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Potential New Mineralised Zone - Mt Margaret IOCG Project

Key Points

- A single diamond hole drill to 558 m has intersected a major new shear zone and broad base metal mineralisation at the FC4 Prospect, Mt Margaret Project, Cloncurry.
- Results include 40 m @ 0.32% Zn from 228 m (incl. 9 m @ 0.82% Zn from 228 m, 4 m @ 0.11% Pb and 16 m @ 590 ppm Cu from 229 m)
- The shear zone geology and geophysics has strong similarity to the nearby E1 IOCG deposit (48 Mt @ 0.72% Cu & 0.21 g/t Au).
- The magnetite shear zone has a strike length of approximately 12 km and follow up drill testing of the shear zone hosted E1-type priority targets is planned for the 4th Qtr 2023.

GBM Resources Limited (ASX: GBZ) (GBM or the Company) is pleased to announce results from the recent single-hole drilling program at the Mt Margaret Project, located near the Ernest Henry and E1 mines, Cloncurry, northwest Queensland. The Cloncurry Project is subject to a Farm-In/Joint Venture agreement with Nippon Mining of Australia (NMA, a wholly owned subsidiary of JX Metals Corporation (JXM), previously JX Nippon Mining & Metals Corporation). The Cloncurry Project exploration is fully funded by NMA who currently hold a 55% interest in the Joint Venture.

A single drill hole was designed to test a strong Moving Loop EM conductor which was generated from an MLEM survey completed last year over the same belt of magnetic rocks that hosts the Ernest Henry deposit 7 km to the southwest. The target model for the drill hole was shear and breccia hosted Eloise-type Iron Sulphide Copper Gold mineralisation (ISCG) hosted within Fort Constantine Volcanics. Drill hole MMA016 was terminated near planned depth at 558.2 m, intersecting a pyrrhotitic black shale within the EM target depth range. Above the shale, however, a broad interval of intensely sheared and magnetite-biotite+-chalcopyrite altered rocks was intercepted, and between the magnetite shear and the shale a wide zone of highly anomalous base metal mineralisation was returned (40 m @ 0.32% Zn from 228 m with anomalous Cu and Pb).

The suite of lithologies, association of chalcopyrite with magnetite metasomatism and the complex shear/fold fabric in MMA016 shows strong similarity to the E1 deposit located 7 km to the southeast. (Exco Resources 2010 and Xstrata 2012 quoted the E1 Mineral Resource of 48 Mt @ 0.72 % Cu & 0.21 g/t Au). E1 also displays some Zn-Pb-Ag anomalism from sphalerite and galena as accessories in the sulphide assemblage, however the discrete lithological host to the base metal mineralisation at the contact with the shear zone in MMA016 points to an additional separate target unit and deposit style within the FC4 area. See pages 6 and 7 for more details of the geological similarities to the E1 deposit.

Approximately 12 km strike length of the magnetite shear zone is interpreted to occur under thin sedimentary cover within the GBM/NMA tenement holding. A set of priority targets has been defined along the magnetite shear trend, targeting E1-style magnetic and structural patterns and Eloise type occurrences in the base-metal host unit. Exploration budgets have been approved from GBM's JV partner for the 2023 field season. Planning is now underway for a follow-up drill program in the FC4 area, scheduled for the fourth quarter of 2023.



GBM Managing Director & CEO, Peter Rohner, commented: "The recent hole along with the understanding of the geological package has confirmed priority targets to be followed up with a more extensive drill program in the fourth quarter of 2023."



Figure 1: Mt Margaret Project FC4 prospect. Location of drill hole MMA016 relative to the Ernest Henry and E1 mines. Base image is TMI RTP magnetics and satellite imagery.

FC4 Diamond Drilling Program

The single-hole diamond drilling program was completed in April this year by DDH1 Drilling. Drill hole MMA016 was pre-collared through approximately 50 m vertical thickness of Tertiary and Mesozoic cover sediments then drilled to completion through the Proterozoic sequence with HQ diamond to a final depth of 558.2 m, just past the planned depth of 550 m. The hole was then cased with PVC pipe to 540 m in preparation for down hole geophysical logging.

MMA016 is located on the centre line of the 2022 MLEM survey completed in 2022 at FC4. The hole was designed to test a three-model EM plate confluence near the plate upper edge (between 300-400 m depth), close to an existing MIMDAS resistivity/chargeability anomaly. The target was massive sulphide (ISCG Eloise-type) mineralisation in Fort Constantine felsic volcanics based on the presence of pyrrhotite/pyrite bearing reduced black shales and copper anomalous breccias under thin cover in nearby historical drilling, and spatially related narrow, linear magnetic anomalies typically associated with ISCG mineralisation.

Results

The source of the EM conductor is interpreted to be a black shale intersected between 329 and 385 m. Down hole EM logging confirmed strong discrete conductive response within the top third of the shale corresponding to a zone of intense fracturing and graphite coating on fracture surfaces. Abundant pyrite (Py) and pyrrhotite (Po) intergrowths in veins and irregular clots will contribute to conductivity. The



interpreted dip of the shale unit from core measurements and from section interpretation (see cross-section below) matches well the modelled EM plate and DHEM model dip.

The basement rocks intersected in the upper part of the hole are characterized by an intense and pervasive shear fabric and associated magnetite-biotite-actinolite-feldspar alteration that makes identification of the host rocks difficult. The main hosts are presumed to be intercalated sediments (most probably psammite, some possibly calcareous) and intermediate volcanics of the Fort Constantine Volcanics Formation. The magnetite shear zone in MMA016 is interpreted to represent the northern continuation of the Rhea Shear Zone (RSZ), identified by Xstrata as a bounding structure on the west side of the magnetic belt that hosts the Ernest Henry copper-gold deposit (see Figure 1).

The RSZ is clearly a major structure, over 150 m true width in MMA016 and more than 20 km in length from EHM through the GBM/NMA tenement holding. GBM interprets the RSZ to represent an early (D1) and major regional bedding-parallel ductile/brittle thrust that exhibits later D2 folding and stratabound magnetite metasomatism, and subsequent D3-D4 refolding which is evident in the magnetics data. Minor chalcopyrite mineralisation present as fine disseminations within the magnetite alteration within the RSZ in MMA016 may be associated with later folding, introduced at Fe-redox and/or dilational sites.

At the lower contact of the Rhea Shear Zone, MMA016 intersected a 40 m wide intensely altered and sheared, relatively non-magnetic zone of probable metasedimentary/calcareous and volcanic rocks. The unusual green alteration hosts fine-grained sulphide stringer veins parallel with the shear fabric. The stringer veins are dominantly pyrite but probably contain sphalerite, galena and chalcopyrite also as assay results through this interval returned:

- 40 m @ 0.32% Zn from 228 m,
- Incl. 9 m @ 0.82% Zn from 228 m,
- Incl. 16 m @ 590 ppm Cu from 229 m,
- Incl. 4 m @ 0.11% Pb from 235 m

Towards the bottom of the hole, MMA016 intersected calc-silicate rocks and marbles of the Corella Formation, including an interval of barren marble breccia of similar characteristics to the Marble Matrix Breccia which hosts mineralisation at Ernest Henry.



Figure 2: MMA016 drill core (111.9-112.1 m). Typical Rhea Shear Zone magnetite shear fabric, locally mylonitic/ductile. Fine-grained magnetite with disseminated fine pyrite (mid-grey), biotite bands (black), pink feldspar clots (pink/orange), with minor pyrite-chalcopyrite stringer veins.



Figure 3: MMA016 drill core (235.2-235.4 m). Base metal zone below RSZ. Pervasive green alteration with shear banding, disseminated and fine stringer sulphides (1 m assay from this interval returned 2.24% Zn).





Figure 4: MMA016 drilling cross-section (view to west). Geological interpretation (top) with Zn-Cu assays, magnetic susceptibility, lithology and alteration shown downhole (assay intersection call outs based on a 0.1% cut-off for Zn-Pb, 0.05% cut off for Cu, and maximum 4 m internal dilution). Geophysical data compilation shown on the same section (bottom) with 3D magnetic inversion shells (red), historical Mount Isa Mines MIMDAS IP section (remodeled by GBM, background grid coloured for resistivity where red is conductive with chargeability contours overlayed), GBM 2022 MLEM plate model and 2023 downhole EM tabular model.





Figure 5: Mt Margaret Project FC4 prospect geological interpretation (top) and magnetic signature (bottom) with all GBM drilling (MMA series) and historical drill collars coded by Cu and Co. **Priority targets shown dashed yellow.**



E1 (Mt Margaret) Deposit Summary

While the EM plate model has probably been tested adequately in this location at FC4, the strongly sheared and magnetite/sulphide-altered lithology further up the hole in MMA016 indicates the prospectivity potential for stratabound magnetite-hosted mineralisation at FC4 like the E1 deposit located 7 km to the east.

The E1 deposit was discovered by WMC in 1995 from a Starra-style exploration model focusing on magnetic and EM signatures. The deposit is characterised by a sinusoidal double fold pattern in the magnetics with clearly visible fold hinges at E1N and E1S. The discovery hole was the first drill hole into one of the fold hinge magnetic anomalies. The project was mined between 2012-2014 with ore transported the short distance to EHM. The combined E1 pre-mining resource as of 2010 was 48.1 Mt @ 0.72% Cu & 0.21 g/t Au (0.27% Cu cut-off), (Exco 2010).

Host rocks at E1 include metasediments and metavolcanics of the Fort Constantine Volcanics and laminated marbles and Corella Breccias of the Corella Formation. Mineralisation is best developed in laminated protoliths although ore grades also occur locally in the black shales (with pyrrhotite). Mineralisation is considered to be stratabound, replacement style and is structurally controlled at the intersection of tight D3 folds and ENE trending shear zones and NS trending faults.

E1 Characteristics & Similarities with MMA016:

- <u>Lithology</u> similar interbedded Corella and Fort Constantine meta-sediments (arenites, pelites, black shales, laminated calc-silicates) and volcanics (andesites) with barren Corella carbonate matrix breccias adjacent to the mineralised units at E1 and deeper in MMA016.
- <u>Black Shales</u> at E1 carbonaceous shales occur in the core of the deposit folds at the mineralisation contact or are directly mineralised with Po-Py-Cpy to ore grade. Numerous Py-Po veins and aggregates are observed in the black shale in MMA016.
- <u>Structure</u> strong shear fabric in MMA016 in the magnetite zone and at the main E1N resource with similar NE orientation to the primary shear fabric observed in MMA016. Shearing and magnetite development appears stratabound within MMA016, as at E1.
- <u>Alteration</u> Intense fine-grained magnetite alteration in both, at E1 interpreted as an earlier epigenetic alteration phase overprinted by Cpy. Apatite, biotite, k-feldspar in the early alteration phase with magnetite in both (high P anomalism in MMA016).
- <u>Mineralisation</u> Cpy at E1 is unusually fine grained (100-500 um) and disseminated within the magnetite. Similar fine disseminated and stringer Cpy is observed in MMA016. At E1 there is a strong correlation between Fe (in Mgt) and Cu and a moderate statistical correlation in the shear zone of MMA016. Beyond the resource areas, stratabound magnetite continues along strike as Cu concentrations diminish at E1. Sphalerite/Galena occur at E1 and are likely in MMA016 (Zn/Pb/Ag anomalism).
- <u>Folding</u> Best mineralisation at E1 is developed in tight fold hinges at the intersections with shear zones and faults. Parasitic folds occur in MMA016 with the same axis orientation and timing (D3).







Figure 6: E1 deposit geology and mineralisation plan (above) and cross-section (below). From Case et al. 2014.



References

Case, G., Z. Chang, R. Lilly, T. Blenkinsop and H. J.M. (2014). Geology, paragenesis, and alteration patterns of the E1 Group of iron oxide-Cu-Au deposits, Cloncurry District, Northwest Queensland, Australia. SEG 2014 - Colorado, Academics with Exploration: Studies of Mount Isa and Eastern Succession

Case, G., T. Blenkinsop, Z. Chang, J. M. Huizenga, R. Lilly and J. McLellan (2018). Delineating the structural controls on the genesis of iron oxide-Cu-Au deposits through implicit modelling: a case study from the E1 Group, Cloncurry District, Australia. Characterization of Ore-Forming Systems from Geological, Geochemical and Geophysical Studies. K. Gessner, Blenkinsop, T. G. & Sorjonen-Ward, P. London, Geological Society. 1: 349-384.

EXCO Resources (2010). Investor Update Presentation dated April 2010.



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 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 GBM also holds tenements in the Mt Morgan district, in the Mt Isa Inlier in Queensland (JV with Nippon Mining Australia - 55%) 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 Person Statement

The information in this report that relates to Exploration Results is based on information compiled by Neil Norris, who is a Member of The Australasian Institute of Mining and Metallurgy and The Australasian Institute of Geoscientists. Mr Norris is a full-time employee of the Company and is a holder of shares and options in the company. Mr Norris 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 Norris consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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.

The Company confirms that it is not aware of any new information or data that materially affects the information in the original reports, and that the form and context in which the Competent Person's findings are presented have not been materially modified from the original reports.

Where the Company refers to the exploration results and Mineral Resources in this report (referencing previous releases made to the ASX), it confirms that it is not aware of any new information or data that materially affects the information included in that announcement and all material assumptions and technical parameters underpinning the Mineral Resource estimates with that announcement continue to apply and have not materially changed.



APPENDIX 1: GBM Mineral Resource Estimate for the Drummond Basin Projects (Mt Coolon, Yandan and Twin Hills) along with other company interests

				Resource Category				Total			Cut-off		
Deposit		Measured	l		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	
					Ko	oala -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	
					E	ugenia							
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	
-					Gler	n 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
					Yar	ndan - ML							
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
Sub Total				4,860	1.5	240,000	8,800	0.8	219,000	13,700	1.0	459,000	
					III	amahta							
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
Sub Total							2,192	0.8	55,500	2,192	0.8	55,500	
					Twin	Hills - M	L						
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	19,739	1.6	993,200	24,901	1.0	820,900	45,655	1.26	1,844,200	
					White	e Dam - N	IL						
Hannaford - Open Pit				/00	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	Vertigo is	restricted to	above 150	1,200 BL (~70m be	0.7	28,600	3,400	0.7	73,500	4,600	0.7	101,900	
cation grade is 0.20 grt Ad for a	, verago is	. conneced to			surrace)								
Malmsbury - RL , Not	te Malm	sbury oun	ces referr	red to in t	his table a	ire subjec	t to the SI	PA comple	tion, Refe	r ASX:GB	Z release :	10 March 2	2023
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 1,998,100

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, GBM ASX Announcement, 14 March 2023, Results of Yandan Mineral Resource Update
- 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
- Malmsbury GBM ASX Announcement, 4 July 2019, Malmsbury Resource Upgraded to JORC 2012, refer note in table also.
- 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: Drill Hole Details

HOLE ID	COORDSYS	EASTING	NORTHING	RL	AZI GRID	DIP	Includes	DEPTH FROM	DEPTH TO	INTERVAL (m)	Cu (ppm)	Zn (%)	Pb (%)
	MGA_Z54	473000	7744915	148	0	-60		169	174	5	535	-	-
								228	268	40	-	0.32	-
MMA016							incl	228	237	9	-	0.82	-
							inc.	229	245	16	590	-	-
							inc.	235	239	4	-	-	0.11

Table 1: Mt Margaret Project, Cloncurry. The reported base metal intersections from drilling were calculated using length-weighted averages and parameters that include a 0.1% cut-off grade for Zn, a 500 ppm cut-off grade for Cu and Pb and no more than 4 m internal waste for all metals. Higher grade "Includes," intercepts calculated for Zn used a 0.3% cut-off grade and no internal dilution.





APPENDIX 3: JORC Code, 2012 Edition – Table 1 Cloncurry JV Project

Section 1 Sampling Techniques and Data

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

(The 2022 Moving Loop EM survey at FC4 was previously reported in ASX announcement 14 April 2023)

Sompling	Nature and quality of convolues (one and also and to	Oserhunies
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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 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. 	 <u>Geophysics:</u> Down Hole Electromagnetic (DHEM) surveying was undertaken by GAP Geophysics Australia Pty Ltd as a ground- based survey using light vehicles for equipment transport and support. The survey was completed on drill hole MMA016 at the FC4 Mt Margaret prospect. The drill hole was cased to 540 m down hole with 50mm Class 18 PVC non-slotted pipe. A Gap GeoPak HPTX-80 surface loop transmitter was used for the surveys. An EMIT DigiAtlantis probe was utilised for the down hole receiver system. The EMIT DigiAtlantis receiver uses a 3-component fluxgate magnetometer (B-field) probe. Transmitter loop geometry consisted of single turns using 35 mm2 wire on a 500 x 600 m loop geometry setup. <u>Drilling:</u> Sampling of HQ3 diamond drilling (DD) core from FC4 prospect drill hole MMA016. Drill core was sawed longitudinally in half for primary samples or quarter cored for duplicate samples. Samples were bagged into calico bags and sent to ALS Mt lsa, which prepared the samples using industry standard procedures for Fire Assay and Multi-element analysis.
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 	 Pre-collar drilling using standard Mud Rotary (MR) drilling methods from surface to top of competent crystalline basement rocks. Diamond drilling utilized standard wireling drilling methods at
	is oriented and if so, by what method, etc.).	HQ3 size below cover sediments within Proterozoic sequence.



		 Drill holes were surveyed at 6 m, then 30 m intervals downhole, and at the end of hole using a Boort Longyear Gyro digital hole survey tool. All drill hole runs were measured for orientation using a Boort Longyear TruCore orientation tool. Diamond drilling was completed to a maximum depth of 558.2 metres.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 Diamond core recovery was recorded in diamond drill logs run by run. Recovery was excellent (>99% over the drill hole length) using conventional core barrel equipment. Any core loss was recorded in geological logs. The sampling methods used (DD half core) are representative when done well. No sample bias was detected.
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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged. 	 All diamond drill core was washed and metre-marked where required, orientated, and then selectively logged for geotechnical parameters (RQD, rock strength), lithology, mineralisation, weathering, alteration, quartz vein style and percentage and number of quartz veins per metre, magnetic susceptibility and representative density measurements. All drill core was photographed. The logging is of a standard that allows identification and interpretation of key geological features to a level appropriate to support mineral resource estimation.
Sub- sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size 	 The diamond drill core was sampled by cutting the core in half longitudinally. Samples were cut to geological boundaries or to a preferred length of 1.0 m. The core was halved along the plane of orientation using a diamond saw and the upper half of the core dispatched for analysis and the lower half returned to the core tray in its original orientation. Sample intervals ranged from 0.8 m to 1.2 m. All samples were crushed and pulverized (ALS CRU-21/PUL-23) and sub-sampled for Fire Assay and Multi-Element analysis. The sampling methods and sample sizes are appropriate to the style of mineralisation (Iron Oxide Copper Gold sulphides or the oxidized equivalents).



of the material being sampled.	
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Quality of assay data and laboratory tests

• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.

• For 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.

• 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.

- Geophysics:
- GAP Geophysics DHEM equipment is described above.
- Transmitter timing is by internal control with GPS synchronization.
- The 3-component DigiAtlantis receiver sensor acquires three orthogonal components: A parallel to hole axis, positive up hole, U perpendicular to hole axis in the vertical plane positive toward 12 o' clock when looking down hole, V perpendicular to hole axis in the horizontal plane positive toward 9 o' clock when looking down hole.
- DHEM acquired as Time Domain data with a 24k Hz sample rate and a transmitter frequency of 0.125-10 Hz.
- Initial QC is performed on the data using SMARTem24 (SMART Fluxgate or RVR) in Office mode. Crosschecks include survey specifications, synchronisation, loop positioning and polarity convention.
- At the conclusion of each day, the acquired data (including stacked and raw data) for the day are backed up to an external hard drive. Stacked data are always archived long term. However, due to the excessive storage requirements, the raw data are generally only retained for the duration of the survey and subsequent QC period.
- Drilling:
- ALS Laboratories Au-AA26 (50 g Fire Assay): A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested in 0.5 mL dilute nitric acid in the microwave oven. 0.5 mL concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 10 mL with de-mineralised water, and analyzed by atomic absorption spectroscopy against matrix-matched standards.
- ALS Laboratories ME-MS61; a 0.5 g sample is subjected to near-total digestion by a four-acid mixture and finished with a



		 combination of ICP Mass Spectrometry (MS) and Atomic Emission Spectroscopy (AES). No handheld laboratory tools were used (e.g. Niton) with all assays performed at external laboratories. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in-house procedures. GBM Resources staff used an industry accepted QAQC methodology incorporating laboratory in-house QAQC and additional blind field duplicates, blanks and matrix specific reference material (Standards). Standards and blanks were inserted at a rate of two each (alternating) per hundred samples and field duplicates at a nominal rate of two per hundred with geologist discretion for duplicate placement. Standards selected were at appropriate grade range and mineralisation type for the material being assayed.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 <u>Geophysics:</u> Data are acquired using the various receivers as previously described. The SMARTem Projects are uploaded to GAP servers on a nightly basis for Quality Control checks prior to any loop retrieval. Project manager and consultant geophysicist Greenfields Geophysics Pty Ltd performed regular data verification checks throughout the program in addition to GAP in-house verification. EM data modelling consultant Montana GIS also verified data during the 3D modelling process. <u>Drilling:</u> All significant intersections were checked and verified internally by senior qualified GBM staff. Twinned holes were not completed. All primary drill core and rock chip data was documented, verified (including QAQC analysis) and stored using GBM procedures and industry-standard database software.
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 	 <u>Geophysics:</u> Transmitter loop location is surveyed by handheld GPS and imported into GPS Trackmaker software. The resulting GPS



	estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	 tracks are provided to the QC Manager and Down hole receiver location and orientations are recorded by the internal inbuilt Gyro receiver in GDA MGA Z54 coordinate system. Elevation control is tied to the Geocentric Datum of Australia (GDA94) and Australian Height Datum (AHD), calculated using AusGeoid09. <u>Drilling:</u> The drill hole collar was surveyed by GBM staff using a handheld GPS. Downhole surveying of diamond drilling was carried out at 6 m, every 30 m from thereon and at end of hole using a Boort Longyear Gyro digital hole survey system.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	 <u>Geophysics:</u> DHEM transmitter loop size was 500 x 600 m approximately centered on the drill collar point. <u>Drilling:</u> Drilling was of a scout nature and is not of sufficient spacing and distribution for Mineral Resource and Ore Reserve estimation. Samples were not physically composited.
Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. 	 <u>Geophysics:</u> The rectangular DHEM transmitter loop orientation was parallel and orthogonal to the drill hole azimuth. <u>Drilling:</u> The drill hole azimuth was orientated to drill across modelled potential mineralisation strike at a high angle to the interpreted mineralisation geometry where possible. Cross section interpretations indicate the hole dip was at a high angle to the geophysical target and the interpreted stratigraphy geometry. No sampling bias is considered to have been introduced by the drilling orientation.
Sample security	• The measures taken to ensure sample security.	 <u>Drilling:</u> All samples were transported to ALS Mt Isa laboratory by Company personnel where they were processed by ALS and on-shipped directly to ALS Laboratories in Townsville and



		•	Brisbane for analysis. Core, coarse rejects and pulps are stored at the GBM sample
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	•	No audits have been conducted however the geophysical data was reviewed by geophysical contractors Greenfields Geophysics Pty Ltd and Montana GIS Pty Ltd on completion of the DHEM survey.

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. 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. 	 In 2010 GBM entered a major Farm In Agreement for the Cloncurry Project with Pan Pacific Copper now held through their registered subsidiary Cloncurry Exploration & Development Pty Ltd (CED). During 2016/7, A Joint Venture (JV) Agreement was finalised in the December quarter 2017. The JV was restructured in 2020 and Nippon Mining of Australia (NMA, a wholly owned subsidiary of JX Metals Corporation (JXM) is now the sole partner. NMA currently holds approximately 55% and GBM 45% interest respectively in the project. To date, the Farm-in parties have spent over A\$17M on exploration within the Project tenements. The GBM/NMA Cloncurry Project comprises eleven granted EPM's held by GBM's subsidiary company Isa Tenements Pty Ltd. The tenement area totals over 810 km². A 2 % net smelter royalty is payable to Newcrest Mining Ltd on 5 of the 11 project leases, including four within the Mt Margaret Project (EPMs 16398, 16622, 18172 and 18174).
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	 The majority of the historic exploration within the Cloncurry Project JV has been completed within the Mt Margaret project area. The very large historical Mount Fort Constantine Joint Venture tenements have been explored by a number of companies prior to WMC. Early work by CRAE, Chevron, Teton and then ANZ Exploration,



Criteria

JORC Code explanation

between 1974 and 1979, concentrated on exploring for roll-front uranium deposits in the Mesozoic cover sequences. Chevron in particular drilled a large number of holes, many of which intersected basement. BHP pegged most of the current lease area as the Mount Margaret tenement from 1984 - 1986 because the area contained the largest undrilled magnetic anomalies in the Mount Isa block. A number of holes were drilled to basement without success exploring for magnetite skarn and ironstone-gold deposits.

- Hunter Resources were granted the tenements covering the EPM 8648 area in March 1990 and entered a joint venture with WMC, who managed the project. WMC identified 7 target areas, FC1 7 with TEM, as being prospective for Starra style magnetic iron oxide hosted Cu-Au mineralisation. During 1991 drilling identified ore grade intersections at FC5, subsequently named 'Ernest Henry'. In February 1992 the current tenements were granted to the WMC/Hunter Resources JV. MIMEX joined the JV in place of Hunter Resources during 1993, although WMC continued to manage the project until 1996 when MIMEX assumed management and sole funding of the project. In 2003 Xstrata assumed management of exploration of the project until 2006.
- Western Mining Corporation (WMC), MIM Exploration Pty Ltd (MIMEX) and Xstrata Copper Exploration Pty Ltd (Xstrata) completed extensive exploration activities over many of the Mt Margaret tenements (FC1 to FC15 and other prospects outside GBM tenement areas). Activities included regional and prospect scale aeromagnetic, ground magnetic, gravity, TEM (transient electromagnetic), IP-resistivity (induced polarization) and MIMDAS IP-resistivity and MT (magnetotelluric) geophysical surveys, along with soil geochemical analysis, and field inspections.
- Xstrata commenced a comprehensive program of systematic regionalstyle IP-resistivity surveying in July 2003, designed to seek large sulphide systems in those areas of Mount Fort Constantine EPM 8648 not previously surveyed with either WMC IP-resistivity or MIMEX IP. Xstrata also conducted additional prospect scale ground magnetics, gravity and drilling. Most of the sub-blocks over the EPM 8648 were relinquished by Xstrata and Newcrest post 2006. Newcrest Mining



Criteria	JORC Code explanation	Commentary
		Limited (NML) acquired the Mt Margaret West EPM 14614 (now Dry Creek tenement - EPM 18172) and carried out work primarily restricted to reviewing geological, geophysical and geochemical data from previous drilling, due to the scarcity of outcrop within this tenement. Previously RC and core drill holes were scan logged, and samples submitted for Petrology to assist in understanding the mineralisation and geology of the area. During 2006 22 RC holes were drilled within the Mt Margaret West EPM 14614. NML determined that significant potential remains for a discovery of economic gold-copper mineralisation within the area.
Geology	 Deposit type, geological setting and style of mineralisation. 	 Geologically the Mount Isa Inlier is divided into three broad tectonic units: the Western and Eastern Fold Belts and the intervening Kalkadoon-Leichardt Belt (KLB). The Western Fold Belt (WFB) is subdivided into the Lawn Hill Platform, Leichardt River Fault Trough, Ewen Block and Myally Shelf. The Eastern Fold Belt (EFB) is subdivided into the Mary Kathleen, Quamby-Malbon and Cloncurry-Selwyn zones and the KLB includes the western parts of the Wonga Belt and Duchess Belt. In the Mt Isa Inlier, a deformed and metamorphosed Proterozoic basement of mixed sedimentary and igneous rocks older than 1870Ma is overlain by Proterozoic supracrustal rocks which are subdivided into four major sequences each separated by unconformities. Cover Sequence 1, which is confined mainly to the KLB comprises a basal sequence of subaerial felsic volcanics deposited between 1870-1850Ma; Cover Sequences 2, 3 and 4 comprise mainly fluviatile and shallow marine/lacustrine sedimentary rocks and bimodal volcanics that were deposited between 1790-1720Ma, 1680-1620Ma and ~1620-1590Ma, respectively. Two major tectonostratigraphic events are recognised in the Mt Isa Inlier. The first was the Barramundi Orogeny which at 1870Ma regionally deformed the basement. The second involved two periods of crustal extension between 1790-1760Ma and 1680-1670Ma lead to basin formation. This period was terminated between 1620-1550Ma by regional compressional deformation and post orogenic granite



Criteria	JORC Code explanation	Commentary
Drill hole Information	 A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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 	 emplacement resulting in folding and high and low angle faulting and regional metamorphism to amphibolite facies. Granites and mafic intrusions were emplaced at various times before 1100Ma. With those older than 1550Ma being generally metamorphosed and deformed. The major granite plutons are grouped into a number of batholiths, from west to east are the Sybella (~1670Ma) in the WFB, Kalkadoon (~1860Ma), Ewen (~1840Ma) and the Wonga (1740-1670Ma) Batholiths in the KLB, and the late to post tectonic Naraku (~1500Ma) and Williams (~1500Ma) Batholiths in the EFB. Other smaller granitic intrusions include the Weberra (~1700Ma), Big Toby (~1800Ma) and Yeldham (~1820Ma) granites. Most of the gold and copper produced to date in the Mt Isa Inlier has come from intrusive and/or shear and fault controlled deposits in the EFB. Detailed drill hole information is provided in the accompanying Table 1 in Appendix 2.
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. 	• The reported base metal intersections from drilling were calculated using length-weighted averages and parameters that include a 0.1% cut-off grade for Zn, a 500 ppm cut-off grade for Cu and Pb and no more than 4 m internal waste for all metals. Higher grade "Includes," intercepts calculated with 0.3% Zn cut-off grade and no internal



Criteria	JORC Code explanation	Commentary
	 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	dilution. • Metal equivalents were not reported.
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 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'). 	 Reported base metal intersections from drilling represent apparent widths.
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. 	 Collar plans showing drill collar locations, and drilling cross-sections of reported intersections are included. A table of intersections from new assay data is included. See Appendix 2.
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. 	 A table of intersections from new assay data is included. See Appendix 2.
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	 New down hole geophysical data relating to the drilling program is reported.



Criteria	JORC Code explanation	Commentary
	characteristics; potential deleterious or contaminating substances.	
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). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 A program of follow-up RC drilling is planned to test interpreted targets along the prospective Rhea Shear Zone structural trend. Drilling is scheduled for the fourth quarter 2023.