Suite 8, 7 The Esplanade,
Mt Pleasant, WA 6153

E info@gbmr.com.au
P +61 (8) 9316 9100
F +61 (8) 9315 5475

gbmr.com.au

ABN 91 124 752 745

**ASX Announcement**
**5 December 2022**

# Twin Hills Gold Project Upgrades to ~1 Moz Mineral Resource

## HIGHLIGHTS

- **Total mineral resource estimate (MRE) for Twin Hills has been upgraded to 999,200 ounces Au from 760,700 ounces, a 31% increase.**
- The new MRE includes a silver credit of ~4.8 million ounces.
- Lone Sister mineral resource estimate is now 475,900 oz Au (@ ~1.2 g/t Au) and the 309 deposit is 523,300 oz Au (@ ~1.5 g/t Au).
- **~60% of Twin Hills resources are now in Measured and Indicated categories.**
- The upgraded resource is a result of new drilling data, a new geological model, and viewing Twin Hills as a potential stand-alone deposit resulting in a combination of bulk minable open pit and underground mineral resources.
- **High grade gold mineralisation at Lone Sister deposit remains open down plunge to the north, while bonanza grade mineralisation at 309 remains open down plunge to the west.**

***Drummond Basin, QLD Total – 51 million tonnes at 1.12 g/t Au for 1,850,700 ounces***

**GBM Managing Director and CEO, Peter Rohner, commented:**

*"The substantial upgrade of the Twin Hills resource is a fantastic result following a very busy year. The upgraded resources at Lone Sister and 309 deposits provide a solid base for a standalone development scenario with current gold prices and open pit mining now being considered. During the year, the team has built an improved geological model of the deposits and validated historic drill data which has delivered a considerable increase in ounces and significantly upgraded the classification of resources. We are confident our new understanding of the deposits will drive additional discoveries in the highly prospective district and look forward to further exploration success in 2023."*

**GBM Resources Limited (ASX: GBZ)** (**GBM** or the **Company**) is pleased to announce a **new Mineral Resource Estimate (MRE) for Twin Hills Gold Project (Twin Hills) with a Measured, Indicated, and Inferred (M+I+I) resource of 999,200 oz Au and 4,824,600 oz Ag** (Table 1). This is an increase of 238,500 oz Au, or approximately 31% on the previous MRE of 760,000 oz Au (ASX: GBZ release 2 February 2022). In addition, we announce a new mineralisation model for the 309 deposit and report recent excellent assay results from Lone Sister.

Also included in this release is the assays of two drill holes (one GBM drilled, and an interval previously not assayed in an old hole) at Lone Sister (page 9) and a summary of the new redefined mineralisation model for the 309 deposit which will greatly enhance future exploration (page 6).

| Deposit | MRE Category | Cutoff (Au g/t) | Tonnes | Au (g/t) | Ag (g/t) | Au oz | Ag oz |
|---|---|---|---|---|---|---|---|
| 309 Deposit | **309 Open Pit (above 0RL)** | | | | | | |
| | Measured | 0.4 | 830,000 | 2.8 | 5.3 | 73,900 | 141,900 |
| | Indicated | 0.4 | 5,480,000 | 1.3 | 2.4 | 235,200 | 421,100 |
| | Inferred | 0.4 | 3,650,000 | 1.1 | 1.7 | 129,800 | 198,000 |
| | Total open pit | 0.4 | 9,960,000 | 1.4 | 2.4 | 438,900 | 761,000 |
| | **309 Underground (below 0RL)** | | | | | | |
| | Measured | 2.0 | - | - | - | - | - |
| | Indicated | 2.0 | 190,000 | 4.0 | 2.2 | 24,500 | 13,400 |
| | Inferred | 2.0 | 480,000 | 3.9 | 1.8 | 59,900 | 28,600 |
| | Total underground | 2.0 | 670,000 | 3.9 | 1.9 | 84,400 | 42,000 |
| | **309 Total** | | | | | | |
| | Measured | 0.4 / 2.0 | 830,000 | 2.8 | 5.3 | 73,900 | 141,900 |
| | Indicated | 0.4 / 2.0 | 5,670,000 | 1.4 | 2.4 | 259,700 | 434,500 |
| | Inferred | 0.4 / 2.0 | 4,130,000 | 1.4 | 1.7 | 189,700 | 226,600 |
| | **309 Total** | **0.4 / 2.0** | **10,630,000** | **1.5** | **2.3** | **523,300** | **803,000** |
| Lone Sister Deposit | **Lone Sister Open Pit (above 0RL)** | | | | | | |
| | Measured | 0.4 | - | - | - | - | - |
| | Indicated | 0.4 | 5,250,000 | 1.3 | 15.2 | 227,300 | 2,559,200 |
| | Inferred | 0.4 | 6,550,000 | 0.9 | 6.5 | 188,500 | 1,370,700 |
| | Total open pit | 0.4 | 11,800,000 | 1.1 | 10.4 | 415,800 | 3,929,900 |
| | **Lone Sister Underground (below 0RL)** | | | | | | |
| | Measured | 2.0 | - | - | - | - | - |
| | Indicated | 2.0 | 370,000 | 2.9 | 4.3 | 34,300 | 51,800 |
| | Inferred | 2.0 | 310,000 | 2.6 | 4.0 | 25,800 | 39,900 |
| | Total underground | 2.0 | 680,000 | 2.7 | 4.2 | 60,100 | 91,700 |
| | **Lone Sister Total** | | | | | | |
| | Measured | 0.4 / 2.0 | - | - | - | - | - |
| | Indicated | 0.4 / 2.0 | 5,620,000 | 1.4 | 14.5 | 261,600 | 2,611,000 |
| | Inferred | 0.4 / 2.0 | 6,860,000 | 1.0 | 6.4 | 214,300 | 1,410,600 |
| | **Lone Sister Total** | **0.4 / 2.0** | **12,480,000** | **1.2** | **10.0** | **475,900** | **4,021,600** |
| Twin Hills Total | **Twin Hills Open Pit (above 0RL)** | | | | | | |
| | Measured | 0.4 | 830,000 | 2.8 | 5.3 | 73,900 | 141,900 |
| | Indicated | 0.4 | 10,730,000 | 1.3 | 8.6 | 462,500 | 2,980,300 |
| | Inferred | 0.4 | 10,200,000 | 1.0 | 4.8 | 318,300 | 1,568,700 |
| | Total open pit | 0.4 | 21,760,000 | 1.2 | 6.7 | 854,700 | 4,690,900 |
| | **Twin Hills Underground (below 0RL)** | | | | | | |
| | Measured | 2.0 | - | - | - | - | - |
| | Indicated | 2.0 | 560,000 | 3.3 | 3.6 | 58,800 | 65,200 |
| | Inferred | 2.0 | 790,000 | 3.4 | 2.7 | 85,700 | 68,500 |
| | Total underground | 2.0 | 1,350,000 | 3.3 | 3.1 | 144,500 | 133,700 |
| | **Twin Hills Total** | | | | | | |
| | Measured | 0.4 / 2.0 | 830,000 | 2.8 | 5.3 | 73,900 | 141,900 |
| | Indicated | 0.4 / 2.0 | 11,290,000 | 1.4 | 8.4 | 521,300 | 3,045,500 |
| | Inferred | 0.4 / 2.0 | 10,990,000 | 1.1 | 4.6 | 404,000 | 1,637,200 |
| | **Twin Hills Total** | **0.4 / 2.0** | **23,110,000** | **1.3** | **6.5** | **999,200** | **4,824,600** |

***Table 1: Summary of the Twin Hills Gold Project MRE showing Au and Ag resources.***

Follow GBM on LinkedIn

## Twin Hills Combined Resources

GBM is pleased to release a new combined resource at Twin Hills of **23.11 Mt @ 1.3 g/t Au and 6.5 g/t Ag for 999,200 oz Au and 4,824,600 oz Ag with 60% of the resource now in Measured and Indicated categories**. The new MRE **adds 238,500 oz Au** or 31% to the previous MRE of 760,700 oz Au (ASX: GBZ release 2 February 2022). The updated MRE comprises open pit resources to approximately 250 m below surface, of **21.76 Mt @ 1.2 g/t Au for 854,700 oz Au** calculated at a cut-off grade of 0.4 g/t Au and underground resources below 250 m of **1.35 Mt @ 3.3 g/t Au for 144,500 oz Au** at a cut-off grade of 2.0 g/t Au.

Together with the upgraded Twin Hills resources, **GBM's Drummond Basin resources increase to 1,850,700 oz Au** (Appendix 2).

Twin Hills was a cornerstone acquisition by GBM, that included the 309 and Lone Sister deposits and over 1,102 $km^2$ of mining and exploration tenements considered by GBM to be highly prospective for discovery of additional gold mineralisation. At the time of the acquisition Twin Hills contained a JORC 2012 Mineral Resource Estimate for the 309 and Lone Sister deposits of 6.9 Mt @ 2.8 g/t Au for 633,000 oz Au.

## Lone Sister Deposit MRE

The new MRE for Lone Sister deposit comprises **12.48 Mt @ 1.2 g/t Au for 475,900 oz Au with 55% of the resource now in Measured and Indicated categories** (Table 1). This resource **adds 215,800 oz Au** or 83% to the previous MRE of 260,100 oz Au (ASX: GBZ release 2 February 2022). The updated resource comprises open pit resources to approximately 250 m below surface, of **11.8 Mt @ 1.1 g/t Au for 415,800 oz Au** calculated at a cut-off grade of 0.4 g/t Au and underground resources below 250 m of **0.68 Mt @ 2.7 g/t Au for 60,100 oz Au** at a cut-off grade of 2.0 g/t Au (Figure 1).

Previous resource estimates only focused on the higher-grade core of the deposit for trucking considerable distance to existing process plant operations. These models necessarily excluded numerous intercepts of well-defined but moderate to lower grade gold mineralisation (Figure 2). GBM considers Twin Hills as a stand-alone operation and the new estimate includes open pit style resources that have captured most of the previously unreported gold mineralisation.

The new MRE was completed following detailed validation of previous drilling (see below) collection of SG data, and re-assessment of the geology model which facilitated a substantial increase in confidence across the estimate.

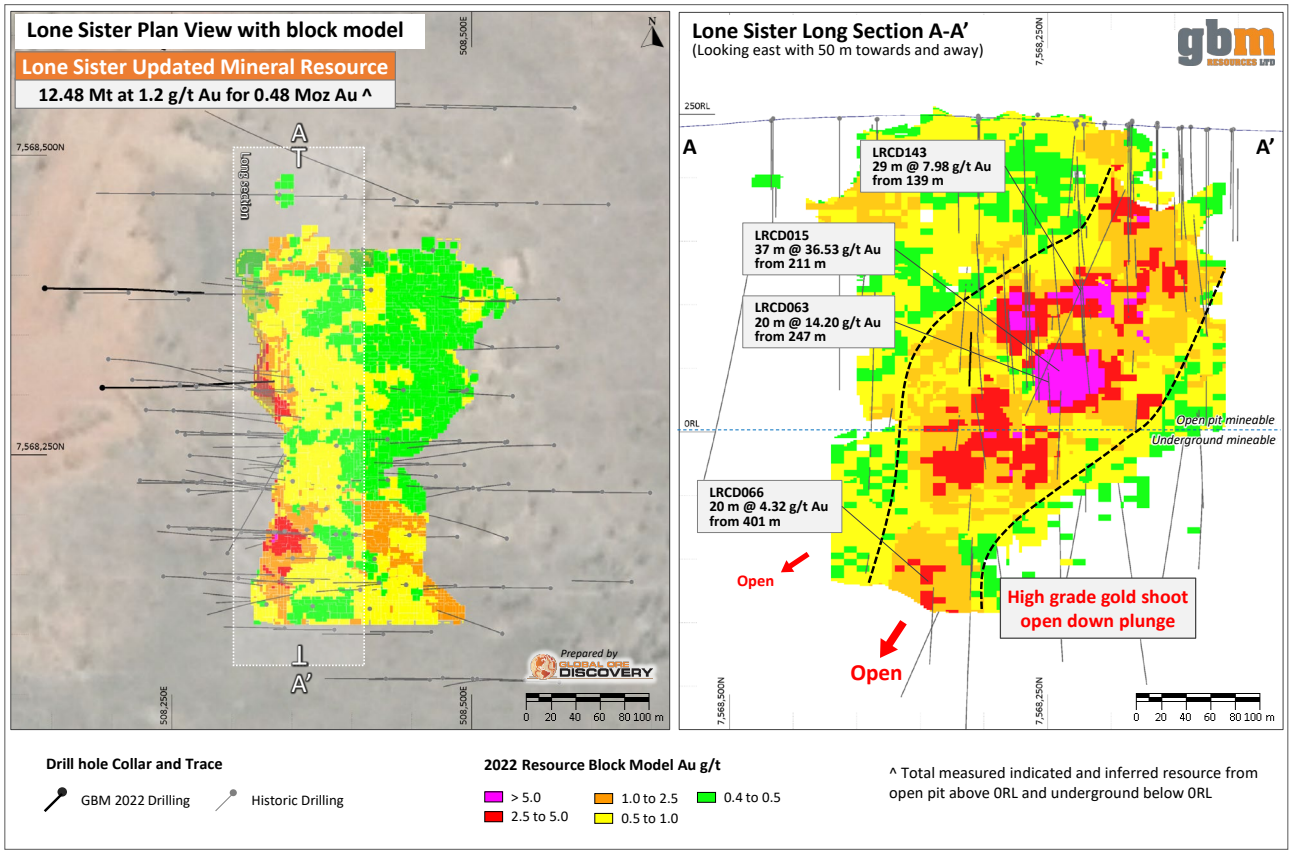



***Figure 1: Plan and long section showing the Lone Sister block model. High grade gold mineralisation clearly plunges to the north and remains open down plunge.***

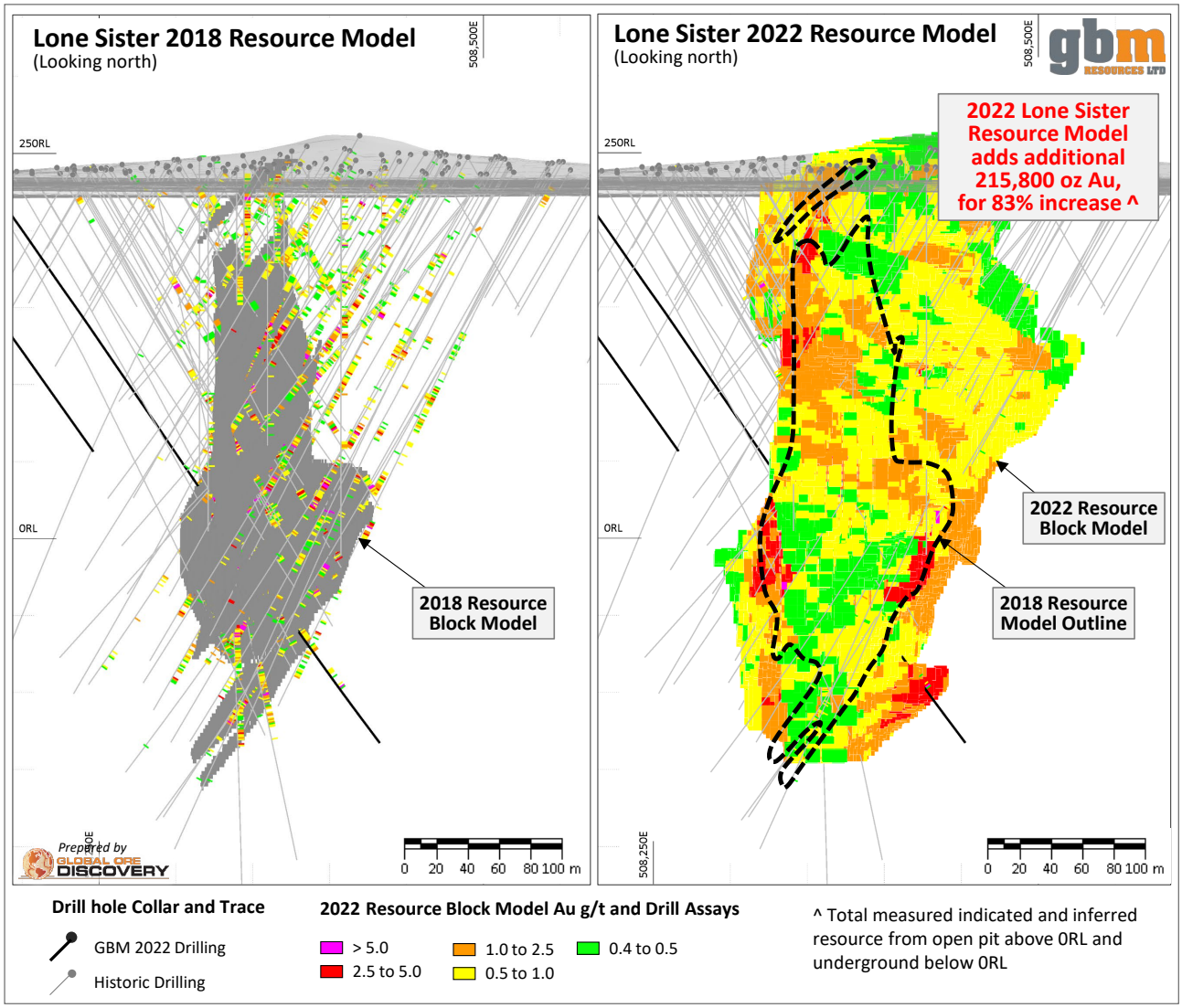



***Figure 2: 3D view looking north showing 2018 and 2022 block models overlain on drilling. Note the numerous intercepts of well-defined gold mineralisation excluded from the 2018 model. GBM considers Twin Hills as a stand-alone operation and the new estimate includes open pit style resources that have captured most of the previously unreported gold mineralisation.***

## Mineralisation Model for Lone Sister Deposit

The Lone Sister ore body is currently defined for 350 m along strike, over 400 m in height, and is approximately 150 m wide. The broadly tabular shape directly reflects mineralisation that is preferentially hosted within a rhyolite dyke with some evidence for limited mineralisation having formed within specific lithological units adjacent to the dyke. Higher grade gold mineralisation displays a distinct plunge to the north and remains open at depth. Controls on the plunge of mineralisation are yet to be confirmed but preliminary work suggests the plunge may relate to adjacent northerly dipping volcanic stratigraphy.

Gold mineralisation manifests as quartz-pyrite veinlets and disseminated pyrite with higher grades associated with increased vein density and higher pyrite percentage. Silicification is also significantly increased around mineralisation.

**Gold mineralisation remains open down plunge** to the north (Figure 1)

Follow GBM on LinkedIn

## 309 Deposit MRE

The new MRE for 309 deposit comprises **10.63 Mt @ 1.5 g/t Au for 523,300 oz Au with 64% of the resource now in Measured and Indicated categories** (Table 1). This resource **adds 22,700 oz Au** or 5% to the previous MRE of 500,600 oz Au (ASX: GBZ release 2 February 2022). The updated resource comprises open pit resources to approximately 250 m below surface, of **9.96 Mt @ 1.4 g/t Au for 438,900 oz Au** calculated at a cut-off grade of 0.4 g/t Au and underground resources below 250 m of **0.67 Mt @ 3.9 g/t Au for 84,400 oz Au** at a cut-off grade of 2.0 g/t Au (Figure 3).

Currently defined gold mineralisation extends from surface downward for 380 m, along strike in a WNW direction for 380 m and NNE for 330 m. Overall, the system dips steeply to the south and plunges to the west with **high grade gold mineralisation remaining open at depth** (Figure 3). The new 309 deposit MRE has been driven by a new geological model (described below) combined with detailed validation of previous drilling (see below), and collection of SG data. This facilitated a substantial increase in confidence across the estimate.

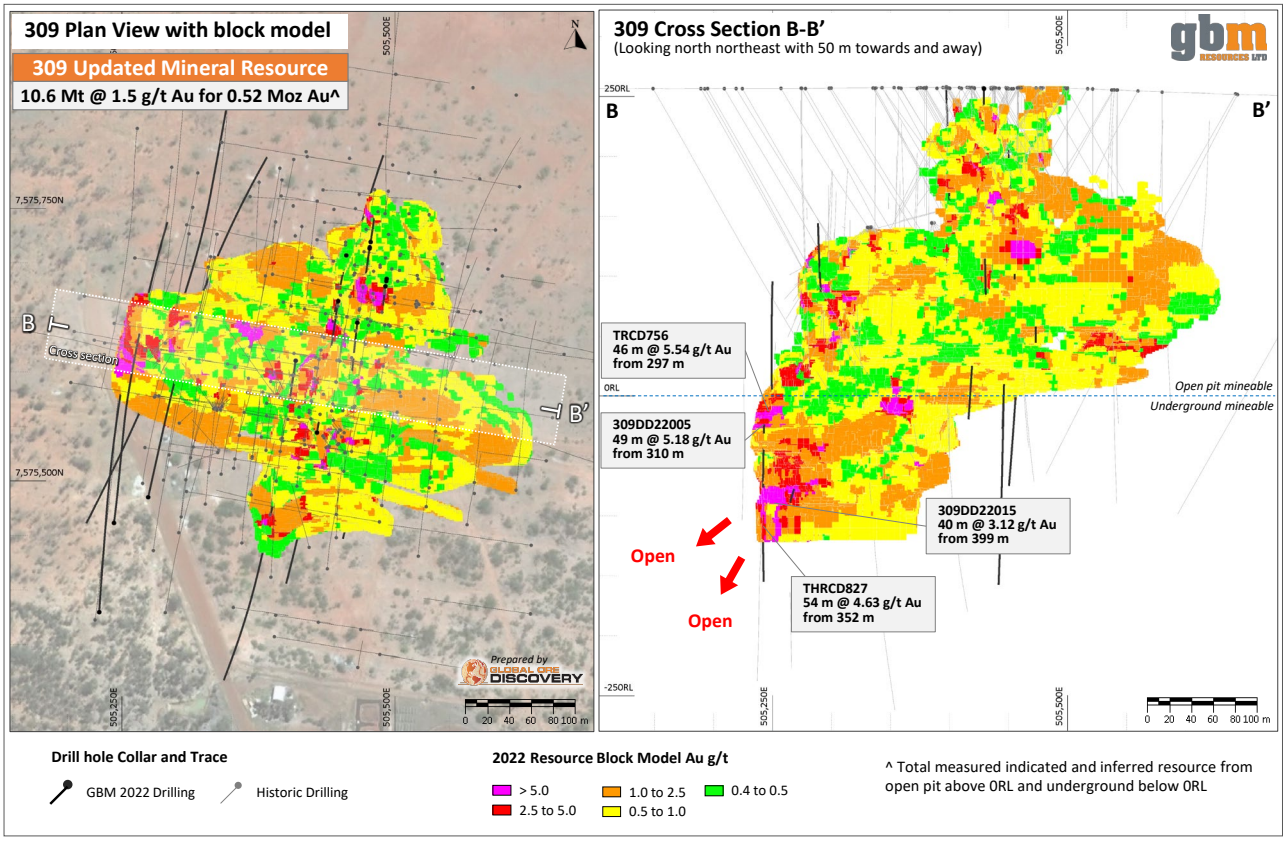



***Figure 3: Plan and long section showing the 309 block model. Note the numerous intersections of high grade that remain open at depth.***

## New Mineralisation Model for 309 Deposit

A new mineralisation model has been defined for the 309 Deposit and is shown in Figure 4. Historic work was hampered by a lack of understanding of both the controls on, and style of, mineralisation and the relationship between gold mineralisation and the host rocks. These features have now been resolved resulting in a significant step forward in deposit understanding and redefinition of the MRE.

Follow GBM on LinkedIn

A variety of hydrothermal mineralisation styles are present at 309. On surface, sinter crops out along an arcuate trend that rings near surface gold mineralisation. Bonanza grade ginguro style colloform banded chalcedony veins are present at the top of the system (Figure 4 A). Spectacular bladed fluorite-chalcedony-quartz ± adularia-pyrite-gold veins (Figure 4 B) and breccia fill form throughout the deposit but are most common in in the middle and upper parts of the deposit. The fluorite bearing veins are progressively replaced by later stages of silicification (Figure 4 C) and corresponding higher gold grades. Quartz-chalcedony-pyrite veins with visible gold as electrum and bonanza grades > 100 g/t Au (Figure 4 D) appear to post-date most other mineralisation and were observed in the deeper parts of the deposit.

The complex shape of the 309 ore body is the result of both structural controls on fluid flow and hydrothermal processes. At depth gold mineralisation is predominantly focused along WNW and, to a lesser extent, NNE structural zones as stockwork veins and breccia fill. The best grades form in two 50 -70 m high layers broadly sub-parallel to bedding and presumably the palaeo surface (Figure 4 E). The uppermost of the two zones contains abundant bladed fluorite-chalcedony-quartz veins and breccia fill. We interpret this zone to represent a boiling and / or fluid mixing zone with associated abundant silicification potentially having formed a cap that allowed later gold rich fluids to be concentrated.

The fluorite-rich zone also marks an inflection point in deposit geometry above which near surface mineralisation forms two pipe-like bodies along a NNE trend (Figure 4 E and F). A hydrothermal breccia with rounded pebble sized clasts has formed at the intersection of the WNW and NNE structural zones and marks the centre of the southern pipe (Figure 4 F). The northern pipe is elongated parallel to the NNE structural zone. This pipe comprises shatter breccia and stockwork veins but a clearly defined breccia conduit was not seen.

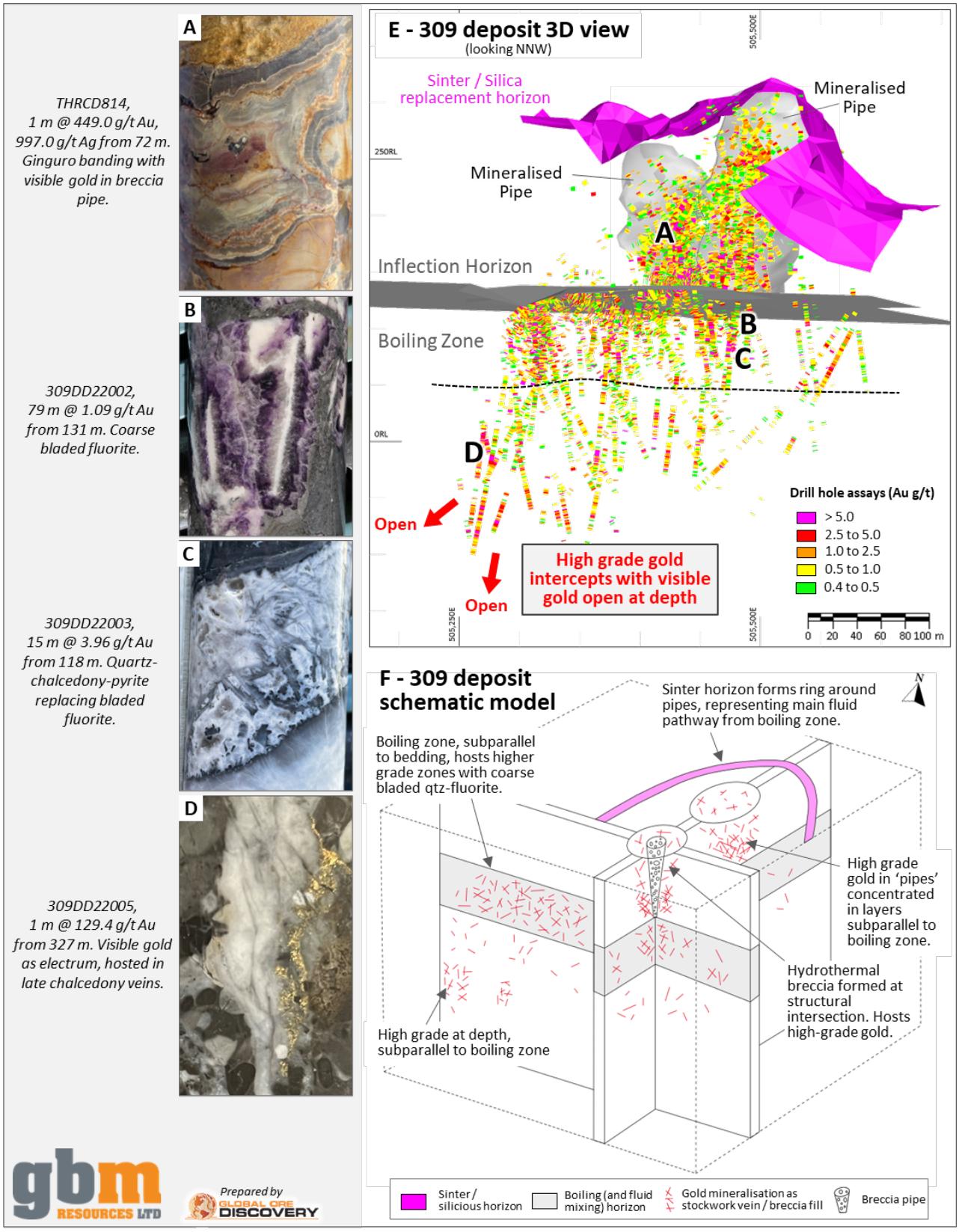



***Figure 4: 309 Deposit mineralisation model. 4 A – D show variation in mineralisation styles across the deposit with sample locations shown on 4 E. Abundant bladed fluorite and fluorite replaced by silica forms in a distinct zone that we interpret to result from boiling. The fluorite-rich boiling zone marks an inflection point in deposit geometry above which mineralisation forms two pipe-like bodies along a NNE trend (4 E and F). Note that elevated gold grades form***

***in layers sub-parallel to the inflection horizon / boiling zone. 4 F schematic model displays the spatial relationships of key mineralisation features at 309.***

## 309 and Lone Sister Database Validation

Substantial work was undertaken to validate historic drill data for both the 309 and Lone Sister deposits and build auditable drill hole databases complete with relevant metadata and where possible validated digital data against original assay certificates, survey files, collar files, hard copy plans, sections, and reports.

The validated data encompasses 18 drilling campaigns and includes 662 drillhole collars, 95,000 m of drilling, 2,500 down hole surveys, and 53,000 assay intervals. The data validation process has contributed to an increase in confidence and resource classification for both the 309 and Lone Sister MRE's.

## New Lone Sister Deposit Assay Results

Excellent results have been returned for the Lone Sister Deposit drilling (Table 2 and Appendix 1). Drilling intersected a **broad interval of gold mineralisation** with gram x metre (g*m) intersection of **164 g*m Au** in LSDD22001 (Figures 5, 6 and 7). Gold mineralisation intersected by LSDD22001 is consistent with adjacent drill holes with continuous mineralisation greater than 0.4 g/t Au over 137 m demonstrating the quality of the ore body.

Drill Hole LSDD22001 intersected

- **137 m @ 1.2 g/t Au and 3.56 g/t Ag** from 251 m including
  - 4 m @ 2.12 g/t Au and 8.05 g/t Ag from 267 m
  - **10 m @ 2.89 g/t Au and 7.98 g/t Ag** from 284 m
  - 7 m @ 2.18 g/t Au and 2.69 g/t Ag from 305 m
  - **13 m @ 2.31 g/t Au and 1.84 g/t Ag** from 325 m
  - 2.2 m @ 7.75 g/t Au and 9.57 g/t Ag from 341.8 m
  - 1 m @ 3.2 g/t Au and 86.63 g/t Ag
- **17.1 m @ 2.37 g/t Au and 1.71 g/t Ag** from 401 m including
  - **1 m @ 34.55 g/t Au and 9.27 g/t Ag** from 415 m

Review of Lone Sister historic drilling identified an unsampled portion of LRCD151 containing rhyolite and heavily silicified volcanics that was likely mineralised. Recent sampling (Table 2 and Figure 7) of this previously unsampled portion of LRCD151 returned

- **23 m @ 1.81 g/t Au and 1.35 g/t Ag** from 237 m including
  - **4 m @ 6.03 g/t Au and 3.03 g/t Ag** from 241 m
  - 2 m @ 4.71 g/t Au and 1.95 g/t Ag from 254 m

When combined with historical results, the overall intersection grades **101 m @ 2.3 g/t Au** from 237 m.

Drill Hole LSDD22002 collapsed and was abandoned before reaching the target zone. No significant results were returned.

| Drill Hole | Comments | From (m) | To (m) | Interval (m) ^ | Au (g/t) | Ag (g/t) | Au g*m ^^ |
|---|---|---|---|---|---|---|---|
| | | **251.0** | **388.0** | **137.0** | **1.20** | **3.56** | **164** |
| | inc. | 267.0 | 271.0 | 4.0 | 2.12 | 8.05 | 8 |
| | **inc.** | **284.0** | **294.0** | **10.0** | **2.89** | **7.98** | **29** |
| | inc. | 305.0 | 312.0 | 7.0 | 2.18 | 2.69 | 15 |
| LSDD22001 | **inc.** | **325.0** | **338.0** | **13.0** | **2.31** | **1.84** | **30** |
| | inc. | 341.8 | 344.0 | 2.2 | 7.75 | 9.57 | 17 |
| | inc. | 358.0 | 359.0 | 1.0 | 3.20 | 86.63 | 3 |
| | | **401.0** | **418.1** | **17.1** | **2.37** | **1.71** | **41** |
| | **inc.** | **415.0** | **416.0** | **1.0** | **34.55** | **9.27** | **35** |
| | | **237.0** | **260.0** | **23.0** | **1.81** | **1.35** | **42** |
| LRCD151 | **inc.** | **241.0** | **245.0** | **4.0** | **6.03** | **3.03** | **24** |
| | inc. | 254.0 | 256.0 | 2.0 | 4.71 | 1.95 | 9 |

Intercepts calculated with 0.2 g/t Au cut-off and 3 m internal dilution.
High grade included intercepts calculated with 2.0 g/t Au cut off and 3 m internal dilution.
^ All widths and intercepts are expressed as metres down hole.
^^ Au g/t multiplied by metres

***Table 2: Assay results returned for Lone Sister Deposit drill holes LSDD22001 and LRCD151.***

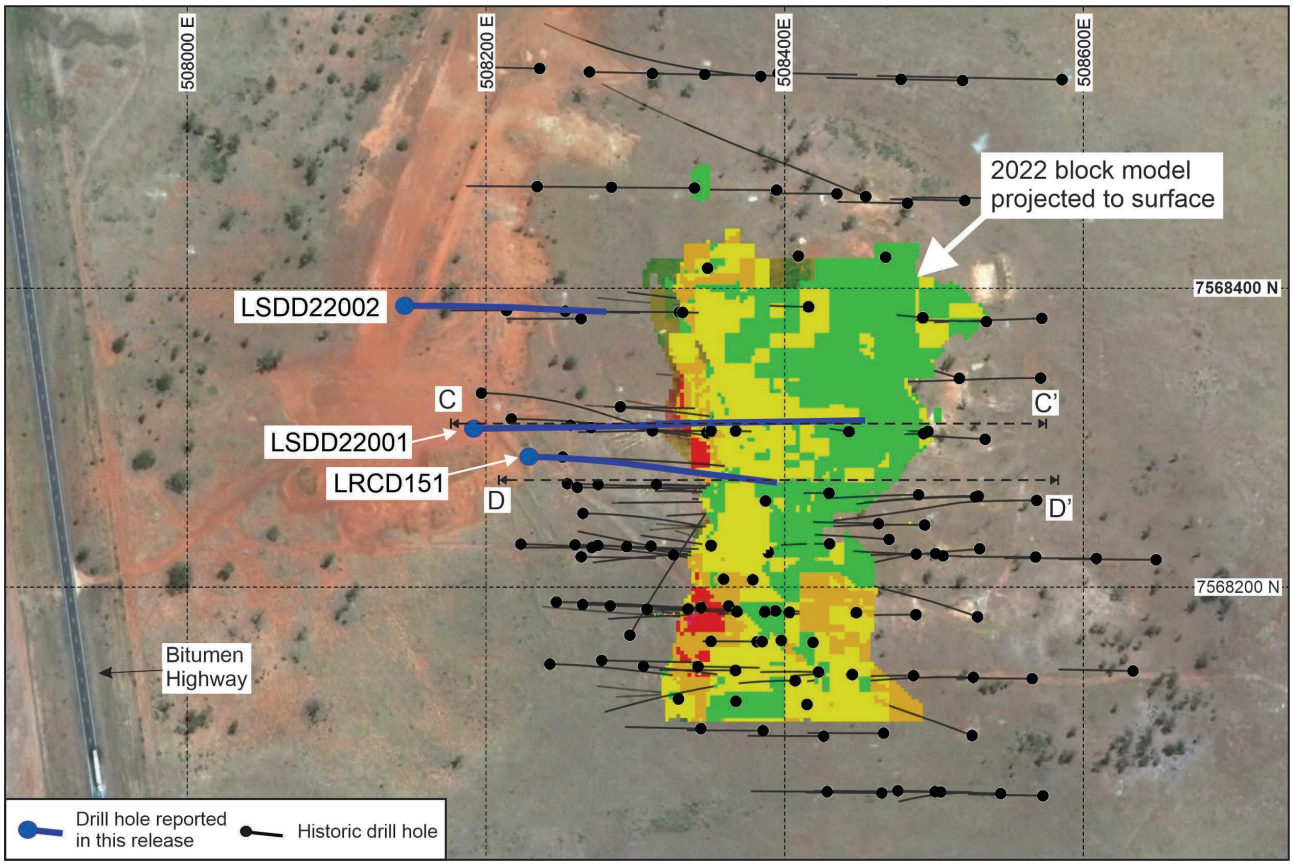



***Figure 5: A map showing the location of drill holes with recently returned results at the Lone Sister Deposit. Note the location of section line C-C' for Figure 6 and D-D' for Figure 7. Also shown is the nearby highway, 2022 block model projected to surface and historic drill holes.***

Follow GBM on LinkedIn

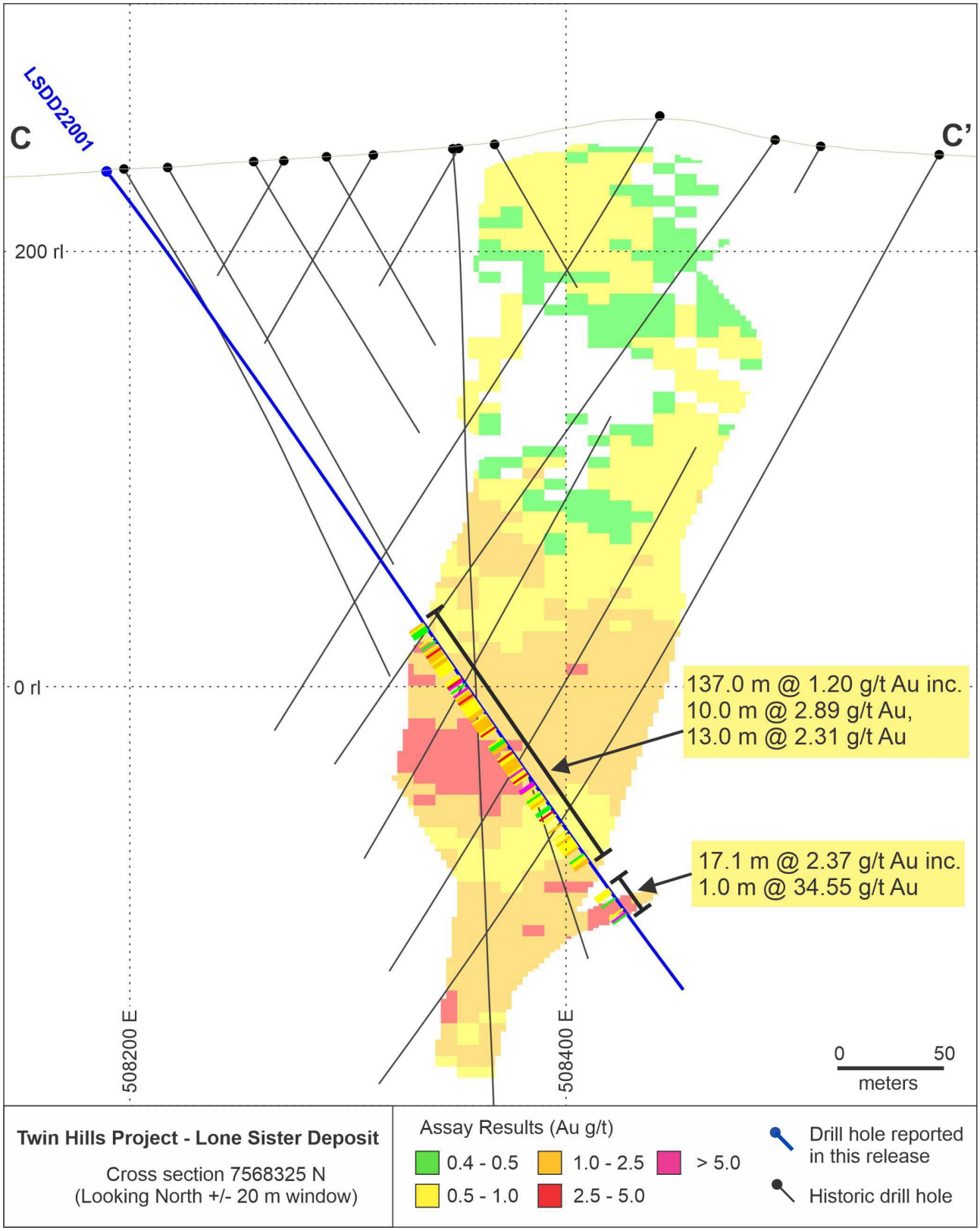



***Figure 6: A cross-section (C-C') showing assay results for drill hole LSDD22001 overlain on the 2022 block model and historic drill holes.***

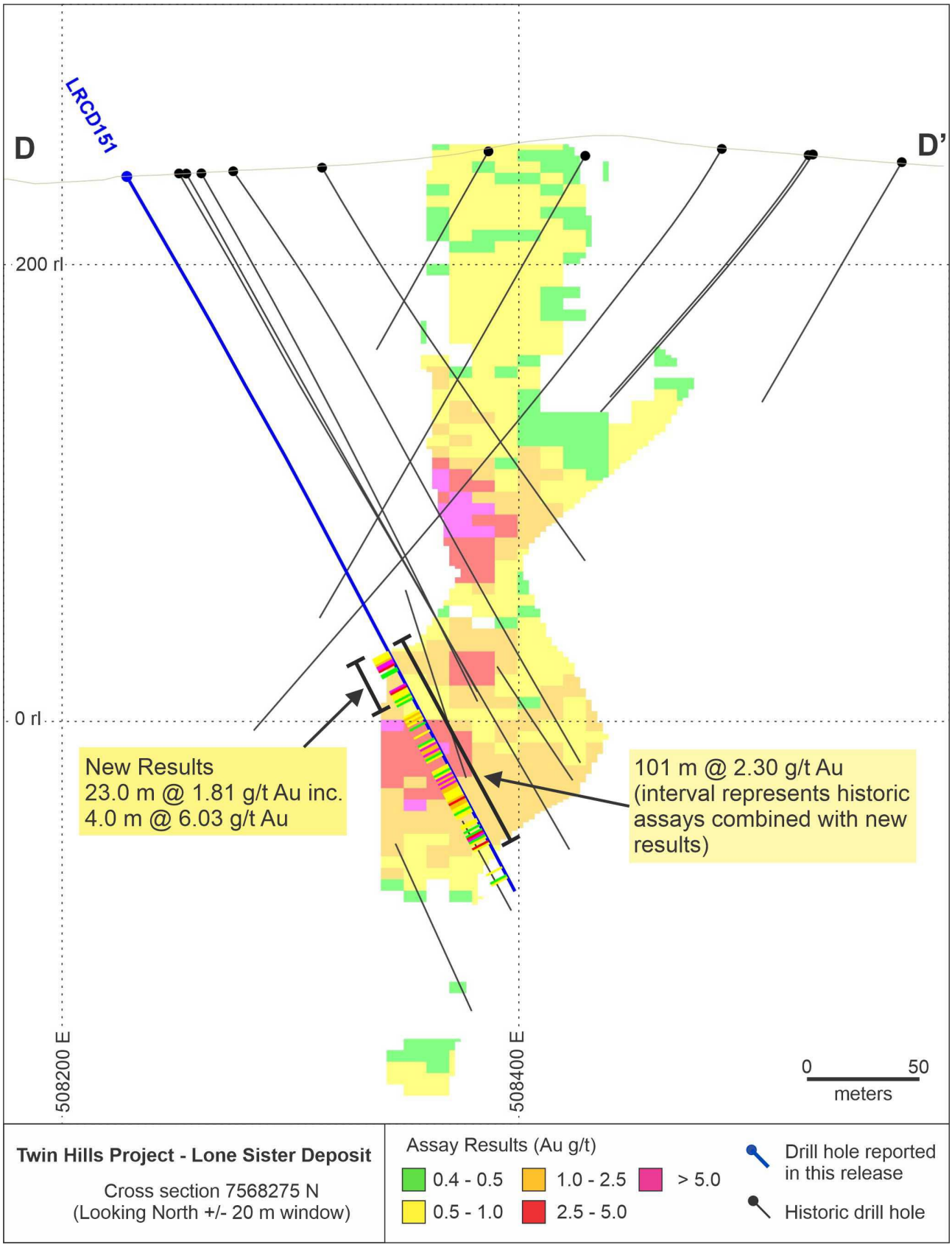



***Figure 7: Cross-section D-D' showing assay results for drill hole LRCD151 overlain on the 2022 block model and historic drilling.***

Follow GBM on LinkedIn

Review of Lone Sister historic drilling identified an unsampled portion of LRCD151 that was likely mineralised. Both the historic results and new results for the previously unsampled portion are shown.

## Twin Hills Geology and Exploration

The 309 and Lone Sister deposits that comprise the Twin Hills Project are within Mining License 70316 and are located 250 km south of Charters Towers, in northeast Queensland. The deposits sit on the western limb of the Devonian to Carboniferous Drummond Basin that is host to several other significant gold deposits including Pajingo, Wirralie, and Yandan (Figure 8). Previous workers have inferred that the Twin Hills sedimentary-volcanic package was deposited in a late Devonian age, structurally controlled, pull apart basin that formed along the margin of a Cambro-Ordovician age metamorphic basement high, the Anakie Inlier.

The 309 and Lone Sister gold deposits are 7 km apart and linked by the St Anns Fault; a major north-striking structural lineament (Figure 9). Both deposits exhibit bonanza gold grades (as evidenced by the peak gold value of 2,940 g/t Au in the 309 Deposit, with 300 individual metre samples exceeding 30 g/t Au, and a peak gold value of 939 g/t Au at Lone Sister). Historic drill intersections have included 17 m @ 317.4 g/t Au from 222 m in TRCD728 including, 5 m @ 1,037 g/t Au from 222 m and 4 m @ 49.0 g/t Au from 230 m (Refer ASX: GBZ release 18 January 2019).

The 309 and Lone Sister Deposits are markedly different in host rock and style of mineralisation but can be considered as low sulphidation epithermal deposits. The 309 Deposit is hosted by a sequence of calcareous and variably carbonaceous well bedded siltstone that is progressively interlayered upwards with ash, crystal, and crystal lithic tuff that starts as occasional beds 1 – 5 cm thick and increases to tuff layers several meters thick. The siltstones and tuffs are cross-cut and overlain by a thick unit of breccia. Historically described as ‘milled matrix breccia’ this breccia is typically matrix supported and comprises a rock flour matrix with angular to sub rounded clasts of the underlying siltstones and tuffs. Facies variation is evident within the breccia with zones of clast supported breccia, zones dominated by specific clast types, and in places a clear gradation to breccia with well-rounded pebble to cobble sized clasts and little matrix. Drill holes consistently passed through the milled matrix breccia into the underlying, typically undeformed, siltstones and tuffs. A diatreme invoked by previous models was not found, though the breccia could still represent a distal expression of a diatreme

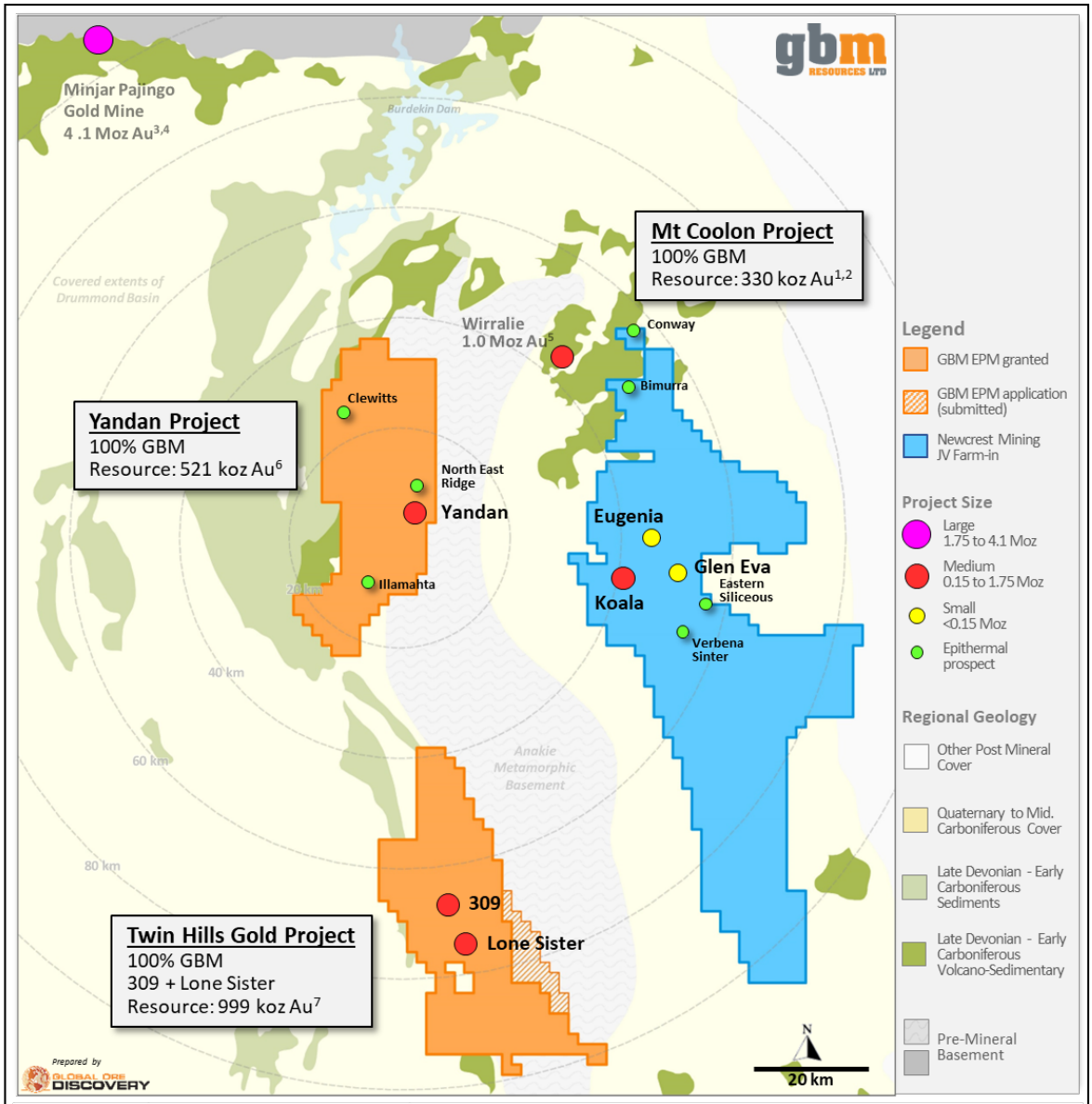
A variety of hydrothermal mineralisation styles are present at 309. On surface, sinter crops out along an arcuate trend that rings near surface gold mineralisation. Bonanza grade ginguro style colloform banded chalcedony veins are present at the top of the system. Spectacular bladed fluorite-chalcedony-quartz ± adularia-pyrite-gold veins and breccia fill form throughout the deposit but are most common in in the middle and upper parts of the deposit. The fluorite bearing veins are progressively replaced by later stages of silicification and corresponding higher gold grades. Quartz-chalcedony-pyrite veins with visible gold as electrum and bonanza grades > 100 g/t Au appear to post-date most other mineralisation and were observed in the deeper parts of the deposit.

The complex shape of the 309 ore body is the result of both structural controls on fluid flow and hydrothermal processes. At depth gold mineralisation is predominantly focused along WNW and, to a lesser extent, NNE structural zones as stockwork veins and breccia fill. The best grades form in two 50 -70 m high layers broadly sub-parallel to bedding with the uppermost of the two zones characterized by abundant bladed fluorite-chalcedony-quartz veins and breccia fill. We interpret this zone to represent a boiling and / or fluid mixing zone that marks an inflection point in deposit geometry above which near surface mineralisation forms two pipe-like bodies along a NNE trend.

Known mineralisation extends to 380 m below surface and remains open in several directions. Exploration will initially focus on down plunge extensions to known mineralisation along the key WNW and NNE trends.

The Lone Sister ore body is preferentially hosted by a rhyolite dyke that cuts a sequence of andesite lavas with abundant amygdales interlayered with volcaniclastics, phreatomagmatic breccia and ignimbrite. The broadly tabular shape of the mineralisation envelope directly reflects the shape of the host rhyolite dyke with some evidence for limited mineralisation having formed within specific lithological units adjacent to the dyke. Higher grade gold mineralisation displays a distinct plunge to the north and remains open at depth. Controls on the plunge of mineralisation are yet to be confirmed but preliminary work suggests the plunge may relate to adjacent northerly dipping volcanic stratigraphy. Gold mineralisation manifests as quartz-pyrite veinlets and disseminated pyrite with higher grades associated with increased vein density and higher pyrite percentage. Silicification is also significantly increased around mineralisation.

Higher grade gold mineralisation remains open down plunge to the north and this will be the initial focus of ongoing exploration. GBM will provide more detail on the geological setting and Twin Hills exploration program next year.




| GBM Project | Location | JORC 2012 Resources[6] | | | |
|---|---|---|---|---|---|
| | | Tonnes (000's) | Au (g/t) | Au (ounces) | Cut-off grade |
| Yandan | East Hill, South Pit | 21,500 | 0.8 | 521,000 | 0.3 g/t |
| | *Inc. East Hill* | *1,900* | *3.6* | *218,000* | *1.0 g/t* |
| Mt Coolon | Eugenia, Koala, Glen Eva | 6,653 | 1.5 | 330,500 | 0.4 g/t |
| Twin Hills | 309, Lone Sister | 23,110 | 1.3 | 999,200 | Open-pit 0.4 g/t<br>Underground 2.0 g/t |
| | *Inc. 309, Lone Sister Open Pit* | *21,760* | *1.2* | *854,700* | *0.4 g/t* |
| | *Inc. 309, Lone Sister UG* | *1,350* | *3.3* | *144,500* | *2.0 g/t* |
| **GBM Drummond Basin Total** | | **51,263** | **1.1** | **1,850,700** | |

*1. GBM ASX Announcement, 18 Jan. 2019, Mt Coolon and Twin Hills Combined Resource Base Approaches 1 Million Ounces*
*2. GBM ASX Announcement, 4 Dec. 2017, Mt Coolon Gold Project Scoping Study *Including Tailings*
*3. Evolution Mining. Pajingo-Fact-Sheet_March-2016_web-1.pdf*
*4. Osborne & Chambers. (2017). Pajingo Gold deposit. In Philips (ed), Australian Ore Deposits. AusIMM. Monograph 23.*
*5. Drummond Gold Limited , 24 Oct 2014, Mining 2014 Presentation, October Brisbane*
*6. GBM ASX Announcement, 23 Dec 2020, Mt Coolon and Yandan Combined Resources Total 852,000 oz following completion of Yandan acquisition*
*7. This Release*

***Figure 8: A map showing the distribution of GBM's tenements in the Drummond Basin including the recently announced farm-in agreement with Newcrest on the Mt Coolon Project (Note: Mt Coolon Project resources have not been verified by Newcrest). Note the location of Twin Hills 309 and Lone Sister deposits.***

Follow GBM on LinkedIn

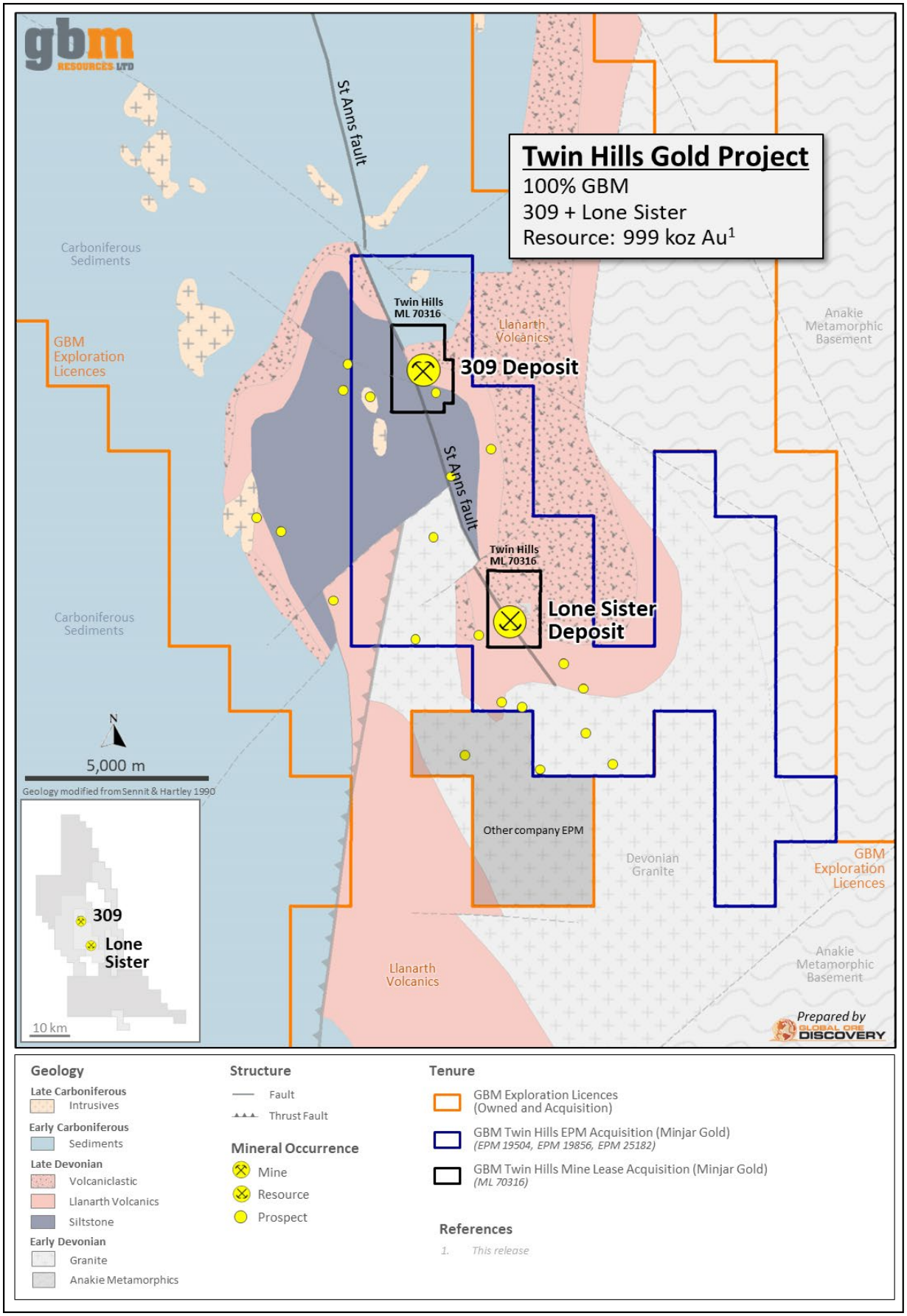



***Figure 9: Geological setting of 309 and Lone Sister Deposits***

Follow GBM on LinkedIn

## Drilling Techniques

These Mineral Resource Estimates are based on diamond (DD) and reverse circulation (RC) drilling data compiled from previous exploration and mining activity and where possible validated against original assay sheets, plans, sections, and reports. Drilling data was carried out in 5 campaigns by Metana (MET) from 1988 to 1990; Plutonic, Homestake and Barrack (PLUT) 1991 to 2001; BMA Gold and THO (BMAG) 2002 to 2007; NQM (Evolution) in 2010 and GBM in 2022. RC drilling used a face sample hammer and cuttings were sampled from the cyclone at 1.0 m intervals and sub-sampled using Jones riffle splitters. Diamond (DD) core was sub-sampled by cutting the core in half longitudinally using a diamond saw. Diamond core samples were generally to 1.0 m intervals but honoured geological contacts where appropriate.

The 309 mineral resource estimate is based on 546 drill holes for 75,553.34 m. Of these 55 were diamond core holes drilled from surface totaling 8,207.15 m; 203 diamond core holes drilled from underground totaling 12,849.0 m; 275 diamond core tails of RC or PCD blade pre-collars totaling 35,677.29 m; 184 RC holes drilled from surface totaling 18,819.9 m. DD core was PQ (0.5%), HQ (16.7%), HQ3 (1.5%), NQ (46.5%), NQ2 (28.9%) and BQ (0.2%) in size with the size not recorded for the remaining 5.8%. All underground drilling was LTK48 core.

The Lone Sister mineral resource estimate is based on 132 drill holes for 26,259.52 m. Of these 5 were diamond core holes drilled from surface totaling 686.7 m; 115 were diamond core tails of RC pre-collars totaling 17,638.82 m; 76 were RC holes drilled from surface totaling 7,934.0 m. DD core was HQ (2.9%), NQ (48.2%), NQ2 (44.1%), BQ (0.2%) and RC-5 (2.5%) in size with the size not recorded for the remaining 2.1%.

RC drilling recovery was not recorded. Diamond drilling recovery is only available for BMAG, THO and GBM data. DD recovery was measured run by run as recovered length compared to drilled length. For the 309 mineral resource estimate diamond drilling recovery is available for 64 holes and averages 98.7%. For the Lone Sister mineral resource estimate diamond drilling recovery is available for 11 holes and averages 100.0%

## Sampling Methods

RC drilling drill cuttings were sampled from the cyclone at 1.0 m intervals and sub-sampled using Jones riffle splitters to a 2 kg – 3 kg sample.

Diamond drill core was sub-sampled by cutting the core in half longitudinally using a diamond saw. The core was cut at the highest angle possible to geological features to ensure that half of each geological feature was sampled. Diamond core samples were generally to 1.0 m

## Sample Analysis Method

55,328 gold samples were available for the 309 deposit. Of these, 663 samples (1.2%) were analysed by aqua regia (AR) digest and AAS analysis, 9,756 (17.6%) by cyanide leach with AAS analysis and 34,249 (61.9%) by fire assay. The gold assay method was not recorded for a further 10,660 (19.3%) samples but given that these samples were made by the same companies these are almost certainly all fire assays. 32,685 samples were analysed for silver, 22,875 by AAS with varying digestion methods, 8,043 by ICP again with varying digestion methods and 1,767 with no recorded method but likely AAS.

17,397 gold samples were available for the Lone Sister deposit. Of these, 67 samples (0.4%) were analysed by aqua regia (AR) digest and AAS analysis and 6,958 (40.0%) by fire assay. The gold assay method was not recorded for a further 9,916 (57.0%) samples, but given that these samples were made by the same companies these are almost certainly all fire assays. 8,943 samples were analysed for silver, 432 by ICP-OES with 4 acid digest and 8,587 with no recorded method but likely

AR/AAS.

Assay quality control procedures varied through time with different operators. MET (12.8% of the 309 data and 15.4% of the Lone Sister data) only used pulp duplicates for quality control at a rate of 1 per 12 primary samples. PLUT used field duplicates, pulp duplicates and umpire laboratory pulp duplicates at rates of 1 per 300, 10 and 500 respectively. BMAG used standards, coarse blanks, pulp duplicates and umpire laboratory pulp duplicates at rate of 1 per 120, 110, 20, 60 respectively. NQM only used pulp duplicates at a rate of 1 per 13 samples. GBM used standards, coarse blanks, pulp blanks and pulp duplicates at rate of 1 per 15, 30, 35, 25, 100 respectively. The quantity of quality control data for the MET, PLUT and NQM data is less than ideal but shows no evidence of bias and good repeatability. The BMAG QC data show no evidence of bias and good re-producibility, although the standards and blanks show moderate variability. The GBM data shows very good precision, reproducibility and no evidence of bias. The QC data shoes that the quality of the assay data is suitable for use in resource estimation.

## Estimation Methodology

309 Deposit:

Gold and silver grades were interpolated into a block model with parent blocks 5 m x 5 m x 5 m and sub-blocks of 1.25 m x 1.25 m x 1.25 m by ordinary kriging. The raw assay data were composited to 1.0 m prior to geostatistical analysis and interpolation. Interpolation was carried out by ordinary kriging within three gold grade domains (NNE main, WNW and NNE south) interpreted assays at a nominal 0.2 g/t Au but including up to 10 m of internal 'dilution' to allow geologically reasonable continuity. The boundaries between domains were treated as 'soft' boundaries but the external boundary between the domains and 'waste' was treated as a hard boundary. High grade (>125 g/t Au in the NNE and NNE south domains and > 100 g/t Au in the WNW domain) samples determined from cumulative probability plots and histograms were restricted to within 5 m and not used beyond this distance. Separate gold and silver variogram models were used in each domain. Variogram modelling was completed on normal score transformed data and the models back-transformed for use in kriging the block model.

Lone Sister Deposit:

Gold and silver grades were interpolated by ordinary kriging into a block model with parent blocks 10 m x 10 m x 5 m (XYZ) and sub-blocks of 2.5 m x 2.5 m x 1.25 m. The raw assay data were composited to 2.0 m prior to geostatistical analysis and interpolation. The interpolation was carried out within a single gold grade domain interpreted at a nominal 0.2 g/t Au as a hard boundary. High grade samples greater than 40 g/t Au were restricted to within 10 m. 40 g/t Au was selected as the outlier restriction from cumulative probability plots and a visual assessment of the continuity of grades above 40 g/t Au. Separate gold and silver variogram models were used in each domain. Variogram modelling was completed on normal score transformed data and the models back-transformed for use in kriging the block model.

## Resource Classification Criteria

The Resource Estimates were classified in accordance with the JORC 2012 code.

The 309 mineral resources were classified into continuous zones of like confidence using an assessment of geological confidence, the distance to the nearest composite and the kriging slope of regression (a function of the grade continuity in the variogram model and the spatial configuration of the data used to estimate a block). The geological continuity of the gold domain was assessed by comparing the gold grade domain with an alternative interpretation independently interpreted by GBM staff. Data quality was also considered but not used because the data quality is good and not spatially variable. In practice the measured – indicated boundary was largely informed by distance to the nearest composite (<5 m in measured) whereas the indicated – inferred boundary was

informed by a combination of distance to the nearest composite (<15 m for indicated) and geological confidence.

The Lone Sister deposit classified in a similar manner to 309 except that the distance used to distinguish measured from indicated was 15 m and indicated from inferred was 25 m. No measured resources are reported from Lone Sister because no continuous zones are sufficiently well informed by data to meet the measured criteria.

## Cut-off Grades

For both the 309 and Lone Sister resource estimates a cut-off grade of 0.4 g/t Au was applied above 0 RL, and 2.0 g/t Au below 0 RL These cut-off grades are based on a gold price of AUD $2,600/oz escalated 30%, assume that open pit mining is feasible to 0RL (approximately 250 m below surface), underground mining below that level and that a CIL processing plant could be economically built and operated at the site achieving gold recoveries of at least 85%. An allowance has also been made for a 5% royalty.

## Mining and Metallurgical Methods

This Resource estimate is based on the following assumptions, that:

For the 309 deposit open pit mining is assumed possible to 0RL based on conceptual mining assessments with appropriate mining, processing and administration costs. Mining selectivity to a minimum of 2 metres is assumed. The same RL limit to open pit mining is assumed at Lone Sister as it has similar geometry, grade and metallurgical characteristics.

For the 309 and Lone Sister deposits underground mining is assumed possible to a minimum width of 3.0 m

CIL recoveries greater than 85% have been demonstrated for ore above 4 g/t Au by past production and a significant amount of testwork at 309. Operating and testwork data shows that the 309 ore is hard and abrasive. Testwork shows that recoveries are variable but a fine grind – CIL – gravity process should give recoveries of 85 – 95% at 309 with low reagent consumption. Oxide ores give better recoveries than fresh ores.

Less testwork has been carried out on Lone Sister mineralisation, but similar metallurgical characteristics to 309 have been demonstrated, although most of the Lone Sister testwork was completed on higher grade samples than the current resource grade. Further testwork on lower grade samples is planned.

**This ASX announcement was approved and authorised for release by:**
Peter Rohner, Managing Director

**For further information please contact:**


**Investor enquiries**
Peter Rohner
Managing Director
+61 8 9316 9100
peter.rohner@gbmex.com.au

**Media enquiries**
Michael Vaughan
Fivemark Partners
+61 422 602 720
michael.vaughan@fivemark.com.au


**About GBM Resources**

GBM Resources Limited **(**ASX: GBZ) is a well-funded Queensland based mineral exploration and development company focused on the discovery of world-class gold and copper deposits in Eastern Australia. The company has a high calibre project portfolio, hosting district scale mineral systems, located in several premier metallogenic terrains.

Its flagship project in the Drummond Basin (QLD) holds ~1.85 Moz of gold in JORC resources (Mt Coolon, Yandan and Twin Hills). Some tenements in the Basin have recently become the subject of a A$25m farm-in with Newcrest. 2023 will see an expanded drilling program which is aiming to define 2-3 Moz and support GBM's transition into a mid-tier Australian gold company.

Separately it also holds tenements in the Mt Morgan district (subject to a vend into a TSX company) and in the Mt Isa Inlier in Queensland (JV with Nippon Mining Australia - 54%), and the Malmsbury Project (JV with Novo Resources Corp. - 50%, earning additional 10%) in the prolific Victorian Goldfields. This is complemented by the cash generating White Dam Gold-Copper Project in South Australia in which GBM now holds a 100% interest. Divestment of non-core assets will continue.

## COMPETENT PERSON STATEMENT

The information in this report that relates to The Twin Hills Mineral Resources is based on information compiled by Kerrin Allwood, who is a Member of The Australasian Institute of Mining and Metallurgy and The Australasian Institute of Geoscientists. Mr Allwood is a full time employee of Geomodelling Limited. Mr Allwood has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Allwood consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results is based on information compiled by Mr. Peter Mullens, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr. Mullens is an employee of the company and is a holder of shares and options in the company. Mr. Mullens has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Mullens consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the respective announcements and all material assumptions and technical parameters underpinning the resource estimates within those announcements continue to apply and have not materially changed.

The Company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.

*References:*


1. *GBM Resources. (2019, January 18). Mt Coolon and Twin Hills Combined Resource Base Approaches 1 Moz. ASX: GBZ Release.*
2. *GBM Resources. (2022, February 2). Significant Resource Upgrade at Twin Hills Project. ASX: GBZ Release.*
3. *GBM Resources (2020, 23 December). Mt Coolon and Yandan Combined Resources Total 852,000 oz, Following Completion of Yandan Acquisition. ASX: GBZ ASX Release.*
4. *Corbett, G. (2006). Comments on Geology and Exploration of the Twin Hills Gold Project, QLD, Australia. Internal report for BMA Gold*
5. *Sennit, C.M. (1991). Aspects of Epithermal Gold Mineralisation, Twin Hills, QLD. MSc thesis, James Cook University (unpub.).*
6. *Alston, A.J., Hartley, J.S., Sennitt, C.M., 1991. The Geology of the Twin Hills Epithermal Gold Deposit, Queensland. World Gold '91, Cairns, pp. 331-339.*
7. *King, S. (1999). Structural Controls on Gold Mineralisation at the Twin Hills Project, Drummond Basin, QLD. Internal Report for Homestake Gold.*

## APPENDIX 1: Lone Sister Deposit Drilling Program Drill Hole Details

***Drill hole information for the Lone Sister drill program.***

| Hole ID | Easting (MGA94 Zone 55S) | Northing (MGA94 Zone 55S) | RL (m) | EOH Depth (m) | Collar Dip | Collar Azimuth | Hole Type | Prospect | Hole Status |
|---|---|---|---|---|---|---|---|---|---|
| LSDD22001* | 508192 | 7568306 | 243 | 459.9 | -52 | 90 | RCDD | Lone Sister | Assays received |
| LSDD22002* | 508144 | 7568389 | 240 | 226.8 | -55 | 91 | RCDD | Lone Sister | Hole collapsed, did not reach target. |
| LRCD151* | 508228 | 7568287 | 238 | 357.7 | -60 | 91 | RCDD | Lone Sister | Sample of previously unsampled portion of historic hole. |

DD = Diamond, RCDD = RC pre-collar with Diamond tail, * = assays reported in this release

## APPENDIX 2: GBM Mineral Resource Estimate for the Drummond Basin Projects (Mt Coolon, Yandan and Twin Hills) along with other company interests

| Deposit | Resource Category | | | | | | | | | Total | | | Cut-off |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Measured | | | Indicated | | | Inferred | | | | | | |
| | 000' t | Au g/t | Au oz | 000' t | Au g/t | Au oz | 000' t | Au g/t | Au oz | 000' t | Au g/t | Au oz | |
| **Koala -ML** | | | | | | | | | | | | | |
| Open Pit | | | | 670 | 2.6 | 55,100 | 440 | 1.9 | 26,700 | 1,120 | 2.3 | 81,800 | 0.4 |
| UG Extension | | | | 50 | 3.2 | 5,300 | 260 | 4 | 34,400 | 320 | 3.9 | 39,700 | 2.0 |
| Tailings | 114 | 1.7 | 6,200 | 9 | 1.6 | 400 | | | | 124 | 1.6 | 6,600 | 1.0 |
| **Sub Total** | **114** | **1.7** | **6,200** | **729** | **2.6** | **60,800** | **700** | **2.7** | **61,100** | **1,563** | **2.5** | **128,100** | |
| **Eugenia** | | | | | | | | | | | | | |
| Oxide - Open Pit | | | | 885 | 1.1 | 32,400 | 597 | 1.0 | 19,300 | 1,482 | 1.1 | 51,700 | 0.4 |
| Sulphide - Open Pit | | | | 905 | 1.2 | 33,500 | 1,042 | 1.2 | 38,900 | 1,947 | 1.2 | 72,400 | 0.4 |
| **Sub Total** | | | | **1,790** | **1.1** | **65,900** | **1,639** | **1.1** | **58,200** | **3,430** | **1.1** | **124,100** | |
| **Glen Eva - ML** | | | | | | | | | | | | | |
| **Sub Total - Open Pit** | | | | **1,070** | **1.6** | **55,200** | **580** | **1.2** | **23,100** | **1,660** | **1.5** | **78,300** | 0.4 |
| **Yandan - ML** | | | | | | | | | | | | | |
| East Hill - Open Pit | | | | | | | 20,600 | 0.8 | 505,000 | 20,060 | 0.8 | 505,000 | 0.3 |
| South Hill - Open Pit | | | | | | | 900 | 0.6 | 16,000 | 900 | 0.6 | 16,000 | 0.3 |
| **Sub Total** | | | | | | | **21,500** | **0.8** | **521,000** | **21,500** | **0.8** | **521,000** | |
| **Twin Hills - ML** | | | | | | | | | | | | | |
| 309 - Open Pit | 830 | 2.5 | 73,900 | 5,480 | 1.3 | 235,200 | 3,650 | 1.1 | 129,800 | 9,960 | 1.4 | 438,900 | 0.4 |
| 309 - UG | | | | 190 | 4.0 | 24,500 | 480 | 3.9 | 59,900 | 670 | 3.9 | 84,400 | 2.0 |
| Lone Sister - Open Pit | | | | 5,250 | 1.3 | 277,300 | 6,550 | 0.9 | 188,500 | 11,800 | 1.1 | 415,800 | 0.4 |
| Lone Sister - UG | | | | 370 | 2.9 | 34,300 | 310 | 2.6 | 25,800 | 680 | 2.7 | 60,100 | 2.0 |
| **Sub Total** | **830** | **2.5** | **73,900** | **11,290** | **1.6** | **571,300** | **10,990** | **1.1** | **404,000** | **23,110** | **1.3** | **999,200** | |
| **Drummond Basin Total** | **944** | **2.6** | **80,100** | **14,879** | **1.6** | **753,200** | **35,409** | **0.9** | **1,067,400** | **51,263** | **1.12** | **1,850,700** | |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **White Dam - ML** | | | | | | | | | | | | | |
| Hannaford - Open Pit | | | | 700 | 0.7 | 16,400 | 1,000 | 0.8 | 26,900 | 1,700 | 0.8 | 43,300 | 0.2 |
| Vertigo - Open Pit | | | | 300 | 1.0 | 9,400 | 1,400 | 0.6 | 29,000 | 1,700 | 0.7 | 38,400 | 0.2 |
| White Dam North - Open Pit | | | | 200 | 0.5 | 2,800 | 1,000 | 0.6 | 17,600 | 1,200 | 0.5 | 20,400 | 0.2 |
| **Sub Total** | | | | **1,200** | **0.7** | **28,600** | **3,400** | **0.7** | **73,500** | **4,600** | **0.7** | **101,900** | |

cut-off grade is 0.20 g/t Au for all, Vertigo is restricted to above 150RL (~70m below surface)

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Malmsbury - RL** | | | | | | | | | | | | | |
| **Sub Total - UG** | | | | | | | **820** | **4.0** | **104,000** | **820** | **4.0** | **104,000** | 2.5 |
| **Sub Total - UG - GBM Share** | | | | | | | **410** | **4.0** | **52,000** | **410** | **4.0** | **52,000** | 2.5 |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **GBM Total** | | | | | | | | | | | | **2,004,600** | |

The announcements containing the Table 1 Checklists of Assessment and Reporting Criteria relating to the 2012 JORC compliant Resources are:

- Koala/Glen Eva and Eugenia – GBM ASX Announcement, 4 December 2017, Mt Coolon Gold Project Scoping Study, note these resources have not been verified by Newcrest and are on tenements subject to a recent farm-in agreement with Newcrest
- Yandan – GBM ASX Announcement, 23 December 2020, Mt Coolon and Yandan Combined Resources Total 852,000 oz, following completion of Yandan acquisition
- Twin Hills – GBM ASX Announcements, 18 January 2019, Mount Coolon and Twin Hills Combined Resource Base Approaches 1 Million Ounces and 2 February 2022, Significant Resource Upgrade at Twin Hills Project
- White Dam - GBM ASX Announcement, 18 August 2020, White Dam Maiden JORC 2012 Resource of 102 koz
- Malmsbury – GBM ASX Announcement, 4 July 2019, Malmsbury Resource Upgraded to JORC 2012
- Including this announcement

a) The preceding statements of Mineral Resources conforms to the "Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 Edition"
b) All tonnages are dry metric tonnes
c) Data is rounded to ('000 tonnes, 0.0 g/t and '000 ounces). Discrepancies in totals may occur due to rounding

d) Resources have been reported as both open pit and underground with varying cut-off based off several factors as discussed in the corresponding Table 1 which can be found with the original ASX announcement for each Resources.

# JORC Code, 2012 Edition – Table 1 309 and Lone Sister Deposits, Twin Hills Project

## Section 1 Sampling Techniques and Data

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

### Important Note:

This Table 1 refers to 2022 drilling completed at the 309 Deposit and Lone Sister Deposit that forms part of GBM's Twin Hills Project. Drilling and exploration has been carried out at 309 and Lone Sister and across the broader Twin Hills area over a long period by a variety of companies. Table 1 data was previously reported for historical drilling and recent resource estimation (Refer ASX: GBZ release 2 February 2022 – Significant Resource Update at Twin Hills Project).

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Sampling techniques* | • *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.* | • These mineral resource estimates are based on samples from reverse circulation (RC) and diamond core (DD) drilling.<br>• The drilling data was carried out in 5 campaigns by Metana (MET) from 1988 to 1990; Plutonic, Homestake and Barrack (PLUT) 1991 to 2001; BMA Gold and THO (BMAG) 2002 to 2007; NQM (Evolution) in 2010 and GBM in 2022.<br>• RC drill cuttings were sampled from the cyclone at 1.0 m intervals and sub-sampled using Jones riffle splitters which are designed to allow the collection of unbiased sub-samples.<br>• DD core was sub-sampled by cutting the core in half longitudinally using a diamond saw. The core was cut at the highest angle possible to geological features to ensure that half of each geological feature was sampled. Diamond core samples were generally to 1.0 m intervals but honoured geological contacts where appropriate.<br>• All sub-samples were then bagged and dispatched to external commercial laboratories for assay.<br>• 55,328 gold samples were available for the 309 deposit. Of these, 663 samples (1.2%) were analysed by aqua regia (AR) digest and |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | AAS analysis, 9,756 (17.6%) by cyanide leach with AAS analysis and 34,249 (61.9%) by fire assay. The gold assay method was not recorded for a further 10,660 (19.3%) samples but given that these samples were made by the same companies these are almost certainly all fire assays. 32,685 samples were analysed for silver, 22,875 by AAS with varying digestion methods, 8,043 by ICP again with varying digestion methods and 1,767 with no recorded method but likely AAS.<br>• 17,397 gold samples were available for the Lone Sister deposit. Of these, 67 samples (0.4%) were analysed by aqua regia (AR) digest and AAS analysis and 6,958 (40.0%) by fire assay. The gold assay method was not recorded for a further 9,916 (57.0%) samples, but given that these samples were made by the same companies these are almost certainly all fire assays. 8,943 samples were analysed for silver, 432 by ICP-OES with 4 acid digest and 8,587 with no recorded method but likely AR/AAS.<br>• 18,225 historical samples were analysed for arsenic, largely by AR digest with AAS finish. All (3,912) GBM samples were analysed by ICP-OAE/MS for a multi-element suite including sulphur and arsenic following a 4 acid digest.<br><br>For GBM Drilling<br><br>• Laboratory analysis was undertaken at Intertek Townsville and include pulverising up to 3 kg to produce a 50 g charge for gold fire assay.<br>• Multi-element analysis was carried out using four acid digest with a 0.2 g charge.<br>• Samples greater than 3 kg were crushed, split via a rotary splitter and 3 kg pulverised. |
| *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.).* | 309 mineral resource estimate:<br><br>• The 309 mineral resource estimate is based on 546 drill holes for 75,553.34 m. Of these 55 were diamond core holes drilled from surface totaling 8,207.15 m; 203 diamond core holes drilled from underground totaling 12,849.0 m; 275 diamond core tails of RC or PCD blade pre-collars totaling 35,677.29 m; 184 RC holes drilled |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | from surface totaling 18,819.9 m.<br>• All RC drilling utilized a face sample hammer.<br>• DD core was PQ (0.5%), HQ (16.7%), HQ3 (1.5%), NQ (46.5%), NQ2 (28.9%) and BQ (0.2%) in size with the size not recorded for the remaining 5.8%. All underground drilling was LTK48 core.<br>Lone Sister mineral resource estimate:<br>• The Lone Sister mineral resource estimate is based on 132 drill holes for 26,259.52 m. Of these 5 were diamond core holes drilled from surface totaling 686.7 m; 115 were diamond core tails of RC pre-collars totaling 17,638.82 m; 76 were RC holes drilled from surface totaling 7,934.0 m.<br>• All RC drilling utilized a face sample hammer.<br>• DD core was HQ (2.9%), NQ (48.2%), NQ2 (44.1%), BQ (0.2%) and RC-5 (2.5%) in size with the size not recorded for the remaining 2.1%.<br>For GBM Drilling<br>• Drilling was undertaken by Eagle Drilling NQ with a Sandvik DE 712.<br>• A combination of RC pre collars and diamond tails was used.<br>• Diamond core was recovered in a standard wireline 3m core barrel using standard HQ and NQ size equipment and a standard core barrel. Triple tube barrel assembly was not used. Samples were emptied into core trays by gravity or pushed out from the core barrel using water injected under pressure.<br>• Core was oriented using a Reflex ACTIII RD down hole orientation tool. |
| *Drill sample recovery* | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • RC drilling recovery was not recorded<br>• Diamond drilling recovery is only available for BMAG, THO and GBM data. DD recovery was measured run by run as recovered length compared to drilled length.<br>• For the 309 mineral resource estimate diamond drilling recovery is available for 64 holes and averages 98.7%<br>• For the Lone Sister mineral resource estimate diamond drilling recovery is available for 11 holes and averages 100.0% |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • Any potential relationship between drilling recovery and gold grade was not investigated because the drilling recovery is so high.<br>For GBM Drilling<br>• Diamond drill recovery was recorded run by run reconciling against driller's depth blocks noting depth, core drilled, and core recovered.<br>• Drilling recovery is good and there no evidence for sample bias. |
| *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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • All drill core and chips were logged for lithology, colour, weathering and alteration using standardized codes.<br>• In 2022 drill holes across selected sections at both 309 and Lone Sister were re-logged from stored core (where available) or core photos to validate historical logging, build mineralisation models and standardize codes<br>• Selected diamond core was also logged for geotechnical data (RQD, strength, fracture frequency, joint type and roughness)<br>• All intersections were logged.<br>For GBM Drilling<br>• All diamond core is logged in detail for lithology, weathering, mineralisation style, alteration, structure, and basic geotechnical parameters (RQD).<br>• The logging has been carried out to an appropriate level of detail for resource estimation.<br>• Core is jigged, orientated, and metre marked prior to being photographed using a digital camera in a proprietary frame to capture one photo of each core tray. All drill core was photographed. |
| *Sub-sampling techniques and sample preparation* | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* | • RC drill cuttings were sub-sampled using 3 tier (12.5%) Jones riffle splitters to yield a 2 kg – 3 kg sub-sample.<br>• RC sample moisture was not recorded and any measures taken to sample wet or moist RC samples have not been recorded.<br>• DD core was sub-sampled by cutting the core in half longitudinally using a diamond saw. The core was cut at the highest angle possible to geological features to ensure that half of each geological feature was sampled. Diamond core samples were generally to 1.0 m |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *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.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | intervals but honored geological contacts where appropriate.<br>• Rare visible gold (<1.0 mm) is present at both deposits. Whilst no analysis of the optimal sample size for such material was undertaken it is likely that the sample size is insufficient for a reliable result. The impact of these samples on the resource estimates was managed by the restriction of outliers during interpolation (see below).<br><br>For GBM Drilling<br>• Sample preparation was undertaken at Intertek Townsville and comprise drying samples, crushing to 2 mm and pulverising 3 kg to 85% passing 75 µm. Samples greater than 3 kg were crushed, split via a rotary splitter and 3 kg pulverised. Lab QAQC will include standards, blanks, pulverised size checks and pulp repeats.<br>• No Additional measures were taken to ensure the representivity of the samples. Field duplicates and twinned holes were not part of this program.<br>• Sample preparation is considered appropriate for the sample types and material sampled. |
| *Quality of assay data and laboratory tests* | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>• *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*<br>• *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.* | • The assay methods used are total and appropriate to the style of mineralisation.<br>• No geophysical methods were used<br>• Assays were carried out at commercial laboratories except for 22.0% of the 309 samples (all underground DD holes) which were analysed at the Twin Hills mine laboratory<br>• Assay quality control procedures varied through time with different operators. MET (12.8% of the 309 data and 15.4% of the Lone Sister data) only used pulp duplicates for quality control at a rate of 1 per 12 primary samples. PLUT used field duplicates, pulp duplicates and umpire laboratory pulp duplicates at rates of 1 per 300, 10 and 500 respectively. BMAG used standards, coarse blanks, pulp duplicates and umpire laboratory pulp duplicates at rate of 1 per 120, 110, 20, 60 respectively. NQM only used pulp duplicates at a rate of 1 per 13 samples. GBM used standards, coarse blanks, pulp blanks and pulp duplicates at rate of 1 per 15, 30, 35, 25, 100 respectively. The |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | quantity of quality control data for the MET, PLUT and NQM data is less than ideal but shows no evidence of bias and good repeatability. The BMAG QC data show no evidence of bias and good re-producibility, although the standards and blanks show moderate variability. The GBM data shows very good precision, reproducibility and no evidence of bias. The QC data shoes that the quality of the assay data is suitable for use in resource estimation.<br><br>For GBM Drilling<br>• Gold assays were undertaken by Intertek Laboratories, Townsville using FA50/OE04: lead collection fire assay with a 50 g charge and ICP-OES finish.<br>• Multi-element assays were also undertaken by Intertek Laboratories using 4A/MS48: a 0.2 g sample is subjected to near-total digestion by a four-acid mixture and finished by ICP Mass Spectrometry.<br>• Laboratory QAQC will involve the use of internal lab standards using certified reference material, blanks, pulp repeats as part of the inhouse Intertek procedures.<br>• GBM quality control procedures for sampling were implemented systematically; coarse and pulp blanks and certified pulp standards were inserted focused in mineralised zones. Standards were selected for a range of grades and reflected oxidation states. Some Lab pulp duplicates were selected by GBM at the pulverisation stage. |
| *Verification of sampling and assaying* | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • GBM have not carried out any check assays<br>• Historic data has been recently validated by Global Ore Discovery. Where possible validated digital data against original assay certificates, survey files, collar files, hard copy plans, sections, and reports<br>• Twinned holes were not deliberately drilled, however the underground drilling at the 309 deposit resulted in very closely spaced (< 1.0 m) drilling. These holes showed that both gold grade and veining is highly variable at less than 10 m scale but form continuous zones at 10 m – 100 m scale.<br>• The raw assay data (laboratory certificates) were available for |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | approximately 80% of the data.<br>• Negative values in the database less than -0.1 g/t were treated as null values (not sampled), negative values between 0 and -0.1 g/t were halved and converted to positive values as these were below detection values.<br>• Where multiple results were available for a sample the highest ranked assay was used using the following ranking:<br><br>Surface holes:<br>1. A30_GRAV<br>2. FA50_AAS<br>3. FA_AAS<br>4. FA50_GRAV<br>5. FA_GRAV<br>6. AR_GAAS<br>7. AR_AAS<br>8. Unknown lab – UN_UN<br><br>Underground holes:<br><br>1. SGS lab – FA_AAS<br>2. Rishton mill – AR_UN<br>3. Mine Site lab – CL__AAS_PAL1000<br>4. Unknown lab – UN_UN<br><br>For GBM Drilling<br><br>• All data, data entry procedures, data verification and data storage has been carried out by GBM staff in accordance with GBM Standard Operating Procedures (SOPs). GBM SOP's meet industry best practice standards. Final data verification and data storage is being managed with final storage in industry standard DataShed software.<br>• GBM standards, blanks and pulp duplicates, and lab standards, blanks and repeats will be reviewed to ensure they fall within acceptable limits. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | • No adjustments or calibrations were made to any assay data used. |
| *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.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • At 309 172 (31.5%) of the drill collar locations were determined by differential GPS (DGPS or DGPS-RTK) to +/- 0.1 m, 259 (47.4%) holes by total station theodolite to +/- 0.1 m, 2 (0.4%) by GPS to +/- 2 m and a further 113 (20.7%) holes do not have the collar location method recorded.<br>• At Lone Sister 98 (74.2%) of the drill collar locations were determined by differential GPS (DGPS or DGPS-RTK) to +/- 0.1 m, 7 (5.3%) holes by total station theodolite to +/- 0.1 m, 2 (1.5%) by GPS to +/- 2 m and a further 25 (18.9%) holes do not have the collar location method recorded.<br>• Downhole surveys were taken at an average of 35 m downhole in DD and RC DD holes.<br>• Most RC holes were not surveyed down hole<br>• Topographic control in the block models are a triangulated LiDAR survey considered accurate to +/- 0.1 m. The topographic surfaces are suitable for resource estimation.<br>• Underground voids at the 309 deposit are from wireframes created from underground survey data (development) and laser scans (stopes). These are suitable for resource estimation.<br>• All locational data was originally acquired local grids. GBM used MapInfo software to convert all locational data (including historical wireframes) to MGA grid.<br><br>For GBM Drilling<br><br>• All collar locations were pegged by GBM personnel using geodetic quality DGPS (< 1 cm) by a qualified surveyor.<br>• Downhole single shot drill surveys (using a Reflex EZ Trac tool) were carried out initially at 10 m then at nominally 30 m intervals while drilling, followed by a 10 m multi-shot survey upon completion of each hole using a Reflex EZ Gyro survey tool equipped with a Sprint IQ continuous survey wireline tool to facilitate end of hole surveys. The data is recorded in grid north as well as QAQC information and uploaded from the EZ GYRO via a Bluetooth connection to a Reflex tablet data recorder which is then uploaded to Reflex's proprietary Web based storage system (IMDEXHUB-IQ) for perusal and transfer |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | by GBM technical staff.<br>• All work was carried out in the Map Grid of Australia (MGA Zone 55) using the GDA94 datum. |
| *Data spacing and distribution* | • *Data spacing for reporting of Exploration Results.*<br>• *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.*<br>• *Whether sample compositing has been applied.* | • Drill data spacing varies significantly from less than 1.0 m near underground drill sites at the 309 deposit to 40 m in areas defined by widely spaced surface drilling.<br>• Underground drilling at 309 is on varying azimuths and dips.<br>• Surface drilling at 309 is on 25 m spaced east-west and 25m spaced north – south sections<br>• Surface drilling at Lone Sister is on 40 m spaced east-west sections and largely drilled towards the east at dips of -60° to -80°.<br>• All work has been completed in MGA zone 55 using the GDA94 datum.<br>For GBM Drilling<br>• Every effort was made to design drilling at high angles to the mineralisation based on the style and shape of mineralisation defined by previous drilling. |
| *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.*<br>• *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.* | • The gross geometry of mineralisation at 309 is largely isotropic. The varying drilling orientations used at 309 has allowed definition of this geometry and does not introduce any known bias<br>• The Lone Sister mineralisation is more tabular in nature, striking north – south and dipping steeply to the west. The drilling towards the east is appropriate to define the geology of the mineralisation and does not introduce any known bias |
| *Sample security* | • *The measures taken to ensure sample security.* | • Measures taken to ensure sample security have not been recorded for historic data.<br>GBM Samples<br>• All drill core is processed and stored at the 309 drill core facility at Twin Hills by Company personnel.<br>• Prepared samples are then transported to Intertek Laboratories in Townsville by either company personnel or 3rd party freight.<br>• Core, coarse rejects and pulps are stored at the 309 Deposit core |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | facility on site. |
| *Audits or reviews* | • *The results of any audits or reviews of sampling techniques and data.* | • The historical data used in these resource estimates was compiled from the original data by Global Ore Discovery (GO). As part of this process GO validated the data against historical plans, sections and reports, LiDAR topo (collar locations) original drill logs and assay certificates.<br>• The competent person is not aware of any audits having been carried out on the data used in this resource estimate. |

## a. Section 2 Reporting of Exploration Results

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Mineral tenement and land tenure status* | • *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*<br>• *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.* | • Twin Hills 309 and Lone Sister deposits are contained within current Mining Licence ML70316, expiry 31/12/2034. ML70316 is surrounded by exploration licences EPM19856 (Twin Hills CS), EPM25182 (Anakie) and EPM19504 (Dingo Range). The licenses are 100% owned by GBM through it's wholly owned subsidiary Mount Coolon Gold Mines Ltd. ML70316 is subject to royalties on gold production will be to the Queensland Government (currently 5% on all MLs in the state of QLD) and a 2.5% royalty to Franco –Nevada Australia Pty Ltd.<br>• Environmental Authority EPML00772013 is current and the Financial Assurance (now ERC) held by the Queensland Department of Environment and Science is currently AUD$1,475,156. The submitted PRCP was approved and finalised in August 2022.<br>• The licence is subject to an ILUA with the Jangaa People. The NW corner of the licence falls within a Strategic Cropping Zone and the licence is contained within a Forest Management Area.<br>• There are no known impediments to future mining on this Licence. |
| *Exploration done by other parties* | • *Acknowledgment and appraisal of exploration by other parties.* | • Exploration has been carried out by several companies over a long period of time at Twin Hills. Gold mineralisation was first recognized at Twin Hills by Metana Minerals NL in 1987. Since that time the |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | project area has been held under either an exploration of mining licence by a variety of companies and joint ventures.<br>• BMA Gold commenced underground mining at 309 in January 2006 and ceased mining in February 2007.<br>• Of the drilling data used to inform the 309 mineral resource estimate Metana drilled 81 holes for 9,524.0 m, Plutonic 72 holes for 9848.75 m, Homestake 16 holes for 4,867.71 m, 4 holes for 1,767.5 m, BMAG 302 holes for 29,397.4 m, NQM 13 holes for 1,860.73 m and GBM 15 holes for 6,152.1 m.<br>• At Lone Sister, Metana drilled 16 holes for 2,702.5 m, Plutonic 67 holes for 13,328.5 m, Homestake Gold 3 holes for 1,147.8 m, BMA Gold 28 holes for 6,763.0 m, THO 12 holes for 1,631.0 m and GBM 2 holes for 686.7 m.<br>• The Twin Hills project area has also been subject to aerial magnetic and radiometric surveys, soil geochemistry, RAB geochemistry and IP surveys.<br>• The mineral resource estimates reported on here are based on the appropriately validated results of work completed by the above companies. |
| *Geology* | • *Deposit type, geological setting and style of mineralisation.* | • The Twin Hills deposits are situated within the western domain of the Upper Devonian to Lower Carboniferous Drummond Basin, host to a number of epithermal gold deposits including the Pajingo deposit (2.7 Moz production to date).<br>• Both 309 and Lone Sister are considered to be Low Sulphidation Epithermal deposits consistent with other gold mineralisation in the Drummond Basin<br>• The 309 Deposit is hosted by a sequence of calcareous and variably carbonaceous well bedded siltstone that is progressively interlayered upwards with ash, crystal, and crystal lithic tuff that starts as occasional beds 1 – 5 cm thick and increases to tuff layers several meters thick. The siltstones and tuffs are cross-cut and overlain by a thick unit of breccia. Historically described as ‘milled matrix breccia’ this breccia is typically matrix supported and comprises a rock flour matrix with angular to sub rounded clasts of the underlying siltstones and tuffs<br>• A variety of hydrothermal mineralisation styles are present at 309. On |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | surface, sinter crops out along an arcuate trend that rings near surface gold mineralisation. Bonanza grade ginguro style colloform banded chalcedony veins are present at the top of the system. Spectacular bladed fluorite-chalcedony-quartz ± adularia-pyrite-gold veins and breccia fill form throughout the deposit but are most common in in the middle and upper parts of the deposit. The fluorite bearing veins are progressively replaced by later stages of silicification and corresponding higher gold grades. Quartz-chalcedony-pyrite veins with visible gold as electrum and bonanza grades > 100 g/t Au appear to post-date most other mineralisation and were observed in the deeper parts of the deposit.<br>• The complex shape of the 309 ore body is the result of both structural controls on fluid flow and hydrothermal processes. At depth gold mineralisation is predominantly focused along WNW and, to a lesser extent, NNE structural zones as stockwork veins and breccia fill. The best grades form in two 50 -70 m high layers broadly sub-parallel to bedding with the uppermost of the two zones characterized by abundant bladed fluorite-chalcedony-quartz veins and breccia fill. We interpret this zone to represent a boiling and / or fluid mixing zone that marks an inflection point in deposit geometry above which near surface mineralisation forms two pipe-like bodies along a NNE trend.<br>• The Lone Sister ore body is currently defined for 350 m along strike, over 400 m in height, and is approximately 150 m wide. The broadly tabular shape directly reflects mineralisation that is preferentially hosted within a rhyolite dyke with some evidence for limited mineralisation having formed within specific lithological units adjacent to the dyke. Higher grade gold mineralisation displays a distinct plunge to the north and remains open at depth. Gold mineralisation manifests as quartz-pyrite veinlets and disseminated pyrite with higher grades associated with increased vein density and higher pyrite percentage. Silicification is also significantly increased around mineralisation. |
| *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* | • Newly reported drill hole collar information including dip, azimuth, and depth are presented in the body of the release.<br>• Historic drill hole information including previous resource estimate results are presented in ASX: GBZ release 2 February 2022, |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | ○ *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.* | Significant Resource Upgrade at Twins Hills Project. |
| *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.* | .<br>• All quoted drill intercepts have been length-weighted where required<br>• Intercepts were calculated using a 0.2 g/t Au cut-off grade and a maximum 3 m internal dilution. High grade included intercepts calculated with 2.0 g/t Au cut-off and 3 m internal dilution. No high grade cut was applied.<br>• No metal equivalents are reported. |
| *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').* | For GBM Drilling<br>• Drilling is generally oriented perpendicular to the strike of the mineralisation at angles varying from acute to perpendicular. However, only downhole intersections have been reported due to the variety of drill orientations and volume of drilling, the mature nature of the deposit with a range of drilling orientations.<br>• All quoted drill intercepts have been length-weighted where required.<br>• Intercepts were calculated using a 0.2 g/t Au cut-off grade and a maximum 3 m internal dilution. High grade included intercepts calculated with 2.0 g/t Au cut-off and 3 m internal dilution. No high grade cut was applied.<br>• Downhole depths 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.* | • Appropriate images are included within the text of the release. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Balanced reporting* | • *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.* | • Intercepts were calculated using a 0.2 g/t Au cut-off grade and a maximum 3 m internal dilution. High grade included intercepts calculated with 2.0 g/t Au cut-off and 3 m internal dilution. No high grade cut was applied. Significant assays > 5 g*m Au (downhole intercept in m multiplied by Au g/t) have been reported.<br>• |
| *Other substantive exploration data* | • *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | • No other exploration results are reported in this release. |
| *Further work* | • *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • Further work will focus on metallurgical testwork to determine possible processing options, step out drilling to extend both the 309 and Lone Sister deposits at depth and infill drilling at the Lone Sister deposit to allow higher confidence resource estimation. Conceptual mining studies will also be undertaken. |

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

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

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *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.*<br>• *Data validation procedures used.* | • The data was exported as csv text files from a Datashed database. The database was compiled by GO for GBM from the original data files. GO carried out validation checks on import into the database including checks on out of range data, duplicate data, missing intervals, over-lapping intervals and collar locations verified against LiDAR topography. GO also compiled comprehensive meta-data, allowing much more detailed analysis of the data quality. Additional validation checks were made on import into the resource estimation software included checks for duplicate samples, duplicate holes, interval overlaps, extreme high grades. Where errors were found these were checked against the original assay certificates and fixed.<br>• The database is fully backed up weekly and incrementally backed up |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | daily.<br>• The data provided included many types of drilling. All RAB, open hole percussion, auger and air core drilling was omitted from the database prior to use in resource estimation as these drilling methods are not considered suitable for resource estimation. |
| *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 competent person visited the site for a period of two days in December 2018. During this visit archived drill core was reviewed and compared to assays and the site layout and infrastructure assessed. |
| *Geological interpretation* | • *Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.*<br>• *Nature of the data used and of any assumptions made.*<br>• *The effect, if any, of alternative interpretations on Mineral Resource estimation.*<br>• *The use of geology in guiding and controlling Mineral Resource estimation.*<br>• *The factors affecting continuity both of grade and geology.* | • The confidence in geological interpretation at the 309 deposit varies with scale. The broad mineralisation envelope has been well defined by drilling and has a gradation boundary and so presents little risk at the low grade interpreted. High grade veinlets at 309 are irregularly oriented as expected in a breccia and drilling shows that the spatial continuity of these veins is low (less than 20 m and usually less than 10 m).<br>• The 309 mineral resource estimate was controlled by a gold grade domain interpreted at a nominal 0.2 g/t Au. A gold grade domain was used because gold mineralisation does not honour any geological or alteration features. The grade of 0.2 g/t Au is somewhat arbitrary, being approximately 50% of the lowest reasonably foreseeable mining cut-off (assuming open pit mining and heap leach processing). A cumulative probability plot of gold grades showed no natural lower cut-off to gold mineralisation.<br>• The confidence in the geological interpretation of the Lone Sister deposit is high. The geometry of the gold mineralisation is simple, continuous and largely confined to within the host rhyolite. In places the mineralisation near the margin of the rhyolite may be more complex than modelled, possibly relating to 'leakage' of mineralising fluids into favorable beds of the surrounding country rocks. The resource classification has taken this uncertainty into account.<br>• The Lone Sister mineral resource estimate was controlled by a gold grade domain interpreted at a nominal 0.2 g/t Au and is generally co-incident with the rhyolite contact. The grade of 0.2 g/t Au is somewhat arbitrary, being approximately 50% of the lowest reasonably foreseeable mining cut-off (assuming open pit mining and heap leach |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | processing). A cumulative probability plot of gold grades showed no natural lower cut-off to gold mineralisation. |
| *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 309 deposit comprises two main zones. The first zone includes mineralisation formed in the breccia pipes and NNE striking structural zone. This zone extends about 400 m in strike (NNE) length, 50 -100 m wide (east-west) and 250 m vertically from surface to the inflection surface. The second zone is mineralisation formed in the WNW striking structural zone. Mineralisation in the WNW zone extends about 400m along strike (WNW), is typically about 100 m wide but also includes several sub-parallel zones up to 20 m wide and extends about 300 m vertically below the inflection surface.<br>• The Lone Sister deposit has been defined by drilling over a strike (010) length of 390 m and to a depth of 500 m. The width varies from 20 m to a maximum of 150 m and is typically 30 m – 60 m wide. The main mineralised zone plunges moderately to the north. |
| *Estimation and modelling techniques* | • *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*<br>• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*<br>• *The assumptions made regarding recovery of by-products.*<br>• *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).*<br>• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*<br>• *Any assumptions behind modelling of selective mining units.*<br>• *Any assumptions about correlation between variables.*<br>• *Description of how the geological interpretation was used to control the resource estimates.*<br>• *Discussion of basis for using or not using grade cutting or capping.* | The 309 deposit:<br>• Gold and silver grades were interpolated into a block model with parent blocks 5 m x 5 m x 5 m and sub-blocks of 1.25 m x 1.25 m x 1.25 m by ordinary kriging. The raw assay data were composited to 1.0 m prior to geostatistical analysis and interpolation. Interpolation was carried out by ordinary kriging within three gold grade domains (NNE main, WNW and NNE south) interpreted assays at a nominal 0.2 g/t Au but including up to 10 m of internal 'dilution' to allow geologically reasonable continuity. The boundaries between domains were treated as 'soft' boundaries but the external boundary between the domains and 'waste' was treated as a hard boundary. High grade (>125 g/t Au in the NNE and NNE south domains and > 100 g/t Au in the WNW domain) samples determined from cumulative probability plots and histograms were restricted to within 5m and not used beyond this distance. In addition, the high grade samples largely occur in extremely densely drilled zones and so are moderated by the much more numerous low grade samples. Separate gold and silver variogram models were used in each domain. Variogram modelling was completed on normal score transformed data and the models back-transformed for use in kriging the block model. The back |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.* | transformed gold variogram models are shown below. |

| | | Mineralisation Domain | | |
|---|---|---|---|---|
| | | 11 - NNE | 12 - WNW | 13 – NNE south |
| **Nugget Variance** | **C0** | 0.39 | 0.65 | 0.39 |
| **Sills (Spherical)** | **C1** | 0.55 | 0.34 | 0.55 |
| | **C2** | 0.06 | 0.01 | 0.06 |
| **Ranges_1 (m)** | **Maj** | 4 | 1 | 4 |
| | **Sem** | 2 | 2 | 2 |
| | **Min** | 4 | 3 | 4 |
| **Ranges_2 (m)** | **Maj** | 10 | 3 | 10 |
| | **Sem** | 8 | 10 | 8 |
| | **Min** | 12 | 5 | 12 |
| **Variogram Rot (MEDS, ZXY)** | **Maj** | 10 | 10 | 10 |
| | **Sem** | 20 | 75 | 20 |
| | **Min** | 0 | 0 | 0 |
| **Actual Direction (plunge/trend)** | **Maj** | 20/010 | 00/100 | 20/010 |
| | **Sem** | 00/100 | 75/010 | 00/100 |
| | **Min** | 70/190 | 15/190 | 70/190 |

A two pass search strategy was used to reduce the 'screen effect' of densely drilled zones. The first pass search neighbourhood used spherical ellipsoid with axes 5 m by 5 m by 5 m, a minimum of 6 and a maximum of 15 composites (maximum 8 per quadrant) were used for interpolation in both domains. The second pass used the same search except that the search ellipsoid was increased to 45 m (the widest drill spacing) and the minimum composites reduced to 4 and maximum increased to 20. The search neighbourhood was chosen to best honour the grade – tonnage curve rather than minimising local (block) grade estimation errors.

- The gold and silver grades of all blocks within historical mining voids were reset to 0.0 g/t.
- Gold and silver were also interpolated into a 'halo' domain surrounding the gold mineralisation domains. The mineralisation within the halo domain does not have sufficient geological continuity

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | to be classified as a resource and is not reported as such. Mineralisation in the halo domain is intended for internal use only.<br>• Arsenic and total sulphur were also estimated using the silver variogram model and search neighbourhood. As there is less arsenic and, especially sulphur, data these elements are not considered to be well estimated and are intended to be used for waste characterization only.<br>• An affine correction volume – variance correction model and variants using no high grade restriction, a top cut instead of a high grade restriction, inverse distance squared weighting and nearest neighbour interpolation were used to assess the interpolation parameters used.<br>• The block model was validated visually against the raw assay data, statistically against de-clustered average composite grade and by the use of swath plots.<br>• The block model was reconciled to past production (76.5 kt at 8.4 g/t Au compared to past production of 75.9 kt at 10.0 g/t Au).<br><br>The Lone Sister Deposit<br><br>• Gold and silver grades were interpolated by ordinary kriging into a block model with parent blocks 10 m x 10 m x 5 m (XYZ) and sub-blocks of 2.5 m x 2.5 m x 1.25 m. The raw assay data were composited to 2.0 m prior to geostatistical analysis and interpolation. The interpolation was carried out within a single gold grade domain interpreted at a nominal 0.2 g/t Au as a hard boundary. High grade samples greater than 40 g/t Au were restricted to within 10 m. 40 g/t Au was selected as the outlier restriction from cumulative probability plots and a visual assessment of the continuity of grades above 40 g/t Au. Separate gold and silver variogram models were used in each domain. Variogram modelling was completed on normal score transformed data and the models back-transformed for use in kriging the block model. The variogram model used is shown below. The search neighbourhood used a spherical search ellipsoid with axes of 50 m. A minimum of 4 and a maximum of 20 composites (maximum 6 per quadrant) were used for interpolation. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | <table><tr><th colspan="2"></th><th>Mineralisation Domain</th></tr><tr><td colspan="2">Exp VG Type</td><td>NS variogram</td></tr><tr><td>Nugget Variance</td><td>C0</td><td>0.48</td></tr><tr><td rowspan="2">Sills (Spherical)</td><td>C1</td><td>0.43</td></tr><tr><td>C2</td><td>0.09</td></tr><tr><td rowspan="3">Ranges_1 (m)</td><td>Maj</td><td>10</td></tr><tr><td>Sem</td><td>15</td></tr><tr><td>Min</td><td>5</td></tr><tr><td rowspan="3">Ranges_2 (m)</td><td>Maj</td><td>30</td></tr><tr><td>Sem</td><td>45</td></tr><tr><td>Min</td><td>60</td></tr><tr><td rowspan="3">Variogram Rot (MEDS, ZXY)</td><td>Maj</td><td>3</td></tr><tr><td>Sem</td><td>-24</td></tr><tr><td>Min</td><td>-29</td></tr><tr><td rowspan="3">Actual Direction (plunge/trend)</td><td>Maj</td><td>24/003</td></tr><tr><td>Sem</td><td>29/108</td></tr><tr><td>Min</td><td>50/240</td></tr></table><br>• Only gold and silver were estimated as there are insufficient data to estimate any other variable<br>• A variant using a top cut instead of outlier restriction was used to assess the interpolation parameters used.<br>• The block model was validated visually against the raw assay data, statistically against de-clustered average composite grade and by the use of swath plots. |
| *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 are reported on a dry basis. No moisture content was determined. |
| *Cut-off parameters* | • *The basis of the adopted cut-off grade(s) or quality parameters applied.* | • For both the 309 and Lone Sister resource estimates a cut-off grade of 0.4 g/t Au was applied above 0RL, and 2.0 g/t Au below 0RL.These cut-off grades are based on a gold price of AUD $2,600/oz escalated 30%, assume that open pit mining is feasible to 0RL, underground mining below that and that a CIL processing plant could be economically built and operated at the site achieving gold recoveries of 85%. An allowance has also been made for a 5% royalty. |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *Mining factors or assumptions* | • *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.* | • For the 309 deposit open pit mining is assumed possible to 0RL based on conceptual mining assessments with appropriate mining, processing and administration costs. Mining selectivity to a minimum of 2 metres is assumed. The same RL limit to open pit mining is assumed at Lone Sister as it has similar geometry, grade and metallurgical characteristics.<br>• For the 309 and Lone Sister deposits underground mining is assumed possible to a minimum width of 3.0 m |
| *Metallurgical factors or assumptions* | • *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.* | • CIL recoveries greater than 85% have been demonstrated for ore above 4 g/t Au by past production and a significant amount of testwork at 309. Operating and testwork data shows that the 309 ore is hard and abrasive. Testwork shows that recoveries are variable but a fine grind – CIL – gravity process should give recoveries of 85 – 95% at 309 with low reagent consumption. Oxide ores give better recoveries than fresh ores.<br>• Less testwork has been carried out on Lone Sister mineralisation, but similar metallurgical characteristics to 309 have been demonstrated, although most of the Lone Sister testwork was completed on higher grade samples than the current resource grade. Further testwork on lower grade samples is planned. |
| *Environmental factors or assumptions* | • *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.* | • It is assumed that the placement of mining waste would be permitted within the current mining lease. There are existing waste dumps, however further approvals would be required to enable open pit mining and associated waste storage.<br>• The presence of sulphide minerals in the 309 waste material suggests that it may be potentially acid forming, although there has been no testwork to confirm this and acid neutralizing carbonate minerals are common.<br>• The Lone Sister fresh waste also contains sulphide minerals but at a lower level and so some may be acid forming.<br>• There is currently no tailings storage facility at site. |
| *Bulk density* | • *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and* | • Bulk density at both deposits was assigned by weathering domain. There are 995 density samples from the two deposits combined. 941 samples are from the recent GBM drilling so the data is not well |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *representativeness of the samples.*<br>• *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.*<br>• *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.* | distributed spatially. Because the data is not well distributed spatially bulk density was not interpolated but applied to blocks based on median value by gold domain / oxidation domain. and all of these are from fresh material. A density of 2.6 t/$m^3$ was applied to fresh mineralisation and waste, 2.5 t/$m^3$ to partially oxidised mineralisation and waste, 2.4 t/$m^3$ to oxide mineralisation and 2.3 t/$m^3$ to oxide waste. The same bulk densities were applied to both the 309 and Lone Sister deposits<br>• At 309 the density of blocks within the historically mined stope was set to 1.8 t/$m^3$ as records indicate that was back filled. The density of development voids was set to 0.0 t/$m^3$. |
| *Classification* | • *The basis for the classification of the Mineral Resources into varying confidence categories.*<br>• *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).*<br>• *Whether the result appropriately reflects the Competent Person's view of the deposit.* | • The 309 mineral resources were classified into continuous zones of like confidence using an assessment of geological confidence, the distance to the nearest composite and the kriging slope of regression (a function of the grade continuity in the variogram model and the spatial configuration of the data used to estimate a block). The geological continuity of the gold domain was assessed by comparing the gold grade domain with an alternative interpretation independently interpreted by GBM staff. Data quality was also considered but not used because the data quality is good and not spatially variable. In practice the measured – indicated boundary was largely informed by distance to the nearest composite (<5m in measured) whereas the indicated – inferred boundary was informed by a combination of distance to the nearest composite (<15m for indicated) and geological confidence.<br>• The Lone Sister deposit classified in a similar manner to 309 except that the distance used to distinguish measured from indicated was 15m and indicated from inferred was 25m. No measured resources are reported from Lone Sister because no continuous zones are sufficiently well informed by data to meet the measured criteria. |
| *Audits or reviews* | • *The results of any audits or reviews of Mineral Resource estimates.* | • This mineral resource estimate has not been audited or reviewed as the project is at a preliminary stage of development. |
| *Discussion of relative* | • *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* | • The relative accuracy and confidence level in the Mineral Resource estimates are considered to be in line with the generally accepted accuracy and confidence of the nominated Mineral Resource |

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| *accuracy/ confidence* | *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.*<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>• *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.* | categories. This has been determined on a semi- quantitative basis and is based on the Competent Person's experience with similar deposits.<br>• The resource classification relates to global estimates. The search neighbourhood was chosen to best honour the grade – tonnage curve rather than minimising local (block) grade estimation errors as the models are designed for use in long term planning rather than short term mining selection.<br>• For the 309 deposit the block model was reconciled to past production (76.5 kt at 8.4 g/t Au compared to past production of 75.9 kt at 10.0 g/t Au). |