

## ASX Announcement

9 June 2023

# Structural Interpretation Resolves Controls on Twin Hills Gold Mineralisation

### HIGHLIGHTS

- Integrated analysis of geophysical and geochemical data has defined a clear relationship between faults and gold mineralisation at Twin Hills.
- NW-NNW and NE-ENE structural orientations are key in localising gold with all known Twin Hills resources and prospects on or adjacent to similarly oriented structures.
- Multi-element soil geochemical trends also parallel key NW-NNW and NE-ENE structural orientations.
- The new structural model will be used in conjunction with other data sets to target future exploration programs including planned drilling of new prospects.

**GBM Resources Limited (ASX:GBZ) (GBM or the Company)** is pleased to announce a new structural interpretation for the Twin Hills Project area that defines a clear relationship between gold mineralisation and favourably oriented structures. At the project-scale NW-NNW and NE-ENE faults appear to control the distribution of gold mineralisation and will be used to target future exploration programs. The NW-NNW and NE-ENE faults can be correlated with the structural architecture of the palaeo arc that formed the Drummond Basin with similar crustal-scale controls on low sulphidation epithermal veins described elsewhere in the world<sup>12,13</sup>.

**GBM Managing Director and CEO, Peter Rohner, commented:** *“This work is an excellent example of GBM leveraging our geological understanding against historical datasets across the very underexplored and highly prospective Twin Hills tenement package. The clear relationship between favourably oriented structures and gold mineralisation will be used to target exploration programs across our tenements including to firm up our next drilling program. This is a key step forward in building our understanding of the Twin Hills gold deposits as we focus on making substantial new discoveries”.*

## Twin Hills Project

The Twin Hills Project is a large, underexplored, highly prospective district-scale tenement package (Figure 7) underpinned by combined resources on permitted mining leases at the 309 and Lone Sister deposits of 23.1 Mt @ 1.3 g/t Au and 6.5 g/t Ag for ~ 1 Moz Au and 4.8 Moz Ag<sup>1</sup>. Both deposits have potential for open pit and bulk mine underground extraction and remain open down plunge. The 309 and Lone Sister deposits are considered to be Low Sulphidation Epithermal deposits with 309 mineralisation manifesting as a spectacular bladed fluorite-chalcedony-quartz ± adularia-pyrite-gold veins and breccia fill within sedimentary and reworked volcanic rocks and Lone Sister mineralisation forming as disseminated pyrite and quartz-pyrite veinlets within a flow banded rhyolite dyke. Both 309 and Lone Sister deposits are hosted by Drummond Basin cycle 1 rocks which also host most of the known gold mineralisation in the Basin including Pajingo (5 Moz Au<sup>5,6</sup>), Wirralie (1 Moz Au<sup>7</sup>), and Yandan (~0.9 Moz Au<sup>14</sup>).

## Structural analysis

Integrated analysis of magnetic, radiometric, and geochemical data<sup>9</sup> was used to define the structural architecture of the Twin Hills area. Two main fault sets are evident and strike NW to NNW and NE to ENE (Figure 1). The faults are clearly defined in Drummond Basin cycle 1 and older rocks but are not evident in the embayment of younger Drummond Basin cycle 2/3 in the centre of the project area. We suggest the NW - NNW and NE – ENE architecture may have developed during cycle 1 deposition. Thus, some of these faults could be basin bounding / basin forming structures and potentially excellent hosts for substantial undiscovered mineralisation. Broad, km-scale, north trending and plunging folding is inferred from map patterns though the effect of the folding on the earlier faults is unclear.

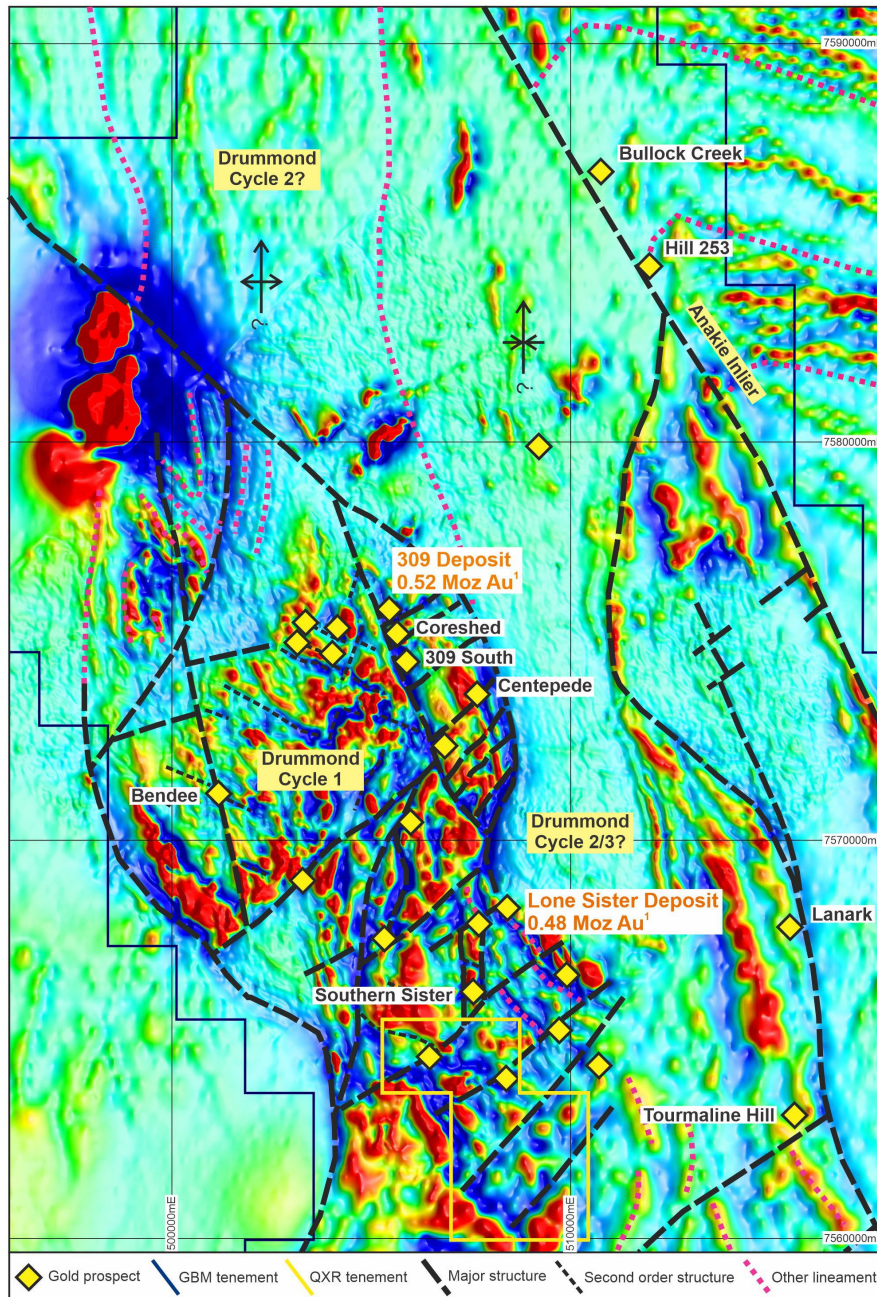
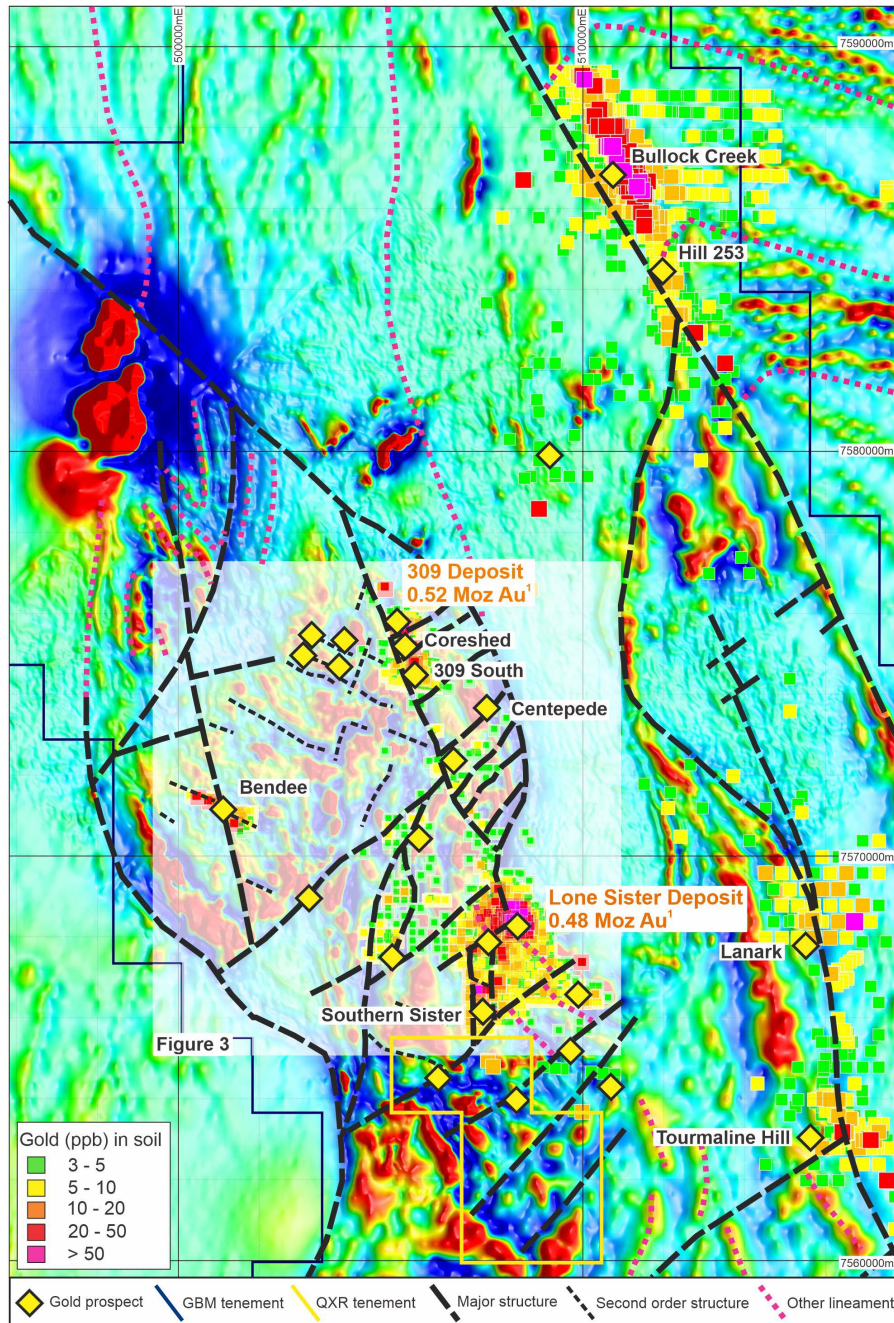


Figure 1. A map of the Twin Hills area showing interpreted structures overlain on magnetics (RTP-1VD). Known prospects (and resource areas) are also shown with key prospects highlighted. Note the clear spatial relationship between known prospects and faults. Also note that the faults do not appear to cut the Drummond Cycle 2/3 rocks in the centre of the project area.



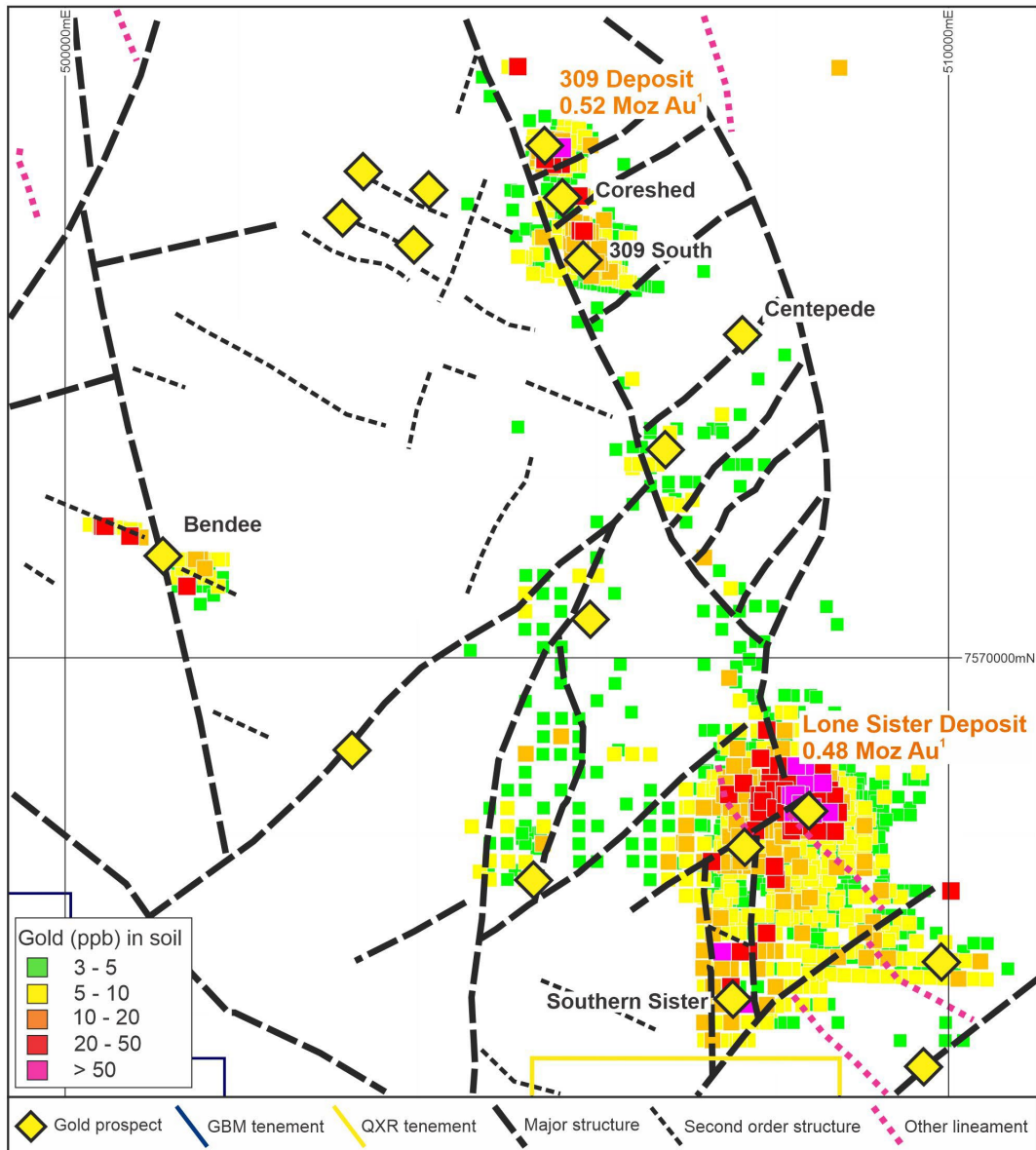
## Structural controls on gold mineralisation

A clear spatial relationship between faults and gold mineralisation is evident at Twin Hills with most known prospects sited on, or immediately adjacent to, interpreted structures (Figures 1, 2, 3). The Lone Sister and 309 Deposits both sit at the intersection of interpreted faults as do several other prospects. The structural interpretation will be used in conjunction with other datasets to target future exploration programs.



**Figure 2. A map of the Twin Hills area showing gold in soil geochemistry<sup>9</sup> overlain on interpreted structures and magnetics (RTP-1VD). Known prospects (and resource areas) are also shown with key prospects highlighted. Note the strong spatial relationship between structures and anomalous gold in soil geochemistry.**

Gold in soil geochemistry<sup>9</sup> also highlights the main structures with strong NW striking soil anomalies at Bullock Creek and Lanark – Tourmaline Hill (Figure 2). Between 309 and Lone Sister soil geochemistry is clearly focused along key structures, even at levels as low as 3-5 ppb Au (Figure 3). The > 7.5 km<sup>2</sup> soil anomaly between Lone Sister and Southern Sister is focused around favourably oriented structures and will be a key target for future exploration.

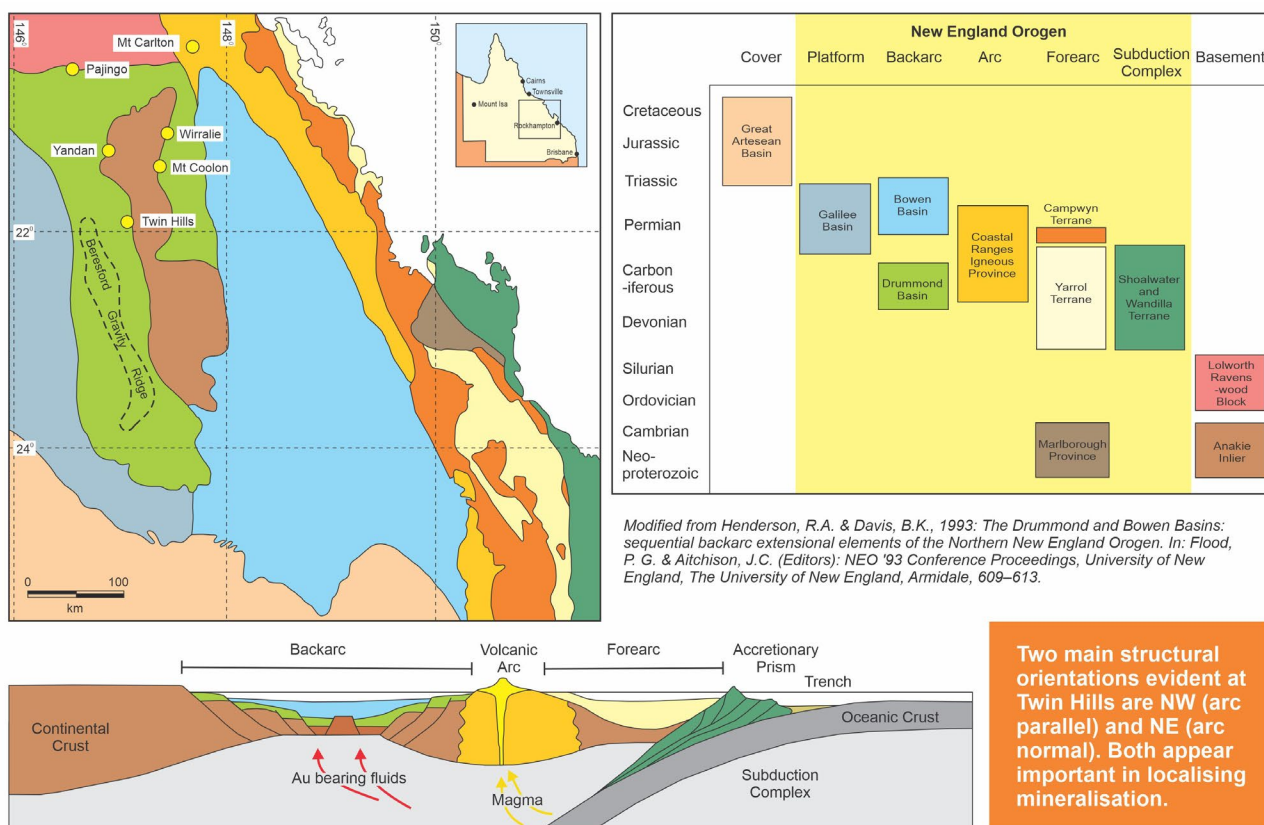


**Figure 3. A map of the Twin Hills area between 309 and Lone Sister Deposits showing gold in soil geochemistry<sup>9</sup> overlain on interpreted structures. Known prospects are also shown with key prospects highlighted. Note that between 309 and Lone Sister soil geochemistry is clearly focused along key structures, even at levels as low as 3-5 ppb Au.**

### Regional structural setting

The Drummond Basin, that hosts the Twin Hills Gold Deposits, is interpreted to represent the northern extension of the New England Orogen and likely formed in an extensional backarc position (Henderson and Davis, 1993). The associated volcanic arc trends NW parallel to the Queensland coastline (Figure 4). Two main structural orientations evident at Twin Hills are NW (arc parallel) and NE (arc normal).



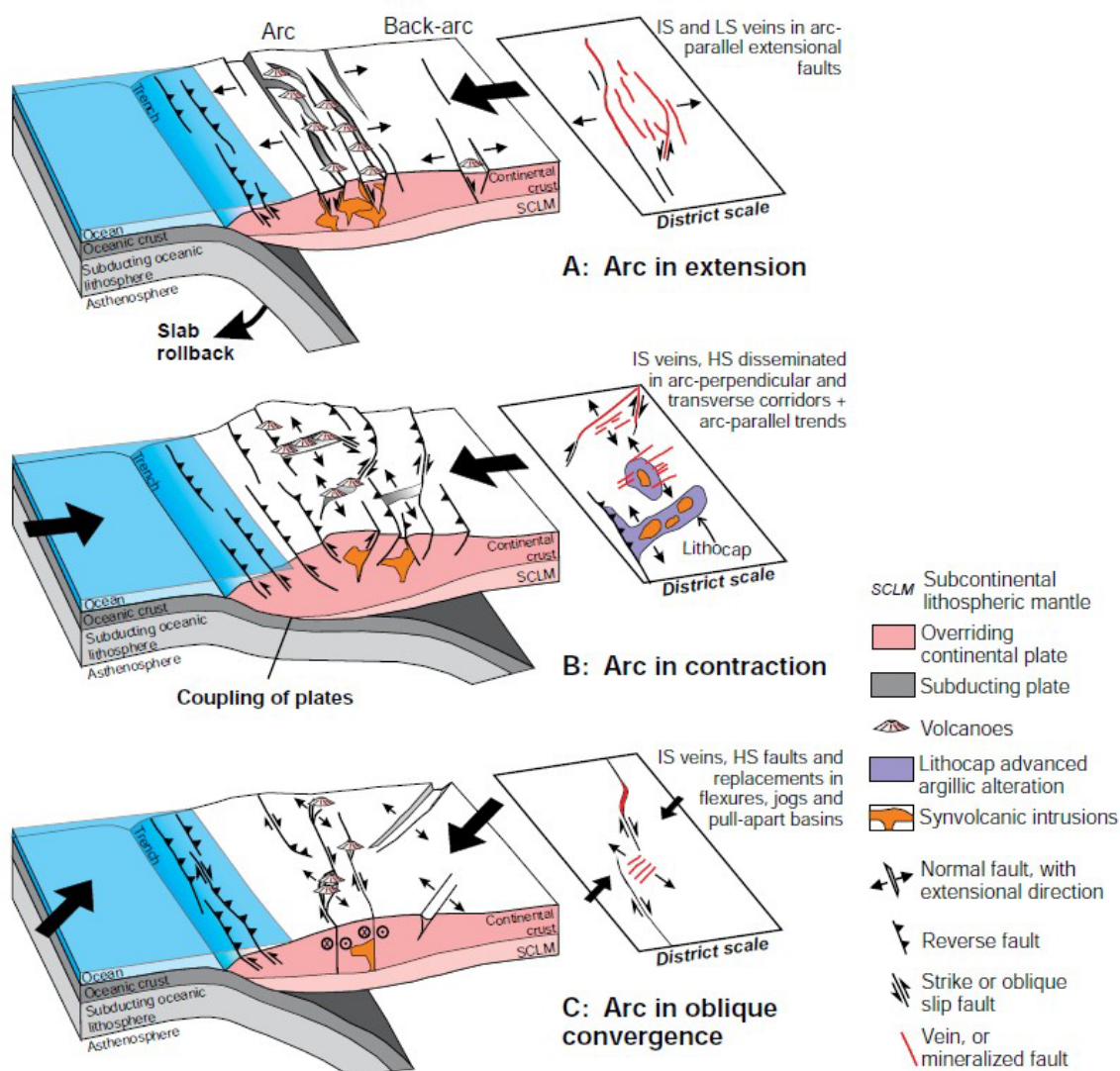


Modified from Nichols, G., 2009. *Sedimentology and Stratigraphy* Second Edition. West Sussex: John Wiley & Sons Ltd.

**Figure 4. A map and time space plot modified from Henderson and Davis (1993)<sup>10</sup> showing the interpreted development of the Drummond Basin in an extensional backarc position as part of the New England Orogen. Note the overall NW trending architecture reflecting the orientation of the palaeo arc. A stylized section of a subduction zone with arc and backarc elements is shown for reference (Modified from Nichols, 2009)<sup>11</sup>.**

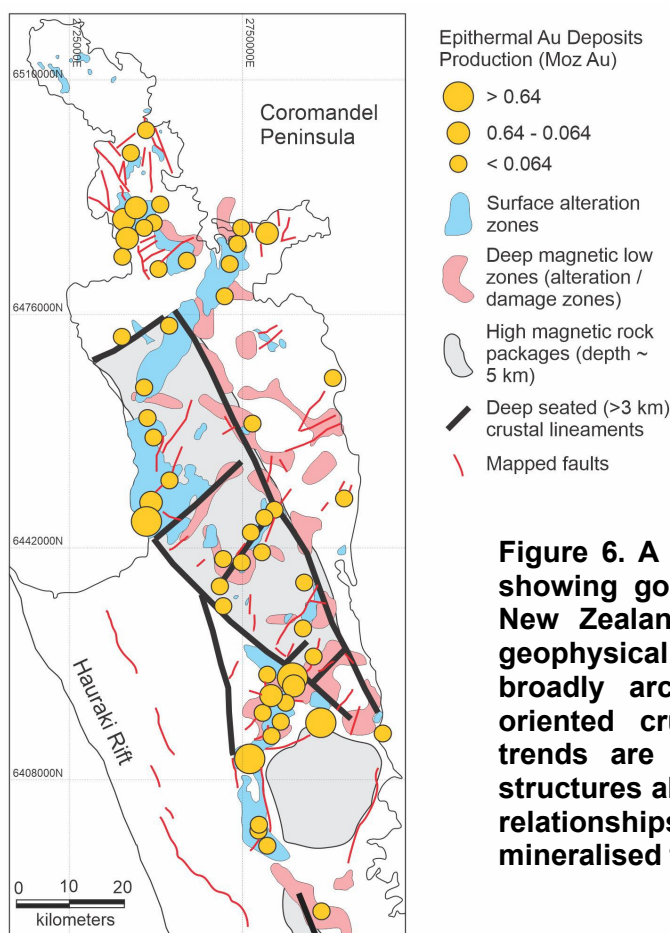
## District analogues

Province-scale structural controls on low sulphidation epithermal deposits have been well documented. Rhys et.al., (2020)<sup>12</sup> illustrate the clear geometrical relationships between gold mineralisation and the orientation and kinematics of the associated arc (Figure 5). In extensional settings they suggest gold mineralisation typically forms along arc parallel trends locally linked or controlled by arc transverse structures. The Drummond Basin that hosts the Twin Hills deposits likely formed in a extensional back-arc position (Henderson and Davis 1993) and mineralisation forms along arc-parallel NW trending structures and arc-normal NE oriented structures.



**Figure 5. Schematic illustrations by Rhys et al., 2020 showing various tectonomagmatic settings with related stress states and the associated positions and geometry of epithermal deposits that form in the respective environments. HS = high sulphidation, IS = intermediate sulphidation, LS = low sulphidation, SCLM = subcontinental lithospheric mantle. Note that when an arc is in extension low sulphidation epithermal veins form broadly parallel to the arc.**

Engdawork et.al., (2019)<sup>13</sup> used integrated geological and geophysical analysis to describe the crustal-scale structural controls on gold deposits along the Coromandel Peninsula, New Zealand. Their work shows ore deposits have formed along NE oriented arc parallel trends that lie above similarly oriented crustal scale lineaments (Figure 6). The mineralised trends are partitioned by NW, arc-normal, structures also parallel to crustal scale lineaments. The equivalent relationship between gold deposits and arc orientation is apparent at Twin Hills with known prospects forming along arc-parallel NW trending structures but also arc-normal NE oriented structures.



**Figure 6. A map modified from Engdawork et al., 2019 showing gold deposits of the Coromandel Peninsula, New Zealand, overlain on integrated geological and geophysical interpretation. The deposits form along NE broadly arc-parallel trends that lie above similarly oriented crustal scale lineaments. The mineralised trends are partitioned by NW (broadly arc normal) structures also parallel crustal scale lineaments. Similar relationships between the orientation of the arc and mineralised trends are apparent at the Twin Hills Project.**

## Forward Plans

Twin Hills is a key project for GBM. Future exploration will focus drill testing selected targets<sup>9</sup> whilst continuing to undertake integrated data analysis and targeting using the extensive historic databases. The structural analysis described herein will be used in conjunction with other data sets to focus exploration. Additional targeted surface geochemical samples will be collected, and electrical geophysics (IP or similar) will be undertaken across prospective areas. 309 and Lone Sister deposit models will be further refined with focus on alteration and metal zoning patterns for use in vectoring across the tenement package.

## References

- <sup>1</sup> GBM ASX Release: 05/12/2022, Twin Hills Gold Project Upgrades to ~ 1 Moz Mineral Resource
- <sup>2</sup> GBM ASX Release: 15/03/2023, Results of Yandan Mineral Resource Update
- <sup>3</sup> GBM ASX Release: 04/12/2017, Scoping Study Demonstrates the Potential Economic Viability of Recommencing the Mount Coolon Gold Project, Queensland Project
- <sup>4</sup> GBM ASX Release: 23/12/2020, Mt Coolon and Yandan Combined Resources Total 852,000 oz, following completion of Yandan acquisition
- <sup>5</sup> Evolution Mining. Pajingo-Fact-Sheet\_March-2016\_web-1.pdf.
- <sup>6</sup> Osborne & Chambers. (2017). Pajingo Gold deposit. In Philips (ed), Australian Ore Deposits. AusIMM. Monograph 23.
- <sup>7</sup> Drummond Gold Limited, 24 Oct 2014, Mining 2014 Presentation, October Brisbane
- <sup>8</sup> GBM ASX Release: 21/10/2022, Strategic Farm-in Agreement with Newcrest in Drummond Basin
- <sup>9</sup> GBM ASX Release: 28/04/2023, Compelling Target Areas Identified at Twin Hills



<sup>10</sup> Henderson, R.A. & Davis, B.K., 1993: The Drummond and Bowen Basins: sequential backarc extensional elements of the Northern New England Orogen. In: Flood, P. G. & Aitchison, J.C. (Editors): NEO '93 Conference Proceedings, University of New England, The University of New England, Armidale, 609–613.

<sup>11</sup> Nichols, G., 2009, Sedimentology and Stratigraphy Second Edition. West Sussex: John Wiley & Sons Ltd.

<sup>12</sup> Rhys, D.A., Lewis, P.D., and Rowland, J.V., 2020. Structural Controls on Ore Localization in Epithermal Gold-Silver Deposits: A Mineral Systems Approach. Reviews in Economic Geology, v. 21, pp. 83 – 145.

<sup>13</sup> Engdawork A. Bahiru, Julie V. Rowland, Jennifer D. Eccles & Richard L. Kellett (2019). Regional crustal-scale structural control on epithermal deposits within the Hauraki Goldfield, Coromandel Volcanic Zone, New Zealand: insight from integrated geological and aeromagnetic structural patterns, New Zealand Journal of Geology and Geophysics, 62:4, 461-482

<sup>14</sup> GBM ASX Release:23/03/2023, New Yandan Geology Model Defines Compelling Targets

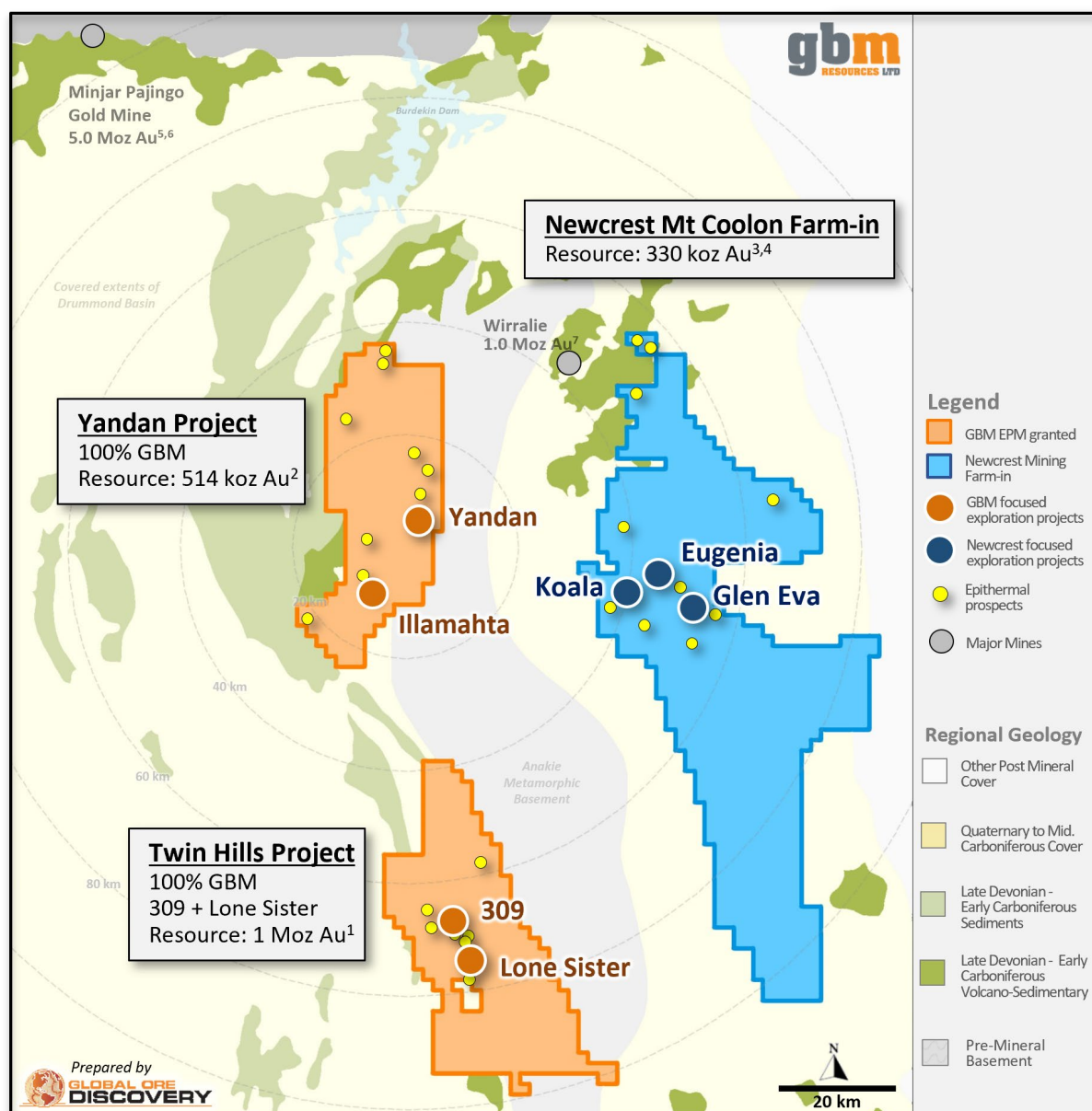


Figure 7. A map showing the distribution of GBM's tenements in the Drummond Basin including the 2022 farm-in agreement with Newcrest on the Mt Coolon Project<sup>8</sup>. Note the location of GBM's key projects.



**This ASX announcement was approved and authorised for release by:**

Peter Rohner, Managing Director

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**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.

GBM's flagship project in the Drummond Basin (QLD) holds ~1.84 Moz Au 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 3 Moz Au and support GBM's transition into a mid-tier Australian gold company.

Separately GBM also holds tenements in the Mt Morgan district, in the Mt Isa Inlier in Queensland (JV with Nippon Mining Australia - 54%) and also holds a 100% interest in the White Dam Gold-Copper Project in South Australia. Divestment of these non-core assets is in progress.

**COMPETENT PERSONS STATEMENT**

*The information in this report that relates to Exploration Results is based on information compiled by Dr Mark Lindsay, who is a Member of The Australian Institute of Geoscientists. Dr Lindsay is an employee of the company and is a holder of options in the company. Dr Lindsay has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Lindsay 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.*

## APPENDIX 1: 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	000' t	Au g/t	Au oz	
<b>Koala - ML</b>													
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
<b>Sub Total</b>	<b>114</b>	<b>1.7</b>	<b>6,200</b>	<b>729</b>	<b>2.6</b>	<b>60,800</b>	<b>700</b>	<b>2.7</b>	<b>61,100</b>	<b>1,563</b>	<b>2.5</b>	<b>128,100</b>	
<b>Eugenia</b>													
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
<b>Sub Total</b>				<b>1,790</b>	<b>1.1</b>	<b>65,900</b>	<b>1,639</b>	<b>1.1</b>	<b>58,200</b>	<b>3,430</b>	<b>1.1</b>	<b>124,100</b>	
<b>Glen Eva - ML</b>													
<b>Sub Total - Open Pit</b>				<b>1,070</b>	<b>1.6</b>	<b>55,200</b>	<b>580</b>	<b>1.2</b>	<b>23,100</b>	<b>1,660</b>	<b>1.5</b>	<b>78,300</b>	<b>0.4</b>
<b>Yandan - ML</b>													
East Hill - Open Pit				4,860	1.5	240,000	7,900	0.8	203,000	12,800	1.1	443,000	0.4
Yandan South - Open Pit							900	0.6	16,000	900	0.6	16,000	0.3
<b>Sub Total</b>				<b>4,860</b>	<b>1.5</b>	<b>240,000</b>	<b>8,800</b>	<b>0.8</b>	<b>219,000</b>	<b>13,700</b>	<b>1.0</b>	<b>459,000</b>	
<b>Illamahta</b>													
Oxide - Open Pit							1,147	0.7	26,900	1,147	0.7	26,900	0.4
Sulphide - Open Pit							1,045	0.9	28,600	1,045	0.9	28,600	0.4
<b>Sub Total</b>							<b>2,192</b>	<b>0.8</b>	<b>55,500</b>	<b>2,192</b>	<b>0.8</b>	<b>55,500</b>	
<b>Twin Hills - ML</b>													
309 - Open Pit	830	2.8	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
<b>Sub Total</b>	<b>830</b>	<b>2.8</b>	<b>73,900</b>	<b>11,290</b>	<b>1.4</b>	<b>521,300</b>	<b>10,990</b>	<b>1.1</b>	<b>404,000</b>	<b>23,110</b>	<b>1.3</b>	<b>999,200</b>	
<b>Drummond Basin Total</b>	<b>944</b>	<b>2.6</b>	<b>80,100</b>	<b>19,739</b>	<b>1.5</b>	<b>943,200</b>	<b>24,901</b>	<b>1.0</b>	<b>820,900</b>	<b>45,655</b>	<b>1.26</b>	<b>1,844,200</b>	
<b>White Dam - ML</b>													
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
<b>Sub Total</b>				<b>1,200</b>	<b>0.7</b>	<b>28,600</b>	<b>3,400</b>	<b>0.7</b>	<b>73,500</b>	<b>4,600</b>	<b>0.7</b>	<b>101,900</b>	
cut-off grade is 0.20 g/t Au for all, Vertigo is restricted to above 150RL (~70 m below surface)													
<b>GBM Total</b>												<b>1,946,100</b>	

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 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, Mt Coolon and Twin Hills Combined Resource Base Approaches 1 Million Ounces, 2 February 2022, Significant Resource Upgrade at Twin Hills Project and 5 December 2022, Twin Hills Gold Project Upgrades to ~1 Moz Mineral Resource
  - White Dam – GBM ASX Announcement, 18 August 2020, White Dam Maiden JORC 2012 Resource of 102 koz
- 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 Resource

## APPENDIX 2: JORC Code, 2012 Edition – Table 1 Twin Hills Project

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No new geochemistry is being reported in this announcement.</li> <li>No new geophysics is being reported in this announcement.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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.).</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No new geochemistry is being reported in this announcement.</li> <li>No new geophysics is being reported in this announcement.</li> </ul>
<b>Verification of sampling</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul style="list-style-type: none"> <li>No new geochemistry is being reported in this announcement.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>and assaying</b>	<ul style="list-style-type: none"> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>No new geophysics is being reported in this announcement.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>No new geochemistry is being reported in this announcement.</li> <li>No new geophysics is being reported in this announcement.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>No new geochemistry is being reported in this announcement.</li> <li>No new geophysics is being reported in this announcement.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul>	<ul style="list-style-type: none"> <li>No new geochemistry is being reported in this announcement.</li> <li>No new geophysics is being reported in this announcement.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>No new data is reported in this announcement</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Twin Hills 309 and Lone Sister deposits are contained within current Mining Licence ML70316, expiry 31/12/2034. The Twin Hills Project also includes licenses EPM19856 (Twin Hills CS), EPM25182 (Anakie), EPM19504 (Dingo Range), EPM27597, EPM27974 , EPM27554 , EPM27594 .The licenses are 100% owned by GBM or 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.</li> <li>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.</li> <li>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.</li> <li>There are no known impediments to future mining on this Licence.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>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 project area has been held under either an exploration of mining licence by a variety of companies and joint ventures.</li> <li>BMA Gold commenced underground mining at 309 in January 2006 and ceased mining in February 2007.</li> <li>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.</li> <li>At Lone Sister, Metana drilled 16 holes for 2,702.5 m, Plutonic 67 holes</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>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.</p> <ul style="list-style-type: none"> <li>The Twin Hills project area has also been subject to aerial magnetic and radiometric surveys, soil geochemistry, RAB geochemistry and IP surveys.</li> </ul> <p>The mineral resource estimates reported on here are based on the appropriately validated results of work completed by the above companies.</p>
<p><b>Geology</b></p>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>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).</li> <li>Both 309 and Lone Sister are considered to be Low Sulphidation Epithermal deposits consistent with other gold mineralisation in the Drummond Basin</li> <li>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</li> <li>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 ginguero 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 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 &gt; 100 g/t Au appear to post-date most other mineralisation and were observed in the deeper parts of the deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>eastings and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>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.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Plans showing the locations of geochemical survey points and geophysical surveys are included in Appendices 3 and 4.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>No new drilling is being reported in this announcement</li> </ul>



Criteria	JORC Code explanation	Commentary
<p><b>Other substantive exploration data</b></p>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>No other exploration results are reported in this release.</li> </ul>
<p><b>Further work</b></p>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>Future exploration will focus on finalising the targets described previously<sup>9</sup> for drill testing. GBM will continue to undertake integrated data analysis and targeting using the extensive historic databases. Additional targeted surface geochemical samples will be collected, and electrical geophysics (IP or similar) will be undertaken on selected target areas. 309 and Lone Sister deposit models will be further refined with focus on alteration and metal zoning patterns for use in vectoring across the tenement package.</li> </ul>