MILLENNIUM NORTH METALLURGICAL TESTS ACHIEVE +90% COPPER AND COBALT RECOVERIES

8 November 2018

ASX Code: HMX

CAPITAL STRUCTURE:

Share Price (6/11/2018)	**$0.03**
Shares on Issue	**278m**
Market Cap	**$8.3m**
Options Listed	**165m**
Options Unlisted	**21m**

Significant Shareholders	
Deutsche Rohstoff	**13%**
Resource Capital Fund VI	**9.3%**
Management	**8.8%**

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Mark Pitts
Company Secretary

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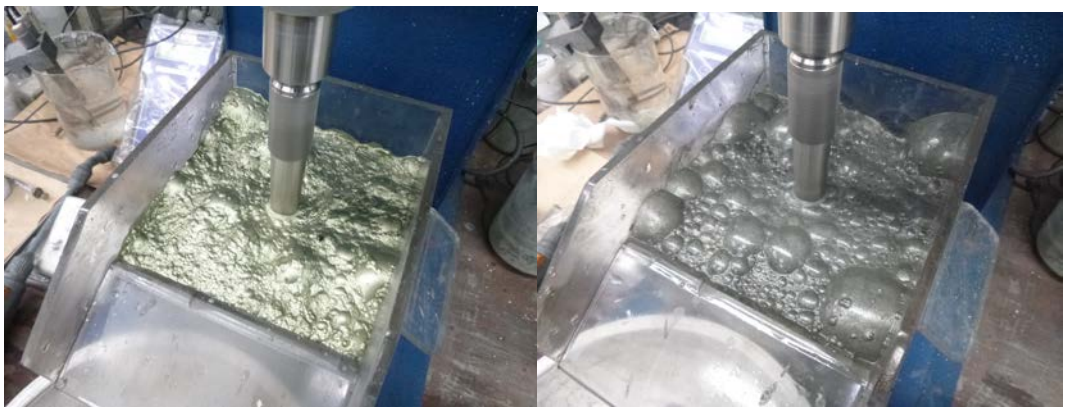
Chief Operating Officer

- Hammer Metals Limited is pleased to report the results of the first metallurgical program conducted over the northern quartzite zone of the Millennium Co-Cu-Au resource. The Millennium Project is a joint venture with TSX listed, Global Energy Metals Corporation (GEMC).
- Two composite samples were sourced from diamond drill core (MIDD001-MIDD010) from a program conducted in the first quarter of 2018. (Refer to ASX releases January 17th, June 5th and July 19th.) The drilling tested the northern quartzite domain which contains the majority of the Millennium Co-Cu-Au resource.
- The key outcomes of the metallurgical test work:
  - Production of separate cobalt and copper rougher concentrate streams is possible.
  - High-grade composite peak rougher flotation test:
    - **Combined Cu recovery of 95.1%**
    - **Combined Co recovery of 95.4%**
    - **Au total recovery of 81.4% reporting dominantly to the Cu concentrate**
  - Low-grade composite peak rougher flotation test:
    - **Combined Cu recovery of 91.3%**
    - **Combined Co recovery of 91.7%**
    - **Au total recovery of 77.9% reporting dominantly to the Cu concentrate**
  - It is expected that the concentrate grades may increase on re-grind and final cleaner flotation. This test-work will be conducted in 2019.
- The results are considered very encouraging. Looking ahead, further drilling is planned on the southern portion of the Millennium deposit to expand and upgrade the current resource. This will be accompanied by ongoing metallurgical characterisation.



Copper rougher flotation test HG-3 (left) and cobalt rougher flotation test HG-1 (right)

Hammer's Executive Chairman, Russell Davis said: "Very encouraging recoveries of copper and cobalt to separate concentrates have been achieved from this initial phase of metallurgical test-work. Hammer looks forward to GEMC further advancing the evaluation of the Millennium project in 2019."

FIRST STAGE METALLURGICAL PROGRAM

Two composites were sourced from diamond drill core from a program conducted during the first quarter of 2018. (Refer to ASX releases January 17th, June 5th and July 19th.) The drilling was testing what is termed the northern quartzite domain at Millennium. This domain hosts the majority of the Millennium Co-Cu-Au resource.

The test-work was done by ALS in Adelaide. The aims of the test-work were:
(1) determine copper, cobalt and gold recoveries via rougher flotation;
(2) determine preliminary comminution parameters; and
(3) determine the main cobalt and copper minerals in concentrates.

Table 1 – Composite head grade assays (HG – high grade and LG – low grade)

Composite	Cu (%)	Co (%)	Au (g/t)	Ag (g/t)
QFR HG	0.45	0.18	0.16	<2
QFR LG	0.28	0.04	0.09	<2

Twelve rougher float tests were undertaken on the high-grade and low-grade composites. Each test was conducted using different grind and reagent settings. The optimum settings were obtained in tests HG-7 and LG-5 and the results of these tests are summarised below.

Quartzite is the main host lithology for this domain at Millennium and, as expected, the comminution test work reported results indicative of a silica rich gangue material. The SMC test classified the composites as "very hard", abrasion tests as "slightly abrasive" and the Ball Mill index test as "hard".

Optical mineralogy and XRD analysis indicated that copper was exclusively present as chalcopyrite ($CuFeS_2$) and cobalt was identified in both cobaltite (CoAsS) and catterite (CoS_2).

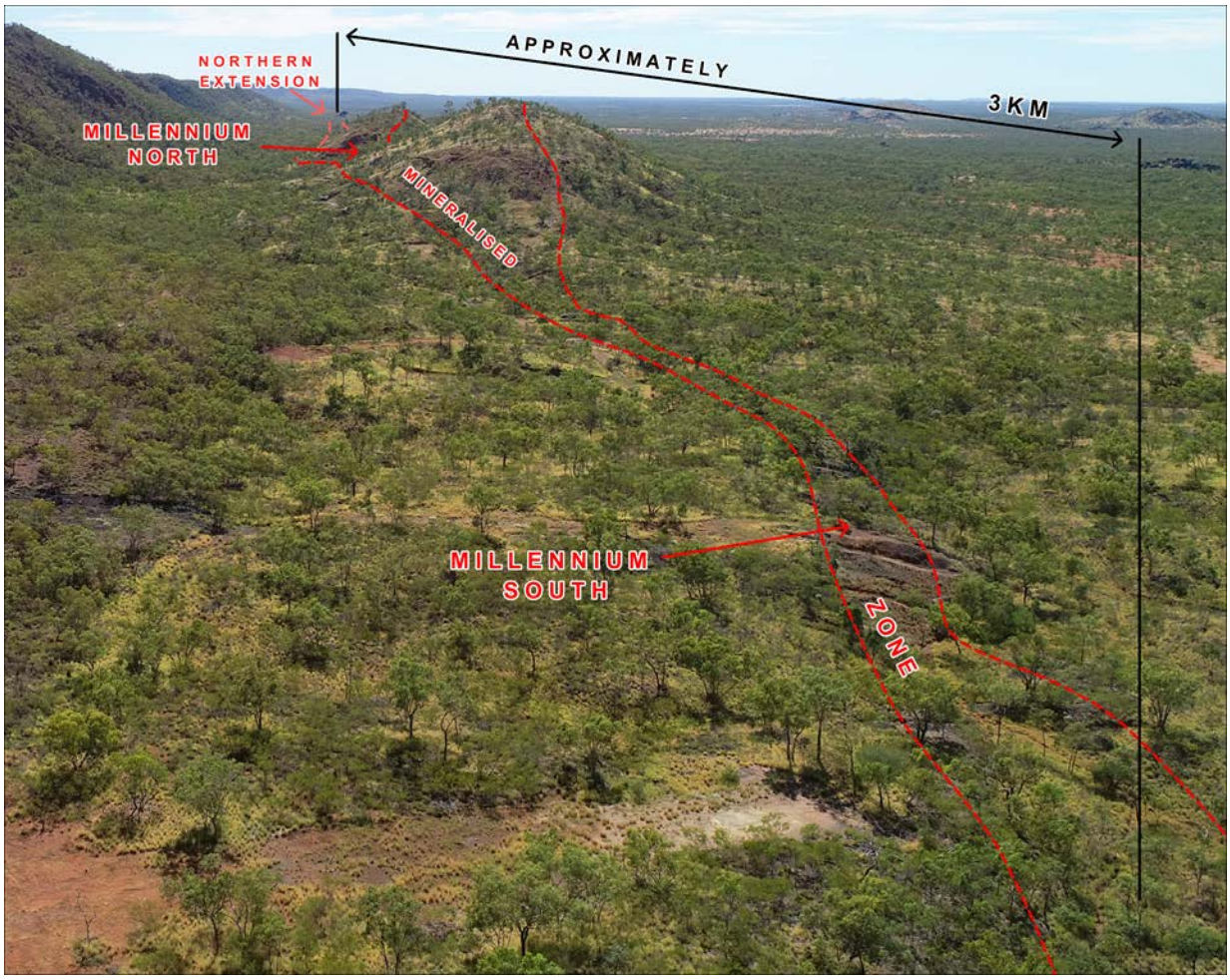
Table 2 – Rougher float test results for high-grade and low-grade composites

Test No.	High Grade Composite - Optimum Test – Combined Rougher Concentrate								
	Product	Cu		Co		Au		As	
		%	% Rec'y	%	% Rec'y	ppm	% Rec'y	%	% Rec'y
HG-7	Cu Con	20.6	90.8	0.48	5.4	5.1	45.6	0.23	2.5
	Co Con	0.4	4.3	3.12	89.9	1.5	35.8	3.39	93.1
	Total Con		95.1		95.4		81.4		95.6

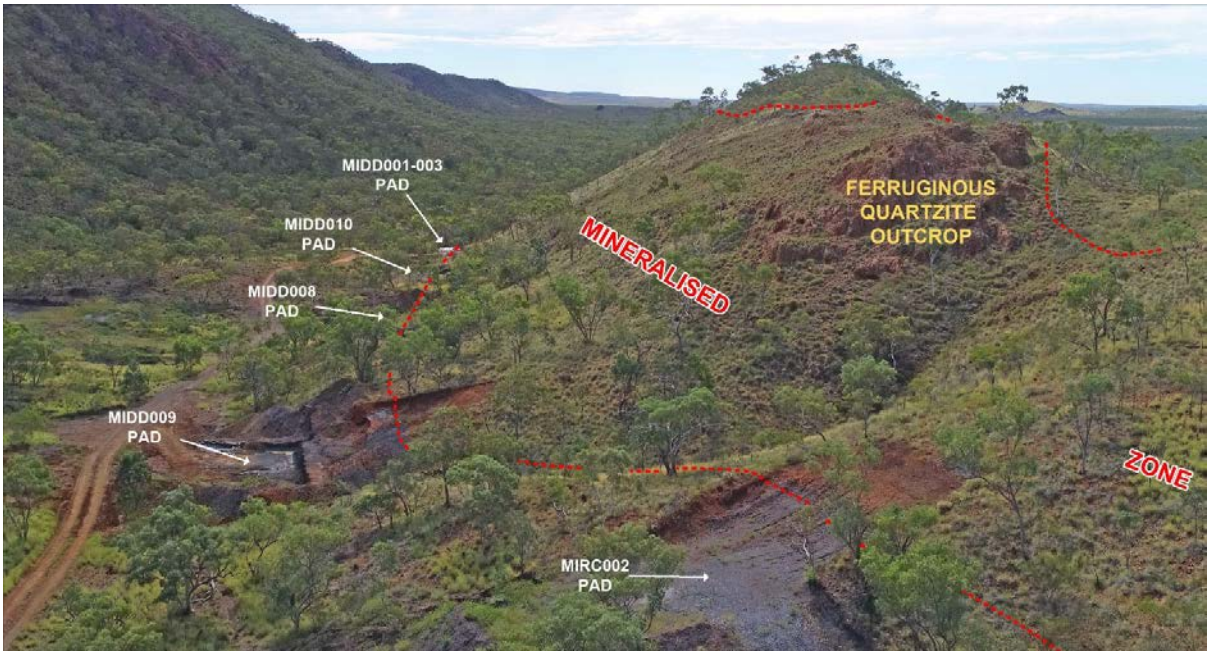
Test No.	Low Grade Composite - Optimum Test – Combined Rougher Concentrate								
	Product	Cu		Co		Au		As	
		%	% Rec'y	%	% Rec'y	ppm	% Rec'y	%	% Rec'y
LG-5	Cu Con	16.9	85.2	0.26	7.8	4.3	51.0	0.14	4.9
	Co Con	0.5	6.1	1.16	83.9	0.9	27.0	1.00	88.4
	Total Con		91.3		91.7		77.9		93.2

Table 3 – Rougher float test parameters

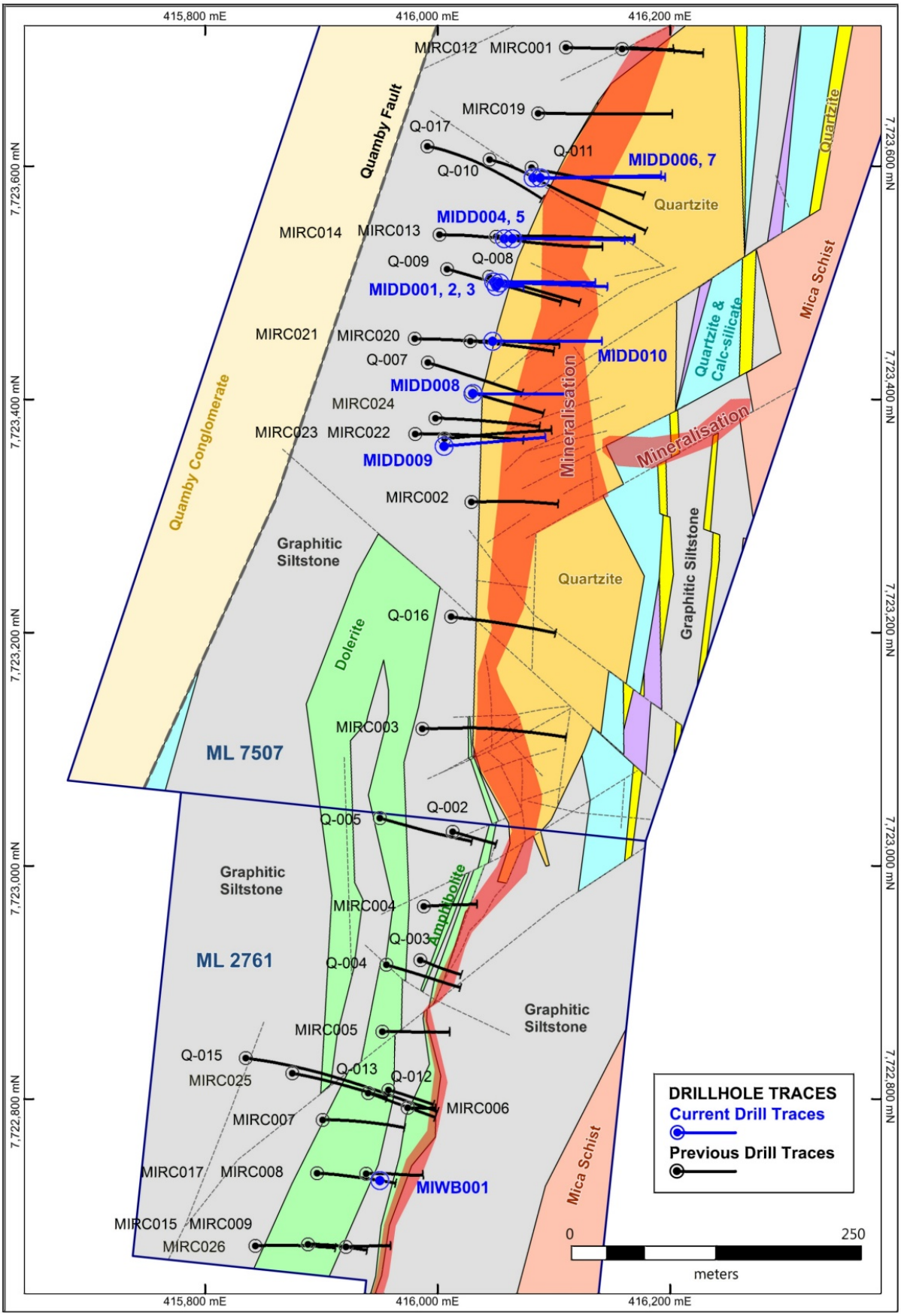
Float Parameters						
Sample	Test No.	Circuit	Float Time, min	pH	Reagent Additions, g/t	
					Collector	Depressant/ Activator
QFR HG	HG-7	Cu	3	10.5	Cytec A3894: 20	NaCN: 15
		Co	12	8.5	Cytec 3477: 10 SIBX: 120	CuSO4: 200
QFR LG	LG-5	Cu	3	10.5	Cytec A3894: 20	NaCN: 10
		Co	10	8.7	Cytec 3477: 10 SIBX: 100	CuSO4: 200



Oblique view of the Millennium deposit looking north. The quartzite domain is largely present at Millennium North



Northern Zone at Millennium showing the mineralised Quartzite



The location of the northern quartzite domain (shaded in orange). The mineralised portion of the domain is shaded in red

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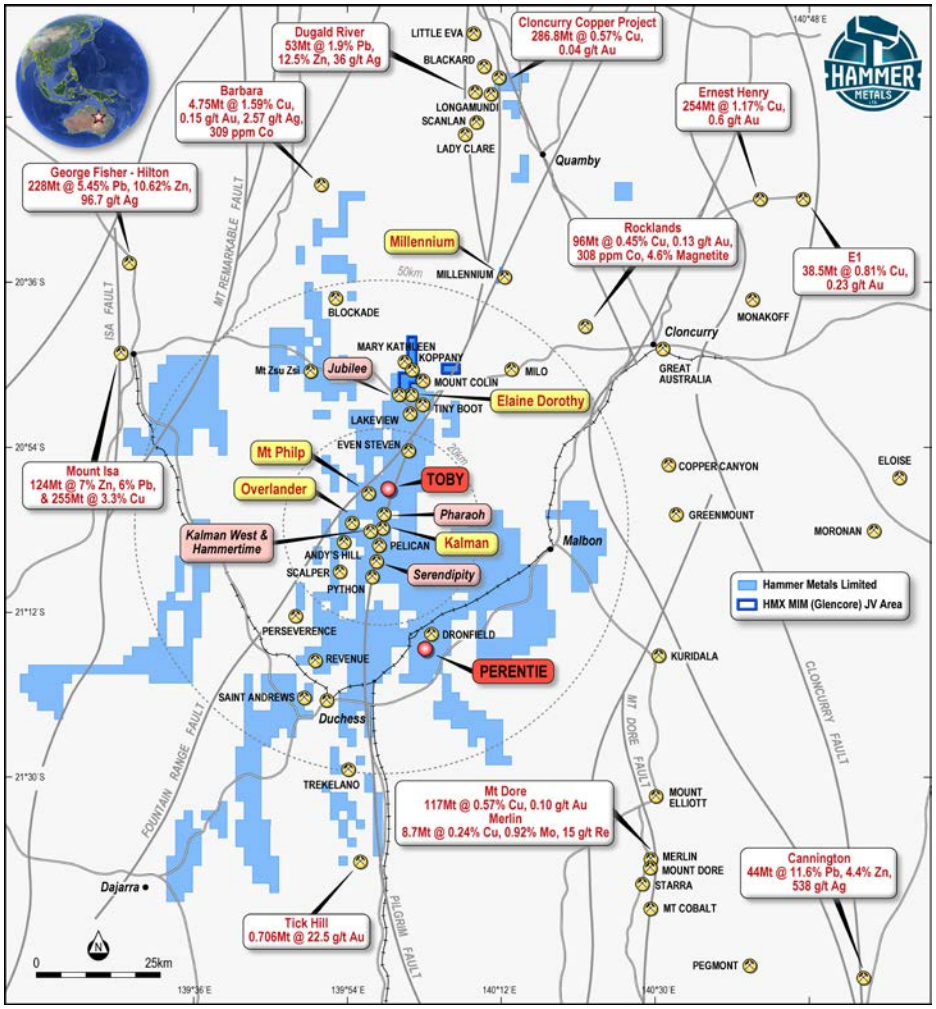
About Hammer Metals

Hammer Metals Limited (ASX: HMX) holds a strategic tenement position covering approximately 3000km^2 within the Mount Isa mining district, with 100% interests in the Kalman (Cu-Au-Mo-Re) deposit, the Overlander North and Overlander South (Cu-Co) deposits and the Elaine-Dorothy (Cu-Au) deposit. Hammer also has a 75% interest in the Millennium (Cu-Co-Au) deposit and a 51% interest in the emerging Jubilee (Cu-Au) project. Hammer is an active mineral explorer, focused on discovering large copper-gold deposits of the Ernest Henry style and has a range of prospective targets at various stages of testing.

Competent Person's Statement:

Exploration Results

The information in this report as it relates to exploration results and geology was compiled by Mr. Mark Whittle, who is a Member of the AusIMM and a consultant to the Company. Mr. Whittle who is a shareholder and option-holder, 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. Whittle consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.



Hammer Metals Mount Isa Project area

JORC Code, 2012 Edition

Table 1 report – Exploration Update

- This table is to accompany an ASX release updating the market on metallurgical results

from the northern quartzite domain of the Millennium Co-Cu-Au deposit.

- **The reader should note that this metallurgical test work was conducted to characterise a portion of the Millennium resource termed the northern quartzite domain. The southern portion of the Millennium Resource has a different host rock and its metallurgical behaviour may differ markedly from that reported above.** Further drilling is planned in the southern domain and this will culminate in another metallurgical study.

- **Details relating to the metallurgical results are detailed in Section 2 "Other substantive exploration data"**

- **All information pertaining to the drilling from which the composite samples were sourced can be found in HMX releases dated January 17th, June 5th and July 19th.** Details of the drilling program are repeated below as the metallurgical composite sample was derived from MIDD prefixed holes.

- **All information pertaining to the Millennium Resource Estimate have been previously reported to the market in HMX releases dated December 6th 2016.**

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	<u>Millennium Drilling</u> • Diamond drilling with samples taken at one or two metre intervals dependent on visual inspection of mineralisation. • All samples submitted for assay underwent a fine crush with 1kg riffled off for pulverising to 75 microns. • Samples were submitted for 4-acid digest followed by AAS assay for gold and ICP (OES) analysis for a multi-element suite including copper, silver, cobalt and molybdenum. .
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details*	<u>Millennium Drilling</u> • Holes were drilled by Drill North Pty Ltd

Criteria	JORC Code explanation	Commentary
	(eg 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).	utilising a small footprint diamond drill-rig.
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.*	<u>Millennium Drilling</u> • Averaged over the entire program (MIDD001-MIDD010) the recovery was 92%. Zones of core loss were encountered on the western contact between graphitic metasediment and quartzite. Commonly, this contact was mineralised and due to the fact that drilling was collared close to this contact the upper parts of holes were also quite shallow and weathered. • To avoid introducing a bias in the intercept calculations, zones of core loss were assigned 0 grade. • Drillers were able to adapt their drilling through changing mud mix and bit styles to maximise recovery and with successive holes the recovery increased. • As is discussed above there was a sample recovery bias in the upper portions of some of the earlier holes where friable weathered material was lost. However, for the purposes of grade calculations these zones of core loss were assigned zero grade.
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.*	<u>Millennium Drilling</u> • Samples consisted of half cut core, the remainder of the core is stored in core trays within a refrigerated container for future metallurgical studies. • The core is qualitatively logged and quantitatively examined using an Olympus Vanta portable XRF instrument and magnetic susceptibility meter.
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 insitu material collected, including for instance results for field*	<u>Millennium Drilling</u> • Assay samples consist of half NQ and half HQ core. • Sample collection methodology and core diameter is considered appropriate to the target-style, and appropriate laboratory analytical methods were employed. • Standard reference samples and blanks were inserted into the laboratory submissions at a rate of 1 per 25 samples. • At least two duplicate samples

Criteria	JORC Code explanation	Commentary
	duplicate/second-half sampling. • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	consisting of quarter core were taken from each drillhole and inserted at the end of the drillhole sample sequence. • The sample sizes submitted for analysis are appropriate for the style of mineralisation sought.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	<u>Millennium Drilling</u> • All drilling samples were analysed by ALS for a range of elements by ICP (OES) after a 4-acid digest. Gold was analysed via flame AAS. • With drill samples standard reference samples and blanks were inserted at 25 sample intervals. ALS also maintained a comprehensive QAQC regime, including check samples, duplicates, standard reference samples, blanks and calibration standards.
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>Millennium Drilling</u> • All intercepts have been verified by alternate company personnel • Holes have not been twinned. • All field logging is validated and entered into the company database. • Assay files were received electronically from the laboratory. • Intercepts which contain an analysis below the detection limit are calculated using an adjusted value which is half the listed detection.
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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	<u>Millennium Drilling</u> • Drill hole collars were measured using a hand-held GPS unit with an estimated positional accuracy of approximately 5 metres. • Datum used is UTM GDA 94 Zone 54. • RL's for the drill hole collars are initially captured by GPS and will subsequently be adjusted utilising the best available digital terrain data. For Millennium this is a sub-metre laser DEM survey.
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*	<u>Millennium Drilling</u> • The drill density relating to this program at Millennium is sufficient to establish grade continuity. • Samples were taken at 1 and 2 metre

Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied. • *Whether sample compositing has been applied.*	interval lengths. The interval length is dependent on visual estimation of mineralisation.
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.*	Millennium Drilling • Drill holes were oriented as close to perpendicular as possible to the interpreted orientation of the geophysical targets, surface and downhole geological features. • There is no indication that the hole angle has introduced a sampling bias.
Sample security	• *The measures taken to ensure sample security.*	• Pre-numbered bags were used, and sample were transported to ALS laboratory in Mt Isa by company personnel.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• The dataset associated with this drilling has been subject to data import validation. • All assay data has been reviewed by two company personnel.

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.*	Millennium • Millennium drilling and surface sampling is located on ML's 2512, 2761, 2762, 7506 and 7507 held by Element Minerals Australia Pty Ltd – a 100% owned subsidiary of Hammer Metals Limited. • The Millennium Project is currently in a Joint Venture with Global Energy Metals Corporation ("GEMC") a TSX listed Canadian company. Hammer announced the sale of its interest in the project to GEMC subject to completion of sale documentation. (Refer to ASX release dated 27/6/18)
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Millennium • Between 1964 and 1990, a number of companies completed exploration activities over the mining leases (including Carpentaria Exploration Company, Tasman Minerals NL, Strategic Resources and Diversified Mineral Resources NL). • Diversified Mineral Resources NL

Criteria	JORC Code explanation	Commentary
		conducted extensive trenching across the mineralised zone. • Limited Metallurgical testing was done by these parties, however float test-work in 1980 indicated that concentrates could be produced. • In 2009, Elementos Limited conducted geological mapping and rock chip sampling. • In 2013, Chinalco Yunnan Copper Resources Limited (ASX:CYU). CYU drilled 16 reverse circulation drill-holes (Q-001 to Q-016) and conducted portable xrf soil sampling over the area.
Geology	• *Deposit type, geological setting and style of mineralisation.*	<u>Millennium</u> • Mineralisation is hosted by the Tommy Creek Beds on a structure related contact between metasediments (variably graphitic) and quartzite. This structure is likely to be associated with the Pilgrim Fault – a large regional structure which hosts the Kalman Cu-Mo-Re-Au deposit. • Mineralisation is controlled by the regional scale fault, a fractured limonitic quartzite to the east and cross-cutting northeast and northwest trending faults. • The mineralisation presents as disseminated bornite, chalcopyrite with cobaltiferous pyrite and cobaltite. These sulphide minerals are associated with elevated gold and silver. The metals are associated with zones of increased carbonate veining and fracture related limonite alteration. • Mineralisation is hosted within graphitic metasediments and ferruginous quartzite.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* • *If the exclusion of this information is*	• Information pertaining to MIDD001 to MIDD010 has been presented in previous ASX releases (dated January 17th, June 5th and July 19th).

Criteria	JORC Code explanation	Commentary
	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.	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *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.*	• Information pertaining to MIDD001 to MIDD010 has been presented in previous ASX releases (dated January 17th, June 5th and July 19th). .
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 (eg 'down hole length, true width not known').*	<u>Millennium Drilling</u> • Information pertaining to MIDD001 to MIDD010 has been presented in previous ASX releases (dated January 17th, June 5th and July 19th). • The drilling is sufficient to enable some level of grade continuity to be established.
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.*	• See attached figures
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.*	• Information pertaining to MIDD001 to MIDD010 has been presented in previous ASX releases (dated January 17th, June 5th and July 19th).
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*	**<u>Millennium northern quartzite domain metallurgical test work</u>** • Two composite samples were sourced from drillholes MIDD001-MIDD010. The samples were composed of quarter NQ ad HQ core. • Composite head grades are

Criteria	JORC Code explanation	Commentary
	characteristics; potential deleterious or contaminating substances.	tabulated in the body of this report. • The composite weights were 68kg (high grade) and 90kg (low grade). • The work was conducted by ALS in South Australia. **Specific aims of the program were** • Multielement head analysis. • Optical microscopy augmented by XRD analysis. • Bench scale rougher flotation tests to determine copper, cobalt and gold recovery. • Comminution tests (SMC tests, abrasion index tests and bond ball mill work index tests). • Head grade and concentrate analyses were conducted by ALS utilising Fusion XRF, 4 acid digest ICP-OES and for gold fire assay with ICP_OES finish.
Further work	• *The nature and scale of planned further work (eg 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.*	<u>Millennium</u> • Further drilling is planned to increase the Millennium resource categorisation. • Drilling is planned at the Millennium north extension. • The current metallurgical work on the northern quartzite domain will be augmented by re-grind and cleaner float studies utilising the concentrates produced during this study. • Another phase of metallurgical test work will be commissioned on the southern portion of Millennium.