 90.0 | -65.0 | 808.00 | 684.30 | 698.50 | 11.42 | 3.3 | 0.02 | 0.1 | 8 | 0.03 |
| | | | | | | | | | | | | | | |
| 16TMDD003 | 10329.1 | 62435.2 | 4483.2 | 65.0 | -61.0 | 413.70 | 327.57 | 360.50 | 23.27 | 7.5 | 0.5 | 1.0 | 161 | 0.3 |
| | | | | | | | | | Including | | | | | |
| | | | | | | | | | 15.56 | 10.5 | 0.5 | 1.3 | 214 | 0.3 |
| | | | | | | | | | | | | | | |
| 16TMDD004 | 10329.0 | 62435.2 | 4483.3 | 65.0 | -65.0 | 468.80 | 365.95 | 417.60 | 34.13 | 9.2 | 0.2 | 1.2 | 209 | 0.7 |
| | | | | | | | | | | | | | | |
| 16TMDD005 | 10330.7 | 62435.2 | 4483.3 | 65.0 | -58.0 | 363.60 | 297.47 | 321.00 | 17.12 | 4.5 | 1.1 | 0.4 | 85 | 0.4 |
| | | | | | | | | | Including | | | | | |
| | | | | | | | | | 9.08 | 5.6 | 1.5 | 0.4 | 85 | 0.6 |
| | | | | | | | | | | | | | | |
| 16TMDD006 | 10315.6 | 62366.7 | 4482.7 | 67.0 | -61.0 | 459.70 | 379.60 | 418.11 | 26.58 | 6.5 | 0.7 | 0.3 | 107 | 0.3 |
| | | | | | | | | | Including | | | | | |
| | | | | | | | | | 13.22 | 8.2 | 1.1 | 0.4 | 156 | 0.5 |
| | | | | | | | | | | | | | | |
| 16TMDD007 | 10315.9 | 62366.7 | 4482.7 | 67.0 | -58.0 | 405.50 | 334.50 | 371.00 | 27.33 | 5.4 | 0.2 | 0.3 | 59 | 0.2 |
| | | | | | | | | | Including | | | | | |
| | | | | | | | | | 14.05 | 7.3 | 0.1 | 0.6 | 86 | 0.3 |
| | | | | | | | | | | | | | | |
| 16TMDD009 | 10345.6 | 62520.1 | 4484.1 | 68.0 | -67.0 | 380.30 | 293.70 | 300.00 | 3.90 | 11.2 | 0.1 | 1.2 | 64 | 0.7 |
| | | | | | | | | | and | | | | | |
| | | | | | | | 313.70 | 318.34 | 2.95 | 10.0 | 0.01 | 0.9 | 90 | 0.2 |
| | | | | | | | | | and | | | | | |
| | | | | | | | 330.89 | 342.88 | 7.47 | 5.0 | 0.2 | 0.3 | 23 | 0.1 |
| | | | | | | | | | | | | | | |
| 16TMDD011 | 10347.4 | 62520.0 | 4484.2 | 68.0 | -61.0 | 366.60 | 267.30 | 326.50 | 39.40 | 9.5 | 0.6 | 0.4 | 140 | 0.4 |
| | | | | | | | | | Including | | | | | |
| | | | | | | | | | 22.99 | 13.9 | 0.9 | 0.5 | 191 | 0.4 |
| | | | | | | | | | | | | | | |
| 16TMDD013 | 10312.2 | 62366.5 | 4482.8 | 66.0 | -65.0 | 466.80 | 424.60 | 441.40 | 11.11 | 4.8 | 0.3 | 0.2 | 43 | 0.2 |
| | | | | | | | | | Including | | | | | |
| | | | | | | | | | 4.10 | 7.1 | 0.3 | 0.2 | 26 | 0.1 |
| | | | | | | | | | | | | | | |
| 16TMDD014 | 10346.0 | 62520.0 | 4484.2 | 68.0 | -58.0 | 345.60 | 270.00 | 277.20 | 5.15 | 18.2 | 0.1 | 0.8 | 158 | 0.4 |
| | | | | | | | | | and | | | | | |
| | | | | | | | 432.00 | 438.30 | 6.09 | 1.8 | 1.0 | 0.04 | 87 | 0.2 |
| | | | | | | | | | | | | | | |
| 16TMDD015 | 10319.1 | 62366.4 | 4482.8 | 66.0 | -54.0 | 369.50 | 316.50 | 346.50 | 24.43 | 1.6 | 0.7 | 0.03 | 17 | 0.1 |
| | | | | | | | | | Including | | | | | |
| | | | | | | | | | 2.68 | 6.4 | 0.5 | 0.1 | 28 | 0.2 |

Results are length density-weighted. Width (m) is a calculated true width

## Appendix 2. Triumph, Stag Lens Drilling Intercepts



## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1)

The table below follows the requirements of JORC Table 1 sections 1, 2 and 3 as required for the estimation and reporting of Mineral Resources.

Section 1 Sampling Techniques and Data Currawong and Wilga deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| **Sampling techniques** | - The Mineral Resources at Currawong and Wilga have been defined using conventional diamond core drilling (DD) both from surface and underground sites.<br>- Some RC holes have been drilled by past explorers, but the data from these holes has only be used for geological information, assay information has not been used in the Mineral Resource estimate.<br>- Refer to the subsections below for details relating to this drilling and sampling. |
| **Drilling techniques** | - The details for the drilling of two Stockman deposits (Currawong and Wilga) are:<br>○ Currawong: 218 holes for a total of 62,613m of drilling (including abandoned holes).<br>○ Wilga: 258 holes for 26,995m of drilling, including 23 holes for 2,528m drilled from underground sites.<br>- The drill hole database dates to 1976 with:<br>○ Western Mining Corporation (WMC) drilling 107 holes between 1976 and 1984 to collect 47.6mm diameter (NQ) cores, and 36.4mm diameter (BQ) cores from deeper tails.<br>○ Macquarie Resources Ltd drilled 78 holes between 1986 and 1990 collecting 63.5mm (HQ) cores with NQ tails.<br>○ Macquarie also drilled 40 holes from underground sites collecting 35.6mm diameter (LTK46) cores.<br>○ Denehurst Ltd drilled 100 holes with a range of core diameters including LTK45, 50.6mm diameter (NQ2), BQ, 36.6mm diameter (BX) and BQ.<br>○ Austminex NL drilled 26 holes at Currawong in 2000 and 2001, sometimes using RC pre-collars. The core collected was triple tube 61.1mm diameter (HQ3) or 45.0mm diameter (NQ3) tails.<br>○ Jabiru Metals Ltd (JML) commenced drilling in 2008 using 85mm diameter (PQ) core for top-ofholes, then HQ tails. Wedge holes were all drilled using a NQ2 core diameter.<br>○ Independence Group NL (IGO) completed a further drill program of 46 holes in 2011 and 2012 prior to updating the Mineral Resource, mainly NQ2 diameter for definition work and HQ for metallurgical sample collection and geotechnical logging and testing.<br>- IGO cores were oriented using electronic tools (Reflex Ace). |
| **Drill sample recovery** | - During drilling, rod counts used to verify the lengths drilled and downhole depths.<br>- Post drilling down hole interval accuracy was monitored through reconstruction of the core into a continuous length and verification against the core blocks. One metre intervals were marked on the core.<br>- Core recovery in all drill programs was quantified as percentage of the core length recovered compared to the drill hole advance length. There were no core recovery issues during the drilling apart form a small area within Wilga with poor recovery due to high (friable) chalcocite concentrates, and this small volume was classified as Inferred Mineral Resource due to the local poor recovery.<br>- Core recovery is reported to be high from all drilling, with minimal losses except in highly fractured ground that lay outside of the mineralisation.<br>- Some core was lost where holes intersected underground workings.<br>- There were no relationships between sample recovery and grades with no sample biases due to the preferential loss or gain core. |
| **Logging** | - RC cuttings and DD cores have been logged geologically and geotechnically, with reference to standard logging schemes, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies.<br>- Qualitative logging for both RC and DD includes codes for lithology, oxidation (if any), veining and mineralisation.<br>- Recent DD cores have been photographed both wet and dry, after logging had taken place, and qualitatively and structurally logged with reference to orientation measurements where available.<br>- The total lengths of all drill holes in all deposits have been logged, with greater detail captured through zones of mineralization and the footwall and hangingwall rocks found within 30m of main lodes. |
| ***Sub-sampling techniques and sample preparation*** | - Only geological information was included from RC drilling, with no RC sample grade information and sample preparation used for Mineral Resource estimation purposes. As such, the description of RC subsampling and preparation of RC samples is immaterial.<br><br><u>DD primary sampling:</u><br>- A geologist marked out DD core for sampling intervals based on geological units, with intervals ranging from 0.1m to 1.5m, with a target interval of 1m.<br>- The sample intervals were then cut in half (or sometimes quartered) longitudinally with a wet diamond blade, with the laboratory dispatch half (or quarter) collected from the same side of the core.<br>- For the few intervals of extremely broken core, the core was sampled by hand-picking representative fragments from the broken core interval to prepare a sub sample having approximately half the sample interval mass.<br>- Samples were collected in pre-numbered calico bags for laboratory dispatch.<br>- Laboratory DD cut-core preparation:<br>- Details of pre-IGO/JML sample preparation are not known but are expected to be consistent with industry practices in place at the time of the various drill programs.<br>- For JML/IGO cores:<br>○ Core samples were oven dried then crushed in a jaw-crusher with recent core crushed to a particle size distribution (PSD) <10mm.<br>○ The jaw-crush lot was then pulverised to a PSD of 85% passing 75 microns.<br>- Apart from 62 duplicates collected by Macquarie Resources, no field duplicates were collected in any of the pre-JML/IGO programs<br>- JML/IGO Quality controls to ensure sample representativity included: |

Section 1 Sampling Techniques and Data Currawong and Wilga deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| | ○ Blanks and standards were inserted in the sample stream with routine samples.<br>○ Replicate samples were collected as ¼ core as field duplicates and pulps replicates were also collected.<br>○ Sieve testing to ensure PSD compliance of the pulps. Monitoring of quality results confirmed the sample preparation was acceptable.<br>- No specific heterogeneity tests have been carried out, but the Competent Person considers that the sub sample protocols applied, and masses collected are consistent with industry standards for the style of mineralisation under consideration. |
| **Quality of assay data and laboratory tests** | - No geophysical tools were used to determine any element concentrations estimated in the Mineral Resource.<br>- Pre-JML/IGO pulp sub-samples were all assayed by a three or four-acid digestion, with the redissolved digestion salts analysed by AAS or ICP methods for key elements. The four-acid digestion is likely a total digestion, but the three-acid method may be incomplete for some elements.<br>- JML/IGO pulp sub-samples (0.3g) were assayed by a four-acid digestion and analysis of the redissolved digestion salts by ICP-OES method for Cu-Pb-Zn-Fe-Ag-As. Gold was assayed by 50g fire assay.<br>- JML/IGO quality results found minimal cross-contamination between samples (from blanks), acceptable accuracy (from standards and umpire assays), and acceptable precision (from replicate samples).<br>- The Competent Person considers that acceptable levels of precision and accuracy had been established and cross-contamination has been minimised for the JORC Code classifications applied.<br>- The quality of the pre-JML/IGO data has lower confidence due to the paucity of assay quality controls, with only 17 field standards, 62 replicate sample and 84 umpire laboratory checks available.<br>- There is a paucity of gold data in the Wilga deposit, and this has been a consideration for JORC Code classification of gold grade in this deposit as inferred. |
| **Verification of sampling and assaying** | - Massive-sulphide drill intersections are visually conspicuous in the core and as such, assay results and assaying have been readily cross-verified by geologists through re-inspection of the core or core photographs.<br>- JML/IGO drilled 10 twin holes, 4 at Wilga and 6 at Currawong to verify older drilling. The assays from the twin hole confirmed the grades in the twin pairs with no apparent bias, albeit a high (expected) nugget effect variability was identified on a sample by sample comparison.<br>- Recent drill hole sample number and logging information has been captured at source using laptop computers with standardised database templates to ensure consistent data entry. Older drilling was captured onto paper logs, which were subsequently entered into spreadsheets and loaded into IGO's centralised database.<br>- Data (logs, sample dispatched, core photographs) was downloaded daily to the IGO's main acQuire database system, which is an industry recognised tool for management and storage of geoscientific data.<br>- The system is backed up offsite daily.<br>- Assay data was merged electronically from the laboratories into a central database, with information verified spatially in Surpac software.<br>- IGO maintained standard work procedures for all data management steps.<br>- An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the main database.<br>- There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for Mineral Resource estimation work. |
| **Location of data points** | - Drill hole collars:<br>○ Older drill holes have been located by surveyors using the most precise survey equipment available at the time of survey.<br>○ The collar locations of recent underground holes have been located by a surveyor using total station survey equipment.<br>○ Recent holes drilled from surface have had the collars located using RTK GPS equipment.<br>- Drill hole paths:<br>○ Older drill hole paths were surveyed using down hole cameras (single and multi-shot) with readings taken at ~30m down hole intervals.<br>○ Recent hole paths have been surveyed using down hole cameras during drilling then at the end of hole, a multi-shot camera was used to record the hole path plunge and bearing every 6m.<br>- The grid system for drilling and the Mineral Resource estimate is the Stockman Regional Grid (SRM) which was prepared as a two-point transformation from GDA94 Zone 56, AHD using the following control points:<br>○ Point 1: 581,179.03 MGA east = 43,855.34 SRG east, 5,906,758.20 MGA north = 801,015.57 SRG north,1,005.56 AHD = 6,005.56 SRG RL<br>○ Point 2: 578,741.74 MGA east = 40,610.25 SRG east,5,904,489.20 MGA north = 800,269.47 SRG north,687.90 AHD = 5,687.90 SRG RL.<br><br>- This transformation results in a 30-degree counter-clockwise rotation from GDA north.<br>- The Stockman topography DTM was prepared by a contractor as part of a 2008 aeromagnetic survey.<br>- A 3D model of the underground mine workings was prepared from 1996 mine plans. |
| **Data spacing and distribution** | - The sample spacing over the Wilga and Currawong deposits is nominally a 25mE×25mY spacing, with a minimum hole spacing of ~10m and maximum of ~70m.<br>- In the stringer domain lenses, the spacing ranges from a 25mE×25mY spacing to a 50mE×50mY spacing.<br>- Down-hole sample intervals range from 0.1m to 1.5m with 1m compositing applied for Mineral Resource estimation work.<br>- The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures used, and the JORC Code classification applied. |

Section 1 Sampling Techniques and Data Currawong and Wilga deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| **Orientation of data in relation to geological structure** | - Nearly all surface drill holes used for Mineral Resource estimation are oriented to intersect the mineralisation at a high angle and as such, a grade bias introduced by the orientation of data in relation to geological structure is unlikely.<br>- Underground fan drilling at Wilga has some holes drilled parallel to mineralisation and as such, there is a risk of sampling bias due to orientation in these holes, but much of this local area is already mined out.<br>- A few of the 2012 holes drilled at Wilga tested mineralisation at shallow angles as a function of drill access issues. However, the volume of Mineral Resource influenced by these holds is not considered material.<br>- Two down-plunge (or dip) holes drilled at Currawong for metallurgical work were not used for grade estimation purposes. |
| **Sample security** | - The sample security relating to pre- JML/IGO drilling is not known but expected to be consistent with industry practices in place at the times of the respective drill programs.<br>- For JML/IGO drilling the core handling was managed by JML/IGO with samples stored a lock core yard, with cut-core transported by road freight contractors to the assay laboratory.<br>- On laboratory receipt, the samples were reconciled to JML/IGO dispatches and any issued resolved before assaying proceeded. |
| **Audits or reviews** | - IGO reviewed the sampling and drilling on site in 2013 and found the processes and procedures in place were acceptable for Mineral Resource estimation work.<br>- IGO audited the main assay laboratory (Genalysis Adelaide) in 2010 and 2012.<br>- A review of the historical procedures and data has been conducted by the Competent person with no major errors detected that would impact the MRE. |

Section 2: Reporting of Exploration Results Currawong and Wilga deposits (Stockman Project)

| Criteria | Explanation |
|---|---|
| Mineral tenement and land tenure status | - The Currawong and Wilga deposits are wholly within Victorian mining tenement MIN5523, which is held by WHSP Stockman Pty Ltd, a 100% owned subsidiary of ROM.<br>- MIN5523 expires 9 Nov 2022.<br>- There are no native title claims registered over the lease, but an agreement is in place with a prior claimant that makes provision for both the prior claimant and/or other indigenous groups to assert an interest in the future. However, no significant heritage sites have been identified.<br>- The lease is located on rugged and heavily forested crown land administered by the Department of Environment, Land, Water and Planning.<br>- The security of tenure at the time of reporting is secure with no known impediments to obtaining a licence to operate on the mining tenement. |
| Exploration done by other parties | - The Stockman area was identified as being prospective for base metals, by stream sediment sampling and mapping in the early 1970s by WMC.<br>- The Wilga deposit was discovered in drilling by a WMC/BP Minerals JV in 1977, and the Currawong deposit was discovered by drilling 1979.<br>- The project was then explored and drilled by several companies – refer to the section on drilling techniques in Section 1.<br>- Denehurst commenced mining of the Wilga high grade copper zones in 1992, the switched to the highgrade zinc zone, before closing the mine in 1996. Mine closure was attributed to unfavourable exchanges rates, poor metallurgical recovery, and high smelter charges. Denehurst went into receivership in 1998.<br>- Mine-claimed ore mined from Wilga is 0.96Mt grading 6.04% Cu and 8.68% Zn.<br>- Further exploration drilling was competed by other companies following closure including Austminex, JML and finally IGO. |
| Geology | - The Stockman Wilga and Currawong polymetallic VHMS deposits (Zn-Cu-Pb-Ag-Au) occur in the Upper Silurian age Cowambat Rift in the Palaeozoic Lachlan Fold Belt of south-eastern Australia. The Cowambat Rift has undergone strong regional deformation and the Stockman deposits are both located in a remnant fault bound tectonostratigraphic block known as the Limestone Creek Graben. Both deposits (which are 3.5 km apart) are hosted by the Enano Group which locally overlies Ordovician to Silurian turbidite metasediments, with lesser basaltic and andesitic volcanic components. The Enano Group is overlain by early Devonian age welded ignimbrites of the Snowy River Volcanics and limestones of the Buchans Group.<br>- The Wilga deposit is a stratiform massive sulphide lens in the immediate footwall to a coherent dacite. The footwall of the lens is sheared then below the shear zone is the Thorkidann Volcanics, which are barren of mineralisation. Wilda's mineralisation boundaries are sharp, and the principal sulphides are chalcopyrite, sphalerite and galena within a massive sulphide style, and stringer sulphides which is characterised by chlorite and chalcopyrite.<br>- The Currawong deposit comprises five stacked stratiform massive sulphide lenses and other minor discontinuous massive sulphide/stringer zones, found at the of the Gibson's Folly Formation. The sulphide mineralogy is analogous to the Wilga mineralogy. |
| Drill hole Information | - A tabular summary of the many holes used to prepare the Mineral Resource estimates for Stockman is not practical for this public report.<br>- The Mineral Resource estimates for each deposit give the best-balanced view of all the drill hole information. |
| Data aggregation methods | - No drill hole related exploration results are included in this report.<br>- No metal equivalent values are considered in the Mineral Resource estimate other than NSR values which are based partially on commercially confident information in concentrate sales contracts. |

## Section 2: Reporting of Exploration Results Currawong and Wilga deposits (Stockman Project)

| Criteria | Explanation |
| --- | --- |
| Relationship between mineralisation widths and intercept lengths | - No drill hole related exploration results are included in this report.<br>- Generally Mineral Resource definition drilling intersects the mineralisation at a high angle and as such approximate or allow estimation of true thicknesses. |
| Diagrams | - Examples sections and/or long sections and/or perspective view diagrams are included in the main body of the MRE report. |
| Balanced reporting | - The Mineral Resources are based on all available data and as such provides the best-balanced view of the deposits. |
| Other substantive exploration data | - Information relating to other exploration data, such as density and metallurgical assumptions are detailed in Section 3 and Section 4 further below. |
| Further work | - Diamond drilling is currently in progress to collect further samples for metallurgical test work and infill initial mining areas to further improve confidence in the resource estimation. |

## Section 3: Estimation and Reporting of Mineral Resources Currawong and Wilga deposits (Stockman Project)

| Criteria | Commentary |
| --- | --- |
| **Database integrity** | - IGO captured all data relating to Stockman drilling into a centralised acQuire database system, which is an industry recognised data management tool for geoscientific drilling data.<br>- JML geologists migrated all the pre-JML data into acQuire and validated the imported information where possible against original hard-copy records.<br>- JML/IGO drilling data was captured directly into acQuire using data entry objects, which have lookup table and validation rule functionality.<br>- Excel spreadsheets were used to capture down hole survey information, collar location and density measurements.<br>- The data entry digital files were e-mailed to the JML's/IGO's database administrator for loading into the central database, and assay files from the laboratory were merged directly with the logging/sample number information in the same system.<br>- The historical data for the estimate has also been validated by ROM geologists and updated within a central database at that time.<br>- The Competent Person considers that there was minimal risk of transcription of keying errors between initial collection and the final data used for Mineral Resource estimation work, and the database is of suitable quality for Mineral Resource estimation purposes. |
| **Site visits** | - The Competent Person is the Chief Geologist for ROM and understands the respective deposit geologies and the data used for Mineral Resource estimation work and has visited the site several times. |
| **Geological interpretation** | - The data used for Stockman geological interpretation is from DD drilling and includes logging and assay results, which are augmented by underground exposure mapping to confirm the interpreted geological units and zones of mineralisation.<br>- The Currawong massive sulphide domain was interpreted in three dimensions (wireframed) using the geological logging of massive or semi-massive sulphides as the limits. The Currawong stringer mineralisation was interpreted using nominal sample cut-offs of 0.5% Cu or 2% Zn. Within the massive sulphide volumes, high grade copper domains were interpreted using a 1.2% Cu sample cut-off. Additionally, 10 'subordinate' lenses were interpreted for logged massive sulphides outside the main high-grade lenses. All mineralisation is in fresh rock, so no oxidation surfaces were considered.<br>- At Wilga wireframes were interpreted in a comparable manner to Currawong with internal high-grade zones interpreted using sample cut-offs of nominal 1.2% Cu and a nominal 3.0% Zn. A high chalcocite domain was also interpreted as a zone of poor core recovery and lower JORC Code confidence.<br>- The wireframes described above were used to constrain the grade estimates.<br>- The Competent Person considers confidence in the geological interpretation for Wilga is moderate to high in areas of closer spaced drilling and where underground mapping has confirmed the interpretations derived from drill hole data.<br>- The confidence in the interpretation for Currawong is lower than for Wilga due to the higher structural complexity and lack of mining exposures to confirm interpretations. However, the confidence is considered good in areas of closer spaced drilling.<br>- No alterative geological interpretations have been prepared or considered necessary. Where geological continuity is doubtful this is reflected by classifying that area as inferred or unclassified. |
| **Dimensions** | Currawong:<br>o The main lens has a ~300m long strike, is ~240m wide down dip and up to 35m thick.<br>o The Mineral Resource starts at ~100m below natural surface and extends to ~300m below surface.<br>Wilga: |

Section 3: Estimation and Reporting of Mineral Resources Currawong and Wilga deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| | ○ The main lens has a ~400m long strike, is ~220m wide down dip and up to 35m thick.<br>○ The Mineral Resource starts at ~50m below natural surface and extends to ~150m below surface. |
| **Estimation and modelling techniques** | - Digital three-dimensional solids were prepared in Surpac (v6.2) software to encompass the interpreted Mineral Resource estimation domains using the sample cut-off grades described above.<br>- Sample were composited to a uniform 1m length within each estimation domain and below detection limit values were converted to half detection.<br>- Residual composites having a length a less than 0.5m were excluded from the estimation dataset.<br>- To limit the estimation influence of extreme high values, top-cuts, or caps for each estimation variable (Cu%, Pb%, Zn%, Ag g/t, Au g/t, As ppm and density) were then applied to the composites of each estimation domain. Caps usually applied at the 98th to 99th percentile of each domain distribution.<br>- A block model was prepared in Surpac software for each deposit with parent blocks dimensions of cubes of side length 10m, and for boundary resolution, sub-blocks permitted down to cubes of side length 1.25m.<br>- The parent block dimensions are approximately half the data spacing in the XY plane.<br>- Grade were then interpolated into each estimation domain using the top-cut 1m composites and continuity models interpreted for each respective domain using the ordinary block kriging routines implemented in Surpac software.<br>- As part of the estimation process sample search ellipses were oriented to match the geometry of each estimation domain.<br>- The block model estimates were validated by on-screen inspection, comparison of input composite and output block grades for each domain on a declustered local (moving window swath plots), and global basis (declustered global means). All validation checks were found to be satisfactory.<br>- Grade were estimated independently so there are no assumptions regarding correlations, albeit the data does enforce correlation in the block estimates, when correlations exist in the data.<br>- There were no assumptions regarding by-products or co product other than independent estimation of payable metals used in the NSR inputs |
| **Moisture** | - The Mineral Resource tonnages are estimated on a dry basis. |
| **Cut-off parameters** | - $A100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Term and conditions (TCs). A$100 NSR represents material that is currently considered economic to mine and process.<br>- US Metal Prices used were $8,013.5/t copper, 2712.6/t zinc, $26.15/oz silver and $2003.1 gold with an FX rate of 0.76.<br>- Mill Recovery assumptions used were<br>○ In Copper Concentrate: 80.6% Copper. 43.4% Silver and 21.3% Gold.<br>○ In Zinc Concentrate: 75.1% Zinc and 13.3% Silver.<br>- TCs and payables are based on contract details |
| **Mining factors or assumptions** | - The assumed mining methods for exploitation are underground mechanised mining with long-hole stoping.<br>- No external dilution has been considered or modelled but internal dilution is included in the estimates.<br>- No assumptions have been applied regarding minimum mining widths for the Mineral Resource. |
| **Metallurgical factors or assumptions** | - Core composite samples collected from 2008 to 2011 drill programs have been tested metallurgically.<br>- The results of this testing indicated that all styles of mineralisation can be treated using conventional crush, grind and flotation techniques and there are no material issues related to deleterious elements in the process or concentrates produced No metallurgical factors or assumptions have been used in the generation of this resource. |
| **Environmental factors or assumptions** | - An Environmental Effects Statement (EES) has been prepared for the project, which is a comprehensive and integrated assessment of the potential environmental, social, and economic impacts of project implementation.<br>- Waste rock will be returned to underground and process tailings not used in underground backfill will be sent to a tailing storage facility. |
| **Bulk density** | - In situ bulk density measurements from core drilling have been made on geologically representative sections of core from recent drilling with density determined using the Archimedes Principle (water displacement) method to determine core volumes and weighing of the oven-dried core interval to determine the core masses.<br>- The rocks measured are generally fresh with no pore spaces that could soak up water and potentially bias the density estimation method.<br>- Some density determinations have been via gas pycnometer methods, which do not account for void spacing if measured on a pulp. |

Section 3: Estimation and Reporting of Mineral Resources Currawong and Wilga deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| | - For historic data where no density measurement information is available, the in-situ density for samples was estimated using a multivariate polynomial regression function derived from the available density information. This repression equation is between density and copper + iron + zinc + lead + (the squares of each predictor).<br>- Block model density values were interpolated into the block model for each domain using ordinary block kriging of the data described above.<br>- A background density of 2.77t/m3 was assigned to any block not estimated by kriging. |
| **Classification** | - The JORC Code classification of the Wilga and Currawong deposits is based on data spacing and geological confidence in the interpreted mineralised lenses<br>- The massive sulphide zones were classified as Indicated Mineral Resources.<br>- For stringer domains, a data spacing of nominally 50m×50m in the plane of the lode was used to classify Indicated Mineral Resources, with wider data spacing within a lens being classified as Inferred Mineral Resources.<br>- Gold grades in the Wilga deposits have a sparse spatial coverage and as such, the gold estimate at Wilga is qualified to meeting only Inferred Mineral Resource class, where gold is reported.<br>- The Competent Person considers that the classifications applied have considered all relevant factors such as the relative confidence in tonnage/grade estimates, the reliability of the input data, the confidence in the continuity of geology and grades, and the quantity and spatial distribution of the data.<br>- The classifications applied reflect the Competent Person's view of the deposits. |
| **Audits or reviews** | - IGO's senior technical staff reviewed the results of the estimate.<br>- An independent technical review of the data, and a prior estimate, was completed in 2011 by Cube consultants. |
| **Relative Accuracy/Confidence** | - No geostatistical methods such as conditional simulation have been prepared to quantify the accuracy or precision of the estimates.<br>- The Competent Person considers that the Measured and Indicated Mineral Resource estimates have local precision that is suitable for planning quarterly and annual targets respectively, and as such, suitable for Ore Reserve conversion.<br>- Inferred Mineral Resource estimates have global estimation precision but are not suitable for Ore Reserve conversion.<br>- A comparison of the mine void model tonnage and grade to mine production found that the Mineral Resource estimated tonnage agreed within ±4% of the mine-claim tonnage. However, the model reported lower average payable metal grades for the mine void, than reported for the mine-claim records. |

## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1)

The table below follows the requirements of JORC Table 1 sections 1, 2 and 3 as required for the estimation and reporting of Mineral Resources.

Section 1 Sampling Techniques and Data Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| **Sampling techniques** | - The Mineral Resources at Eureka and Bigfoot deposits have been defined using conventional diamond core drilling (DD) from surface.<br>- Some RC holes have been drilled by past explorers but the data from these holes has only be used for geological information, and assay information has not been used in the Mineral Resource estimate.<br>- Refer to the subsections below for details relating to this drilling and sampling. |
| **Drilling techniques** | - The details for the drilling of two Stockman deposits (Eureka and Bigfoot) are:<br>○ Eureka: 14 DD holes for a total of 5,790m of drilling.<br>○ Bigfoot: 21 DD holes for 7,202.3m of drilling,<br>- The drill hole database dates to 1976 with:<br>○ Western Mining Corporation (WMC) drilling ten holes between 1976 and 1984 to collect BQ cores.<br>○ Jabiru Metals Ltd (JML) and Independence Group (IGO) completed a further drill program of 19 holes in 2011 to 2012, NQ2 in diameter.<br>○ WHSP Stockman (Round Oak Mineral "ROM") completed six 63.5mm diameter HQ holes in 2018.<br>○ JML/IGO/TOM all used Deepcore drilling, with similar drilling and recovery techniques and procedures.<br>○ For WMC it is assumed that a Van Ruth/crayon was used to determine core orientations, whilst later core was oriented using Reflex electronic tools. |
| **Drill sample recovery** | - Descriptions for the WMC are not available, but for drilling afterwards the following procedures were maintained:<br>○ Drill core was taken from the drill tube and stored within plastic core trays, with core blocks at the start and end of each run. Areas where no core was recovered during a drill run were marked up as such.<br>○ During drilling, rod counting was used to verify the lengths drilled and downhole depths.<br>○ Post drilling, down hole interval accuracy was monitored through reconstruction of the core into a continuous length and verification against the core blocks. One metre intervals were marked on the core.<br>○ Core recovery in all drill programs was quantified as percentage of the core length recovered compared to the drill hole advance length.<br>○ Core recovery is reported to be high from all drilling, with minimal losses except in highly fractured ground that lies outside of the mineralisation.<br>○ There were no relationships between sample recovery and grades, with no sample biases due to the preferential loss or gain of core. |
| **Logging** | - RC cuttings and DD cores have been logged geologically and geotechnically, with reference to standard logging schemes, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies.<br>- Qualitative logging for both RC and DD includes codes for lithology, oxidation (if any), veining and mineralisation.<br>- Recent DD cores have been photographed both wet and dry after logging had taken place, and qualitatively and structurally logged with reference to orientation measurements where available.<br>- The total lengths of all drill holes in all deposits have been logged, with greater detail captured through zones of mineralization and the footwall and hangingwall rocks found within 30m of main lodes. |
| ***Sub-sampling techniques and sample preparation*** | - Only geological information was included from RC drilling, with no RC sample grade information and sample preparation used for Mineral Resource estimation purposes. As such, the description of RC subsampling and preparation of RC samples is immaterial.<br>- Details of pre-IGO/JML sample preparation is not known but is expected to be consistent with industry practices in place at the time of the various drill programs.<br><br><u>DD primary for IGO/ROM sampling:</u><br>- A geologist marked out DD core for sampling intervals based on geological units, with intervals ranging from 0.1m to 1.5m, with a target interval of 1m.<br>- The sample intervals were then cut in half (or sometimes quartered) longitudinally with a wet diamond blade, with the laboratory dispatch half (or quarter for HQ) collected from the same side of the core.<br>- For the few intervals of extremely broken core, the core was sampled by hand-picking representative fragments from the broken core interval to prepare a sub sample having approximately half the sample interval mass.<br>- Samples were collected in pre-numbered calico bags for laboratory dispatch.<br>- Bulk densities were measured.<br><br><u>Laboratory DD cut-core preparation:</u><br><br>- Blanks and standards were inserted in the sample stream with routine samples.<br>- Replicate samples were collected as ¼ core as field duplicates.<br><br>- JML/IGO samples were sent to Genalysis Laboratories in Adelaide where:<br>○ Core samples were oven dried, then crushed in a jaw-crusher to a particle size distribution (PSD) <10mm.<br>○ The jaw-crush lot was then pulverised to a PSD of 90% passing 75 microns.<br>○ Sieve testing to ensure PSD compliance of the pulps.<br><br>- ROM core samples were sent to SGS Laboratories in West Wyalong for preparation where:<br>○ Core samples were oven dried to 105Ct.<br>○ Crushed in a combination of Jacques GC 200 and Labtech jaw-crushers to a particle size distribution (PSD) <6mm. If |

Section 1 Sampling Techniques and Data Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| | the sample was >3kg it was split to <3kg via a rotating cone splitter<br>○ The jaw-crush lot was then pulverised in a LM5 pulveriser to a PSD of 85% passing 75 microns.<br>○ A pulp is then taken out for analysis. With every 20th sample, three splits were taken, with one subjected to sieve testing to ensure PSD compliance and another kept for duplicate pulp analysis.<br>○ Analysed for gold by fire assay.<br>○ Sent to SGS Townsville for multi-element analysis.<br><br>- Monitoring of quality results and QAQC reports confirmed the sample preparation was acceptable.<br><br>- No specific heterogeneity tests have been carried out, but the Competent Person considers that the sub sample protocols applied, and masses collected are consistent with industry standards for the style of mineralisation under consideration. |
| **Quality of assay data and laboratory tests** | - No geophysical tools were used to determine any element concentrations estimated in the Mineral Resource.<br><br>- Pre-JML/IGO pulp sub-samples were all assayed by a three or four-acid digestion, with the redissolved digestion salts analysed by AAS or ICP methods for key elements. The four-acid digestion is likely a total digestion, but the three-acid method may be incomplete for some elements.<br>- JML/IGO pulp sub-samples (0.3g) were subjected to a four-acid digestion and analysis of the redissolved digestion salts by ICP-OES method for Cu-Pb-Zn-Fe-Ag-As. Gold was subject to 50g fire assay and analysed using AAS.<br>- ROM pulps were first analysed for Au using a 50g fire assay and AAS finish. With a separate multi element suite analysed by Suite B method ICP41Q (Trace level of 36 elements by 4-acid digest with an Inductively Coupled Plasma and Atomic Emission Spectroscopy (ICP AES) finish).<br><br>- Standards and blanks of various Certified Reference Material (CRM) were routinely inserted into the sample stream by all companies and by the laboratories themselves, at a nominal 1/20 with at least two different standards and blanks per submission (generally per hole).<br><br>- JML/IGO/ROM monitoring of quality results of individual jobs and CRM found minimal cross-contamination between samples (from blanks), acceptable accuracy (from standards and umpire assays), and acceptable precision (from replicate samples).<br><br>- Sufficient QAQC data exists to allow thorough review of the analytical performance of assay laboratories. The sampling methods, chain of custody procedures, sample preparation procedures and analytical techniques are all considered appropriate and are compatible with accepted industry standards. The sampling and dispatch of samples were completed and managed by IGO and WHSP Stockman staff. Sample preparation and assaying was completed independently of IGO and WHSP Stockman by accredited laboratories, Genalysis and SGS.<br><br>- The Competent Person considers that acceptable levels of precision and accuracy have been established and cross-contamination has been minimised for the JORC Code classifications applied. |
| **Verification of sampling and assaying** | - Massive-sulphide drill intersections are visually conspicuous in the core and as such, assay results and assaying have been readily cross-verified by geologists through re-inspection of the core or core photographs.<br>- Recent drill hole sample number and logging information has been captured at source using laptop computers with standardised database templates to ensure consistent data entry. Older drilling was captured onto paper logs, which were subsequently entered into spreadsheets and loaded into IGO's centralised database.<br>- Data (logs, sample dispatched, core photographs) was downloaded daily to the main AcQuire database systems, which is an industry recognised tool for management and storage of geoscientific data. Used by IGO/JML/ROM.<br>- The systems were backed up offsite daily.<br>- Assay data was merged electronically from the laboratories into a central database, with information verified spatially in Surpac software.<br>- Standard written work procedures for all data management steps were maintained and monitored.<br>- Assay importing protocols ensure quality control samples are checked and accepted before data can be loaded into the main database.<br>- ROM undertook inter-lab quality controls to ensure sample representativity, including sending 77 out of 711 from the 2018 drilling to an umpire lab (Intertek) where the pulp duplicates for all economic elements performed within the 90% +/- 10% confidence, apart from gold which due to the relatively low absolute values performed at 85.14%. CRMs submitted with the pulps all passed with +/- 2 standard deviations.<br>- There have been no adjustments or scaling of assay data other than setting below detection limit values to half detection for Mineral Resource estimation work. |
| **Location of data points** | - Drill hole collars:<br>○ Older drill holes have been located by surveyors using the most precise survey equipment available at the time of survey.<br>○ Recent holes drilled from surface have had the collars located using RTK GPS equipment.<br>- Drill hole paths:<br>○ Older drill hole paths were surveyed using down hole cameras (single and multi-shot) with readings taken at ~30m down hole intervals.<br>○ During 2013 downhole surveys were taken every 30m using the Reflex EZ-Trac digital downhole camera to monitor the hole whilst drilling. At the completion of the hole multi-shot surveys were undertaken every 6m.<br>○ 2018's program employed a Reflex Gyro™ down hole survey tool and a Reflex multi shot core orientation tool at 9m intervals. |

Section 1 Sampling Techniques and Data Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| | ○ The grid system for drilling and the Mineral Resource estimate is the Stockman Regional Grid (SRM) which was prepared as a two-point transformation from GDA94 Zone 56, AHD using the following control points:<br>• Point 1: 581,179.03 MGA east = 43,855.34 SRG east, 5,906,758.20 MGA north = 801,015.57 SRG north,1,005.56 AHD = 6,005.56 SRG RL<br>• Point 2: 578,741.74 MGA east = 40,610.25 SRG east,5,904,489.20 MGA north = 800,269.47 SRG north,687.90 AHD = 5,687.90 SRG RL.<br>- This transformation results in a 30-degree counter-clockwise rotation from GDA north.<br>- The Stockman topography DTM was prepared by a contractor as part of a 2008 aeromagnetic survey. |
| **Data spacing and distribution** | - The drill spacing for both deposits is a nominal 30mE × 50mY spacing.<br>- Down-hole sample intervals range from 0.1m to 1.5m with 1m compositing applied for Mineral Resource estimation work.<br>- The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedures used, and the JORC Code classification applied. |
| **Orientation of data in relation to geological structure** | - Nearly all surface drill holes used for Mineral Resource estimation are oriented to intersect the mineralisation at a high angle and as such, a grade bias introduced by the orientation of data in relation to geological structure is unlikely. |
| **Sample security** | - The sample security relating to pre- JML/IGO drilling is not known but expected to be consistent with industry practices in place at the times of the respective drill programs.<br>- For JML/IGO/ROM drilling the core handling was managed by JML/IGO/ROM with samples stored a lock core yard, with cut-core transported by road freight contractors to the assay laboratory.<br>- On laboratory receipt, the samples were reconciled to JML/IGO/ROM dispatches and any issued resolved before assaying proceeded. |
| **Audits or reviews** | - IGO reviewed the sampling and drilling on site in 2013 and found the processes and procedures in place were acceptable for Mineral Resource estimation work.<br>- IGO also audited the main assay laboratory (Genalysis Adelaide) in 2010 and 2012.<br>- A review of the historical procedures and data has been conducted by the Competent Person with no major errors detected that would impact the MRE. |

Section 2: Reporting of Exploration Results Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Explanation |
|---|---|
| Mineral tenement and land tenure status | - The Eureka and Bigfoot deposits are wholly within Victorian mining tenement MIN5523, which is held by WHSP Stockman Pty Ltd, a 100% owned subsidiary of ROM.<br>- MIN5523 expires 9 Nov 2022.<br>- There are no native title claims registered over the lease, but an agreement is in place with a prior claimant that makes provision for both the prior claimant and/or other indigenous groups to assert an interest in the future. However, no significant heritage sites have been identified.<br>- The lease is located on rugged and heavily forested crown land administered by the Department of Environment, Land, Water and Planning.<br>- The security of tenure at the time of reporting is secure, with no known impediments to obtaining a licence to operate on the mining tenement. |
| Exploration done by other parties | - The Stockman area was identified as being prospective for base metals, by stream sediment sampling and mapping in the early 1970s by Western Mining Corporation (WMC).<br>- The Wilga deposit was discovered in drilling by a WMC/BP Minerals JV in 1977, and the Currawong deposit was discovered by drilling in 1979. Massive sulphides were first intersected at Bigfoot during this period.<br>- The project was then explored and drilled by several companies – refer to the section on drilling techniques in Section 1.<br>- Denehurst commenced mining of the Wilga high grade copper zones in 1992.<br>- Further exploration drilling was competed by other companies following closure including Austminex, Jabiru Metals (JML) and finally Independence Group (IGO).<br>- At Bigfoot, drilling by IGO during 2011/2012 defined a high-grade interval, with Eureka being discovered in 2013. |

Section 2: Reporting of Exploration Results Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Explanation |
|---|---|
| Geology | - The Stockman Eureka and Bigfoot polymetallic VHMS deposits (Zn-Cu-Pb-Ag-Au) occur in the Upper Silurian age Cowambat Rift, in the Palaeozoic Lachlan Fold Belt of south-eastern Australia. The Cowambat Rift has undergone strong regional deformation and the Stockman deposits are located in a remnant fault bound tectonostratigraphic block known as the Limestone Creek Graben. Both deposits are hosted within the Gibson's Folly Formation of the Enano Group, which locally overlies Ordovician to Silurian turbidite metasediments, with lesser basaltic and andesitic volcanic components. The Enano Group is overlain by early Devonian age welded ignimbrites of the Snowy River Volcanics and limestones of the Buchans Group.<br><br>- The Bigfoot deposit comprises a singular lens of high-grade gold and elevated silver, with stringer sulphides.<br>- The Eureka deposit sits footwall to the Bigfoot deposit and consists of a two massive sulphide lenses disrupted by an off-setting fault and associated footwall stringer mineralisation. It sits ~ 250m along strike from the 'M' Lens at Currawong. |
| Drill hole Information | - Eureka<br>○ IGO 47.6mm NQ core, 9 holes for 3,528m<br>○ WHSP Stockman (ROM) 63.5mm HQ core, 5 holes for 2,252m<br><br>- Bigfoot:<br>○ WMC 47.6mm NQ core, 10 holes for 3,618m<br>○ Jabiru/IGO 47.6mm NQ core, 10 holes for 3,281.4m<br>○ WHSP Stockman (ROM) 63.5mm HQ core, 1 hole for 302.9m |
| Data aggregation methods | - No drill hole related exploration results are included in this report.<br>- No metal equivalent values are considered in the Mineral Resource estimate other than NSR values which are based partially on commercially confidential information in concentrate sales contracts. |
| Relationship between mineralisation widths and intercept lengths | - No drill hole related exploration results are included in this report.<br>- Generally Mineral Resource definition drilling intersects the mineralisation at a high angle and as such approximate or allow estimation of true thicknesses. |
| Diagrams | - Examples sections and/or long sections and/or perspective view diagrams are included in the main body of the MRE report. |
| Balanced reporting | - The Mineral Resources are based on all available data and as such provides the best-balanced view of the deposits. |
| Other substantive exploration data | - Information relating to other exploration data, such as density and metallurgical assumptions are detailed in Section 3 and Section 4 further below. |
| Further work | - Further work is dependent on economic studies. |

Section 3: Estimation and Reporting of Mineral Resources Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| **Database integrity** | - All data relating to Stockman drilling is within a centralised acQuire database system, which is an industry recognised data management tool for geoscientific drilling data.<br>- JML geologists migrated all the pre-JML data into acQuire and validated the imported information where possible against original hard-copy records.<br>- JML/IGO/ROM drilling data was captured directly into acQuire using data entry objects, which had lookup table and validation rule functionality.<br>- Excel spreadsheets were used to capture down hole survey information, collar location and density measurements.<br>- The data entry digital files were e-mailed to the Database Administrator for loading into the central database, and assay files from the laboratory were merged directly with the logging/sample number information in the same system after passing QAQC.<br>- The historical data for the estimate has also been validated by ROM geologists and updated within a central database at that time.<br>- The Competent Person considers that there was minimal risk of transcription of keying errors between initial collection and the final data used for Mineral Resource estimation work, and the database is of suitable quality for Mineral Resource estimation purposes. |
| **Site visits** | - The Competent Person is the Chief Geologist for ROM and understands the respective deposit geologies and the data used for Mineral Resource estimation work and has visited the site several times. |

Section 3:  Estimation and Reporting of Mineral Resources Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| **Geological interpretation** | - The data used for Stockman geological interpretation is from DD drilling and includes logging and assay results, which are augmented by underground mapping from Wilga to help confirm the interpreted geological units and deformation history. Further internal and external geological and petrological studies have been conducted. This work has been used to build 3D geological frameworks that have been used in interpreting the mineralisation wireframes.<br>- Two major new D2 shear zones have been identified to dissect and stack the Eureka stratigraphy. These shear zones are essentially eastward extensions of the Currawong shear. These have been named the 'Eureka' and 'Deepfoot' shears, dipping NW at ~-65° and ~-55° respectively. These two shear zones, combined with the Bigfoot shear zone, give a relatively well constrained, albeit a coarse, structural framework for the Eureka/Bigfoot area.<br>- Eureka is a simplified analogy to the nearby Currawong Deposit where post mineralisation duplex thrust stacking and folding is responsible for the repetition of the stratigraphic unit and associated mineralisation.<br>- The geological structure at Bigfoot is complex and wireframes have been interpreted based on detailed measurements and logging of drill core. Mineralised horizons are in sheared contacts at the hangingwall and footwall of sedimentary units within the Bigfoot horizon. A continuous basalt unit marks interpreted D3 shearing in the hangingwall of emplaced intermediate breccia. A thick dacite package separates Big Foot from the deeper Eureka stratigraphic horizon. The sedimentary package thickens to the southwest (towards Currawong).<br>- The Eureka massive sulphide domains were interpreted in three dimensions (wireframed) using the geological logging of massive or semi-massive sulphides as the limits. The stringer mineralisation at both deposits was interpreted by producing individual wireframe for Cu, Zn, Au, Ag, Pb and As, based on distribution and approximate economic cut-offs values and then building a 3D wireframe that contains all these wireframes.<br>- The Competent Person considers confidence in the geological interpretation for the two deposits to be of a high quality and reflects the current drill spacing where possible. Geometry changes might occur when infilled.<br>- No alterative geological interpretations have been prepared and the level of geological understanding is reflected by classifying the resources as inferred or unclassified. Any such changes would unlikely significantly affect the global tonnages and grades within the current MRE. |
| **Dimensions** | Eureka:<br>○ The main lens has a ~200m long strike, is ~120m wide down dip and up to 15m thick.<br>○ The Mineral Resource starts at ~330m below natural surface and extends to ~410m below surface.<br>Bigfoot<br>○ The main lens dips ~55° to the north and has a ~250m long strike over ~75m down dip and up to 10m thick within a larger envelope.<br>○ The Mineral Resource starts at ~135m below natural surface and extends to ~200m below surface. |
| **Estimation and modelling techniques** | - Digital three-dimensional solids were prepared in MineSight software to encompass the interpreted Mineral Resource estimation domains using the methods described above.<br>- Samples were composited to a uniform 1m length within each estimation domain and below detection limit values were converted to half detection.<br>- The database was coded with wireframe identifiers and composite files extracted for each.<br>- Analysis of the data using various graphs (normal and log) and assessing CV values (all less than 1.25) suggested top cutting of the assay data was not necessary.<br>- Directional controls for each element, and for each lens were investigated independently for both Bigfoot and Eureka using various combinations of composite data, from individual lenses to total data. No well-structured variograms were found, presumably due to the lack of data density currently informing the deposits. Best variograms were identified for Au using the combined BF/EU Resource datasets. The direction and anisotropies for Au are reasonably sensible geologically, suggesting a shallow plunge close to the strike direction. The Au variography was utilised for all elements, noting that global estimates are quoted at the Inferred level Resource (+\-25% grade).<br>- A block model was prepared in Surpac software for each deposit with parent blocks dimensions of 4m Y x 10m E x 4m Z, and for boundary resolution, sub-blocks permitted down to of 1m Y x 2.5m E x 1m Z.<br>- The parent block dimensions are approximately half the data spacing in the XY plane.<br>- Grade and density were then interpolated into each estimation domain using the 1m composites and continuity models interpreted for each respective domain using the ordinary block kriging routines implemented in Surpac software.<br>- For Resource interpolation, the first interpolation step utilised a search distance at the range (100m) less than the variogram (125m) for each element. The next pass involved reducing the number of minimum informing samples required from 8 to 3. The final pass used a large search distance (300m) and small minimum sample selection (1) to ensure all blocks were filled. As each search run for each element was completed, the associated 'fill-seq' attribute was filled with ascending integers corresponding to each run (1-3). This is a useful tool in assessing confidence in the interpolation process, that is, the higher the run number (search distance) the lower is the confidence in the interpolated value. Lenses with average kriged grade of adjacent lenses have a 'fill-seq' value of 0. Approximately 87% of model blocks (by weight) for Au, Ag, Cu and Zn Resource domains are filled after the first fill step. |

Section 3: Estimation and Reporting of Mineral Resources Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| | <table><tr><td>Au fill pass</td><td>Tonnes</td><td>% total</td></tr><tr><td>1</td><td>872781</td><td>87</td></tr><tr><td>2</td><td>108360</td><td>11</td></tr><tr><td>3</td><td>16963</td><td>2</td></tr><tr><td>Ag fill pass</td><td>Tonnes</td><td>% total</td></tr><tr><td>1</td><td>873836</td><td>88</td></tr><tr><td>2</td><td>90572</td><td>9</td></tr><tr><td>3</td><td>33695</td><td>3</td></tr><tr><td>Cu fill pass</td><td>Tonnes</td><td>% total</td></tr><tr><td>1</td><td>873960</td><td>88</td></tr><tr><td>2</td><td>79004</td><td>8</td></tr><tr><td>3</td><td>45140</td><td>5</td></tr><tr><td>Zn fill pass</td><td>Tonnes</td><td>% total</td></tr><tr><td>1</td><td>871038</td><td>87</td></tr><tr><td>2</td><td>105667</td><td>11</td></tr><tr><td>3</td><td>21398</td><td>2</td></tr></table><br>- To assess the representation of composite data within the block model, a series of cross sections and plans were generated with block and drillhole Au grade for visual comparison. Graphs (swath plots) by easting were generated comparing the OK model and informing assays (composites) for Ag, Au, As, Cu, Zn, Pb and BD.<br>- The plots showed model grades more than 10% (relative) higher than assay grade: Au for both BF and EU (14% and 12% respectively), and BF Zn (20% higher). Investigation of assay versus model grade distribution for these 3 cases indicates the influence of high grades at the periphery of domain extents, and/or the effect of directional controls on grade projection into areas of no informing assays. Although CVs for the relevant elements/domains are not high, and no top-cutting was deemed necessary, it is possible that these elements have been over-estimated in areas. Tolerance gates for Inferred level Resource confidence is around +/-25%.<br>- Grade were estimated independently so there are no assumptions regarding correlations, albeit the data does enforce correlation in the block estimates, when correlations exist in the data.<br>- There were no assumptions regarding by-products or co product other than independent estimation of payable metals used in the NSR inputs. |
| **Moisture** | - The Mineral Resource tonnages are estimated on a dry basis. |
| **Cut-off parameters** | - $A100/t NSR for all domains based on NSR calculations that include assumptions made on Consensus metal prices, exchange rates, mill recoveries and concentrate Term and conditions (TCs). A$100 NSR represents material that is currently considered economic to mine and process.<br>- US Metal Prices used were $8,013.5/t copper, 2712.6/t Zinc, $26.15/oz Silver, and $2003.1 gold with an FX rate of 0.76.<br>- Mill Recovery assumptions used were:<br>    o In Copper Concentrate: 80.6% Copper. 43.4% Silver and 21.3% Gold.<br>    o In Zinc Concentrate: 75.1% Zinc and 13.3% Silver.<br>- TCs and payables are based on contract details |
| **Mining factors or assumptions** | - The assumed mining methods for exploitation are underground mechanised mining such as long-hole stoping or AVOCA.<br>- No external dilution has been considered or modelled, but internal dilution is included in the estimates.<br>- No assumptions have been applied regarding minimum mining widths for the Mineral Resource. |
| **Metallurgical factors or assumptions** | - Core composite samples collected from 2018 drill programs have been tested metallurgically.<br>- The results of this testing indicated that all styles of mineralisation can be treated using conventional crush, grind and flotation techniques and there are no material issues related to deleterious elements in the process or concentrates produced.<br>- No metallurgical factors or assumptions have been used in the generation of this resource. |
| **Environmental factors or assumptions** | - An Environmental Effects Statement (EES) has been prepared for the project, which is a comprehensive and integrated assessment of the potential environmental, social, and economic impacts of project implementation.<br>- Waste rock will be returned to underground and process tailings not used in underground backfill will be sent to a tailing storage facility. |
| **Bulk density** | - In situ bulk density measurements from core drilling by IGO and ROM have been made on geologically representative sections of core from recent drilling. Density was determined using the Archimedes Principle (water displacement) method to determine core volumes and weighing of the oven-dried core interval to determine the core masses.<br>- The rocks measured are generally fresh with no pore spaces that could soak up water and potentially bias the density estimation method.<br>- Block model density values were interpolated into the block model for each domain using ordinary block kriging of the data described above.<br>- Modelled lithological density varies between 2.74 for non-mineralised dacite, to 3.86 for the Eureka massive sulphide zone. These lithological density matches appropriately detailed work on core samples |

Section 3: Estimation and Reporting of Mineral Resources Eureka and Bigfoot deposits (Stockman Project)

| Criteria | Commentary |
|---|---|
| | within the Stockman Project. Swath plots indicate appropriate correlation (1-2% difference) between modelled and measured density within the Resource.<br>- A background density of 2.77t/m3 was assigned to any block not estimated by kriging. |
| **Classification** | - The JORC Code classification of the Eureka and Bigfoot deposits is based on data spacing and geological confidence in the interpreted mineralised lenses.<br>- The low number of drillholes (20), and associated data density informing the calculated BF/EU Resources (1 Mt) dictates an Inferred level of confidence. Verified data quality (for most drillhole data), the presence of a significant amount of measured density data, confidence in the geological interpretation, and reasonable confidence in the calculated Resource meets JORC 2012 guidelines. The Inferred level of confidence assigned to the Resources should have nominal +/-25% confidence gates.<br>- The Competent Person considers that the classifications applied have considered all relevant factors such as the relative confidence in tonnage/grade estimates, the reliability of the input data, the confidence in the continuity of geology and grades, and the quantity and spatial distribution of the data.<br>- The classifications applied reflect the Competent Person's view of the deposits. |
| **Audits or reviews** | - No independent reviews have been conducted. |
| **Relative Accuracy/Confidence** | - No geostatistical methods such as conditional simulation have been prepared to quantify the accuracy or precision of the estimates.<br>- The Competent Person considers that the Inferred Mineral Resource estimates have global estimation precision but are not suitable for Ore Reserve conversion and can only been used in high level economic assessments that would guide any potential further drilling. |

## ASSESSMENT AND REPORTING CRITERIA (JORC TABLE 1)

The table below follows the requirements of JORC Table 1 sections 1 and 2 as required for the estimation and reporting of exploration targets.

Section 1 Sampling Techniques and Data for the Spectre mineralisation at the Bentley Deposit.

| Criteria | Commentary |
|---|---|
| **Sampling techniques** | - The sampling techniques used for drilling of the Spectre mineralisation at the Bentley Underground was diamond core (DD) drilling. Refer to the subsections below for details relating to this drilling and sampling. |
| **Drilling techniques** | - The drilling of the Spectre mineralisation at the Bentley deposit has been defined using DD drilling.<br>o Underground drilling was 50.6mm (NQ2) diameter or 63mm (HQ2) diameter. Core was oriented where possible using electronic (ACT) tools or using the spear method in older drill holes. |
| **Drill sample recovery** | - During drilling, rod counting used to verify the lengths drilled and downhole depths.<br>- Post drilling down hole interval accuracy was monitored through reconstruction of the core into a continuous length and verification against the core blocks. One metre intervals were marked on the core.<br>- Core recovery in all drill programs was quantified as percentage of the core length recovered compared to the drill hole advance length. There were no core recovery issues during the drilling.<br>- Core recovery is reported to be high from all drilling with minimal losses except in highly fractured ground.<br>- Average core recovery was >98%.<br>- There were no relationships between sample recovery and grades with no sample biases due to the preferential loss or gain core. |
| **Logging** | - DD cores have been logged geologically and geotechnically with reference to standard logging schemes, to levels of detail that support Mineral Resource estimation, Ore Reserve estimation and metallurgical studies.<br>- Qualitative logging for DD includes codes for lithology, oxidation (if any), veining and mineralisation.<br>- DD cores were photographed both wet and dry after logging had taken place, and qualitatively and structurally logged with reference to orientation measurements where available.<br>- The total lengths of all drill holes in all deposits have been logged, with greater detail captured through zones of mineralization and the footwall and hangingwall rocks found within 30m of main lodes. |
| ***Sub-sampling techniques and sample preparation*** | <u>DD primary sampling:</u><br>- A geologist marked out DD core for sampling intervals based on geological units, with intervals ranging no less than 0.3m and no greater than 1.3m, with a target sample interval of 1m.<br>- The sample intervals were then cut in half longitudinally with a wet diamond blade, with the laboratory dispatch half collected from the same side of the core.<br>- Certified reference materials (CRMs) and duplicates were placed in pre-numbered calico bags for laboratory dispatch.<br><br><u>Quality controls to ensure sample representability included:</u><br>- Coarse blanks and standard (CRMs) were inserted into routine sample stream to monitor cross contamination and accuracy at a nominal rate of 1:20.<br>- Variable standards were chosen in line with the predicted grades. Coarse blanks were inserted in and around the high-grade samples.<br>- CRMs for each individual hole must be at or above the nominal rates.<br>- Ensuring the laboratory used compressed air and barren rock washes to clean crushing and grinding equipment between each routine sample preparation.<br>- Crusher duplicate samples were collected at a nominal rate of 1:20 to monitor the repeat precision at various stages of comminution.<br>- Sieve tests were completed at the pulverization stage to confirm particle size distribution (PSD) compliance.<br>- Monitoring of quality results confirmed the sample preparation was acceptable in terms of accuracy, precision, and minimisation of sample cross contamination.<br>- Umpire laboratory checks were routinely undertaken at a rate of 10% of the primary samples.<br><br><u>Laboratory DD cut-core preparation</u>:<br>- Core samples were oven dried for 4-6 hours at 105°C then crushed in a jaw-crusher to a nominal 5-10mm particle size. The jaw-crush lot was then fine crushed to a PSD <2mm in a Boyd crusher-rotary splitter unit.<br>- The whole sample was then pulverized in Essa LM5 grinding mills to a PSD of 85% passing 75 microns with a final 200g sub-sample collected from the pulp into a paper packet for assay.<br>- The sample preparation laboratory was conducted by Intertek Genaylsis laboratory in Perth.<br>- No specific heterogeneity tests have been carried out, but the Competent Person considers that the sub-sample protocols applied, and masses collected, are consistent with industry standards for the styles of mineralization under consideration. |

Section 1 Sampling Techniques and Data for the Spectre mineralisation at the Bentley Deposit.

| Criteria | Commentary |
|---|---|
| **Quality of assay data and laboratory tests** | Laboratory Assay processes for Spectre was conducted by Intertek Genalysis in Perth or Adelaide as follows:<br>- Digest a 0.2g sample of the pulp in a four-acid (hydrofluoric, nitric, perchloric and hydrochloric – 4AH) mixture and heated to dryness. The four-acid digestion is considered a total extraction all variables of interest.<br>- The digestion salts were then re-dissolved, and the prepared solution was then analysed by ICP-OES or ICP-MS analysis of an elemental suite (Cu, Pb, Zn, Ag, Fe, As, Sb and S).<br>- Gold was assayed using 25g fire-assay digestion then AAS assay of the dissolved bead solution.<br>- Quality control samples were included by the laboratory in the form of standards, blanks, and replicates. |
| **Verification of sampling and assaying** | - Massive-sulphide drill intersections are visually conspicuous in the core and as such, assay results have been readily cross-verified by Round Oak Minerals (ROM) geologists through re-inspection of the core or core photographs.<br>- Drill hole sample numbers and logging information are captured at source using laptop computers with standardized database templates to ensure consistent data entry.<br>- Data records (logs, sample dispatched, core photographs) are downloaded daily to ROM's main AcQuire database system, which is an industry recognized tool for management and storage of geoscientific data.<br>- The databases are backed up off site daily.<br>- Upon receipt of the assay results both the company's and the laboratory's CRMs are verified and checked to see that are with acceptable standard deviations from the expected mean values.<br>- The results of both the company's and the laboratory's CRMs<br>- Assay data is merged electronically from the laboratories into a central database, with information verified spatially in Surpac software.<br>- ROM maintains standard work procedures for all data management steps.<br>- An assay importing protocol has been set up to ensure quality samples are checked and accepted before data can be loaded into the main database.<br>- The Competent Person considers that acceptable levels of precision and accuracy has been established and cross-contamination has been minimized for the results received. |
| **Location of data points** | - The collar locations of underground holes have been surveyed by ROM's Mine Survey teams using total station survey equipment to accuracy better than 2mm in three dimensions.<br>- Initial collar directions are aligned using industry standard azimuth aligner tools.<br>- Down hole paths have been surveyed using a north seeking Reflex Gryo SPRINT-IQ electronic tool that have high azimuth and dip precision with readings taken every ≈4m downhole.<br>- The grid system is a local grid tied to MGA Zone51, GDA94 datum with 311,465.6mE and 6,796,594.3mN subtracted from MGA coordinates and 4000m added to GDA elevation, followed by a +23.52 clockwise grid rotation.<br>- All other mine surveys have high precision and are prepared by ROM's mine surveyors using total station equipment. |
| **Data spacing and distribution** | - Drilling was conducted from underground cuddy locations Drilling is on a nominal 40m x 40m spacing.<br>- Down-hole sample intervals are targeted to be 1m down hole but vary in length as a function of geological contact spacings.<br>- The Competent Person considers that these data spacings are sufficient to establish the degree of geological and grade continuity appropriate for the estimation of an exploration target under the JORC Code. |
| **Orientation of data in relation to geological structure** | - Drilling from UG platforms does not allow most holes to be designed to intercept the mineralization at 90° though holes are generally not drilled at angles less than 30 degrees. However. the initial discovery drillholes before 2021 were drilled at acute (<30 degrees) angles from the footwall with a purpose-built hanging wall drill drive established based off those results.<br>- Both downhole widths and estimated true widths are obtained. |
| **Sample security** | - Sample dispatches have been prepared by ROM's field personnel and tracked for delivery to the laboratory and progress through the laboratory.<br>- Samples are sealed for transport and transport is direct.<br>- Sample dispatch sheets have been verified against samples received at the laboratory and any issues such as missing samples and so on are resolved before sample preparation commences.<br>- The Competent Person considers that the likelihood of deliberate or accidental loss, mix-up or contamination of samples is very low. |

## Section 2: Reporting of Exploration Results – Spectre Mineralization at the Bentley Deposit

| Criteria | Explanation |
|---|---|
| Mineral tenement and land tenure status | - The tenements hosting the Bentley deposit is 100% owned by Round Oak Jaguar Limited, which is a ROM 100%-owned subsidiary. The Bentley deposit is within M37/1290 WA Mining Lease, which has an expiry date of 2 Feb 2031.<br>- All tenements are in good standing with rents paid and expenditure commitments met.<br>- Any ore mined from the tenements listed is subject to WA State royalties as prescribed in the WA Mining Act.<br>- There are no other material issues relating to agreements, third parties, joint ventures, partnerships, other royalties, native title interests, historic sites, wilderness or national parks, or environmental settings. |
| Exploration done by other parties | - No previous exploration has been conducted by other companies on the Spectre mineralisation |
| Geology | - Jaguar Operation is centred on a cluster of Volcanic Hosted Massive Sulphides (VHMS) deposits that are located within the Gindalbie Terrane, which is part of the late Archaean Eastern Goldfields Superterrane of the Yilgarn Craton of Western Australia.<br>- The area is dominated rocks of volcanic, intrusive, volcano-sedimentary origin and lesser sedimentary rocks.<br>- The local sequences have undergone tilting to sub-vertical positions and regional metamorphism to a lower greenschist facies.<br>- The Main Turbo VHMS mineralisation occurs at the contact of a felsic sedimentary/volcaniclastic sequence adjacent to a basal rhyolitic sequence (like the Arnage and Bentayga lenses).<br>- The hangingwall lens occurs at the upper contact of the felsic package with an overlying andesite (in a stratigraphic position similar to the Zagato lens). The sequence is steeply dipping.<br>- The massive sulphide mineralisation is banded and consists of pyrite, sphalerite, chalcopyrite, galena and minor pyrrhotite. The upper contact of the massive sulphide is typically sharp. The footwall to the massive sulphide zone consists typically of stringer and disseminated sulphide mineralisation comprising pyrite, chalcopyrite, and minor sphalerite.<br>- Dolerite sills have intruded and inflated the sequence. |
| Drill hole Information | - The exploration target is defined by 10 diamond holes of which 4 have not had assay values returned. |
| Data aggregation methods | - Drill hole intercepts have been calculated based on a grade x length x density weighted averages based on lithology. |
| Relationship between mineralisation widths and intercept lengths | - As drill angles vary true width calculations vary between holes. True widths are estimated by using a Surpac macro that takes the downhole width, dip//strike and orientation of the drill angle into account.<br>- Wireframing of the two lenses was also completed.<br>- Both Down hole and estimated true width are quoted in the table. |
| Diagrams | - Examples sections and/or long sections and/or perspective view diagrams are included in the main body of this report. |
| Balanced reporting | - The exploration target is based on all available data and as such provides the best-balanced view of the Spectre mineralisation. |
| Other substantive exploration data | - Density applied to the 3D wireframes was based on a length weighted average of the density data collected on site from the samples before they were sent for assaying.<br>- Grades are based on both recently received assay results and visual estimates of the grades in the other holes. Site geologists have a very strong understanding of the mineralisation styles and have demonstrated over a long period of time the ability to visually estimate grades within a reasonable standard of error. |
| Further work | - Downhole geophysical surveys of selected holes will eb conducted.<br>- Follow up drilling is planned to both infill and extended the Turbo mineralisation |

# BENTLEY MINE MAY 2021
# ORE RESERVES STATEMENT

## SUMMARY

Round Oak Jaguar Pty Ltd (Round Oak) have updated the Ore Reserve Estimate (ORE) for its 100% owned Bentley Mine (Bentley) in Western Australia. The Bentley Mine is part of Round Oak Minerals Jaguar Operation. The updated Bentley ORE is based on the Bentley Life of Mine (LOM) plan completed on site during May 2021. The Bentley ORE has been completed in accordance with the JORC Code (2012 Edition) and is reported as at 1 May 2021.

The 2021 ORE has been derived from the Mineral Resource Estimate (MRE), using ore classified in the Measured and Indicated categories only. The 2021 ORE shows an increase in tonnage over the previous 2020 ORE of 96 kt (17%) and total value of A$28M (14%).

The Bentley April 2021 MRE and ORE are shown in Table 22 and Table 23 respectively.

**Table 22 Bentley Mineral Resource Estimate as at 1 May 2021**

| Category | Tonnes (kt) | NSR (A$/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|
| Measured | 580 | 313 | 1.04 | 7.34 | 0.99 | 119 |
| Indicated | 574 | 369 | 1.07 | 9.52 | 1.06 | 139 |
| Inferred | 924 | 295 | 0.82 | 7.57 | 0.94 | 110 |
| **Mineral Resource** | **2,078** | **320** | **0.95** | **8.04** | **0.99** | **121** |
| Contained Metal | | | 19.7 kt | 167.0 kt | 66.1 koz | 8.0 Moz |

*Note: The MRE utilises an A$100/t NSR cut-off. MRE NSR is based on higher metal prices than the ORE. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

**Table 23 Bentley Project Ore Reserve Estimate as at 1 May 2021**

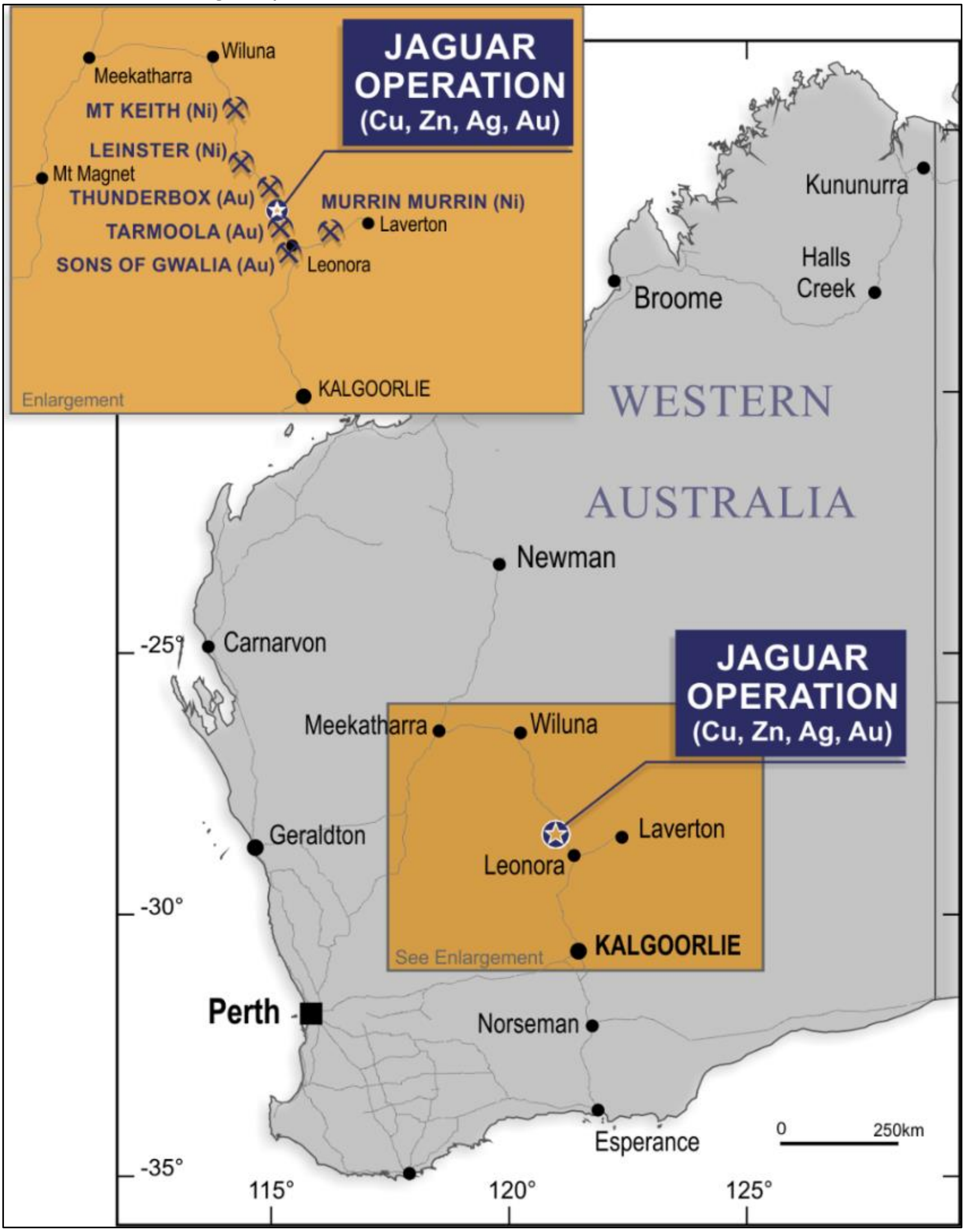
| Category | Mine Area | Tonnes (kt) | NSR (A$/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|---|
| Proved | Arnage | 147 | 289 | 1.5 | 7.0 | 1.1 | 77 |
| | Bentayga | 148 | 344 | 1.0 | 9.4 | 1.1 | 182 |
| | Pegasus | 0 | 0 | 0.0 | 0.0 | 0.0 | 0 |
| | Zagato | 5 | 279 | 0.1 | 8.0 | 1.7 | 172 |
| **Proved** | | **301** | **316** | **1.3** | **8.2** | **1.1** | **130** |
| Probable | Arnage | 15 | 186 | 0.5 | 6.7 | 0.6 | 47 |
| | Bentayga | 95 | 314 | 0.6 | 9.1 | 0.8 | 201 |
| | Pegasus | 206 | 385 | 1.9 | 11.6 | 0.9 | 80 |
| | Zagato | 51 | 327 | 0.1 | 7.8 | 1.8 | 276 |
| **Probable** | | **367** | **350** | **1.2** | **10.2** | **1.0** | **137** |
| **Ore Reserves** | | **667** | **335** | **1.3** | **9.3** | **1.0** | **134** |
| **Contained Metal** | | | **$223M** | **8.3 kt** | **62.2 kt** | **22.5 koz** | **2.9 Moz** |

*Note: The Bentley ORE utilises a fully costed cut-off of A$220/t NSR, an incremental stoping cut-off of A$120/t NSR and A$80/t NSR cut-off for development. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

## INTRODUCTION

The owner operated Jaguar Operation is located 60 km north of Leonora in Western Australia. The Bentley Mine is located within the Jaguar Operation approximately 6 km south of the existing processing plant used for treating the Bentley ore.

**Figure 16:** **Location of Jaguar Operation**




The Bentley anomaly was first discovered by Mount Isa Mines Exploration (MIMEX) in the 1970s and follow up diamond drilling occurred in 1991. Sporadic drilling programmes occurred until 2008 when Jabiru Metal Limited (JML) discovered the Bentley deposit. In 2009 the maiden MRE and ORE were published, and initial mining commenced in 2010.

In 2011 JML was acquired by Independence Group NL (IGO) who continued mining and exploring the Jaguar Operations. In 2014 the Jaguar mine was placed on care and maintenance and focus was placed on extending production at the Bentley Mine, in particular from the Arnage lens.

In 2015 the drilling focussed on infill definition drilling of Arnage and Flying Spur as well as discovering the Arnage Deeps and Zagato lenses. In 2017 the Bentayga lens was discovered south of the Arnage lens. Further drilling success discovered the Pegasus lens at depth.

Further drilling in 2018 through 2020 provided sufficient data for Bentayga and Pegasus to be estimated in the MRE. The drilling success of 2020 has resulted in the maiden ORE inclusion of Pegasus material for 2021.

The Arnage, Bentayga and Pegasus lenses make up the majority of the 2021 ORE.

## NET SMELTER RETURN

As Bentley is a polymetallic mine producing ore containing zinc, copper, silver and gold, a net smelter return (NSR) in A$/t has been used to estimate the value of the ore net of all costs after it leaves site. The NSR estimate takes into account recoveries associated with each of the process streams, which include production of copper and zinc concentrates, as well as by products silver and gold. The NSR includes road freight, stevedoring, sea freight, treatment charges, refining charges, mill recoveries and royalties. The revenue from the smelter is net of payable metal and smelter penalties. The NSR is estimated using :

**NSR calculation**

*NSR = [metal grade x expected metallurgical recovery x expected payables x metal price] –*
*[concentrate freight, treatment and refining charges, penalties and royalties]*

A separate NSR was built into the geological block model for the MRE and ORE based on the various metal prices outlined in Table 24. The ORE prices are based on consensus forecasts approved by the Round Oak Board. The MRE has been estimated with higher metal prices in line with 2012 JORC Code.

**Table 24 Metal price assumptions used for the purpose of 2021 Mineral Resources and Ore Reserves**

| Commodity | Unit | Mineral Resource May 2021 | Ore Reserves May 2021 |
|---|---|---|---|
| Copper | US$/t | 8,014 | 7,285 |
| Zinc | US$/t | 2,713 | 2,466 |
| Gold | US$/oz | 2,003 | 1,821 |
| Silver | US$/oz | 26 | 24 |
| Exchange Rate | AUD/USD | 0.76 | 0.76 |

Metallurgical recoveries, concentrate grades and offsite costs are given in Table 25. Metallurgical recoveries are based on operating experience and ongoing metallurgical test work.

**Table 25** **Metal recoveries and concentrate grades**

| Physical Assumptions | Unit | Ore Reserves May 2021 |
|---|---|---|
| Copper Recovery | % | 79 |
| Zinc Recovery | % | 89 |
| Gold Recovery | % | 52.8 |
| Silver Recovery | % | 74.3 |
| Copper concentrate grade | % | 21.8 |
| Zinc concentrate grade | % | 48.3 |
| Payable Copper (of 20.75%) | % | 100 * |
| Payable Zinc (of 40.3%) | % | 100** |
| Payable Gold | % | 96 |
| Payable Silver in Cu conc | % | 87.5 |
| Payable Silver in Zn conc | % | 70 (after 3oz/t) |
| Copper treatment charge | US$/conc dmt | 60 |
| Zinc treatment charge | US$/conc dmt | 160 |
| Copper refining cost | US$/payable lb | 0.059 |
| Gold refining cost | US$/payable oz | 1.87 |
| Silver refining cost | US$/payable oz | 0.00 |
| Road Transport | AU$/conc wmt | 72.55 |
| Stevedoring | AU$/conc wmt | 25.36 |
| Sea Transport | US$/conc wmt | 22.88 |
| Cu and Zn Royalty | % | 5 |
| Au and Ag Royalty | % | 2.50 |

* assumes average concentrate grade of ~21.75%

** assumes average concentrate grade of ~48.3%

The assumptions outlined in Table 24 and Table 25 were used to generate the simplified NSR calculations for the NSR_M (MRE) and NSR_O (ORE) as outlined below.

**MRE NSR calculation**

$$NSR\_M = 71.160 \times Cu\% + 19.044 \times Zn\% + 38.452 \times Au\ g/t + 0.513 \times Ag\ g/t$$

**ORE NSR calculation**

$$NSR\_O = 64.182 \times Cu\% + 16.761 \times Zn\% + 34.681 \times Au\ g/t + 0.461 \times Ag\ g/t$$

# MINERAL RESOURCE ESTIMATE

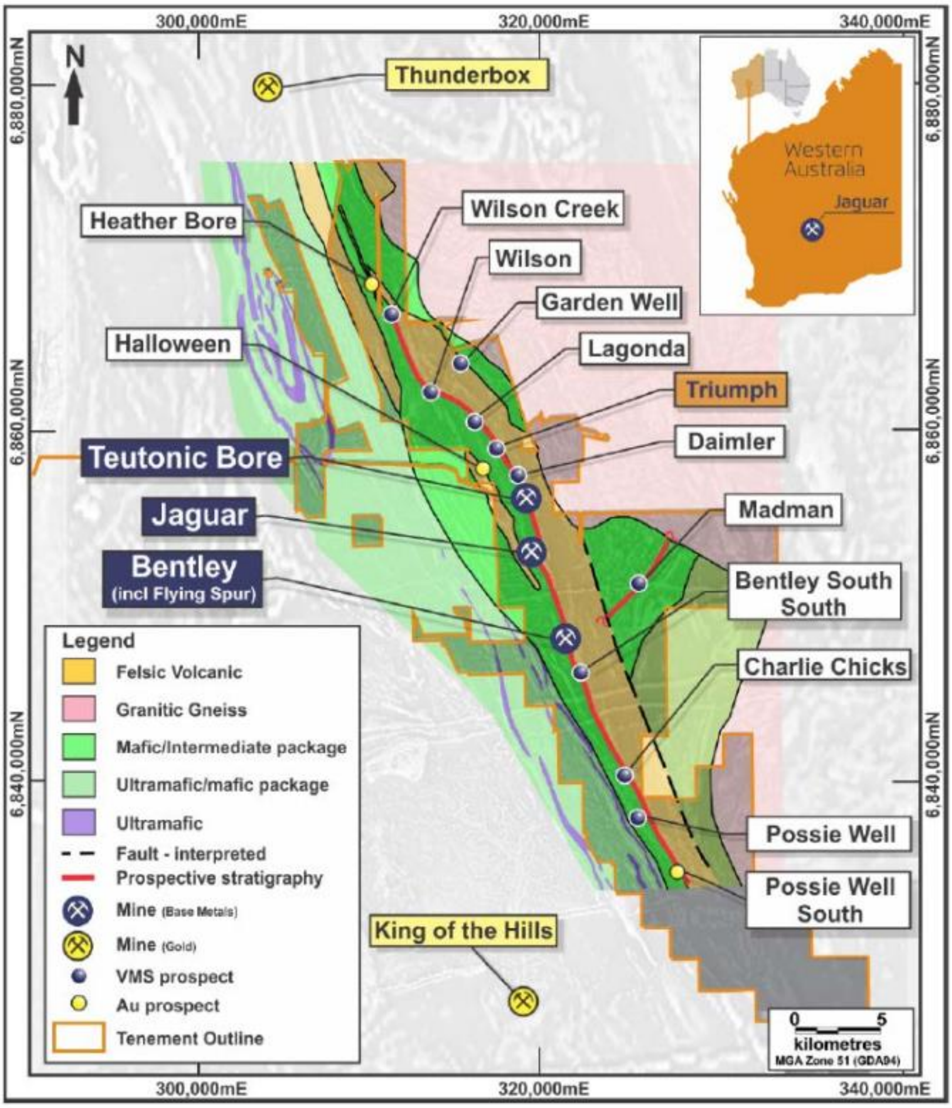
The Bentley Deposit is located within the Gindalbie Terrane, a part of the late Archaean Eastern Goldfields Superterrane, within the Yilgarn Craton of Western Australia. The area is dominated by volcanic and lesser sedimentary and intrusive rocks that have undergone tilting to sub-vertical positions. Regional metamorphism is lower greenschist facies.

The Gindalbie Terrane is characterised by bimodal rhyolites, basalts, and intermediate-felsic calc-alkaline complexes overlying an older tholeiite-komatiite succession. The Archaean units are locally intruded by Proterozoic dolerite dykes, and unconformably overlain by Tertiary and Quaternary-aged alluvial cover. Regionally, lateritic weathering is intense with a well-developed saprolite. Complete oxidation persists to depths of 50 m to 80 m with localised fracture-controlled partial oxidation penetrating to a depth of 120 m.

Bedrock exposure in the area varies from being reasonably good sub-crop in the north and west, including the Teutonic Bore mine area, to virtually non-existent in the south in the vicinity of the Bentley mineralisation. Interpretation is largely aided by magnetic and drilling data. Outcrop is very limited hence the interpretation of the geological setting of the deposit is based almost entirely on observations made from drilling programs. Bentley occurs in the same broad stratigraphic position as the Teutonic Bore and Jaguar deposits.

The local geology is shown in Figure 17.

**Figure 17 Plan of local geology around Bentley Orebody**

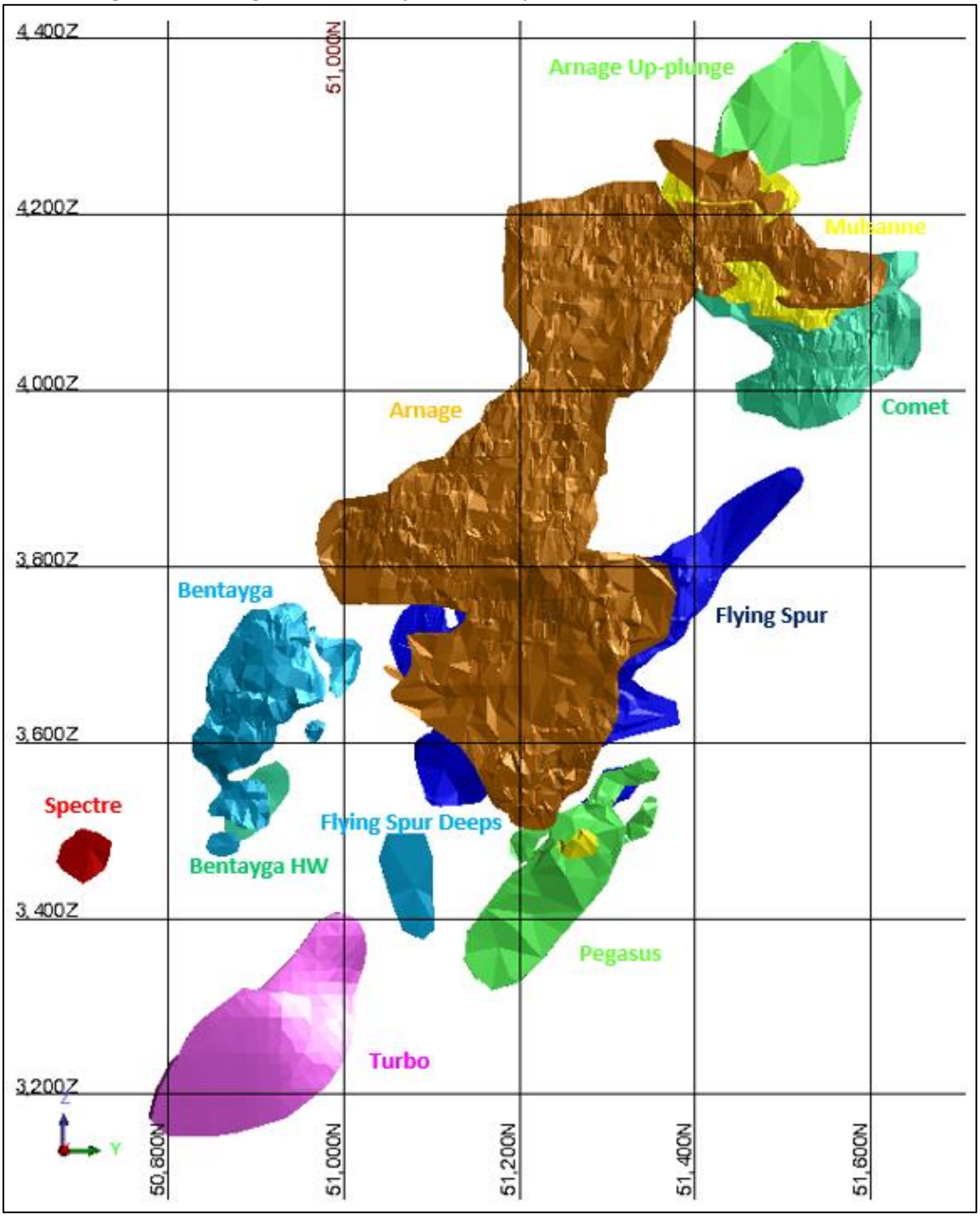



At Bentley, the basal rhyolite sequence is interpreted to represent the Archean seafloor that is comprised rhyolitic mass-flow units and lavas. The rhyolitic sequence is overlain by a sediment unit comprising carbonaceous mudstones to sandstones. This unit is interpreted to be the mineralisation host with total replacement of this host in the )upper part of the deposit, where only remnant chert bands occur as the host marker. The host sediment package is thicker at the base of the deposit which is interpreted to reflect a more, well developed basin at depth.

Post sedimentation, an intermediate andesite volcanic succession has overlain the sediment package, with the volcanics consisting of submarine basalts and reworked volcaniclastics and sediments. The contacts of individual basaltic horizons are variably chilled, auto brecciated and locally pepperitic. The andesite sequence is approximately 100m thick and is overlain by a calc-alkaline basalt succession containing tuffaceous and carbonaceous interflow sediments. The calc-alkaline succession is intruded by tholeiitic dolerite sills and dykes, ranging from centimetres to 70 m wide sills.

Massive sulphide mineralisation has partially and fully replaced the volcanoclastic sedimentary unit between the basal rhyolite and andesite succession. A series of low angle dolerite sills have split the massive sulphide into a number of main lenses being Arnage, Bentayga, Brooklands, Comet, Flying Spur Mulsanne, Pegasus, Turbo and Zagato. The Bentley orebodies are shown in Figure 18.

**Figure 18** **Longsection looking west of Bentley massive sulphide wireframes**




Mineralisation is defined by surface and underground diamond drilling. The geology interpretation for the Bentley deposits was manually constructed in Surpac. The massive sulphide and semi massive sulphide domains were constructed using the rock codes logged in the drill hole database and therefore no grade cut-off was used.

Stringer sulphide domains were manually wireframed by snapping to drill holes and interpreted using a $30/t NSR cut-off. Ordinary kriging (OK) is used for estimation of copper, lead, zinc, gold, silver, arsenic, iron, antimony and sulphur.

The mineralisation zones were classified as:

- Measured Mineral Resource where drill spacing was less than 20 m along strike and down dip and there are development drives above and below the block.
- Indicated Mineral Resource where drill spacing was less than 40 m along strike and down dip.
- Inferred Resource where drill spacing was greater than 40 m along strike and down dip.

- Unclassified has been used in areas where there is not enough information to reliably inform the block or geological confidence is not high.

The MRE is reported above a Mineral Resource NSR greater than A$100/t cut-off and is shown in Table 26.

**Table 26 Mineral Resource Estimate as at 1 May 2021**

| Category | Tonnes (kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|
| Measured | 580 | 313 | 1.04 | 7.34 | 0.99 | 119 |
| Indicated | 574 | 369 | 1.07 | 9.52 | 1.06 | 139 |
| Inferred | 924 | 295 | 0.82 | 7.57 | 0.94 | 110 |
| **Mineral Resource** | **2,078** | **320** | **0.95** | **8.04** | **0.99** | **121** |
| Contained Metal | | | **19.7 kt** | **167.0 kt** | **66.1 koz** | **8.0 Moz** |

*Note: The MRE utilises an A$100/t NSR cut-off. MRE NSR is based on higher metal prices than the ORE. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

### Block Model Manipulation

The original Mineral Resource model (bentley_mre_210412.mdl) was modified by the site geology team for provision to the mine planning engineers, modifications included:

- Remove of estimation parameters not required for mine planning purposes.
- Addition of updated Ore Reserve NSR fields.
- Minor modification to sterilisation and depletion shapes.

The modified Mineral Resource model (bentley_mre_210412_cut_total_stripped.mdl) was further modified by the mine planning team to create a new model (bentley_mre_210412_mpm02.dm) used for mine planning purposes (stope optimisation etc.), changes undertaken were:

- All grades set to zero where class = 4 (unclassified material).
- All grades set to zero where mined = 1.
- Negative or absent values were set to zero, except density which was given a default of 2.8.

## MINE DESIGN

### Mining Method

Historically, the Bentley underground mine has used single and double lift longitudinal sublevel open stoping (SLOS) using a combination of consolidated and unconsolidated backfill. Low grade stopes and the crown stopes below backfill were designed with unrecoverable rib and sill pillars for stoping stability as well as minimising dilution. To maximise high grade ore recovery and to eliminate the requirement to mine back through consolidated backfill, footwall drives and cross cut drives were developed at the top of the producing stopes to ensure stopes are tight filled. Top down and bottom up sequencing is employed across the various lenses to suit orebody geometry and operational requirements. The 2021 LOM design continues with this mining method with the inclusion of some areas of lower grade material using an Avoca mining method with unconsolidated backfill to reduce operating costs.

### Cut-off Grade

During financial year 2021, Bentley mine production was increased from 25,000 t to 40,000 t per month. The increased production was achieved with minimal increase in fixed costs. As the operation is owner operated this effectively reduced the fully costed stoping cut-off value for the 2021 LOM plan. Operating costs since achieving the increased production rate have been analysed to determine the three cut-off values in **Table 27** that were used for the 2021 LOM plan.

**Table 27:** **Bentley 2021 ORE cut-off values**

| Cut-off | Value ($/t) |
|---|---|
| Fully Costed Stoping | 220 |
| Incremental Stoping | 120 |
| Development | 80 |

### Stope Optimisation

To assess the most suitable mining inventory for the operation, Deswik Stope Optimiser (DSO) was used to undertake stope optimisation at cut-off values of $220 and $120/t. Other DSO parameters used are outlined in **Table 28**.

**Table 28:** **Deswik Stope Optimiser parameters**

| Parameter | Value |
|---|---|
| Minimum mining width | 1.5 m |
| HW dilution skin | 0.5 m |
| FW dilution skin | 0.5 m |
| Minimum footwall angle | 45° |
| Stope height | |
| Existing level development | Varies |
| No existing development | 20 m |
| Stope length | 10 m |

Factors have been applied to determine the mining inventory from the designs as show in Table 29

**Table 29:** **Mining Inventory Modifying Factors**

| Parameter | Value |
|---|---|
| **Stoping** | |
| Mining recovery – blind upholes | 80%* |
| Mining recovery – with backfill | 95% |
| Stope dilution# | 0% |
| | |
| **Development** | |
| Dilution – Lateral | 100 mm overbreak annulus |
| Dilution – Vertical | 5% |
| **Recovery** | 100% |

** This is to represent the unrecoverable material left insitu as rib pillars between blind uphole stopes.*

*# This is incorporated inside the DSO shapes by use of a minimum mining width and dilution skins, no further dilution required.*

The modifying factors have been derived from previous mining reconciliations and are consistent with industry standards for the given mining methods.

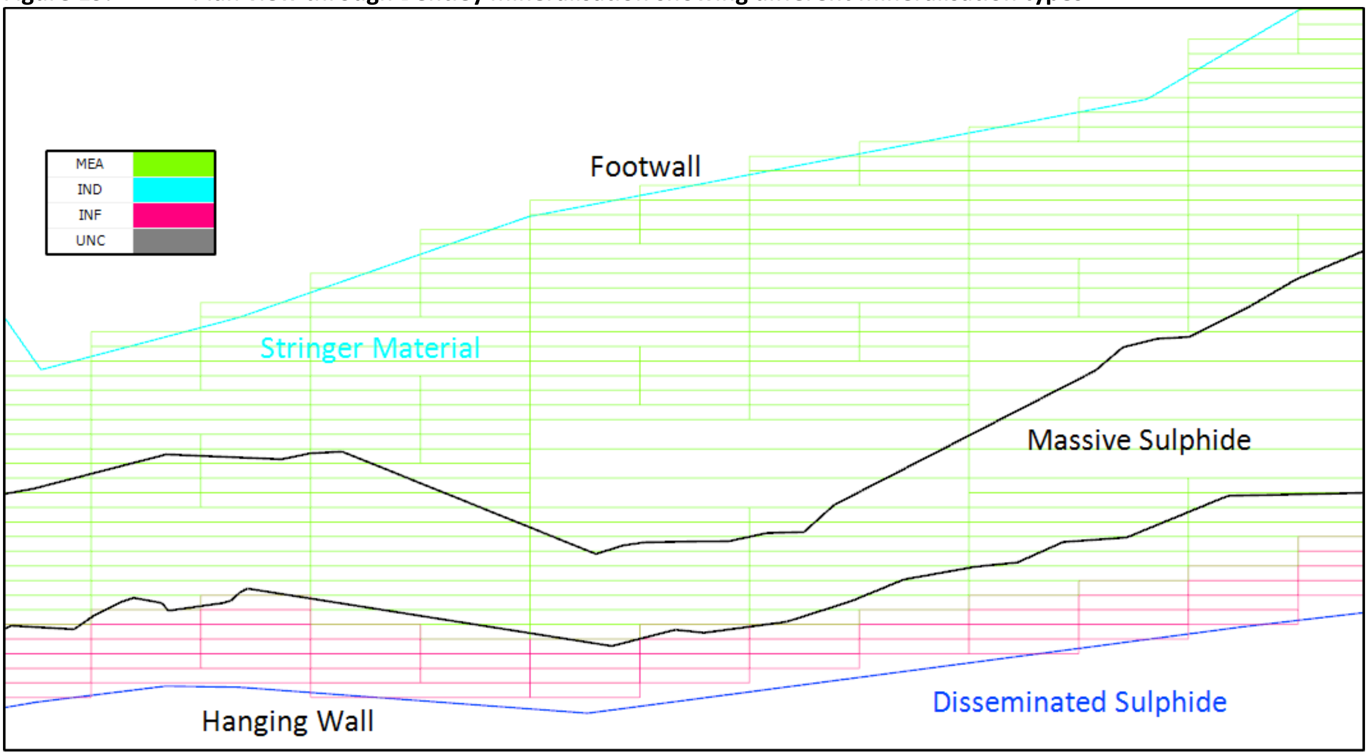
## ORE RESERVES ESTIMATE

This section of the report details the way the LOM Plan (which includes Inferred and unclassified material), is modified to only include material that has sufficient geological confidence for inclusion in the ORE. This ensures that no Inferred or unclassified material makes any contribution to the stoping inventory or the economics of the ORE.

### Classification of Disseminated Sulphide

The Bentley mineralisation is primarily composed of massive sulphides with disseminated sulphides and stringer material in the hanging wall (HW) and footwall (FW) respectively of the massive sulphide. The massive and stringer sulphides generally have the same Mineral Resource classification. The disseminated sulphides are generally classified as Inferred as there is less data available and the mineralisation is sporadic in nature. This is shown in **Figure 19**.

**Figure 19: Plan view through Bentley mineralisation showing different mineralisation types**




### Modified Stoping and Mine Design

To create an Ore Reserve inventory, the LOM plan was used as the basis and all stopes that contained 100% Inferred material were removed from the design. The remainder of the stopes that contained any Inferred material were assessed to determine the proportion of Inferred material and whether the remainder of these stopes could be deemed practical and economic for inclusion in the ORE. Analysis showed that stopes with greater than 40% Inferred material were not practical or economic to mine and were excluded from the ORE. The stopes with 0-40% Inferred material fell into three categories:

1) Inferred material as HW disseminated sulphide (see Figure 20)
2) Inferred material as strike extension of the stope (see Figure 21)
3) Uneconomic without Inferred material

Stopes in category 1 were included as the stopes was deemed practical without the Inferred material as the Inferred material comprises a thing skin of the HW shape. Stopes in category 2 were included as the Indicated material could be mined with the adjacent 100 % Indicated or Measured stope. Stopes in category 3 were excluded as the Measured and Indicated material was not economic.

**Figure 20:** **Section view showing Inferred disseminated material in HW of stope**

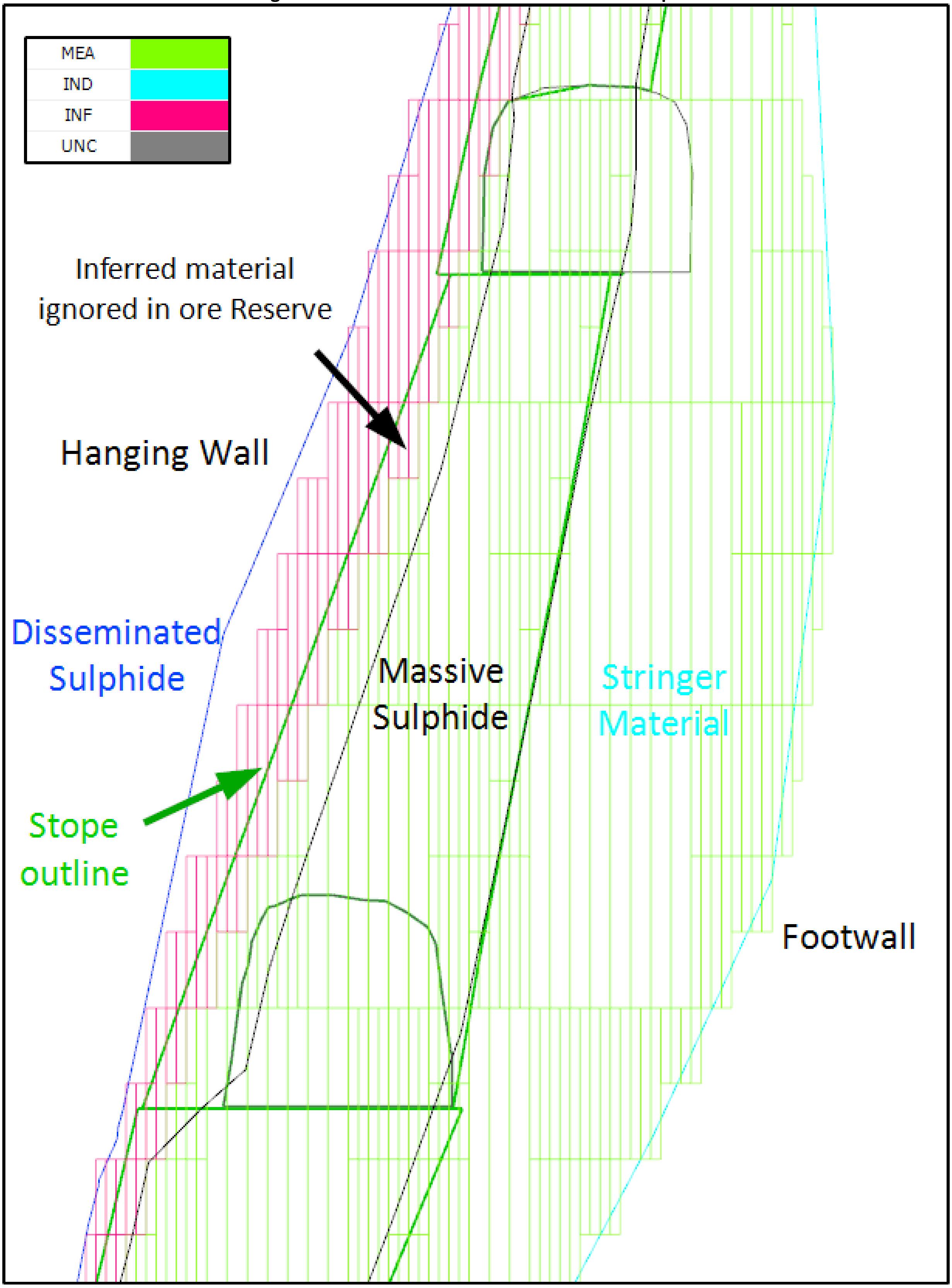
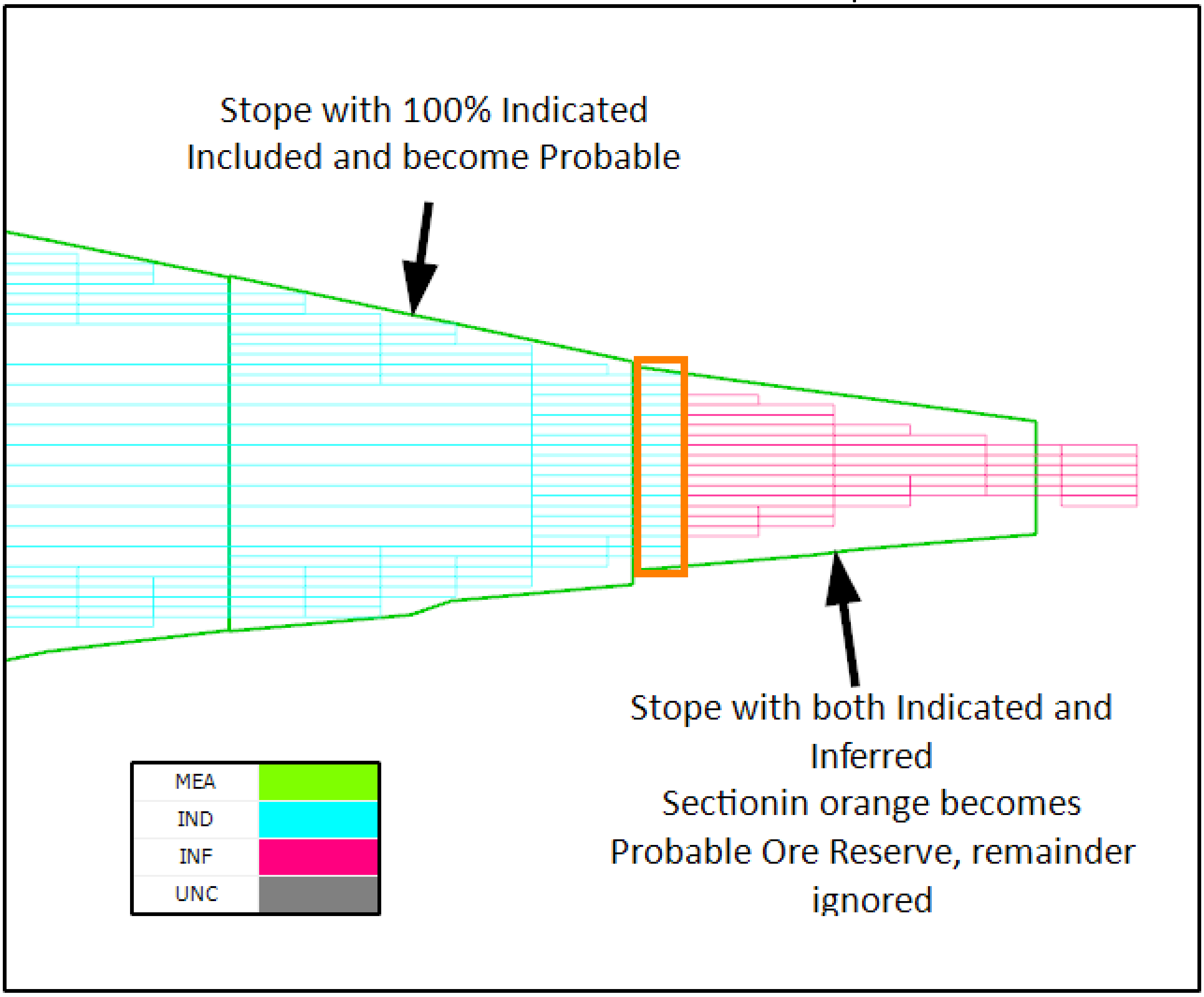


**Figure 21:** **Plan view Indicated material included from a mixed classification stope**



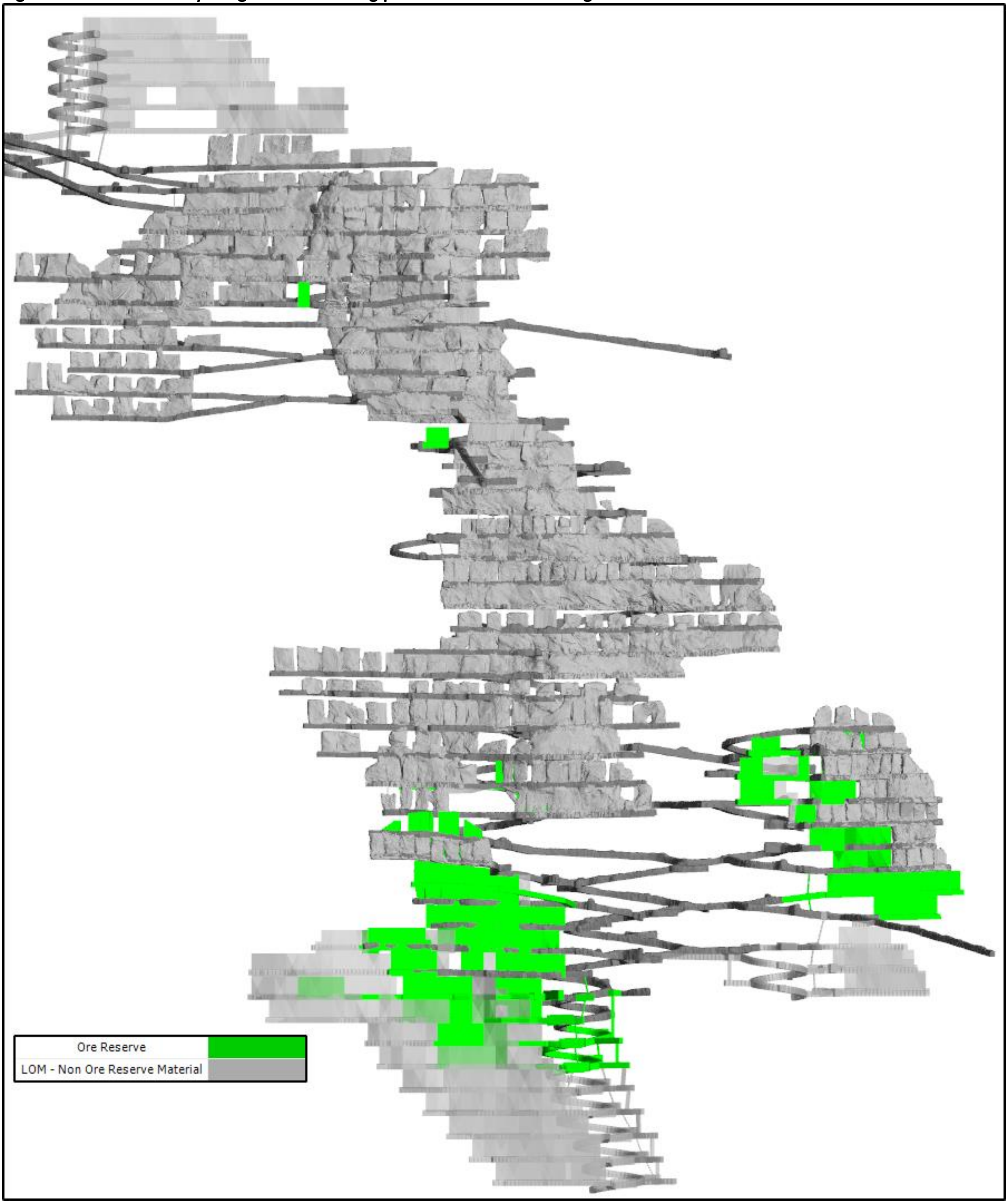

Of the stopes included in the ORE that contain some Inferred material, the ORE only includes the Measured and Indicated material (as well as the pro-rated overbreak material) as ore. While not conventional, it is justifiable as the Measured and Indicated material is either a practical stope shape with the Inferred material removed or a strike extension that could be mined with the adjacent stope that is entirely Measured and / or Indicated material.

Once the stopes that did not meet the geological confidence to remain in the Ore Reserve were removed, minor modifications to the development design where undertaken, including:

- Ore Drives where trimmed to align with the Ore Reserve stope shapes.
- Capital and operating development that were no longer required from the LOM was deleted.

The long section in Figure 22 shows the portion of the LOM design that informs the 2021 ORE.

**Figure 22 Bentley Longsection showing portion of LOM informing 2021 ORE**



The 2021 ORE and 2020 ORE by Ore Reserve category are shown in Table 30 and Table 31 respectively. With the change between the 2020 and 2021 ORE shown in Table 32.

**Table 30 Ore Reserve Estimate as at 1 May 2021**

| Category | Tonnes (kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|
| Proved | 301 | 316 | 1.3 | 8.2 | 1.1 | 130 |
| Probable | 367 | 350 | 1.2 | 10.2 | 1.0 | 137 |
| **Ore Reserves** | **667** | **335** | **1.3** | **9.3** | **1.0** | **134** |
| Contained Metal | | $223M | 8.3 kt | 62.2 kt | 22.5 koz | 2.9 Moz |

*Note: The Bentley ORE utilises a fully costed cut-off of A$220/t NSR, an incremental stoping cut-off of A$120/t NSR and A$80/t NSR cut-off for development. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

**Table 31 Ore Reserve Estimate as at 1 January 2020**

| Category | Tonnes (kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|
| Proved | 178 | 298 | 1.4 | 10.5 | 0.9 | 140 |
| Probable | 393 | 363 | 1.3 | 12.1 | 1.5 | 271 |
| **Ore Reserves** | **571** | **343** | **1.3** | **11.6** | **1.3** | **230** |
| Contained metal | | $196M | 7.6 kt | 66.3 kt | 23.6 koz | 4.2 Moz |

*Note: The Bentley 2020 ORE utilises a fully costed cut-off of A$274/t NSR, an incremental stoping cut-off of A$130/t NSR and A$88/t NSR cut-off for development. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

**Table 32 Change between 2020 and 2021 Ore Reserve Estimate**

| Category | Tonnes (kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|
| Proved Change | 123 | 18 | -0.2 | -2.3 | 0.2 | -10 |
| Probable Change | -26 | -13 | -0.1 | -1.9 | -0.5 | -134 |
| **Ore Reserves Change** | **96** | **-8** | **-0.1** | **-2.3** | **-0.2** | **-96** |
| **% change** | **17%** | **-2%** | **-7%** | **-20%** | **-19%** | **-42%** |
| Contained Metal Change | | $28M | 0.7 kt | -4.1 kt | -1.1 koz | -1.3 Moz |
| % change | | 14% | 10% | -6% | -5% | -31% |

The 2021 ORE has increased by 96 kt due to a 123 kt increase in Proved material countered by a reduction of 26 kt of Probable material. Although the contained metal and head grades have decreased, the overall value of the ORE has increased A$28M (14%) due to better processing recoveries realised during FY2021 and increased commodity prices.

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

(Criteria listed in section 1, and where relevant in sections 2 & 3, also apply to this section)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Mineral Resource estimate for conversion to Ore Reserves** | • Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.<br>• Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. | • The 2021 ORE is based on the Surpac Mineral Resource block model "bentley_mre_210412.mdl" which was updated in April 2021 by the Jaguar geology department. Minor modifications were made to the Mineral Resource Model including removal of estimation parameters, resetting negative values, grades and densities consistent with use in an Ore Reserve estimate to produce a final mine planning model (bentley_mre_210412_mpm02.dm) that was used in the Ore Reserve estimate.<br>• As this model was exported from Surpac format into Datamine format, checks on the entire model were performed to ensure no data corruption, only minor variances in line with expectations of the differences in reporting of various software packages were encountered.<br>• The Mineral Resources are reported inclusive of the Ore Reserve. |
| **Site visits** | • Comment on any site visits undertaken by the Competent Person and the outcome of those visits.<br>• If no site visits have been undertaken indicate why this is the case. | • The Bentley Ore Reserve Estimate was undertaken by the site planning team and overseen by Mr Michael Leak, FAusIMM, who is a fulltime employee of Round Oak with full accountability for mining operations and mine technical services at Jaguar and Competent Person for the Ore Reserve. |
| **Study status** | • The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.<br>• The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered. | • The Bentley mine has been operating since 2010. It has established mining practices and orebody knowledge. The ORE is based on the current operational practices at the Bentley underground mine. The ORE is based on three dimensional mine designs and schedules completed on site using Deswik software.<br>• A mining method review and redesign of the LOM was completed in May 2021. This included development design, stope access and mining method application.<br>• Bentley ore is currently the only ore source of the Jaguar Operation which feeds the Jaguar Processing Facility.<br>• The ORE considered all material modifying factors from the current operation and concluded that the existing mine plan was technically feasible and economically viable. |
| **Cut-off parameters** | • The basis of the cut-off grade(s) or quality parameters applied. | • Cut-off values are based on the value of contained zinc, copper, silver and gold, net of mine gate (NSR). The NSR accounts for costs such as concentrate transport, treatment and refining charges and royalties |

| | | |
|---|---|---|
| | | • The estimation of the Ore reserve is based on the cut-off values of:<br>  • A$220 per tonne for fully costed stoping.<br>  • A$120 per tonne for fully incremental stoping.<br>  • A$80 per tonne for development.<br>• During financial year 2021 Jaguar Operation increased monthly production from 25,000 t to 40,000 t with minimal fixed cost increase. As the mine is owner operated this resulted in a material decrease in the fully costed stoping cut-off value from 2020 ORE to the 2021 ORE.<br>• The cut-off values are based upon actual operating costs of the Jaguar Operation at the 40,000 t per month production rate. |
| **Mining factors or assumptions** | • The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).<br>• The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.<br>• The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre- production drilling.<br>• The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).<br>• The mining dilution factors used.<br>• The mining recovery factors used.<br>• Any minimum mining widths used.<br>• The manner in which Inferred Mineral Resources are utilised in mining studies | • The mining method is the same as currently used at the operation.<br>• The major modifying factors in determining the stoping inventory are:<br>  • A 2.5 m minimum mining width (inclusive of 0.5 m HW and FW overbreak), no additional dilution percentages were applied.<br>  • A 45° minimum footwall angle.<br>  • A 20 m level interval for areas without existing development.<br>  • A 80% stoping mining recovery for blind uphole stopes to represent the unrecoverable rib pillar material within the stope optimiser shapes.<br>  • A 95% stoping mining recovery for stopes with backfill.<br>• Geotechnical parameters are based on current site operating standards.<br>• Inferred Mineral Resources have been excluded completely from all ORE designs and do not contribute any metal or financial benefit to the ORE. |

| | | |
|---|---|---|
| | and the sensitivity of the outcome to their inclusion.<br>• The infrastructure requirements of the selected mining methods. | |
| **Metallurgical factors or assumptions** | • The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.<br>Whether the metallurgical process is well-tested technology or novel in nature.<br>• The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.<br>• Any assumptions or allowances made for deleterious elements.<br>• The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.<br>• For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications | • The ORE is predicated on the existing Jaguar ore processing facility with a nominal throughput rate of 580ktpa.<br>• The assumed Bentley metallurgical process flow sheet is conventional crush, grind and then differential flotation to produce two saleable concentrates, copper-rich and zinc-rich, with precious metals reporting to both concentrates.<br>• The Bentley ore is processed in the existing Jaguar processing plant approximately 6 km away from the Bentley mine.<br>• Geometallurgical algorithms have been developed that indicated recoveries will vary over time in accordance with the mineralogy present at the time of processing.<br>• The LOM average metallurgical recovery assumptions are as follows:<br>Copper concentrate:<br>- 79.0% copper.<br>- 52.8% silver.<br>- 52.8% gold.<br>Zinc concentrate:<br>- 88.5% zinc.<br>- 21.5% silver.<br>• Operational results demonstrate that the Bentley concentrates can be produced as saleable with acceptable chemistry and low levels of potentially deleterious elements such as As, Bi, Sb and Pb. The deleterious elements have been taken into account in the NSR calculation and included in the financial model. |
| **Environmental** | • The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of | • Round Oak operates under an environmental management plan, which meets or exceeds all environmental legislative requirements. Round Oak's license to operate is in good standing.<br>• Environmental rehabilitation plans are constructed and progressively acted upon. The costing of the rehabilitation works is accounted for in the operations financial model at a value of A$36M. |

| | | |
|---|---|---|
| | approvals for process residue storage and waste dumps should be reported. | |
| **Infrastructure** | • The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed. | • There is current processing infrastructure in place at the Jaguar Operation.<br>• All other surface infrastructure and underground infrastructure specific to the Bentley Mine has been allowed for in design and costing. This includes allowances for all earthworks, mine services, and all underground infrastructure as well as primary ventilation fans, escape ways, high voltage power reticulation, service water and compressed air. |
| **Costs** | The derivation of, or assumptions made, regarding projected capital costs in the study.<br>• The methodology used to estimate operating costs.<br>• Allowances made for the content of deleterious elements.<br>• The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.<br>• The source of exchange rates used in the study.<br>• Derivation of transportation charges.<br>• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.<br>• The allowances made for royalties payable, both Government and private. | • Capital costs for decline development and accesses were included in the financial evaluation. Other capital such as surface and underground infrastructure have also been included in the financial evaluation.<br>• Operating costs for mining were modelled on existing site costs. The operating processing costs are based on the current Jaguar processing plant operation.<br>• Offsite transportation, treatment and refining charges have been provided by Round Oak management based upon existing contracts and included in the NSR calculation and financial modelling.<br>• A 5% WA state royalty applies to copper and zinc. A 2.5% state royalty applies on gold and silver.<br>• Metal price and exchange rate assumptions are as provided by the Round Oak Board and have been based on consensus forecasts. |
| **Revenue factors** | • The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. | • The mining and processing tonnes and grade were scheduled monthly to enable detailed financial analysis of the project.<br>• Commodity prices are based on consensus forecasts approved by Round Oak management. |

| | | |
|---|---|---|
| | • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products. | |
| **Market assessment** | • The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.<br>• A customer and competitor analysis along with the identification of likely market windows for the product.<br>• Price and volume forecasts and the basis for these forecasts.<br>• For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract | • The volume and high quality of concentrate produced is expected to continue to attract a ready market domestically and internationally.<br>• Offtake agreements and negotiations on a new contract are currently in progress.<br>• All concentrate is sold on the spot market.<br>• Market conditions indicate minimal risk pursuing sale on the spot market. |
| **Economic** | • The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.<br>• NPV ranges and sensitivity to variations in the significant assumptions and inputs. | • A financial model of Bentley has been completed by suitably qualified and experienced accounting and financial staff employed by Round Oak and has been reviewed by senior management of Round Oak. The financial model demonstrates a positive NPV.<br>• The confidence in the inputs is consistent with the assigned Proved and Probable classification of the ORE. Confidence in the economic inputs is appropriate as the inputs are based on current costs from the Bentley mine and Jaguar operation.<br>• Economic inputs for processing and revenue were provided by Round Oak management and assume treatment at the adjacent Jaguar Processing Facility. Sensitivity analysis work has been undertaken on variables such as mining costs, processing costs, foreign exchange rate and metal price, with the NPV proving most sensitive to changes in the commodity price and exchange rate. |
| **Social** | • The status of agreements with key stakeholders and matters leading to social licence to operate. | • Tenement status is currently in good standing. |

| | | |
|---|---|---|
| **Other** | • To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:<br>• Any identified material naturally occurring risks.<br>• The status of material legal agreements and marketing arrangements.<br>• The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the Ore Reserve is contingent. | • There are no foreseeable risks associated with the Bentley mine that are expected to impact on the ORE.<br>• Bentley is situated within Round Oak's mining lease M37/1290. |
| **Classification** | • The basis for the classification of the Ore Reserves into varying confidence categories.<br>• Whether the result appropriately reflects the Competent Person's view of the deposit.<br>• The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any). | • All Measured Mineral Resources deemed economic in the ORE were converted to a Proved Ore Reserve.<br>• All Indicated Mineral Resources deemed economic in the ORE were converted to a Probable Ore Reserve.<br>• No Probable Ore Reserve have been derived from Measured Mineral Resources.<br>• The classification of Ore Reserves reflects the view of the Competent person. |

| | | |
|---|---|---|
| **Audits or reviews** | • The results of any audits or reviews of Ore Reserve estimates. | • No external audit of this ORE has been undertaken at the time of release of this document.<br>• Round Oak have undertaken internal checks on the ORE and have identified no material issues. |
| **Discussion of relative accuracy/ confidence** | • Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.<br>• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.<br>• Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.<br>• It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. | • The ORE is based on a LOM Plan that is derived from operating history, achievable production rates, modifying factors, historic or contractual agreed costs, terms etc. As such it is considered to be of a pre-feasibility study (+ 15 to 25%) or better accuracy.<br>• Orebody knowledge decreases with depth and as such, deeper portions of the Ore Reserve are less well defined which may result in overcalling orebody extents, underestimation of costs etc. The ORE is mostly determined by the order of accuracy associated with the latest Mineral Resource model, the metallurgical inputs and the cost adjustment factors used.<br>• Geotechnical assumptions are well established operational standards.<br>• Metallurgical recoveries are based upon recent operational results processing ore across the Bentley lenses providing reliable operating results. |

# Mount Colin Project May 2021
# ORE RESERVES STATEMENT

## SUMMARY

Round Oak Minerals (Round Oak) have updated the Ore Reserves Estimate (ORE) for its 100% owned Mount Colin Project (Mount Colin) in Queensland. The Mount Colin ORE update is based on the Mount Colin Life of Mine (LOM) plan completed in April 2021. The Mount Colin ORE has been completed in accordance with the JORC Code (2012 Edition) and is reported as at 1 May 2021.

The 2021 ORE has been derived from the Mineral Resource models using ore classified in the Measured and Indicated category only. There were minor amounts of Inferred Mineral Resource that fell within the ORE, but these tonnes were deemed immaterial to the overall ORE.

Table 22 summarises the Mount Colin May 2021 Mineral Resource Estimate (MRE).

**Table 33. Mount Colin Project Mineral Resource Estimate as at 1 May 2021**

| Category | Tonnes (Kt) | NSR ($/t) | Cu (%) | Au (g/t) |
|---|---|---|---|---|
| **Measured** | 642 | 291 | 3.46 | 0.67 |
| **Indicated** | 737 | 265 | 3.17 | 0.57 |
| **Inferred** | 127 | 218 | 2.61 | 0.46 |
| **Mt Colin Mineral Resource (M+I+I)** | **1,505** | **272** | **3.25** | **0.60** |
| **Contained metal** | | | **49Kt** | **29 Koz** |

*Note: The Mount Colin MRE utilises an A$100/tonne NSR cut-off to the insitu ore. MRE NSR is based on higher metal prices than the ORE. Tonnage estimates have been rounded to the nearest 1,000 tonnes*

| Category | Tonnes (kt) | NSR (A$/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|
| Measured | 580 | 313 | 1.04 | 7.34 | 0.99 | 119 |
| Indicated | 574 | 369 | 1.07 | 9.52 | 1.06 | 139 |
| Inferred | 924 | 295 | 0.82 | 7.57 | 0.94 | 110 |
| **Mineral Resource** | **2,078** | **320** | **0.95** | **8.04** | **0.99** | **121** |
| Contained Metal | | | 19.7 kt | 167.0 kt | 66.1 koz | 8.0 Moz |

*Note: The MRE utilises an A$100/t NSR cut-off. MRE NSR is based on higher metal prices than the ORE. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

**Table 23** summarises the Mount Colin Project May 2021 ORE.

**Table 34. Mount Colin Project Ore Reserve Estimate as at 1 May 2021**

| Category | Rock Type | Tonnes (Kt) | NSR ($/t) | Cu (%) | Au (g/t) |
|---|---|---|---|---|---|
| Proved | Fresh | 275 | 213 | 2.83 | 0.51 |
| | Transition | | 0 | 0.00 | 0.00 |
| | Oxide | | 0 | 0.00 | 0.00 |
| **Proved** | | **275** | **213** | **2.83** | **0.51** |
| Probable | Fresh | 681 | 193 | 2.58 | 0.47 |

| | | | | | |
|---|---|---|---|---|---|
| | Transition | 51 | 188 | 3.08 | 0.65 |
| | Oxide | | 0 | 0.00 | 0.00 |
| **Probable** | | **732** | **192** | **2.62** | **0.48** |
| **Mt Colin Ore Reserves (P+P)** | | **1,007** | **198** | **2.68** | **0.49** |
| **Contained metal** | | | | **26.9 Kt** | **15.9 Koz** |

*Note: The Mount Colin ORE utilises an A$107/tonne NSR cut-off for stoping and A$48/tonne NSR cut-off for development. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

## INTRODUCTION

Mount Colin is located approximately 60km from both Cloncurry and Mount Isa, in northwest Queensland. It is near the historic mine and abandoned township of Mary Kathleen and is shown in Figure 23. The mine is located on mining lease ML 2640 and the site map is shown in Figure 24.

**Figure 23 Mount Colin location map**

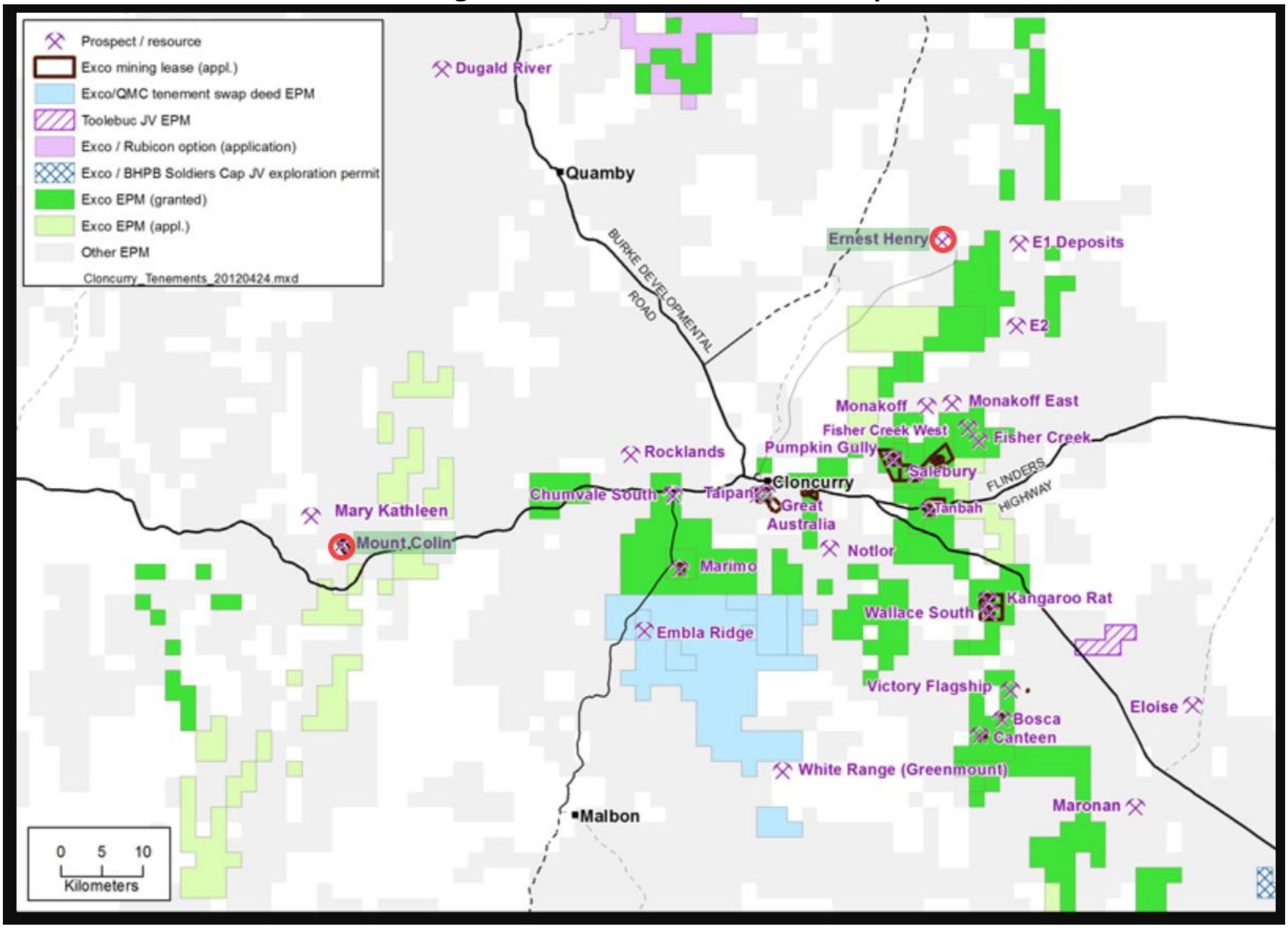
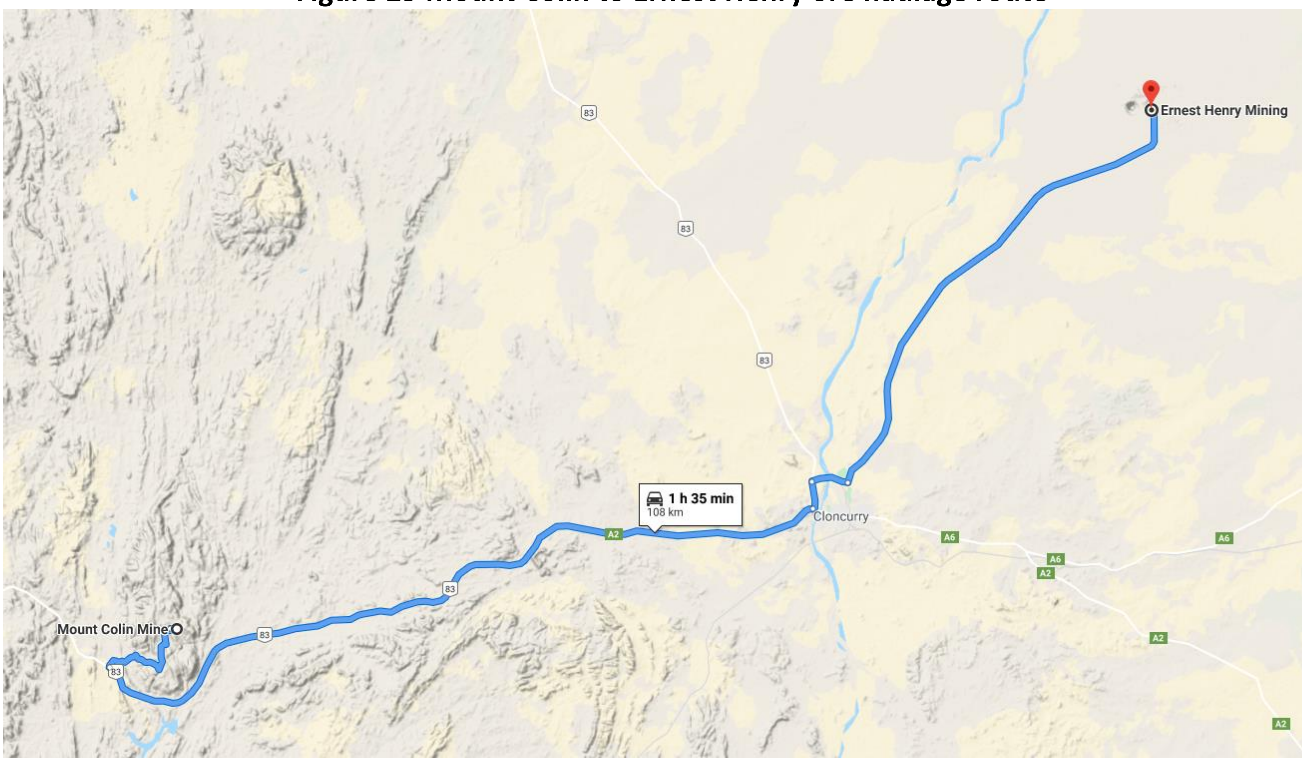


**Figure 24 Mount Colin site map**


Open pit mining occurred at Mount Colin between 2013 and 2014. Approximately 360Kt of ore was mined and treated through the Glencore Ernest Henry processing plant. Underground mining commenced in August 2018, using Barminco mining contractors, and 747Kt of ore has been mined from the underground to the end of April 2021. This includes 576Kt mined since the last ORE in January 2020.

Ore from the underground is toll treated 108km north east, at the processing plant at Ernest Henry mine and is shown in Figure 25.

**Figure 25 Mount Colin to Ernest Henry ore haulage route**



## NET SMELTER RETURN

Since Mount Colin is a polymetallic operation producing copper and gold, a net smelter return (NSR) in A$/t has been used to estimate the value of the ore net of all costs once the ore has been converted to a concentrate. The NSR estimate includes mill recoveries, road freight, processing toll treatment charges at Ernest Henry, payable metal and royalties. The ore from Mount Colin consists of the following rock types:

- fresh rock (mainly consisting of chalcopyrite)
- Transitional rock (mainly consisting chalcocite in the upper area of the underground mine)
- Oxide rock (mainly consisting malachite in the upper area of the underground mine)

It is expected the three rock types will have different metallurgical recoveries and these have been included in the individual NSR estimations.

The NSR ($/t) is estimated using the following formula:

***NSR = [metal grade x expected metallurgical recovery x expected payables x metal price] – [Ore haulage to Ernest Henry mine, Ernest Henry toll treatment charges, TC/RC, penalties and royalties]***

A separate NSR was built into the geological block model for the MRE and ORE based on the various metal prices. The ORE prices are based on +2 year consensus forecasts approved by the Round Oak Board. MRE prices are ORE prices +10%.

The MRE have been estimated with higher metal prices in line with 2012 JORC Code stating that:

*A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are* ***reasonable prospects for eventual economic extraction****.*

It is reasonable that metal prices stated under the Mineral Resources section have been achieved in the past and have reasonable prospects of being achieved in future based on the Mount Colin Mine Life.

The Metal prices and exchange rates are shown in Table 24.

**Table 35. Metal price assumptions used for the purpose of 2021 Ore Reserves**

| Commodity | Unit | Mineral Resource May 2021 | Ore Reserves May 2021 |
|---|---|---|---|
| Copper | US$/t | 8,014 | 7,285 |
| Gold | US$/oz | 2,003 | 1,821 |
| Exchange Rate | AUD/USD | 0.76 | 0.76 |

The Mount Colin 2021 MRE NSR value was built into the geological block model using the following formulas:

**NSR (fresh rock) = 75.421 x Cu% + 45.364 x Au g/t**
**NSR (transition rock) = 56.165 x Cu% + 43.50 x Au g/t**
**NSR (oxide rock) = 56.165 x Cu% + 43.50 x Au g/t**

The Mount Colin 2021 ORE NSR value was built into the geological block model using the following formulas:

**NSR (fresh rock) = 67.987 x Cu% + 40.893 x Au g/t**
**NSR (transition rock) = 50.628 x Cu% + 39.212 x Au g/t**
**NSR (oxide rock) = 50.628 x Cu% + 39.212 x Au g/t**

Metallurgical recoveries, concentrate grades and offsite costs are given in Table 25. Metallurgical recoveries are based on operating experience and ongoing metallurgical test work.

**Table 36. Metal recoveries and concentrate grades**

| Physical Assumptions | Unit | Ore Reserves May 2021 |
|---|---|---|
| Copper Recovery - Fresh | % | 94 |
| Copper Recovery - Transition | % | 70 |
| Copper Recovery - Oxide | % | 70 |
| Gold Recovery - Fresh | % | 73 |
| Gold Recovery – Transition | % | 70 |
| Gold Recovery – Oxide | % | 70 |
| Copper concentrate grade | % | 28.45 |
| Payable Copper | % | 96.5 |
| Payable Gold | % | 90 |
| Copper treatment charge | US$/conc dmt | 59.50 |
| Copper refining cost | US$/payable lb | 0.06 |
| Gold refining cost | US$/payable oz | 5.00 |
| Concentrate Transport | AU$/conc wmt | 100 |
| Royalty | % | 5 |

## MINERAL RESOURCE ESTIMATE

The Mount Colin deposit is considered a skarn-hosted Cu-Au deposit. The proximal Burstall Granite has probably provided the intrusive generally associated with skarn deposits. The deposit strikes approximately 295º (MGA), and dips approximately 75º NNE. Understanding of deposit geology is very high, with mineralisation principally controlled and essentially contained within the WNW- SE striking planar Mt Colin Fault zone. The broad-scale geology appears relatively simple and straightforward.

The mineralised zone is dominated by pyrrhotite gangue to the east, and carbonate dominated gangue to the west. A karst-like void/cavity zone exists principally in areas of the carbonate-rich portion in the upper levels of the underground mine.

Secondary controls may include a small dilational jog within the Fault. The mineralised zone has been intersected to >400m below surface, where it intersects the Burstall Granite. Promising Cu intersections have been encountered within the Burstall Granite, leaving the deposit open at depth.

The deposit consists of a discrete high grade lode, dipping at approximately 75 degrees, which is amenable for benching.

Mineralisation is defined by underground and surface diamond and reverse circulation percussion (RC) drilling. There has been in excess of 24km of diamond drilling and RC drilling at Mount Colin.

The Mount Colin deposit model was constructed using the geological logging of the Mount Colin Fault zone. Mineralisation wireframes were constructed at a nominal 0.5% Cu cut-off based on assay grades within the geological database.

Ordinary kriging (OK) was used for estimation of copper, gold, iron and sulphur. Density has been derived by a regression formula related to the iron grades within the database.

The mineralisation was classified as Indicated and Inferred Mineral Resource based on the density of drilling density and kriging variance.

The MRE, by Mineral Resource category, are shown in Figure 26 and Table 26.

Figure 26 Longsection of the Mount Colin 2021 Mineral Resource (looking North)

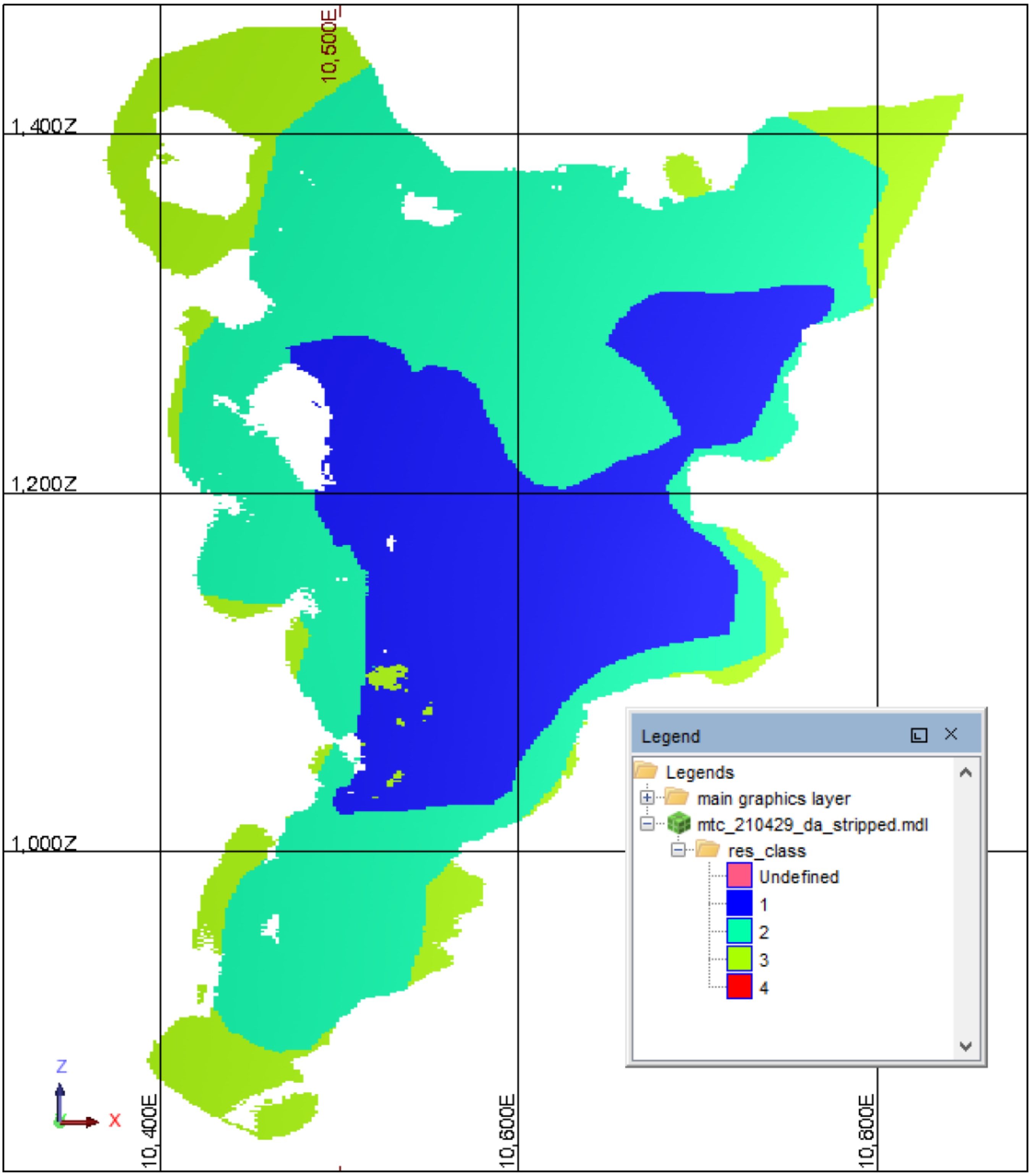


Table 37. Mineral Resource Estimate by Category as at 1 May 2021

| Category | Tonnes (Kt) | NSR ($/t) | Cu (%) | Au (g/t) |
|---|---|---|---|---|
| Measured | 642 | 291 | 3.46 | 0.67 |
| Indicated | 737 | 265 | 3.17 | 0.57 |
| Inferred | 127 | 218 | 2.61 | 0.46 |
| **Mt Colin Mineral Resource (M+I+I)** | **1,501** | **1,505** | **272** | **3.25** |
| **Contained metal** | | | | **49Kt** |

*Note: The Mount Colin MRE utilises an A$100/tonne NSR cut-off. MRE NSR is based on higher metal prices than the ORE. Tonnage estimates have been rounded to the nearest 1,000 tonnes*

## MINE DESIGN

### Cut-off Grade

A fully costed breakeven cut-off of $139/t NSR was used for initial evaluations of stopes and development layouts at Mount Colin. The fully costed cut-off covered operating development, sustaining capital development, stoping, surface haulage, processing and administration costs. Once the level strike extents were deemed economic by evaluating the high grade stopes, a breakeven stoping cut-off grade of $107/t NSR was used for designing the stopes between high grade stopes on a level as the cost of development had been applied to the high grade stopes.

A development cut-off of $48/t NSR was used to determine if development would be dumped as waste or trucked to the low grade ROM pad for processing at Ernest Henry when the opportunity arises.

### Mining Method

The mining method assumed in the Mount Colin LOM is a combination of centre out bench and fill stoping and Avoca bench stoping, using alternating accesses. The mining methods recover the ore by progressing bottom up in approximately 100m high panels. The mining methods are summarised below.

### Bench and Fill Stoping

The bench and fill mining method is developed from the centre of the orebody to the ends and then retreated back to the centre. Rockfill (RF) is tipped over the advancing ore face until the void is filled. RF is dug out to create a sufficient void to blast the next rings of ore. The new ore firing is blasted against the remaining RF causing mixing of ore and rockfill. The dilution is taken into account in the stoping and recovery factors applied to the stoping tonnes. This method is cyclical as each mining activity has to occur in a specific order. This method has typically two production fronts on each level retreating towards the central access. The proposed bench stoping is designed at 20m levels (floor to floor) above 1300 Level and 25m level intervals below 1300 Level. Stoping will progress from the bottom up in 100m vertical panels.

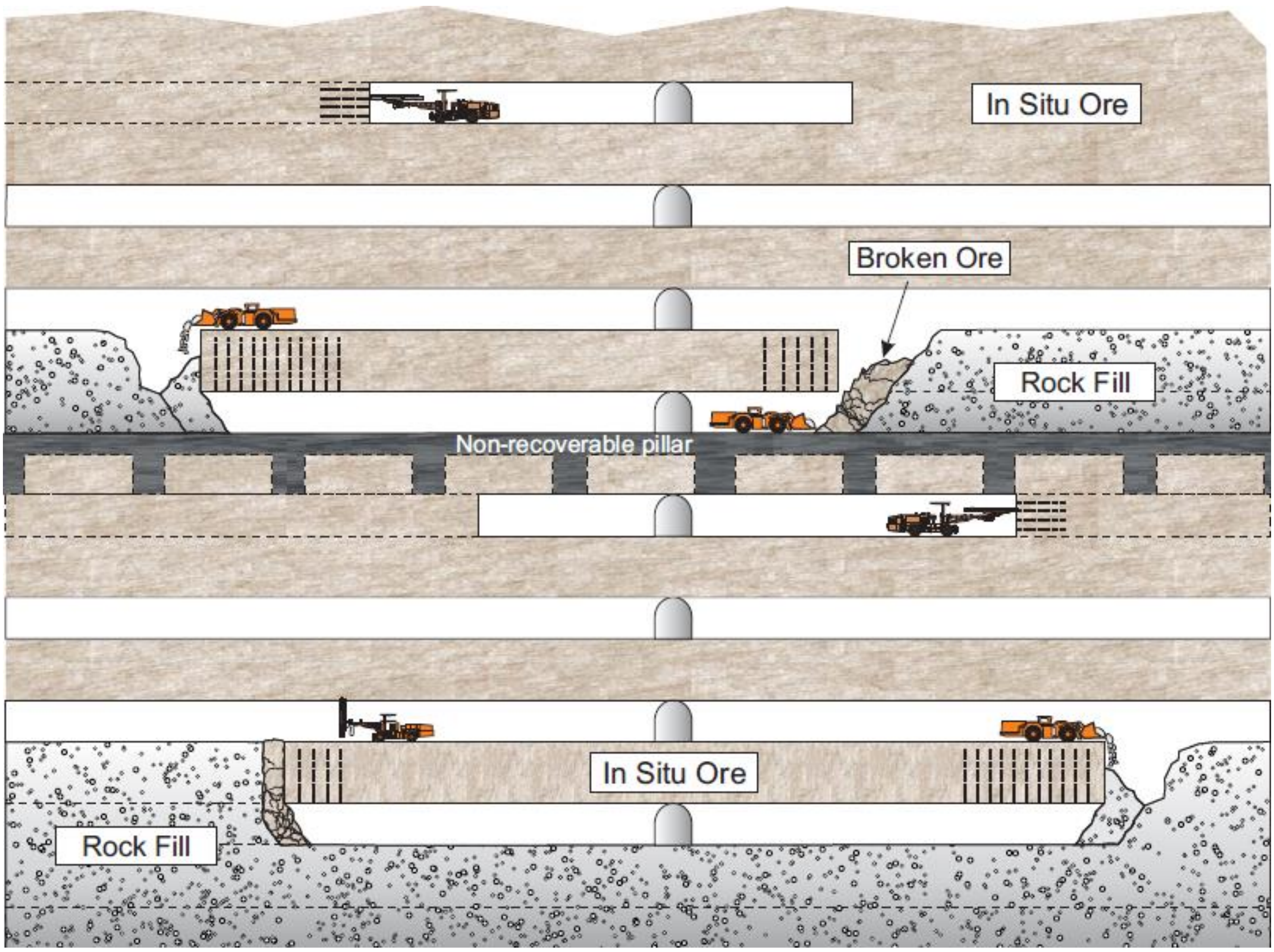
Key features include:

- The use of a bottom-up mining sequence in 100m vertical panels which allows production with limited pre-development.
- Cyclical production rates and requires multiple mining fronts to achieve continuous production

- Requirement for backfill which allows development waste to be dumped underground.
- High ore recovery with relatively low dilution
- A flexible mining method that can be adjusted to suit local ground conditions

A schematic of the bench stoping method for Mount Colin is shown in Figure 27.

**Figure 27 Bench stoping method for Mount Colin**




Sill pillars will be extracted with uphole open stoping method adopting a yielding pillar above and between the previously filled panel.

### Avoca Bench Stoping

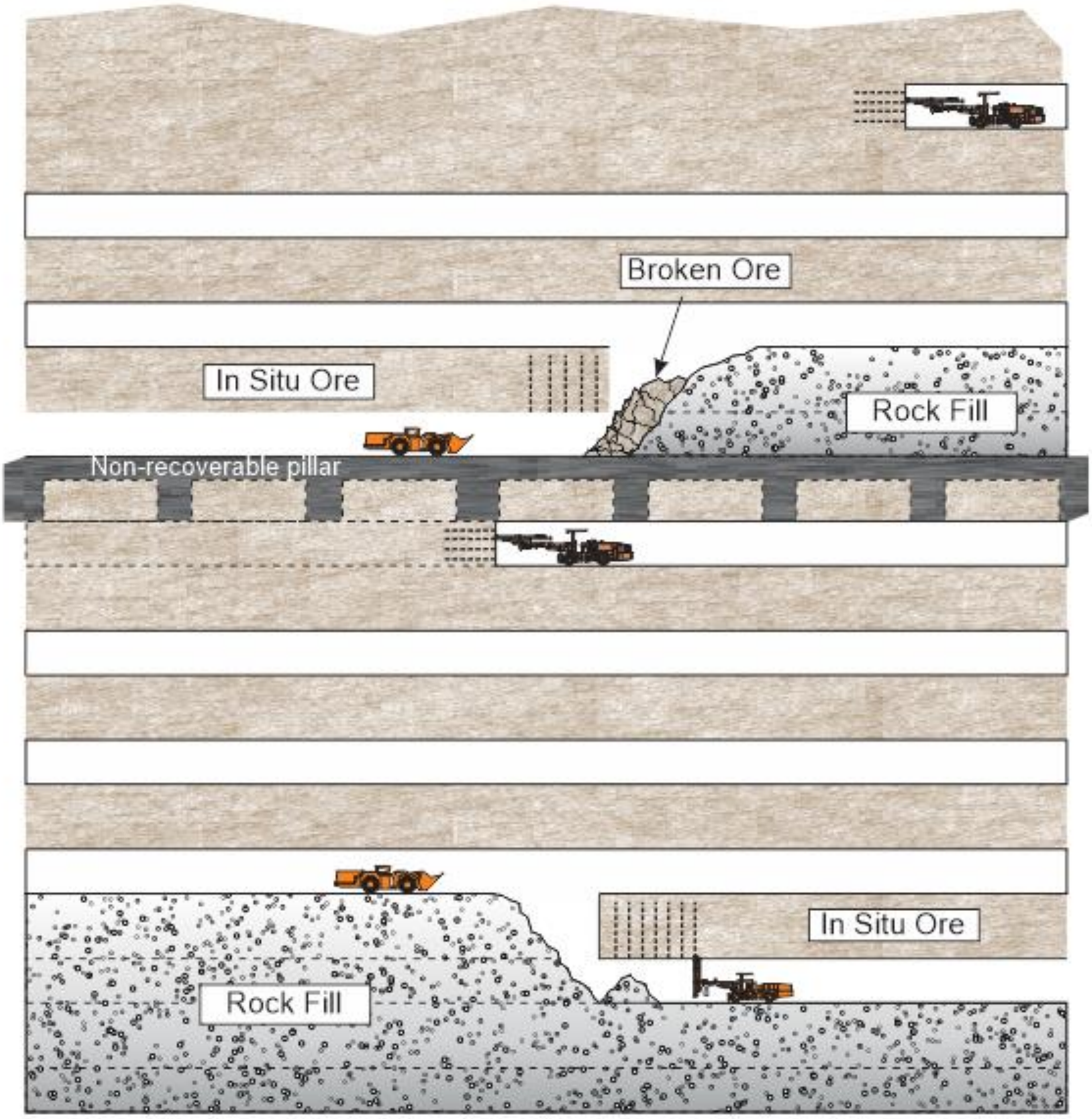
The Avoca with RF mining method is similar to bench stoping, but allows continuous production and filling to occur as the accesses are at alternative ends between levels.

Continuous Avoca advances from one end of the orebody to the other, with rock fill tipped behind the advancing ore face, minimizing contact between blasted ore and rock fill, thereby minimizing dilution and ore loss. The void between the insitu ore and the RF is based on the stability of the hanging wall and footwall. The maximum span is limited by a hydraulic radius determined by geotechnical consultants. Where ground conditions are good, the interaction between broken ore and RF is minimal. Where ground conditions deteriorate the void can be reduced by tipping more RF. This will reduce wall dilution, but will increase the interaction between the broken ore and the RF.

There is only one production area on each level for Avoca, but production is semi-continuous on the level until the last void is filled.

A schematic of the Avoca stoping method for Mount Colin is shown in Figure 28.

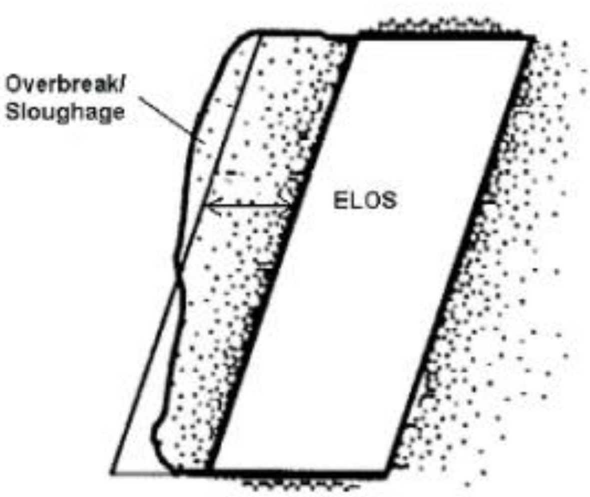
**Figure 28 Avoca stoping method for Mount Colin**



## MINING INVENTORY

The Mount Colin mining shapes were created using the $107/t NSR cut-off on 4m sections. The individual 4m stope wireframes were evaluated to determine the economic limits. Stope shapes were created by combining the 4m sections into practical stope shapes based on the stable Hydraulic Radius (HR) supplied by AMC Consultants (AMC). All stopes had equivalent linear overbreak slough (ELOS) dilution applied to the FW and HW to represent unplanned dilution at zero grade.
ELOS is represented in Figure 29.

**Figure 29 Schematic of ELOS**




Additional fill dilution and stope recoveries were applied to each combined stope shape, where appropriate, to determine the economic stopes. The fill floor dilution was applied only to stopes that were designed to bog off RF. The fill wall dilution was applied to stopes where it was expected to get ore and RF interaction.

The stope recovery and wall dilutions are dependent on the fresh, transition and oxide rock type.
The crown stope recovery seems high, but it is applied to the stope tonnes once the unrecoverable crown pillar and rib pillar have been subtracted from the original stope shape.

The fill dilution and stope recoveries are summarised in Table 38.

**Table 38. Additional stope dilution and stope recovery factors**

| | | Dilution ELOS (m) | | | |
|---|---|---|---|---|---|
| Stope Parameters | Stope Recovery (%) | FW | HW | Fill floor* | Fill Wall+ |
| Bench Stopes - Fresh | 95% | 0.5 | 0.5 | 0.15 | 0.3 |
| Bench Stopes - Transition | 80% | 1.0 | 1.0 | 0.15 | 0.3 |
| Bench Stopes - Oxide | 75% | 1.0 | 1.0 | 0.15 | 0.3 |
| Crown Stopes - Fresh | 90%# | 0.5 | 0.5 | 0.15 | 0 |

** fill floor dilution only to stope with fill floor*
*+ fill wall dilution only to stope with fill walls*

# *Stope recovery applied after rib and crown pillars have been subtracted*

Stopes that had an average insitu grade of less than $160/t had less stope recovery and wall dilution applied to ensure the stope extracted grades remained economic. The logic of the lower stope recoveries and dilution was lower grade areas would have production drill holes located further within the stope design. This would reduce overbreak and reduce wall dilution. This would also increase underbreak in the stopes and the reason the stope recoveries were reduced. The fill dilution remained the same as the normal stope parameters.

The fill dilution and stope recoveries for the lower grade stopes are summarised in Table 39.

**Table 39. Additional stope dilution and stope recovery factors for low grade stopes**

| Stope Parameters | Stope Recovery (%) | Dilution ELOS (m) | | | |
|---|---|---|---|---|---|
| | | FW | HW | Fill floor* | Fill Wall+ |
| Bench Stopes - Fresh | 90% | 0.10 | 0.10 | 0.15 | 0.3 |
| Bench Stopes - Transition | 75% | 0.25 | 0.25 | 0.15 | 0.3 |
| Bench Stopes - Oxide | 65% | 0.25 | 0.25 | 0.15 | 0.3 |
| Crown Stopes - Fresh | 85%# | 0.10 | 0.10 | 0.15 | 0 |

** fill floor dilution only to stope with fill floor*

*+ fill wall dilution only to stope with fill walls*

*# Stope recovery applied after rib and crown pillars have been subtracted*

## ORE RESERVES ESTIMATE

The ORE was based on the Mineral Resource classifications in the current geological block model.

Development and stopes were evaluated for tonnes and grade, as well as the proportions of Mineral Resource classifications. Where activities include various classifications within a shape the following process was used to determine if the ore was a Proved Ore Reserve, Probable Ore Reserve or an Inferred Production Target.

- If (Measured tonnes) / (Measured + Indicated + Inferred tonnes) > 90% the stope (or ore development) tonnes were classified as **Proved ORE**, otherwise
- If (Measured + Indicated tonnes) / (Measured + Indicated + Inferred tonnes) > 90% the stope (or ore development) tonnes were classified as **Probable ORE**, otherwise
- The remaining ore tonnes were classified as **Inferred Production Target** and not included in the ORE.

The ORE includes 130Kt of unplanned footwall and hangingwall dilution at zero grade based on the ELOS summarised in Table 38. This equates to 13% of the overall ORE tonnes. There is an additional 10Kt of fill floor and wall dilution included in the ORE and this accounts for 1% of the total tonnes. Where the development head grades dropped below the $48/t cut-off applied, the tonnes were deemed as waste and Unclassified.

The 90% Ore Reserve factor allows up to 10% of lower classified material to be included in a higher Ore Reserve classification before the entire stope or development round is downgraded to a lower Ore Reserve classification. It is the competent person's opinion that 10% of a lower classified material is not material to the integrity of an individual stope or development round, and the process used is deemed appropriate for an ORE.

The **Proved Ore Reserve** includes 10,300t of Indicated Mineral Resource and 900t of Inferred Mineral Resource. This equates to 4.1% of lower classified Mineral Resource in the Proved Ore Reserve and is deemed immaterial to the ORE.

The **Probable Ore Reserve** includes 3,900t of Inferred Mineral Resource. This equates to 0.5% Inferred Mineral Resource in the Probable Ore Reserve and is deemed immaterial to the ORE. The Probable Ore Reserve also includes 234Kt Measured Mineral Resource. This equates to 32% of the Probable Ore Reserve and these tonnes have been downgraded where stopes have less than 90% Measured Mineral Resource.

The 120Kt of **Production Target**, which is based on Inferred Mineral Resource, oxide ore and downgraded ore on the 1340 level, has not been included in the ORE. The Production Target includes 25Kt of Measured Mineral Resource and 75Kt of Indicated Mineral Resource. The fresh rock tonnes on the lower levels have been excluded from the ORE as the development and stope shapes include more than 10% of Inferred Mineral Resource in the design. The oxide ore in the upper levels and on 1340 level has been downgraded to a Production Target to reflect the uncertainty of ore recovery.

Underground mining commenced in August 2018 using Barminco mining contractors, and 747Kt of ore has been mined from the underground to the end of April 2021. This includes 576Kt mined since the last ORE in January 2020.

The 2021 ORE has increased by a net 175Kt since the January 2020 ORE. The increase in ORE excludes the 576Kt of mining depletion from January 2020 until the end of April 2021. This gives a total increase in the 2021 ORE of 750Kt, mainly due to infill drilling, geological confidence and the use of higher metal prices in the NSR formulas.

The 2021 ORE, by Ore Reserve category and rock type, is shown in Table 30.

**Table 40. Ore Reserve Estimate by Category and Rock Type as at 1 May 2021**

| Category | Rock Type | Tonnes (Kt) | NSR ($/t) | Cu (%) | Au (g/t) |
|---|---|---|---|---|---|
| Proved | Fresh | 275 | 213 | 2.83 | 0.51 |
| | Transition | | 0 | 0.00 | 0.00 |
| | Oxide | | 0 | 0.00 | 0.00 |
| **Proved** | | **275** | **213** | **2.83** | **0.51** |
| Probable | Fresh | 681 | 193 | 2.58 | 0.47 |
| | Transition | 51 | 188 | 3.08 | 0.65 |
| | Oxide | | 0 | 0.00 | 0.00 |
| **Probable** | | **732** | **192** | **2.62** | **0.48** |
| **Mt Colin Ore Reserves (P+P)** | | **1,007** | **198** | **2.68** | **0.49** |
| **Contained metal** | | | | **26.9 Kt** | **15.9 Koz** |

*Note: The Mount Colin full costed cut-off is ~$137/t. The ORE utilises an A$107/tonne NSR cut-off for stoping and A$48/tonne NSR cut-off for development. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

There is an 81% conversion factor from the 2021 MRE (Measured and Indicated) to the 2021 ORE. This is a very good result, considering the MRE uses higher metal prices and a lower cut-off of $100/t.

The 2020 ORE, by Ore Reserve category and rock type, is shown in Table 41.

**Table 41. Ore Reserve Estimate by Category and Rock Type as at 1 January 2020**

| Category | Rock Type | Tonnes (Kt) | NSR ($/t) | Cu (%) | Au (g/t) |
|---|---|---|---|---|---|
| Proved | Fresh | | 0 | 0.00 | 0.00 |
| | Transition | | 0 | 0.00 | 0.00 |
| | Oxide | | 0 | 0.00 | 0.00 |
| **Proved** | | | **0** | **0.00** | **0.00** |
| Probable | Fresh | 693 | 241 | 3.17 | 0.52 |
| | Transition | 139 | 159 | 2.54 | 0.44 |
| | Oxide | | 0 | 0.00 | 0.00 |
| **Probable** | | **832** | **227** | **3.07** | **0.50** |
| **Mt Colin Ore Reserves (P+P)** | | **832** | **227** | **3.07** | **0.50** |
| **Contained metal** | | | | **26.5 Kt** | **13.4 Koz** |

*Note: The Mount Colin full costed cut-off is ~$137/t. The ORE utilises an A$107/tonne NSR cut-off for stoping and A$48/tonne NSR cut-off for development. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

The change between the 2020 and 2021 ORE is shown in Table 32. Although the contained metal has increased, the head grade of each metal has decreased (3.07% to 2.68% for Cu and 0.50g/t to 0.43g/t for Au).

**Table 42. Change in 2020 and 2021 Ore Reserve Estimate**

| Description | Tonnes (Kt) | Cu (%) | Au (g/t) |
|---|---|---|---|
| **2020 to 2021 Ore Reserve change** | **175** | **0.81** | **0.43** |
| **2020 to 2021 Ore Reserve metal change** | 21% | **1,400 t** | **2,400 oz** |
| | change in metal | 6% | 18% |
| | change in grade | -13% | -2% |

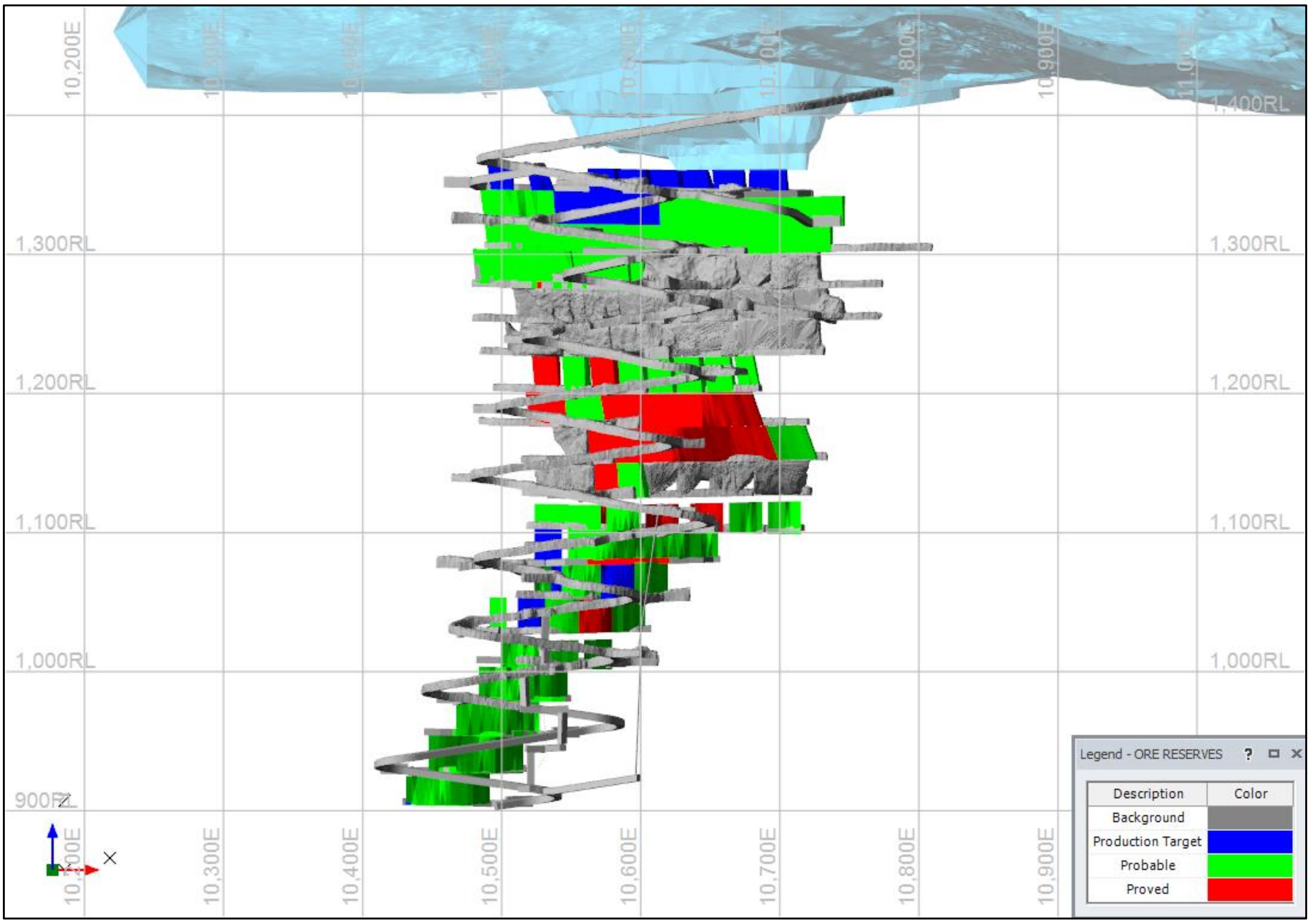
The main changes from 2020 to 2021 ORE are:

- The increased Measured MRE between 1025 and 1300 levels. Not all this is converted to Proved ORE due to the proportion of the classifications within each stope.
- Additional diamond drilling to improve the confidence in the lower levels as well as a better understanding of the upper levels.
- A change of MRE classification for the carbonate area from Inferred to Indicated where appropriate drilling density supported the change.
- The increased amount of interpreted oxide ore in the upper areas. NOTE all oxide stopes have been classified as a production target in the LOM and are not included in the 2021 ORE.

- No stoping above 1360 level has been included in the 2021 LOM as it is unlikely it will be recovered and no development has been designed in this area in the latest LOM. The 14Kt of 1360 stopes and development were included in the 2020 LOM, but were low grade and therefore eliminated from the 2021 LOM.
- The 1340 stopes have been changed to Uphole stopes with rib pillars and therefore no development is required on the 1360 level. The 1340 stopes were previously designed as downhole stopes with backfill in the 2020 LOM. Until there is further geotechnical advice on the likely recovery of the 1340 stopes and required pillar sizes, these tonnes are high risk tonnes and therefore been downgraded to a production target.
- Favourable changes to treatment and refining costs which increase NSR block values, adding new Resource material.
- Significant copper price increases which increase NSR block values, adding new Resource material.

A schematic of the 2021 ORE and Production Target can be seen in Figure 30.

**Figure 30 Schematic of Mount Colin Ore Reserve classifications**



## Specific Risks

The Upper Mining Area (above 1300mRL) is complicated by various ground conditions, consisting of a natural void comprising open voids, low strength natural weathered material and differing geological rock types. The ore zone comprises a predominantly fresh rock mass hosting fresh, transitional and oxide rock types. Economic ore zones have been based on modelled (infill drilling) metal grades and NSR parameters, however stope boundaries may not necessarily be along rock type boundaries.

The inability to develop within the orebody has led to a design that incorporates FW and HW drives with cross cuts to access the ore (Figure 9, 10 and 11). Cross cuts allow radial production drilling and access for backfilling. Probe drilling will be used to confirm the actual ore zone. The uncertainty of stope boundaries means that FW and HW dilution will be more difficult to control and in places ore may be left behind. More extensive ground support has been allowed for the various ground conditions encountered.

Additional costs have been allowed for in determining stoping boundaries for the ORE.

**Figure 9 1300mRL proposed development showing bypass of orebody zone containing natural voids.**

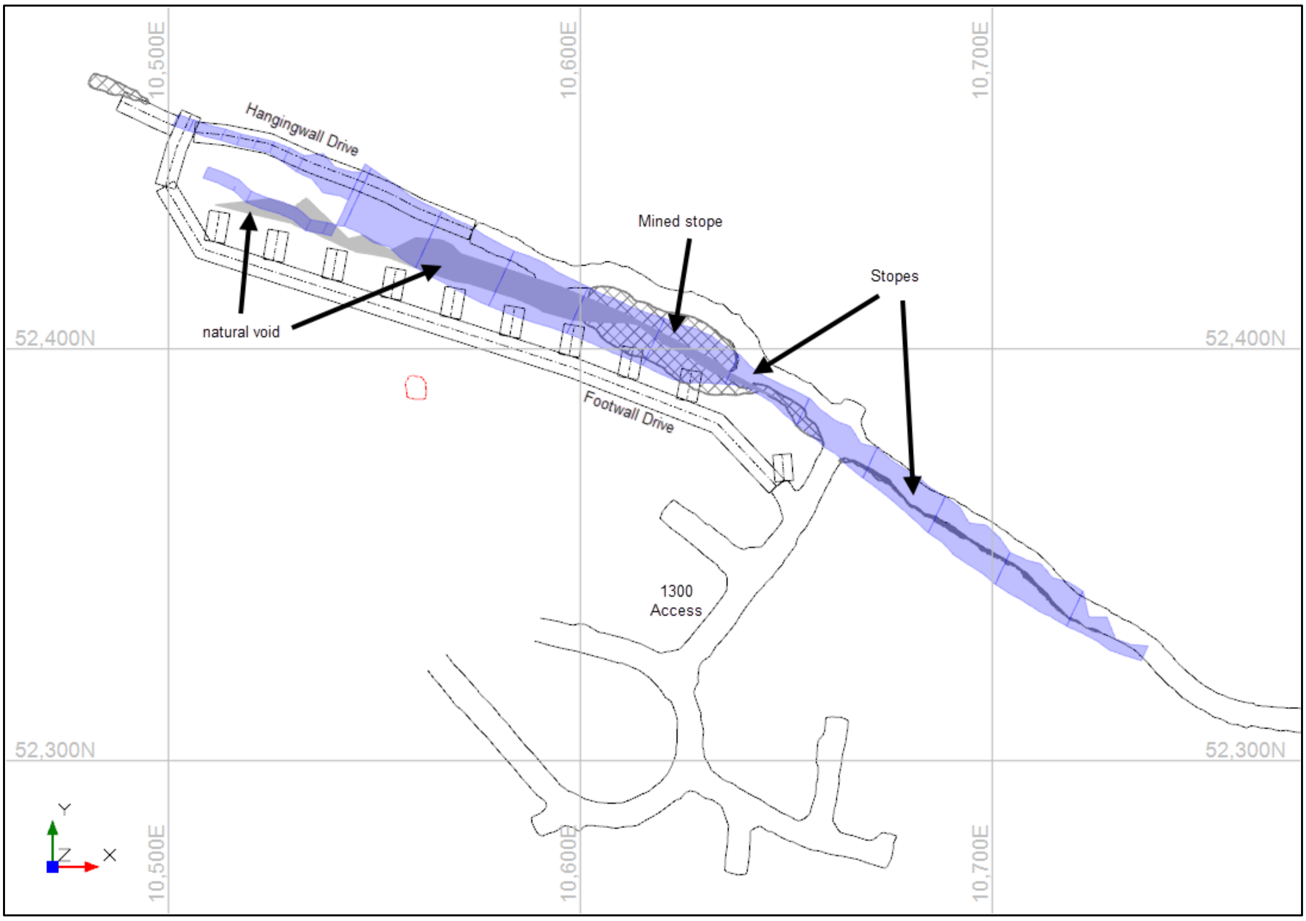


**Figure 10 1320mRL proposed development showing bypass of orebody zone containing natural voids.**

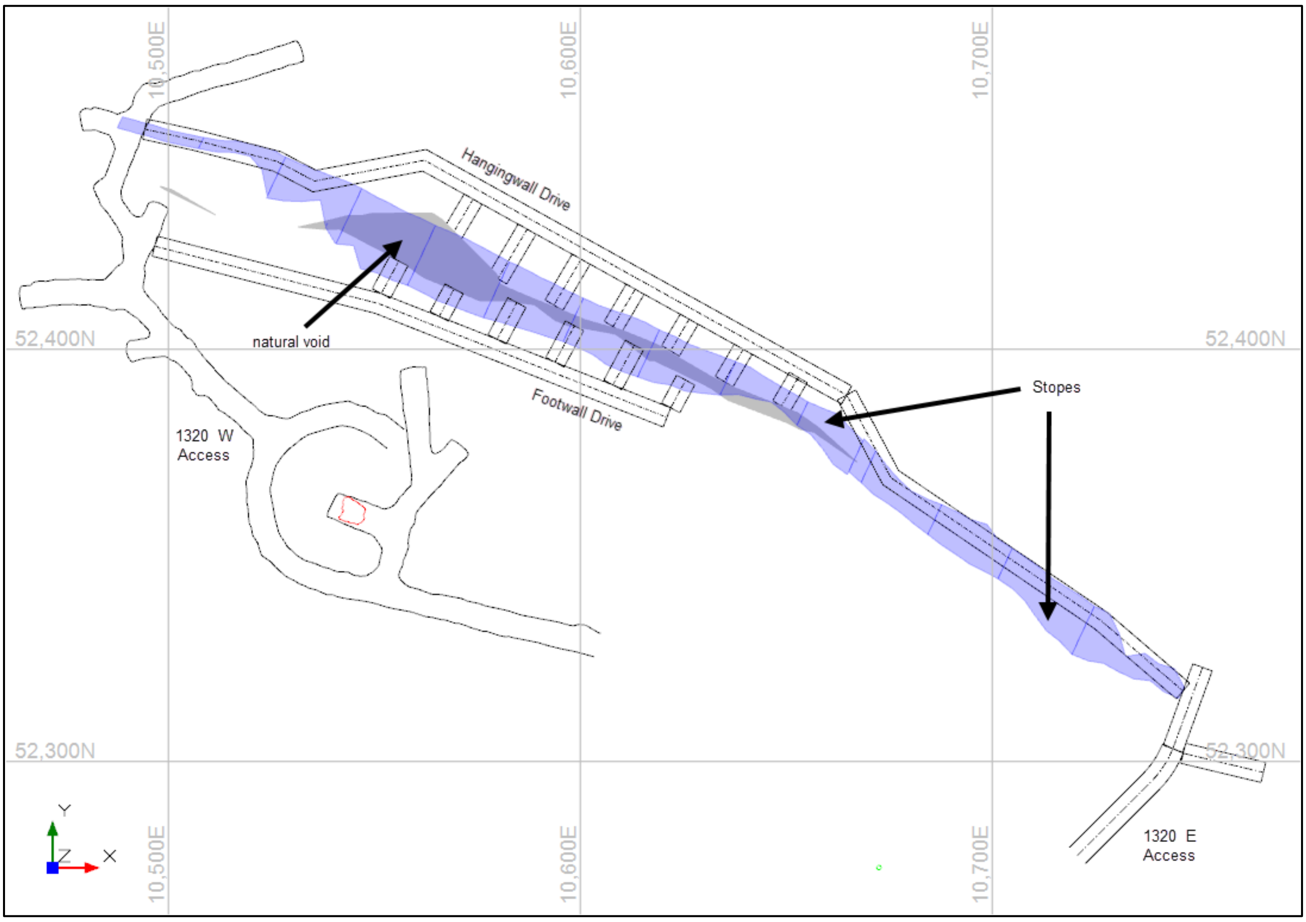
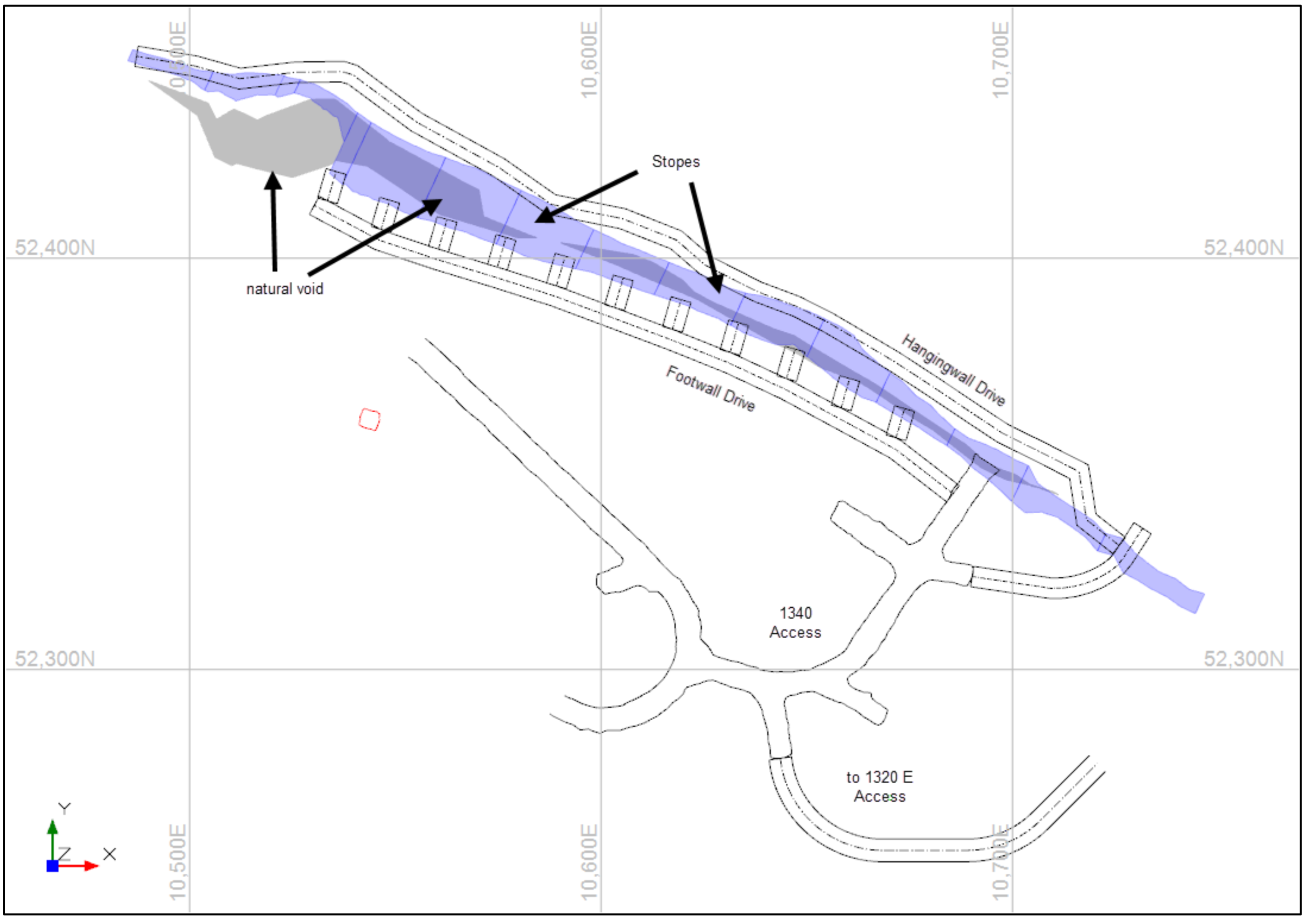



**Figure 11 1340mRL proposed development showing bypass of orebody zone containing natural voids.**

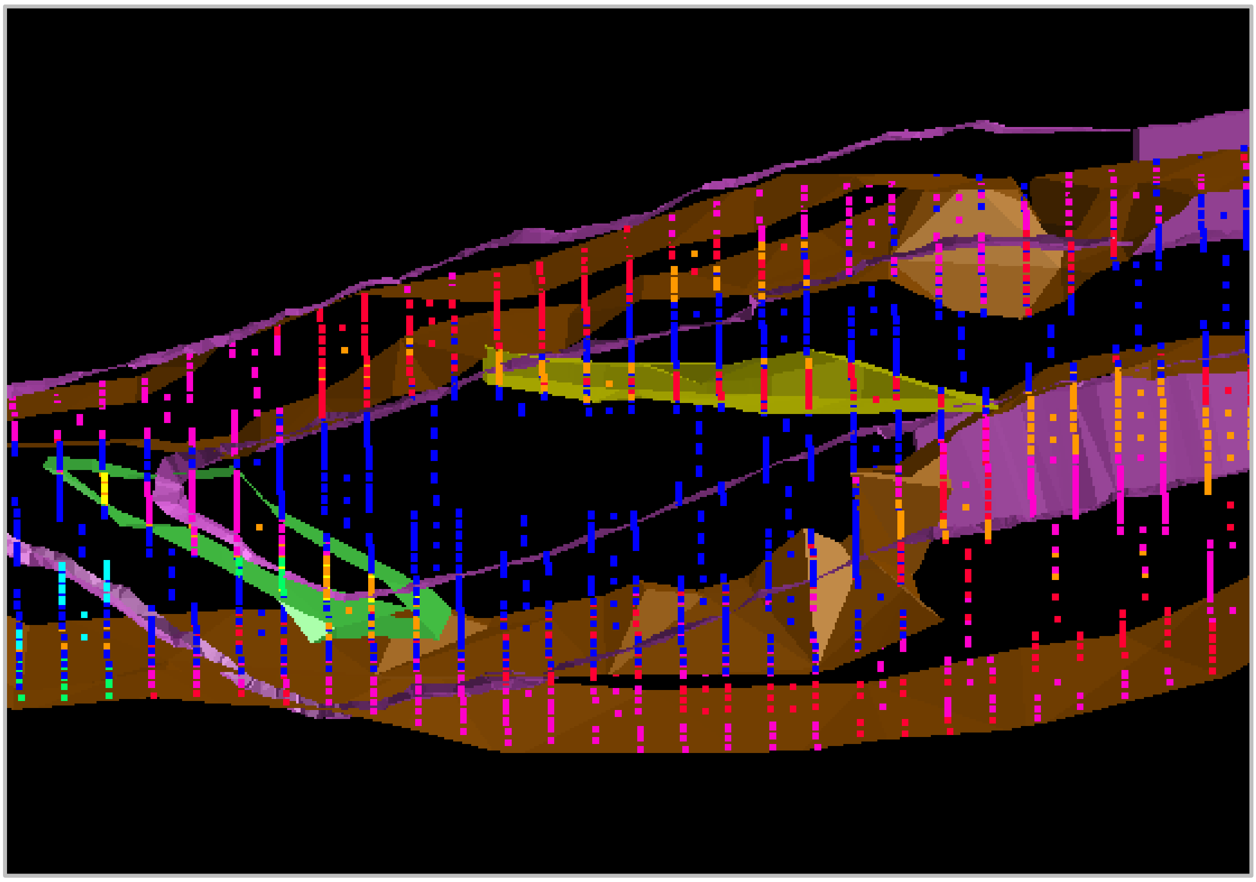



The Lower Mining Areas (below 1000mRL) have been grade control drilled to a density where the majority of the Resource has been classified as Indicated, apart from the orebody strike edges and link structures. The cross cutting mineralised link structures have been modelled (refer Figure 12) and lie between the HW and FW lenses. They have been estimated as separate domains, but are excluded from the MRE Measured/Indicated classification due to their lack of definition.

While development has been designed on high grade intersections entirely within the western carbonate, many have turned out to be narrow (up to 2m wide), on the FW and HW contacts, with high-grade cross cutting links, spurs and associated pods. These create a false impression of a wide continuous ore zone. Standard procedure is now to extensively probe drill between FW and HW, after development, to better define these linking mineralised structures.

Detailed mapping of the ore drive is required to model the cross cut structures for inclusion in stope designs. This may lead to unplanned dilution and ore loss in the planning process where there is insufficient definition.

**Figure 12   1025mRL level showing the linking structures (green and yellow)**



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

(Criteria listed in section 1, and where relevant in sections 2 & 3, also apply to this section)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Mineral Resource estimate for conversion to Ore Reserves** | • Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.<br>• Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. | • The 2021 ORE is based on the following Mineral Resource block model provided in May 2021. The block model has been created using Surpac mining software.<br>– mtc_210429_da_stripped.mdl<br>• The MRE includes the ORE. |
| **Site visits** | • Comment on any site visits undertaken by the Competent Person and the outcome of those visits.<br>• If no site visits have been undertaken indicate why this is the case. | • The Mount Colin ORE was produced by John McKinstry, who is a fulltime employee of Round Oak Minerals with good knowledge of the operation, with assistance from Anthony Allman, director of ANTCIA Consulting Pty Ltd. |
| **Study status** | • The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.<br>• The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that | • The ORE is based on the current operational practices at the Mount Colin underground mine.<br>• The ORE is based on three dimensional mine designs and schedules completed on site using Deswik software.<br>• A mining method review and redesign of the LOM was completed in May 2021. This included development design, stope access and mining method application.<br>• Mount Colin ore is currently being toll treated in batches at the Ernest Henry Processing Facility, 108km from the mine.<br>• The ORE considered all material modifying factors from the current operation and concluded that the existing mine plan was technically feasible and economically viable. |

<table>
<tr><td></td><td>material Modifying Factors have been considered.</td><td></td></tr>
<tr><td>Cut-off parameters</td><td><ul><li>The basis of the cut-off grade(s) or quality parameters applied.</li></ul></td><td><ul><li>The cut-off value of $107/t NSR incorporated stoping operating costs including stoping, haulage, processing and administration. The $48/t cut-off for development incorporated only the surface haulage cost to Ernest Henry and processing.</li><li>A fully costed breakeven cut-off of $139/t NSR was also used for evaluating mining extension at depth. The fully costed cut-off incorporated all operating costs including operating development, sustaining capital development, stoping, haulage, processing and administration.</li><li>All costs used for cut-off estimation were based on existing and proposed costs at Mount Colin.</li><li>Costs beyond the mine gate and the Ernest Henry processing facility, including concentrate haulage, port facilities, shipping, penalties and royalties, are netted from revenues of concentrates and create the Net Smelter Return estimates.</li></ul></td></tr>
<tr><td>Mining factors or assumptions</td><td><ul><li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li><li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li><li>The assumptions made regarding geotechnical parameters (eg pit</li></ul></td><td><ul><li>No Inferred Mineral Resource was specifically targeted for the 2021 ORE. There is 4,900t (0.5% of the ORE) of Inferred Mineral Resource within the Proved and Probable Ore Reserve. The competent person deems this to be immaterial.</li><li>The mining method used for the LOM was a combination of cyclical retreat benching and continuous Avoca benching.</li><li>Stope shapes in the ORE include an allowance of unplanned and fill dilution as well as various stope recoveries shown below.</li></ul>
<table>
<tr><th></th><th></th><th colspan="4">Dilution ELOS (m)</th></tr>
<tr><th>Stope Parameters</th><th>Stope Recovery (%)</th><th>FW</th><th>HW</th><th>Fill floor*</th><th>Fill Wall+</th></tr>
<tr><td>Bench Stopes - Fresh</td><td>95%</td><td>0.5</td><td>0.5</td><td>0.15</td><td>0.3</td></tr>
<tr><td>Bench Stopes - Transition</td><td>80%</td><td>1.0</td><td>1.0</td><td>0.15</td><td>0.3</td></tr>
<tr><td>Bench Stopes - Oxide</td><td>75%</td><td>1.0</td><td>1.0</td><td>0.15</td><td>0.3</td></tr>
<tr><td>Crown Stopes - Fresh</td><td>90%[#]</td><td>0.5</td><td>0.5</td><td>0.15</td><td>0</td></tr>
</table>
</td></tr>
</table>

<table>
<tr>
<td></td>
<td>
slopes, stope sizes, etc), grade control and pre- production drilling.
<ul>
<li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li>
<li>The mining dilution factors used.</li>
<li>The mining recovery factors used.</li>
<li>Any minimum mining widths used.</li>
<li>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li>
<li>The infrastructure requirements of the selected mining methods.</li>
</ul>
</td>
<td>
* fill floor dilution only to stope with fill floor<br>
+ fill wall dilution only to stope with fill walls<br>
# Stope recovery applied after rib and crown pillars have been subtracted
<ul>
<li>For stopes with an average insitu NSR value of less than $160/t lower stope recoveries and dilution factors were applied.</li>
</ul>
<table>
<tr><th></th><th></th><th colspan="4">Dilution ELOS (m)</th></tr>
<tr><th>Stope Parameters</th><th>Stope Recovery (%)</th><th>FW</th><th>HW</th><th>Fill floor*</th><th>Fill Wall+</th></tr>
<tr><td>Bench Stopes - Fresh</td><td>90%</td><td>0.1</td><td>0.1</td><td>0.15</td><td>0.3</td></tr>
<tr><td>Bench Stopes - Transition</td><td>75%</td><td>0.25</td><td>0.25</td><td>0.15</td><td>0.3</td></tr>
<tr><td>Bench Stopes - Oxide</td><td>65%</td><td>0.25</td><td>0.25</td><td>0.15</td><td>0.3</td></tr>
<tr><td>Crown Stopes - Fresh</td><td>85%#</td><td>0.1</td><td>0.1</td><td>0.15</td><td>0</td></tr>
</table>
<ul>
<li>Sub level intervals vary from 20m above 1300 Level and 25m below 1300 Level at Mount Colin. This is based on appropriate method for control of dilution, reduction of pillars and ore loss, ground control, safety and regional stability.</li>
<li>A minimum stoping width of 4m has been used.</li>
<li>Stable stope dimensions have been based on geotechnical feedback from AMC Consultants.</li>
<li>Practical designed have been included for ventilation, power, pumping and drainage as well as second means of egress.</li>
<li>Majority of the stopes will be filled using rock fill to improve stope stability and increase ore recovery.</li>
</ul>
</td>
</tr>
<tr>
<td>Metallurgical factors or assumptions</td>
<td>
<ul>
<li>The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.</li>
</ul>
</td>
<td>
<ul>
<li>The ORE is predicated on the toll treatment of ore at the Ernest Henry processing facility. Ore is batch fed to Ernest Henry in approximately 50Kt allotments with a nominal production rate of 460Ktpa.</li>
<li>The Ernest Henry metallurgical process flow sheet is conventional crush, grind and then differential flotation to produce saleable copper-rich concentrate.</li>
</ul>
</td>
</tr>
</table>

| | | |
|---|---|---|
| | Whether the metallurgical process is well-tested technology or novel in nature.<br>• The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.<br>• Any assumptions or allowances made for deleterious elements.<br>• The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.<br>• For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications | • Many drill core composite samples have undergone metallurgical testing with representative samples selected from of the different geometallurgical domains within the deposit.<br>• Geometallurgical algorithms have been developed that indicated recoveries will vary over time in accordance with the mineralogy present at the time of processing.<br>• The life-of-mine metallurgical recovery assumptions are as follows:<br>  • Copper concentrate:<br>  94% of head copper for fresh rock<br>  70% of head copper for transition rock<br>  70% of head copper for oxide rock<br>  73% of head gold for fresh rock<br>  70% of head gold for transitional rock<br>  70% of head gold for oxide rock.<br>• Previous metallurgical testing has demonstrated that the Mount Colin concentrates can be produced as a saleable product with acceptable chemistry and low levels of potentially deleterious elements.<br>• Oxide and transition ore has been previously treated at Ernest Henry Mine during open cut mining operations<br>• It is assumed that all deleterious elements are within tolerances and no penalties have been applied to financial calculations. |
| **Environmental** | • The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue | • The Mount Colin Mine is in full operation and has all environmental, statutory and social approvals and licenses to operate. The project continues to meet the reporting requirements under the terms of the project approval and as such remains in good standing with all regulatory authorities.<br>• The Mount Colin Deposit is located on ML2640. |

| | | |
|---|---|---|
| | storage and waste dumps should be reported. | |
| **Infrastructure** | • The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed. | • All surface infrastructures are complete with no new surface infrastructure required for constructing the 2021 ORE.<br>• Ongoing underground sustaining capital and infrastructure including declines, level accesses, escapeways, vent accesses and rises, pump stations and substations will need to be developed as part of the ORE. This has been accounted for in the cost analysis and cut-off values in determination of ore. |
| **Costs** | The derivation of, or assumptions made, regarding projected capital costs in the study.<br>• The methodology used to estimate operating costs.<br>• Allowances made for the content of deleterious elements.<br>• The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.<br>• The source of exchange rates used in the study.<br>• Derivation of transportation charges.<br>• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.<br>• The allowances made for royalties payable, both Government and private. | • Capital costs for decline development and accesses were included in the financial evaluation. Other capital such as surface and underground infrastructure have also been included in the financial evaluation.<br>• Operating costs for mining were modelled on existing site costs and benchmarked against similar style of ore deposits to Mount Colin Mine. The operating processing costs are based on the current toll treatment at Ernest Henry processing plant operation.<br>• Offsite transportation, treatment and refining charges have been provided by Round Oak management and included in the NSR calculation and financial modelling.<br>• A variable QLD state royalty applies to copper and gold. The rate varies between 2.50% and 5.00% (varying in 0.02% increments) of value, depending on average metal prices<br>• Metal price and exchange rate assumptions are as provided by Round Oak Board and have been based on +2 year consensus forecasts. |

<table>
<tr><td>Revenue factors</td><td>
<ul>
<li>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li>
<li>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li>
</ul>
</td><td>
<ul>
<li>The mining and processing tonnes and grade were scheduled monthly to enable detailed financial analysis of the project.</li>
<li>The following table represents revenue and metal recovery assumptions.</li>
</ul>
<table>
<tr><th>Commodity</th><th>Unit</th><th>2021 Mineral Resource</th><th>2021 Ore Reserves</th><th>2021 Metal Recovery</th></tr>
<tr><td>Copper</td><td>US$/t</td><td>8,014</td><td>7,285</td><td>94%, 70%, 70%*</td></tr>
<tr><td>Gold</td><td>US$/oz</td><td>2,003</td><td>1,821</td><td>73%, 70%, 70%*</td></tr>
<tr><td>FX</td><td>AUD/USD</td><td>0.76</td><td>0.76</td><td></td></tr>
</table>
*Metallurgical recoveries applied to Fresh, Transition, and Oxide ore.
</td></tr>
<tr><td>Market assessment</td><td>
<ul>
<li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li>
<li>A customer and competitor analysis along with the identification of likely market windows for the product.</li>
<li>Price and volume forecasts and the basis for these forecasts.</li>
</ul>
For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract
</td><td>
<ul>
<li>The volume and high quality of concentrate produced is expected to continue to attract a ready market domestically and internationally.</li>
<li>With predicted future market supply deficits for copper, it is expected there will be continued robust interest in supply or take agreements.</li>
</ul>
</td></tr>
<tr><td>Economic</td><td>
<ul>
<li>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and</li>
</ul>
</td><td>
<ul>
<li>A financial model of the Mount Colin Project has been completed by suitably qualified and experienced accounting and financial staff employed by Round Oak and has been reviewed by senior management of Round Oak. The financial model demonstrates a positive NPV.</li>
</ul>
</td></tr>
</table>

| | | |
|---|---|---|
| | confidence of these economic inputs including estimated inflation, discount rate, etc.<br>• NPV ranges and sensitivity to variations in the significant assumptions and inputs. | |
| **Social** | • The status of agreements with key stakeholders and matters leading to social licence to operate. | • Mount Colin mine is in full operation and has all environmental and social approvals and licenses to operate. The project continues to meet the reporting requirements under the terms of the project approval and as such remains in good standing with all regulatory authorities. |
| **Other** | • To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:<br>• Any identified material naturally occurring risks.<br>• The status of material legal agreements and marketing arrangements.<br>• The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. | • There are no foreseeable risks associated with the Mount Colin mine that are expected to impact on the ORE. |

| | | |
|---|---|---|
| | Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the Ore Reserve is contingent. | |
| **Classification** | • The basis for the classification of the Ore Reserves into varying confidence categories.<br>• Whether the result appropriately reflects the Competent Person's view of the deposit.<br>• The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any). | • The ORE is based on the MRE.<br>• Where there is greater than 90% Measured MRE within stopes and ore development, the tonnes have been converted to Proved Ore Reserves.<br>• Where there is greater than 90% Measured and Indicated MRE within stopes and ore development, the tonnes have been converted to Probable Ore Reserves.<br>• The Ore Reserve classification process evaluated all Mineral Resource classifications within individual stope shapes and development designs.<br><br>• If (Measured tonnes) / (Measured + Indicated + Inferred tonnes) > 90% the stope (or ore development) tonnes were classified as **Proved ORE**, otherwise<br>• If (Measured + Indicated tonnes) / (Measured + Indicated + Inferred tonnes) > 90% the stope (or ore development) tonnes were classified as **Probable ORE**, otherwise<br>• The remaining ore tonnes were classified as **Inferred production target** and not included in the 2021 ORE.<br><br>• The 2021 ORE includes 4,900t (0.5%) Inferred Mineral Resource tonnes which is deemed by the competent person to be immaterial to the ORE.<br>• The 2021 ORE includes 130Kt (13%) of unplanned dilution tonnes at zero grade. There is also 10Kt of fill floor and wall dilution in the ORE.<br><br>• It is the competent person's view that the classifications used for the 2021 ORE are appropriate. |

| | | |
|---|---|---|
| **Audits or reviews** | • The results of any audits or reviews of Ore Reserve estimates. | • No external audit of this ORE has been completed, but the process has been internally reviewed by Round Oak management, and is a continuation of previously prepared statements. |
| **Discussion of relative accuracy/ confidence** | • | • The ORE is mostly determined by the order of accuracy associated with the latest Mineral Resource model, the metallurgical inputs and the cost adjustment factors used.<br>• The ORE is based on recent operational performance and costs at the mine, hence confidence in the resulting figures is high.<br>• Confidence in the mine design and schedule is high as mining rates and modifying factors are based on actual site performance. Mine design is consistent with what has been effective previously. |

# Stockman Project May 2021
# ORE RESERVES STATEMENT

## SUMMARY

Round Oak Minerals (Round Oak) have updated the Ore Reserves Estimate for its 100% owned Stockman Project (Stockman) in Victoria. The updated Stockman Ore Reserves Estimate (ORE) is based on the Stockman Selection Phase Study (SPS) completed in September 2019. The Stockman ORE has been completed in accordance with the JORC Code (2012 Edition) and is reported as at 1 May 2021.

The 2021 ORE has been derived from the Mineral Resource models using ore classified in the Indicated category only. The 2021 ORE represents a decrease in tonnage over the previous 2020 ORE of 705Kt (7% decrease). This decrease is due to an increase in cut-off applied at both Wilga and Currawong.

Table 22 summarises the Stockman Project May 2021 Mineral Resource Estimate (MRE) for the Currawong and Wilga orebodies only (excludes Bigfoot and Eureka which are Inferred category only).

| Category | Tonnes (kt) | NSR (A$/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|
| Measured | 580 | 313 | 1.04 | 7.34 | 0.99 | 119 |
| Indicated | 574 | 369 | 1.07 | 9.52 | 1.06 | 139 |
| Inferred | 924 | 295 | 0.82 | 7.57 | 0.94 | 110 |
| **Mineral Resource** | **2,078** | **320** | **0.95** | **8.04** | **0.99** | **121** |
| Contained Metal | | | 19.7 kt | 167.0 kt | 66.1 koz | 8.0 Moz |

*Note: The MRE utilises an A$100/t NSR cut-off. MRE NSR is based on higher metal prices than the ORE. Tonnage estimates have been rounded to the nearest 1,000 tonnes.*

**Table 23** summarises the Stockman Project May 2021 ORE.

**Table 43. Stockman Project Mineral Resource Estimate (Currawong and Wilga only) as at 1 May 2021**

| Category | Mine Area | Tonnes (Kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|---|
| Measured | Currawong | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| | Wilga | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| **Measured** | | | **0** | **0.00** | **0.00** | **0.00** | **0.0** |
| Indicated | Currawong | 9,550 | 244 | 2.03 | 4.16 | 1.19 | 42 |
| | Wilga | 2,852 | 247 | 2.11 | 4.93 | 0.44 | 31 |
| **Indicated** | | **12,400** | **244** | **2.05** | **4.34** | **1.02** | **39** |
| Inferred | Currawong | 780 | 143 | 1.35 | 2.03 | 0.46 | 23 |
| | Wilga | 657 | 375 | 3.77 | 5.59 | 0.41 | 34 |
| **Inferred** | | **1,438** | **260** | **2.45** | **3.66** | **0.44** | **28** |
| **Stockman Mineral Resource (M+I+I)** | | **13,839** | **235** | **2.09** | **3.66** | **1.0** | **38** |
| **Contained metal** | | | | **289 Kt** | **538 Kt** | **428 Koz** | **16.9Moz** |

*Note: The Stockman MRE utilises a 1.2%Cu and 3.0%Zn cut-off for massive sulphides and 0.5%Cu and 2.0%Zn for stringer mineralisation. MRE NSR is based on higher metal prices than the ORE. Tonnage estimates have been rounded to the nearest 10,000 tonnes*

Table 44. Stockman Project Ore Reserve Estimate as at 1 May 2021

| Category | Mine Area | Tonnes (Kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|---|
| Proved | Currawong | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| | Wilga | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| **Proved** | | | **0** | **0.00** | **0.00** | **0.00** | **0.0** |
| Probable | Currawong | 7,988 | 206 | 1.91 | 4.04 | 1.13 | 38.2 |
| | Wilga | 1,652 | 212 | 1.83 | 5.46 | 0.52 | 30.1 |
| **Probable** | | **9,640** | **207** | **1.90** | **4.28** | **1.02** | **36.8** |
| **Stockman Ore Reserves (P+P)** | | **9,640** | **207** | **1.90** | **4.28** | **1.02** | **36.8** |
| **Contained metal** | | | | **183 Kt** | **413 Kt** | **317 Koz** | **11.4 Moz** |

*Note: The Stockman ORE utilises an A$120/tonne NSR cut-off for stoping and A$50/tonne NSR cut-off for development. It also ensures all stopes have a minimum diluted head grade of $144/t Tonnage estimates have been rounded to the nearest 10,000 tonnes.*

## INTRODUCTION

Stockman consists of two proposed mines, Currawong and Wilga, located within 8km of each other, and a proposed processing plant located near Currawong. Wilga commenced operation in 1992 and was put on care and maintenance in 1996 after mining 956Kt of ore using a post pillar cut and fill mining method.

In January 2013 a feasibility study (FS) was completed by Independence Group NL (IGO) with an optimisation study following in November 2014. In April 2016 an Options study was completed by Kenmore Mine Consulting that focussed on alternative scheduling options of the previous designs. The previous studies were used as a reference point for the SPS study completed by Round Oak and the SPS design formed the basis of the 2021 ORE.

The Wilga deposit is a single lens of massive sulphide with a relatively flat dip of approximately 35 degrees. The Currawong deposit has multiple lenses with varying dips that range from approximately 40 degrees to 60 degrees. The majority of the ore is located in M lens and B lens. Two other deposits, Bigfoot and Eureka have not been included as these are currently only drilled to Inferred Resource category status

## NET SMELTER RETURN

Since Stockman is a polymetallic operation producing copper, zinc, gold and silver, a net smelter return (NSR) in A$/t has been used to estimate the value of the ore net of all costs after saleable products leave site. The NSR estimate takes into account metal recoveries associated with the production of copper and zinc concentrates. This includes mill recoveries, road freight, wharfage, ship loading, sea freight, treatment charges, refining costs and royalties. The revenue from the smelter is also net of payable metal and smelter penalties.

The NSR ($/t) is estimated using the following formula:

*NSR = [metal grade x expected metallurgical recovery x expected payables x metal price] – [concentrate freight and treatment charges, penalties and royalties]*

A separate NSR was built into the geological block model for the MRE and ORE based on the various metal prices. The ORE prices are based on +2 year consensus forecasts approved by the Round Oak Board.

The MRE have been estimated with higher metal prices in line with 2012 JORC Code stating that:

> *A 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are **reasonable prospects for eventual economic extraction**.*

It is reasonable that metal prices stated under the Mineral Resources section have been achieved in the past and have reasonable prospects of being achieved in future based on the Stockman Mine Life.

Metal price parameters used in the NSR estimation are listed in Table 24.

**Table 45. Metal price assumptions used for the purpose of 2021 Ore Reserves**

| Commodity | Unit | Mineral Resource May 2021 | Ore Reserves May 2021 |
|---|---|---|---|
| Copper | US$/t | 8,014 | 7,285 |
| Zinc | US$/t | 2,713 | 2,466 |
| Gold | US$/oz | 2,003 | 1,821 |
| Silver | US$/oz | 26.15 | 23.77 |
| Exchange Rate | AUD/USD | 0.76 | 0.76 |

The Stockman 2021 MRE NSR value was built into the geological block models using the following formula:

**NSR = 70.023 x Cu% + 16.648 x Zn% + 14.054 x Au g/t + 0.366 x Ag g/t**

The Stockman 2021 ORE NSR value was built into the geological block models using the following formula:

**NSR = 62.934 x Cu% + 14.677 x Zn% + 12.631 x Au g/t + 0.329 x Ag g/t**

Metallurgical recoveries, concentrate grades and offsite costs for both MRE and ORE are given in Table 25. Metallurgical recoveries are based on operating experience and ongoing metallurgical test work.

**Table 46. Metal recoveries and concentrate grades**

| Physical Assumptions | Unit | Ore Reserves May 2021 |
|---|---|---|
| Copper Recovery | % | 81 |
| Copper Recovery | % | 81 |
| Zinc Recovery | % | 75 |
| Gold Recovery | % | 21 |
| Silver Recovery to Cu conc | % | 43 |
| Silver Recovery to Zn conc | % | 13 |
| Copper concentrate grade | % | 21 |
| Zinc concentrate grade | % | 50 |
| Payable Copper | % | 96.5 |
| Payable Zinc | % | 88 |
| Payable Gold | % | 90 |
| Payable Silver in Cu conc | % | 90 |
| Payable Silver in Zn conc | % | 70 (after first 3oz) |
| Copper treatment charge | US$/conc dmt | 80 |
| Zinc treatment charge | US$/conc dmt | 250 |
| Copper refining cost | US$/payable lb | 0.08 |
| Gold refining cost | US$/payable oz | 5.00 |
| Silver refining cost | US$/payable oz | 0.35 |
| Road Transport | AU$/conc wmt | 94.21 |
| Wharfage | AU$/conc wmt | 0.00 |
| Sea Transport | US$/conc wmt | 40.14 |

## MINERAL RESOURCE ESTIMATE

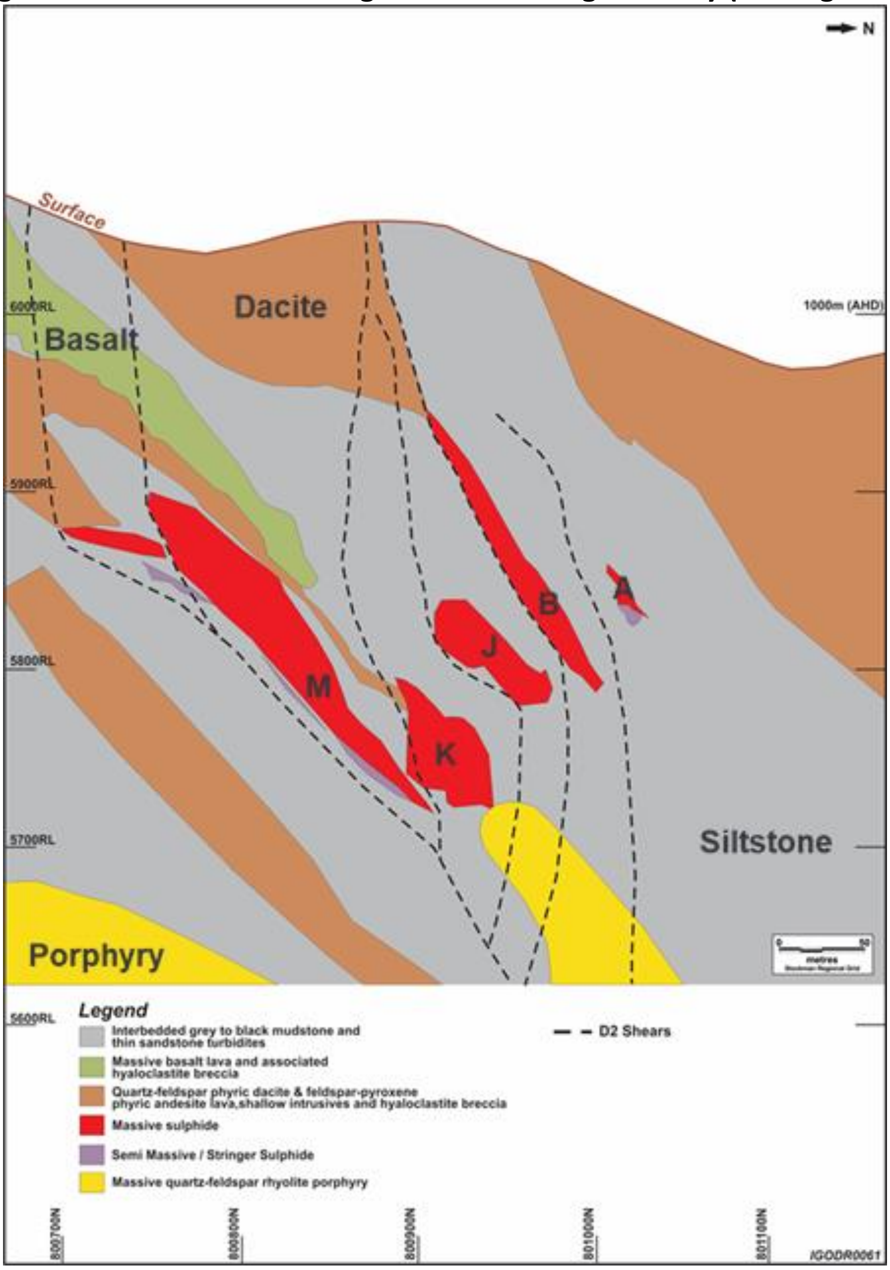
The Stockman Wilga and Currawong polymetallic VHMS deposits (Zn-Cu-Pb-Ag-Au) occur in the Upper Silurian age Cowambat Rift in the Palaeozoic Lachlan Fold Belt of south-eastern Australia. The Cowambat Rift has undergone strong regional deformation and the Stockman deposits are both located in a remnant fault bound tectonostratigraphic block known as the Limestone Creek Graben. Both deposits are hosted by the Enano Group which locally overlies Ordovician to Silurian turbidite metasediments, with lesser basaltic and andesitic volcanic components. The Enano Group is overlain by early Devonian age welded ignimbrites of the Snowy River Volcanics and limestones of the Buchans Group.

The Currawong deposit comprises five stacked stratiform massive sulphide lenses and other minor discontinuous massive sulphide/stringer zones, found at the base of the Gibson's Folly Formation. The sulphide mineralogy is analogous to the Wilga mineralogy. The Currawong deposit consists of a series of high grade copper and zinc lenses, dipping at approximately 40 to 60 degrees, which is amenable for various forms of stoping.

The local geology is shown in Figure 17.

shows a cross section through the Currawong orebody and indicates the various geological lenses.

**Figure 31 Cross section through the Currawong Orebody (looking west)**



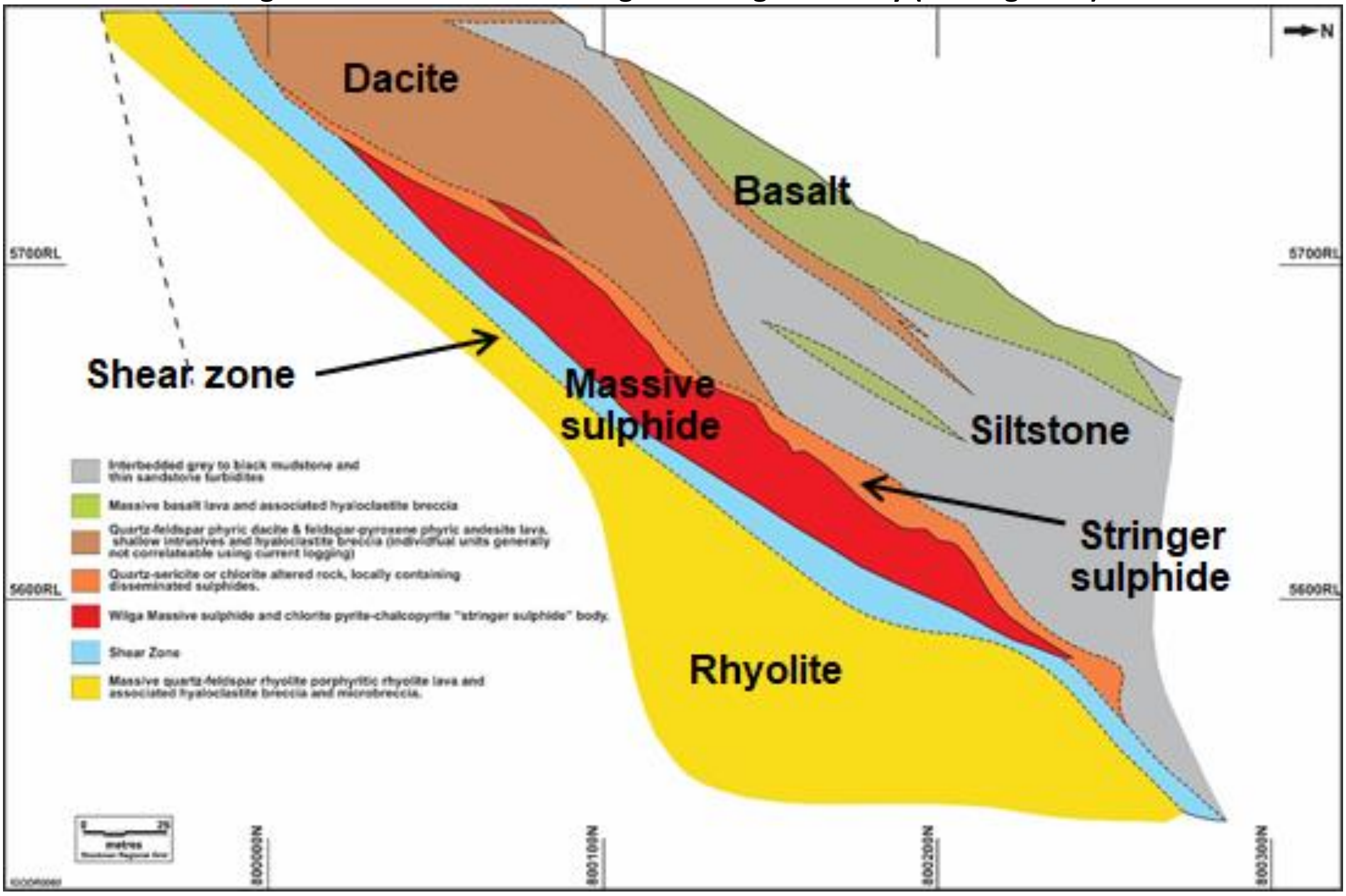

The Wilga deposit is a stratiform massive sulphide lens in the immediate footwall to a coherent dacite. The footwall of the lens is sheared then below the shear zone is the Thorkidann Volcanics, which are barren of mineralisation. Wilga's mineralisation boundaries are sharp, and the principal sulphides are chalcopyrite, sphalerite and galena within a massive sulphide style, and stringer sulphides which is characterised by chlorite and chalcopyrite.

The Wilga deposit consists of a single massive sulphide lens with additional stringer lenses at the extremities. The Wilga deposit dips at approximately 35 degrees, which is amenable for a limited number of stoping options.

The Wilga deposit consists of high grade copper and zinc mineralisation. Between 1992 and 1996 the Wilga deposit was mined, producing 956Kt of 6.0% Cu and 7.1% Zn ore.

Figure **32** shows a cross section through the Wilga orebody and indicates the various geological lenses.

**Figure 32 Cross section through the Wilga Orebody (looking west)**




Mineralisation is defined by underground and surface diamond and reverse circulation percussion (RC) drilling. There has been approximately 28km of diamond drilling at Currawong and approximately 5km of diamond drilling at Wilga.

Orebody wireframes for the Currawong and Wilga deposits were constructed using the geological logging of the massive sulphide and semi massive sulphides. High grade domains were interpreted within the wireframes 1.2% Cu or 3% Zn cut-offs. The Currawong stringer mineralisation was interpreted using a 0.5% Cu or 3% Zn cut-off. There was a high chalcocite domain interpreted at Wilga as a zone of poor core recovery and this was given a lower Mineral Resource classification.

Ordinary kriging (OK) is used for estimation of copper, lead, zinc, gold, silver, arsenic, iron and density.

The massive sulphides zones were classified as Indicated MRE. The stringer domains with data spacing less than 50m by 50m in the plane of the lode was classified as Indicated MRE, with wider spaced drilling classified as Inferred MRE.

It is important to note that gold grades in the Wilga deposit have sparse spatial coverage and would be classified as an Inferred MRE if gold is to be reported. The MRE by ore category and mine area are shown in Table 26.

Table 47. Mineral Resource Estimate by orebody as at 1 May 2021

| Category | Mine Area | Tonnes (Kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|---|
| Measured | Currawong | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| | Wilga | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| **Measured** | | | **0** | **0.00** | **0.00** | **0.00** | **0.0** |
| Indicated | Currawong | 9,550 | 244 | 2.03 | 4.16 | 1.19 | 42 |
| | Wilga | 2,852 | 247 | 2.11 | 4.93 | 0.44 | 31 |
| **Indicated** | | **12,400** | **244** | **2.05** | **4.34** | **1.02** | **39** |
| Inferred | Currawong | 780 | 143 | 1.35 | 2.03 | 0.46 | 23 |
| | Wilga | 657 | 375 | 3.77 | 5.59 | 0.41 | 34 |
| **Inferred** | | **1,438** | **260** | **2.45** | **3.66** | **0.44** | **28** |
| **Stockman Mineral Resource (M+I+I)** | | **13,839** | **235** | **2.09** | **3.66** | **1.0** | **38** |
| **Contained metal** | | | | **289 Kt** | **538 Kt** | **428 Koz** | **16.9Moz** |

*Note: The Stockman MRE utilises a 1.2%Cu and 3.0%Zn cut-off for massive sulphides and 0.5%Cu and 2.0%Zn for stringer mineralisation. MRE NSR is based on higher metal prices than the ORE. Tonnage estimates have been rounded to the nearest 10,000 tonnes*

## MINE DESIGN

### Cut-off Grade

A total breakeven cut-off grade of $120/t NSR was used for designing the stopes at both Currawong and Wilga. This is an increase in cut-off used in previous studies and covers the operating costs of mining, sustaining capital, processing and administration. Individual stope diluted grades were reviewed once the footwall, hanging wall and fill dilution were applied. Any diluted stope NSR that was less than $144/t was removed from the mine plan. This built a minimum of 20% margin on all stopes above the breakeven cut-off.

### Mining Method

The mining method assumed in the Stockman 2021 ORE is a combination of sublevel open stoping (SLOS), diamond open stopes (DS) and bench and fill stoping progressing bottom up in panels. The mining methods are detailed in the SPS report and summarised below.

### Bench Stoping

Bench stoping is typically developed from the centre of the orebody to the extremities and then stopes are retreated back to the centre. The method only produces from stopes between two levels to minimise both lateral and vertical wall exposures.

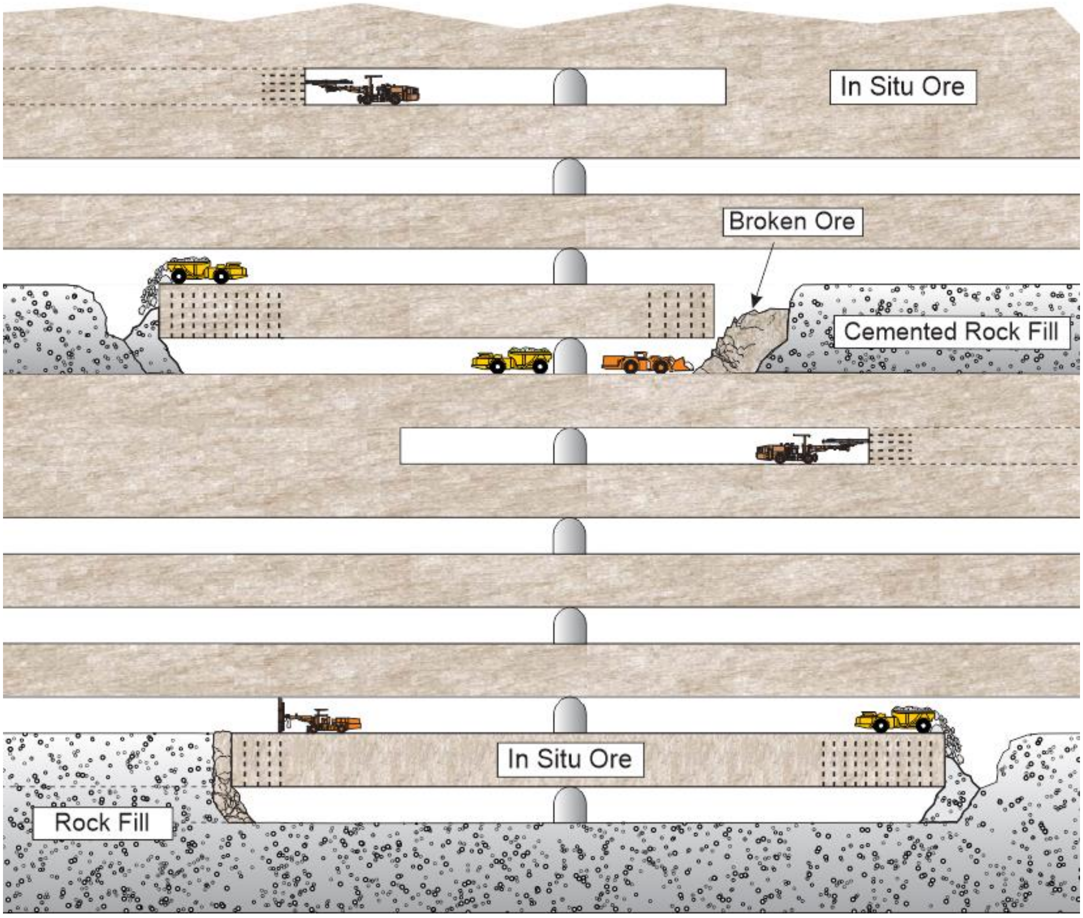
For the modified Avoca style bench stoping Rock Fill (RF) is tipped over the advancing ore face until the void is filled. If the strike of the ore is longer than the maximum stope length then the RF is dug out to create a sufficient void to blast the next rings of ore. The new ore firing is blasted against the remaining RF causing some mixing of ore and rockfill. The dilution is taken into account in the stoping and recovery factors applied to the stoping tonnes.

Based on the dip of the upper areas of Wilga that require Non Acid Forming (NAF) backfill, it was deemed appropriate to use Cemented Rock Fill (CRF) in the upper two levels in Wilga.

The remaining bench stopes in Currawong and the lower areas of Wilga are to be tight filled using Paste Fill (PF), unless the stopes are isolated and do not require backfilling to extract the next stope. The isolated bench stopes would be filled with RF as a low priority activity to ensure no voids were left empty.

The proposed stoping at Wilga have been designed at 20m levels (floor to floor) and Currawong have 25m level intervals due to the steeper dip than Wilga and geotechnical advice from AMC Consultants that larger stopes are suitable. A schematic of the proposed bench stoping method for Stockman is shown in Figure 27.

**Figure 33 Proposed bench stoping method for Stockman**




**Sublevel Open Stoping**

Sublevel open stoping (SLOS) was deemed to be a practical mining method that could be used at Currawong as well as the lower areas in Wilga. SLOS can be designed as longitudinal which minimises the amount of waste development but restricts the flexibility of the stoping sequence as it typically has a centre access and stoping is retreated from the extremities to the centre. A schematic of the proposed longitudinal SLOS method for Stockman is shown in Figure 34.

The lower area of Wilga is relatively flat and up to 70m wide from footwall to hangingwall. This ore is too wide to extract in a single pass so transverse SLOS has been applied to this area. The orebody has been divided into 15m wide stopes (east/west) and up to 40m long (north/south) depending on the ground conditions. A plan of the proposed transverse SLOS method for the lower mining panel at Wilga is shown in Figure 35.

**Figure 34 Longsection of the proposed SLOS method for Stockman**

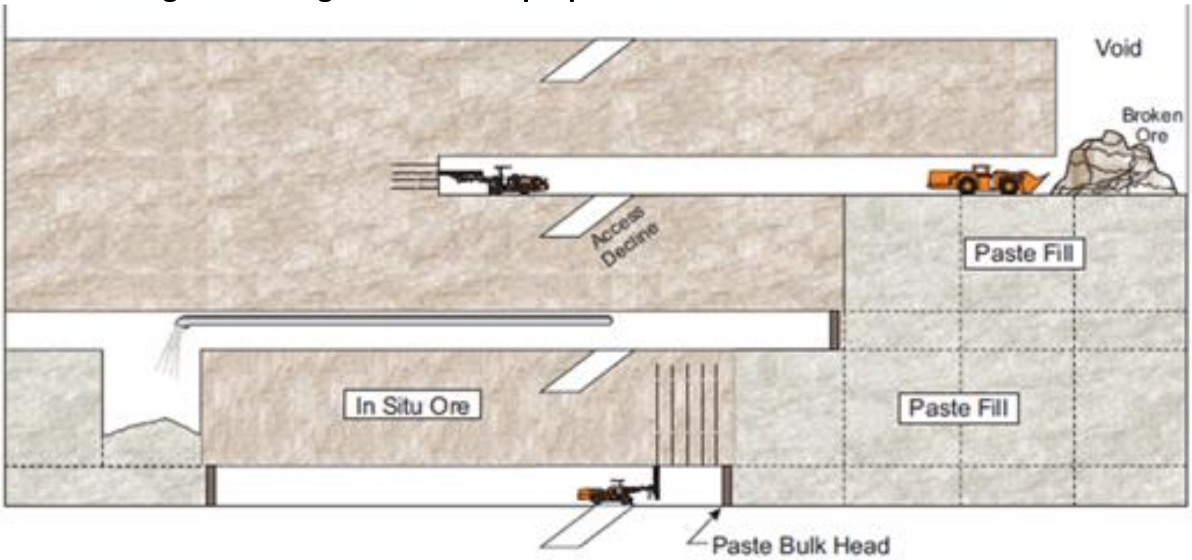
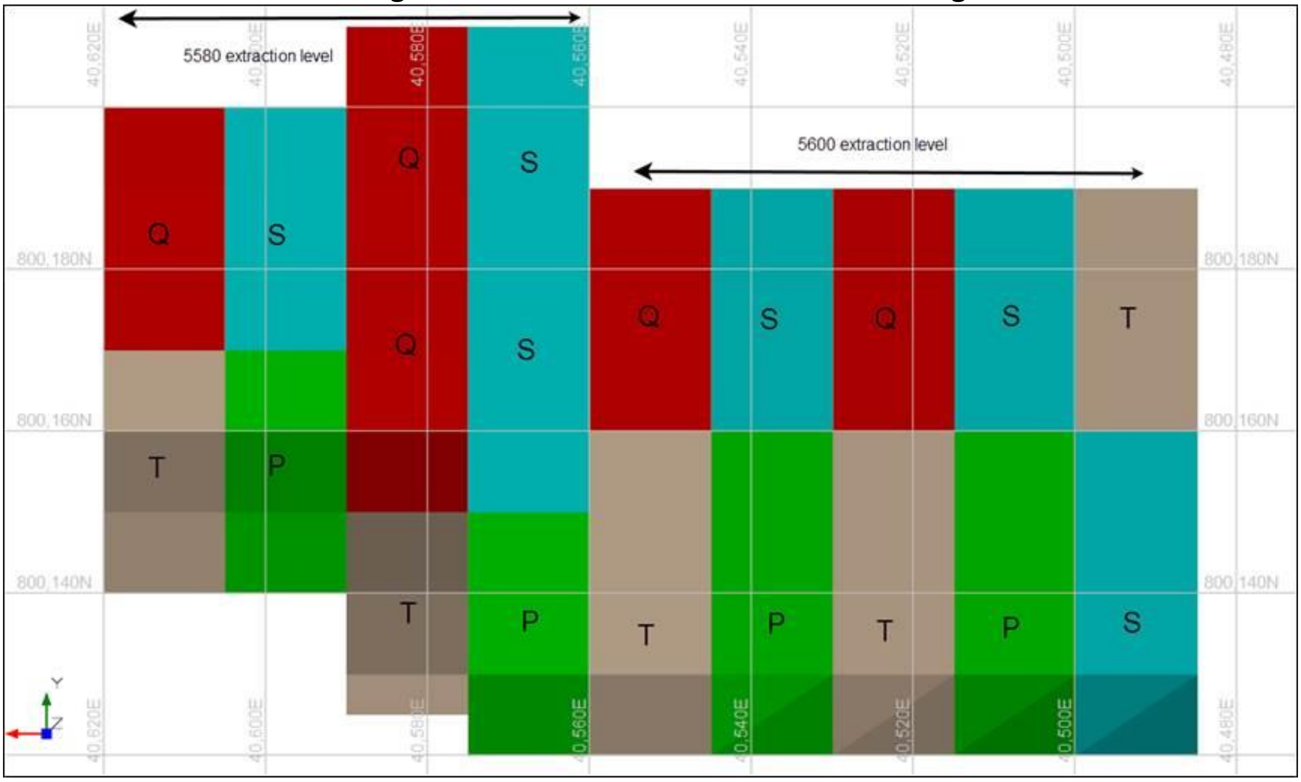



**Figure 35 Plan of the Transverse SLOS at Wilga**




**Diamond Sublevel Open Stoping**

Some of the main issues with typical bench stoping and SLOS are listed below:

- the flat crowns created at the top of the stope
- wide extraction levels created from the stope below
- bogging off PF and the practicalities of spreading rock on the PF for loader traction
- additional cablebolting of the crown for stope stability that also limits the strike length of the stope
- the amount of remote bogging due to the flat extraction level

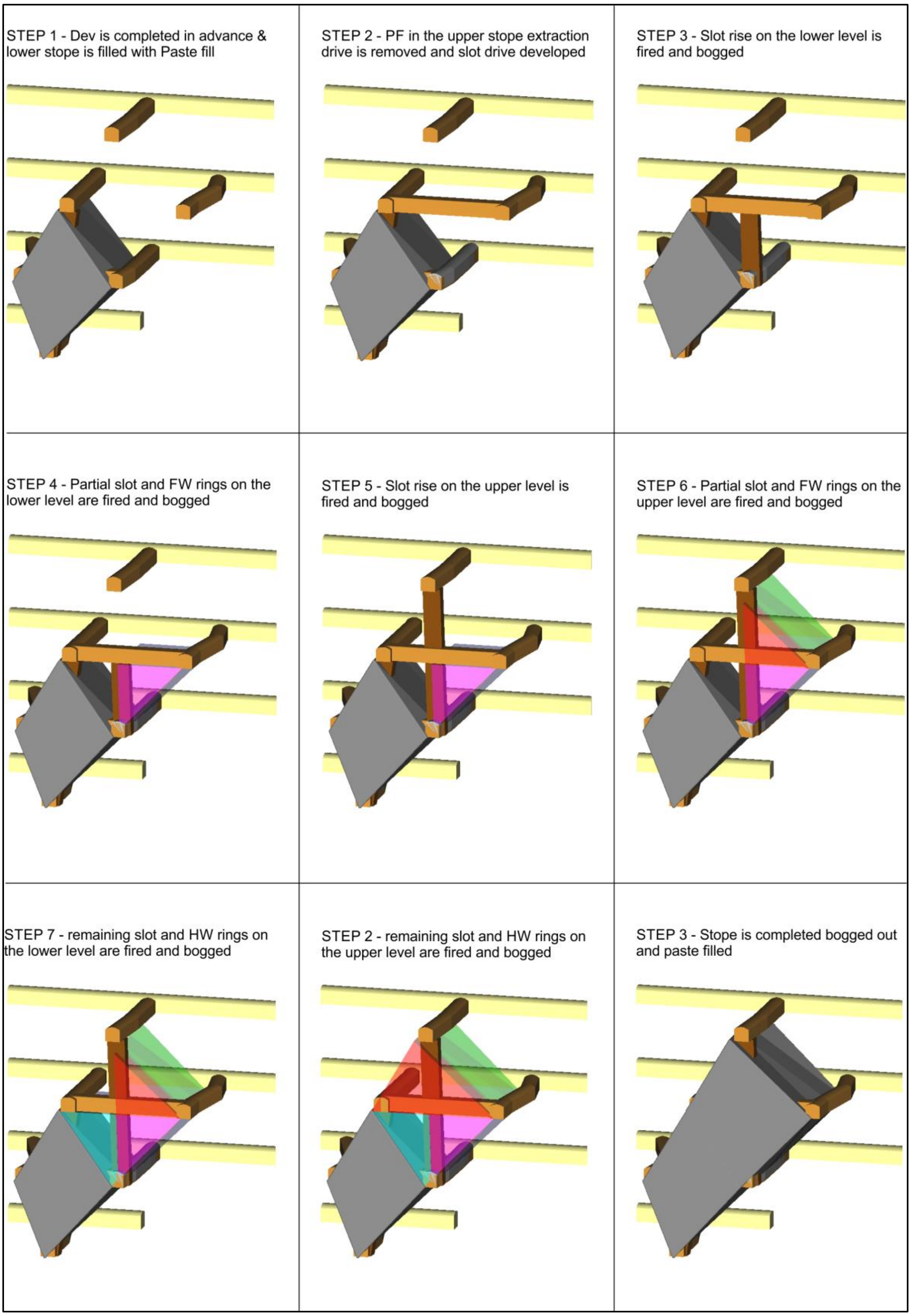
- tight filling in the wider stopes

Due to the relatively flat dip and wide zones in some of the lenses at Currawong it is proposed diamond stopes (DS) be used to effectively extract the ore. DS are a form of SLOS but have been “tilted” with angles walls and crown. The unique features of the DS are:

- a trough at the bottom of the stope to maximise the manual bogging
- the trough is located in the footwall so the extraction drive is solid rock and not bogging off PF
- The crown of the stope is inclined which increases the stope stability
- The angle of the trough and crown can be adjusted to follow the variations of the lenses
- Creation of multiple production drilling options from the bottom, centre and/or the top level
- Multiple levels which increase the stope size while minimising the HR
- The ability to split the DS in half if ground conditions deteriorate
- Ability to install hangingwall cablebolting from various locations
- Potential to extract the crown of the lower mining panel adjacent to the initial stope in the upper mining panel; this does not require the PF from the upper stope to be completely undercut
- More effective use of the ore development across multiple stopes
- Flexibility in the internal mining sequence within the stope – it can be drilled and fired in multiple ways based on ground conditions, deferring PF exposures or minimising remote bogging

A schematic of a DS mining sequence proposed at Currawong is shown in Figure 36. It should be noted that there are various options to the mining sequence and is dependent on hangingwall, footwall and internal stope ground conditions, PF exposure, bogging procedures and the minimising of dilution.

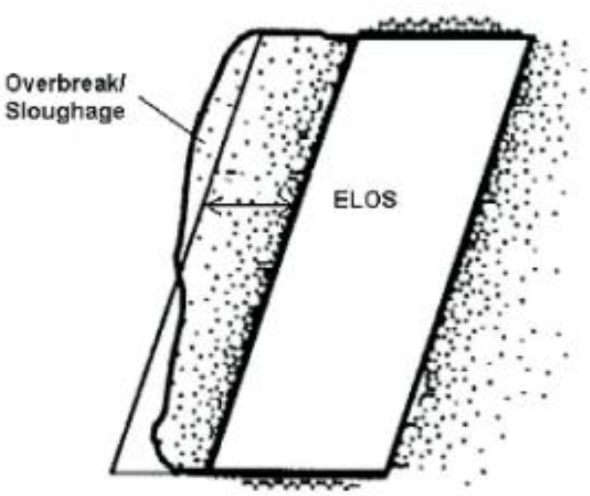
**Figure 36 Schematic of the Diamond Stope Sequence at Currawong**



## MINING INVENTORY

The Currawong and Wilga mining shapes were created using the $120/t NSR cut-off on 10m sections. The individual 10m stope wireframes were evaluated to determine the economic limits. Shapes were adjusted, where required, before combining the 10m sections into practical stope shapes based on the stable Hydraulic Radius (HR) supplied by AMC Consultants (AMC). All stopes had 0.5m equivalent linear overbreak slough (ELOS) dilution applied to the FW and HW to represent unplanned dilution at zero grade apart from the arsenic grade where the individual stope grade was applied. ELOS is represented in Figure 29.

**Figure 37 Schematic of ELOS**




Additional fill dilution and stope recoveries were applied to each combined stope shape where appropriate to determine the economic stopes. DS have a high stope recovery and manual bogging compared to other stopes as the shape of the trough enables a better ore recovery by the loaders.
The fill dilution and stope recoveries are summarised in Table 38.

**Table 48. Additional stope dilution and stope recovery factors**

| | | Dilution ELOS (m) | | | | | |
|---|---|---|---|---|---|---|---|
| Stope Parameters | Stope Recovery (%) | FW | HW | Fill floor* | Fill Wall+ | MAX wall exposures | Remote Bog % |
| Bench Stopes | 95% | 0.5 | 0.5 | 0.1 | 0.25 | 1 | 50% |
| Diamond Stopes | 98% | 0.5 | 0.5 | 0 | 0.25 | 2 | 20% |
| Diamond Crown Stopes | 85% | 0.5 | 0.5 | 0 | 0.25 | 2 | 20% |
| Crown Stopes | 85% | 0.5 | 0.5 | 0.1 | 0.5 | 2 | 50% |
| Transverse Primaries | 100% | 0.5 | 0.5 | 0.1 | 0 | 0 | 50% |
| Transverse Secondaries | 95% | 0.5 | 0.5 | 0.1 | 0.25 | 1 | 50% |
| transverse Tertiaries | 90% | 0.5 | 0.5 | 0.1 | 0.25 | 2 | 50% |
| Transverse Quaternaries | 85% | 0.5 | 0.5 | 0.1 | 0.25 | 3 | 50% |

** fill floor dilution only to stope with fill floor*

*+ fill wall dilution only to stope with fill walls*

*FW and HW dilution has been applied zero grades (Arsenic at stope grade)*

## ORE RESERVES ESTIMATE

The 2021 ORE has increased over previously reported ORE for Stockman primarily based on the metal prices and exchange rate used. This converted low grade material, which previously fell below cut-off, to being above cut-off. The stope shapes were designed with practical trough angles for ore to flow to the drawpoints. In some areas this meant low grade or waste was included as planned dilution to ensure practical stopes were designed. The 2021 ORE by ore category and mine area are shown in Table 30, the 2020 ORE by ore category and mine area are shown in Table 30, and the change between the 2020 and 2021 ORE is shown in Table 32.

**Table 49. Ore Reserve Estimate by orebody as at 1 May 2021**

| Category | Mine Area | Tonnes (Kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|---|
| Proved | Currawong | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| | Wilga | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| **Proved** | | | **0** | **0.00** | **0.00** | **0.00** | **0.0** |
| Probable | Currawong | 7,988 | 206 | 1.91 | 4.04 | 1.13 | 38.2 |
| | Wilga | 1,652 | 212 | 1.83 | 5.46 | 0.52 | 30.1 |
| **Probable** | | **9,640** | **207** | **1.90** | **4.28** | **1.02** | **36.8** |
| **Stockman Ore Reserves (P+P)** | | **9,640** | **207** | **1.90** | **4.28** | **1.02** | **36.8** |
| **Contained metal** | | | | **183 Kt** | **413 Kt** | **317 Koz** | **11.4 Moz** |

*Note: The Stockman ORE utilises an A$120/tonne NSR cut-off for stoping and A$50/tonne NSR cut-off for development. It also ensures all stopes have a minimum diluted head grade of $144/t. Tonnage estimates have been rounded to the nearest 10,000 tonnes.*

**Table 50. Ore Reserve Estimate by orebody as at 1 January 2020**

| Category | Mine Area | Tonnes (Kt) | NSR ($/t) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|---|---|
| Proved | Currawong | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| | Wilga | | 0 | 0.00 | 0.00 | 0.00 | 0.0 |
| **Proved** | | | **0** | **0.00** | **0.00** | **0.00** | **0.0** |
| Probable | Currawong | 8,640 | 191 | 1.86 | 3.92 | 1.09 | 37.6 |
| | Wilga | 1,710 | 199 | 1.82 | 5.35 | 0.50 | 29.6 |
| **Probable** | | **10,350** | **192** | **1.85** | **4.15** | **0.99** | **36.3** |
| **Stockman Ore Reserves (P+P)** | | **10,350** | **192** | **1.85** | **4.15** | **0.99** | **36.3** |
| **Contained metal** | | | | **192 Kt** | **430 Kt** | **330 Koz** | **12 Moz** |

**Table 51. Change in 2020 and 2021 Ore Reserve Estimate**

| Description | Tonnes (Kt) | Cu (%) | Zn (%) | Au (g/t) | Ag (g/t) |
|---|---|---|---|---|---|
| **2020 to 2021 Ore Reserve change** | **-705** | **1.27** | **2.37** | **0.59** | **29.1** |
| **2020 to 2021 Ore Reserve metal change** | **-7%** | **-9,000 t** | **-16,700 t** | **-13,300 oz** | **-660,000 oz** |
| | change in metal | -5% | -4% | -4% | -5% |
| | change in grade | 2% | 3% | 3% | 1% |

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

(Criteria listed in section 1, and where relevant in sections 2 & 3, also apply to this section)

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| **Mineral Resource estimate for conversion to Ore Reserves** | • Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.<br>• Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. | • The 2021 ORE is based on the following MRE block models provided in August 2018:<br>– wg_nsr_oct_2014.mdl<br>– currawong_igo_jw_mod_sep18.mdl<br>• The MRE includes the ORE. |
| **Site visits** | • Comment on any site visits undertaken by the Competent Person and the outcome of those visits.<br>• If no site visits have been undertaken indicate why this is the case. | • The Stockman ORE was produced by John McKinstry (AusIMM member 105824), who was a fulltime employee of Round Oak Minerals Pty Limited, with assistance from Anthony Allman, director of ANTCIA Consulting Pty Ltd. Round Oak Minerals staff have conducted multiple visits to the project site and geology team based at the site. There is no access available to the old Wilga mine and Currawong mine is not yet developed so underground mine visits are not possible. |
| **Study status** | • The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.<br>• The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that | • A full Life of Mine Plan (LOM) was completed in May 2021. This included development design, stope access, mining method application, scheduling and resource levelling. The mine is preparing to commence the definition phase study. The order of accuracy of the LOM is at least a prefeasibility study with indicative costs, stope performance and recoveries applied to the ORE.<br>• The ORE considered all material modifying factors and concluded that the proposed mine plan was technically feasible and economically viable. |

| | | |
|---|---|---|
| | material Modifying Factors have been considered. | |
| **Cut-off parameters** | • The basis of the cut-off grade(s) or quality parameters applied. | • The cut-off value of $120/t NSR for stoping and $50/t for development was used based on previous studies at Stockman. Fully costed breakeven cut-off values incorporated all costs including development, stoping, haulage, sustaining capital, processing and administration.<br>• All stopes had an estimated diluted NSR value greater than the minimum diluted head grade of $144/t. This covered the total breakeven cut-off as well as a 20% margin.<br>• Costs beyond the mine gate including concentrate haulage, port facilities, shipping, penalties and royalties are netted from revenues of concentrates and create the NSR estimates. |
| **Mining factors or assumptions** | • The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).<br>• The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.<br>• The assumptions made regarding geotechnical parameters (eg. pit slopes, stope sizes, etc), grade control and pre- production drilling.<br>• The major assumptions made and | • No Inferred Mineral Resource was considered for the ORE.<br>• The mining method used for the LOM is varied depending on the orebody. A combination of SLOS, DS and benching have been designed at Currawong and Wilga.<br>• Stope shapes in the ORE include an allowance of unplanned and fill dilution as well as various stope recoveries shown below. |

| | | Dilution ELOS (m) | | | |
|---|---|---|---|---|---|
| Stope Parameters | Stope Recovery (%) | FW | HW | Fill floor* | Fill Wall+ |
| Bench Stopes | 95% | 0.5 | 0.5 | 0.1 | 0.25 |
| Diamond Stopes | 98% | 0.5 | 0.5 | 0 | 0.25 |
| Diamond Crown Stopes | 85% | 0.5 | 0.5 | 0 | 0.25 |
| Crown Stopes | 85% | 0.5 | 0.5 | 0.1 | 0.5 |
| Transverse Primaries | 100% | 0.5 | 0.5 | 0.1 | 0 |
| Transverse Secondaries | 95% | 0.5 | 0.5 | 0.1 | 0.25 |
| transverse Tertiaries | 90% | 0.5 | 0.5 | 0.1 | 0.25 |
| Transverse Quaternaries | 85% | 0.5 | 0.5 | 0.1 | 0.25 |

** fill floor dilution only to stope with fill floor*

*+ fill wall dilution only to stope with fill walls*

*FW and HW dilution has been applied zero grades (Arsenic at stope grade)*

| | | |
|---|---|---|
| | Mineral Resource model used for pit and stope optimisation (if appropriate).<br>• The mining dilution factors used.<br>• The mining recovery factors used.<br>• Any minimum mining widths used.<br>• The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.<br>• The infrastructure requirements of the selected mining methods. | • Sub level intervals vary from 20m at Wilga and 25m at Currawong. This is based on appropriate method for control of dilution, reduction of pillars and ore loss, ground control, safety and regional stability.<br>• A minimum stoping width of 3m has been used.<br>• Stable stope dimensions have been based on geotechnical feedback from AMC Consultants.<br>• Practical designed have been included for ventilation, power, pumping and drainage as well as second means of egress.<br>• Majority of the stopes will be filled using a cemented paste to improve stope stability and increase ore recovery. Isolated stopes will be filled with waste rock from development where possible. Bench stopes in the upper area of Wilga will be filled with non-acid forming (NAF) cemented rock fill. |
| **Metallurgical factors or assumptions** | • The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.<br>Whether the metallurgical process is well-tested technology or novel in nature.<br>• The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.<br>• Any assumptions or allowances made for deleterious elements.<br>• The existence of any bulk sample or pilot scale test work and the degree to which such samples are | • The ORE is predicated on the proposed ore processing facility with a nominal throughput rate of 1Mtpa.<br>• The assumed Stockman metallurgical process flow sheet is conventional crush, grind and then differential flotation to produce saleable concentrates (copper-rich and zinc-rich). Many drill core composite samples have undergone metallurgical testing with representative samples selected from of the different geometallurgical domains within both deposits. Testing included bulk sample testing in 2014 and locked cycle tests for domain variability results. Further metallurgical test work is in progress.<br>• Geometallurgical algorithms have been developed that indicated recoveries will vary over time in accordance with the mineralogy present at the time of processing.<br>• The life-of-mine metallurgical recovery assumptions are as follows:<br>  • Copper concentrate:<br>  80.6% of head copper.<br>  43.4% of head silver.<br>  21.3% of head gold.<br>  • Zinc concentrate:<br>  75.1% of head zinc.<br>  13.3% of head silver. |

| | | |
|---|---|---|
| | considered representative of the orebody as a whole.<br>• For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications | • Previous metallurgical testing has demonstrated that the Stockman concentrates can be produced as saleable with acceptable chemistry and low levels of potentially deleterious elements such as As, Si, and Pb. Further testing is in progress to confirm recoveries and the potential impact of deleterious elements.<br>• Deductions of penalty elements in the saleable product were included in the LOM financial model. |
| **Environmental** | • The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. | • An Environmental Effects Statement (EES), which is a comprehensive and integrated assessment of potential environmental, social and economic impacts of the proposed project, has been prepared for and approved by the State (Victoria).<br>• Mine Licences MIN5523 (Underground mining and processing) and MIN006642 (Infrastructure (TSF) only) have been granted by the State.<br>• Mining is proposed on MIN5523, a mining lease held by WHSP Stockman Pty Ltd (ACN 619 759 465), a wholly owned company of Round Oak Minerals Pty Limited (Round Oak), which is in turn a subsidiary company of Washington H. Soul Pattinson and Company Limited (WHSP).<br>• Related activity (tailings storage) is proposed for an adjacent area where the previous tailings storage facility (TSF) is located. A Post Closure Trust Fund has been agreed with the State, enabling the granting of an Infrastructure Mining Licence (IML) MIN006642 to WHSP Stockman for the development of the proposed upgraded TSF.<br>• The Mine Work Plan for the Project, and supporting environment and community management plans, was approved in April 2019.<br>• The off-lease activities – accommodation village and access road widening – have been approved under the Victoria Planning Act and conditioned through an Incorporated Document.<br>• The Project has also received approval, with conditions, and the Environmental Protection and Biodiversity Conservation (EPBC) Act.<br>• The project will require acquisition of vegetation offset areas for ground disturbed by construction and mining, As well as the off-lease activities. Based on current plan layout design, these offsets areas have been identified and have been secured in part, or are |

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| | | subject to option agreements with existing landholders. Finalisation of the total area and type of offsets is yet to be determined and additional offsets may be required. There are no known impediments to securing the required offset areas.<br>• There are no known impediments to the outstanding parts of the secondary approval process, but approvals will be subject to the conditions placed on the project by the respective regulators. |
| **Infrastructure** | • The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed. | • Additional off-site infrastructure includes an accommodation village to be located on freehold land close to the mine site and a car park and transport interchange facility located in Benambra. These activities (including the road improvement works) are located outside the mining lease and will be regulated by the local planning authority and relevant agencies. A Planning Scheme Amendment addressing support infrastructure outside MIN5523 was exhibited with the EES and was approved and gazetted in May 2017.<br>• The current project area is served by an existing access road that will need to be upgraded for concentrate transport.<br>• Limited telecommunications are available but will need to be upgraded to bring these services to site.<br>• Power will be generated on site using natural gas sourced from Victorian natural gas infrastructure.<br>• Water balance modelling indicates the project will require the construction of a 300Ml storage facility within the TSF footprint and during periods of 3 year continues droughts require supplementary water. Contingent water sources have been identified and extraction licences applications submitted<br>• The workforce can be sourced partly from the local area but is expected to be on a drive-in and drive out basis from regional centres, with the workforce housed in an on-site accommodation village.<br>• Access land for the planned accommodation village has been secured by a lease with a local land holder. |
| **Costs** | The derivation of, or assumptions made, regarding projected capital costs in the study.<br>• The methodology used to estimate | • Capital costs for the LOM are based on 2014 quotations from potential vendors and from first principle estimates where vendor estimates were not available. These costs were escalated to 2021 costs. |

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<td>operating costs.<br>• Allowances made for the content of deleterious elements.<br>• The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.<br>• The source of exchange rates used in the study.<br>• Derivation of transportation charges.<br>• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.<br>• The allowances made for royalties payable, both Government and private.</td>
<td>• Operating costs were estimated from a mixture of first principles and contractor rates from other Round Oak operations. Labour costs were derived from an assessment of like operation in Victoria and existing Round Oak operations.<br>• Concentrate transport charges (including port) were based on vendor quotations, with sea freight charges based on a market assessment by a logistics consultant. Concentrate export is assumed to be via Port Anthony or Port of Eden.<br>• Concentrate treatment and refining costs are based on forecasts from reputable market analysts.<br>Victorian state royalties apply to copper, zinc and silver. From 1 January 2020, a 2.75% royalty will be payable on gold although the Victorian government.<br>• There is a 1.5% royalty to IGO applicable.<br>• Metal price and exchange rate assumptions are as provided by Round Oak management and have been based on consensus forecasts.</td>
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<td>Revenue factors</td>
<td>• The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.<br>• The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</td>
<td>• The mining and processing tonnes and grade were scheduled monthly to enable detailed financial analysis of the project.<br>• The following table represents revenue and metal recovery assumptions for the MRE and ORE. Treatment costs for zinc and copper concentrate are US$250/dmt and US$80/dmt respectively.
<table>
<tr><th>Commodity</th><th>Unit</th><th>2021 Mineral Resource</th><th>2021 Ore Reserves</th><th>2021 Metal Recovery</th></tr>
<tr><td>Copper</td><td>US$/t</td><td>8,014</td><td>7,285</td><td>80.6%</td></tr>
<tr><td>Zinc</td><td>US$/t</td><td>2,713</td><td>2,466</td><td>75.1%</td></tr>
<tr><td>Gold</td><td>US$/oz</td><td>2,003</td><td>1,821</td><td>21.3%</td></tr>
<tr><td>Silver</td><td>US$/oz</td><td>26.15</td><td>23.77</td><td>56.7%</td></tr>
<tr><td>FX</td><td>AUD/USD</td><td>0.76</td><td>0.76</td><td></td></tr>
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| **Market assessment** | • The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.<br>• A customer and competitor analysis along with the identification of likely market windows for the product.<br>• Price and volume forecasts and the basis for these forecasts.<br><br>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract | • An IGO concentrate off-take and funding information memorandum issued in 2012 received Non-binding submissions from four interested companies. All indicated interest in Stockman concentrate products and three interested in participating in project funding.<br>• In 2018 several international mining and smelting companies expressed interest in Stockman copper and zinc concentrate products and potential funding participation.<br>• With predicted future market supply deficits for copper, it is expected there will be continued robust interest in supply or take agreements and project funding participation. |
| **Economic** | • The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.<br>• NPV ranges and sensitivity to variations in the significant assumptions and inputs. | • A financial model of the Stockman Project has been completed by suitably qualified and experienced accounting and financial staff employed by Round Oak and has been reviewed by senior management of Round Oak. The financial model demonstrates a positive Net Present Value (NPV) for the project. |
| **Social** | • The status of agreements with key stakeholders and matters leading to social licence to operate. | • A Cultural Heritage Management Plan (CHMP) has been approved by the Office of Aboriginal Affairs Victoria. A project trust has also been established with four indigenous groups.<br>• Water licences are in the process of being sought.<br>• A number of planning scheme conditions are required prior to commencement of construction. Negotiations with East Gippsland Shire Council (EGSC), Regional Roads Victoria, Vic Road and emergency service organisations have commenced. This includes a Social Management Plan that has been issued to the EGSC for review. |

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| | | • A Memorandum of Understanding (MoU) has been developed with the EGSC, to maximise the positive social and economic effects of the Project for the local communities. Regular meetings are held between Round Oak and the EGSC to track progress of the actions developed under the MoU.<br>• The Community Reference Group has been successfully functioning since 2018 and the process to establishment an Environmental Review Committee has commenced.<br>• The annual public presentations on the Project by the CEO continue to be held in the local area.<br>• The Project Newsletter continues to be published biannually, and the Project continues to run an information stall at the Omeo Show annually. |

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| **Other** | • To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:<br>• Any identified material naturally occurring risks.<br>• The status of material legal agreements and marketing arrangements.<br>• The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes | • A Mine Work Plan has been prepared for and approved by the State. This document details various environmental and related management plan conditions that are required prior to the commencement of construction.<br>• Plant tailings that are not used for paste fill will be stored in an upgraded version of the existing tailing storage facility (TSF) that meet the guidelines of the Australian National Committee on Large Dams. A condition of the approved mine work plans requires approval by the state of an amendment to the current approved work plan to permit the store of paste fill underground. |

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| | anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the Ore Reserve is contingent. | |
| **Classification** | • The basis for the classification of the Ore Reserves into varying confidence categories.<br>• Whether the result appropriately reflects the Competent Person's view of the deposit.<br>• The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any). | • The ORE is based on the MRE. Indicated Mineral Resources within stopes have been converted to Probable Ore Reserves.<br>• To ensure practical stope shapes certain areas included unclassified waste material at zero grade. This was included as planned dilution.<br>• It is the competent person's view that the classifications used for the ORE are appropriate. |
| **Audits or reviews** | • The results of any audits or reviews of Ore Reserve estimates. | • No external audit of this ORE has been completed but the process has been internally reviewed by Round Oak management. |

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| **Discussion of relative accuracy/ confidence** | • | • The ORE is mostly determined by the order of accuracy associated with the MRE model, the metallurgical inputs and the cost adjustment factors used.<br>• A definition phase study is planned later in 2021 which will include further metallurgical test work, a mine design review and more detailed cost estimates.<br>• Additional infill diamond drilling is proposed from surface and underground as the underground infrastructure is established. |