

## QUEENSLAND EXPLORATION UPDATE

### ASX RELEASE

23 September 2020

### DIRECTORS / MANAGEMENT

#### Russell Davis

Chairman

#### Daniel Thomas

Managing Director

#### Ziggy Lubieniecki

Non-Executive Director

#### David Church

Non-Executive Director

#### Mark Pitts

Company Secretary

#### Mark Whittle

Chief Operating Officer

### CAPITAL STRUCTURE

#### ASX Code: HMX

Share Price (22/9/2020)	\$0.039
Shares on Issue	672m
Market Cap	\$26.2m
Options Listed	78m
Options Unlisted	24m
Performance Rights	8m

### HIGHLIGHTS

- **Assays received for the CEI funded 2-hole Koppany Cu/REE diamond drilling program.** Both holes intersected REE mineralisation with HMKPDD002 intersecting 26m at 0.39% TREOY from 112m including 3m at 1.23% TREOY. Downhole EM processing is underway
- **Gold soil sampling program to commence immediately** in Hammer's tenure surrounding the historic high-grade Tick Hill mine (Produced: 511koz at 22.5g/t Gold, 1991-1993)
- Recent field mapping has defined **mineralisation controls** and highlighted **several gold drill targets on the Kings-Charlotte and Lake View trends**
- Commenced review of **significant gold exploration potential within Hammer's 100% owned Mount Isa projects**. Hammer's portfolio already includes JORC resources, totalling some **237,000 oz of gold**
- Historical high-grade gold intercepts on Hammer's properties also to be reviewed considering sustained higher gold price environment (**30m at 6.7g/t Au from 508m in MKED009 at the Elaine project** - See ASX announcement 15 December 2016)
- Review of high-grade gold intercepts in drill core at Kalman and Kalman West highlights similarities with the Tick Hill deposit
- Hammer's Joint Venture activities with JOGMEC continue

**Hammer Metals Ltd** (ASX: **HMX**) ("Hammer" or the "Company") is pleased to report the assays from its Qld State Government Collaborative Exploration Initiative ("CEI") funded 507m diamond drilling programme at the Koppany Copper – Copper and Rare Earth Element ("REE") prospect located to the southeast of the historic Mary Kathleen mine. The drilling intersected broad zones of visible REE mineralisation (Allanite) and multiple zones of stringer and semi-massive sulphide mineralisation. Downhole EM has been conducted and processing of this data is underway.

The company continues to advance its 100% owned portfolio and we have recently commenced a review of the gold exploration potential within our Mount Isa project areas. Hammer's tenure and strategy in Mount Isa has historically been primarily focussed on exploring for large scale Iron Oxide Copper Gold (IOCG) systems. Whilst this exploration target remains the primary strategic objective, there is also potential for significant gold mineralisation within our tenure.

With the sustained momentum in gold prices and strong shareholder support in our pursuit of gold in Western Australia, the potential for a significant gold discovery within our Mount Isa portfolio warrants further evaluation. Hammer has historically recorded several significant gold intercepts and rock chip samples within our Mount Isa projects including at prospects such as Elaine, Kalman, Kalman West, Kings-Charlotte, Lake View and El Questro. Hammer has commenced several low-cost exploration activities with the aim of producing high quality, drill ready targets.

**Hammer's Managing Director, Daniel Thomas said:**

*"The REE diamond drilling programme at Koppany conducted with the support of the Queensland Government's Critical Minerals CEI confirmed the presence of broad zones of REE mineralisation as well as an adjacent zone of copper mineralisation. These results are currently being compiled and reviewed to determine the next steps at this interesting prospect.*

*The gold exploration review highlights the latent opportunity that exists within Hammer's Mount Isa portfolio. With much of the region's historic exploration focussing on base metal deposits, we have an opportunity to review these areas through a different lens and add quality exploration targets to the portfolio. The tenure that we have near the former Tick Hill mine has not been systematically explored and presents a unique opportunity for Hammer to continue progressing our efforts in advancing grass roots exploration concepts within the Mount Isa region."*

#### **Mt Frosty Joint Venture (HMX 51% and MIM 49%)**

##### **Koppany Prospect**

Hammer Metals received a Critical Minerals Exploration Initiative ("CEI") grant from the Queensland Government to drill test rare earth mineralisation at the Koppany prospect located 2km to the south east of the Mary Kathleen U and REE deposit. The two-drill hole program for 507m was designed to test strongly anomalous Lanthanum and Cerium responses in surface soil sampling.<sup>1</sup>

The rare earth bearing skarn zone at Koppany is cross-cut on its western side by pyrrhotite – chalcopyrite zones that correspond to a series of strong VTEM responses occurring over a 5.6 km strike length. This area represents a significant Iron-Sulphide-Copper-Gold ("ISCG") target. Other examples of ISCG mineralisation style in the Mount Isa region include Eloise and Osborne.

HMKPDD002 intercepted zones of semi-massive pyrrhotite with lesser chalcopyrite. Significant intercepts:

- 4m at 0.78% Cu from 126m including 1m at 2.14% Cu in HMKPDD002; and
- 42m at 0.10% Cu from 34m including 1m at 0.78% in HMKPDD002.

Significant intercepts of rare earth bearing skarn were encountered in both holes:

- 106m at 0.25% TREOY from 88m including 7m at 0.74% TREOY and 1m at 1.43% TREO in HMKPDD001
- 23m at 0.28% TREOY from 226m in HMKPDD001
- 26m at 0.39% TREOY from 112m including 3m at 1.23% TREOY and 1m at 1.05% TREOY in HMKPDD002

The rare earth element response is dominated by the lighter elements, typically comprising greater than 98% of the total rare earth concentration. Individual maximum REE grades of 1.02% Ce<sub>2</sub>O<sub>3</sub>, 0.53% La<sub>2</sub>O<sub>3</sub> and 0.11% Nd<sub>2</sub>O<sub>3</sub> were noted within mineralised intervals. Based on downhole orientation information, the outer envelope of the REE mineralisation in HMKPDD001 (at a 0.2% TREOY cut-off) is approximately 90m in true thickness.

The drilling has continued to outline a broad zone of REE mineralisation as well as an adjacent zone of copper mineralisation at Koppany. The results from the drilling are currently being compiled and reviewed with any follow up work to be planned in conjunction with our Joint Venture partner MIM.

Downhole EM has been conducted on HMKPDD002 and processing is underway.

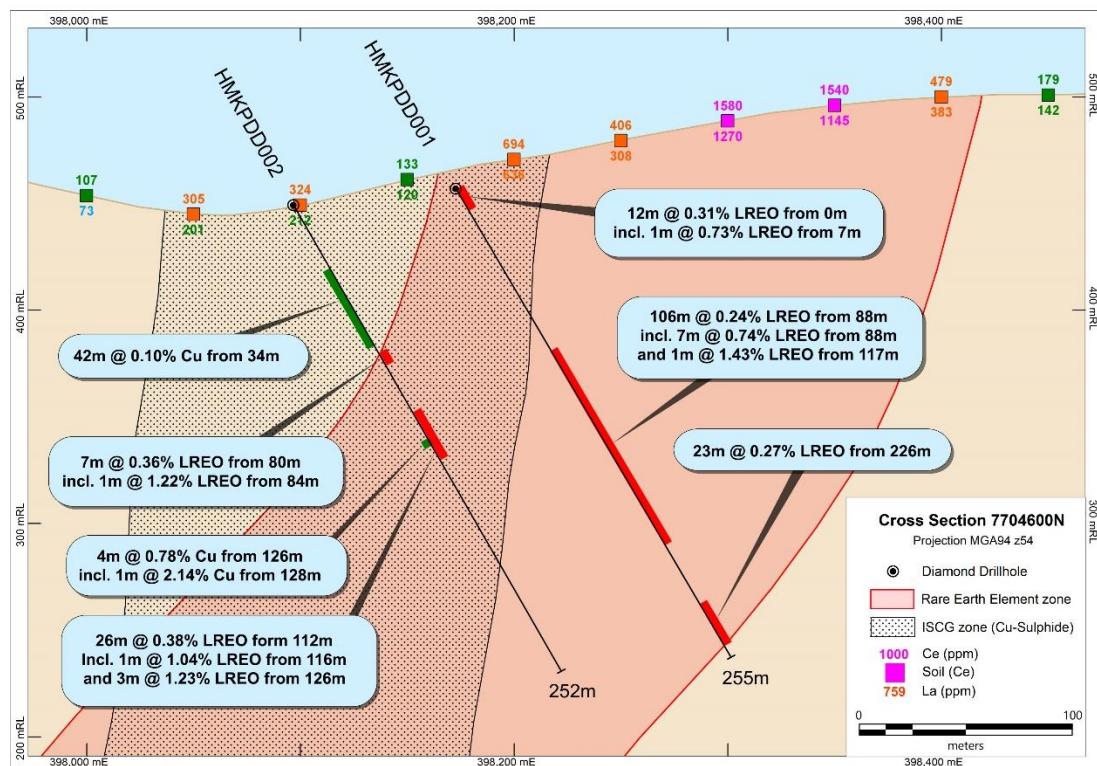
<sup>1</sup> Refer to Hammer Metals ASX release dated 3/7/2019



**Figure 1.** Pyrrhotite-Chalcopyrite mineralisation – HMKPDD002, 128.3m. The interval 128-129m assayed at 2.14% Cu.



**Figure 2.** Black Allanite (REE bearing mineral with formula  $(Ce,Ca,Y,La)_2(Al,Fe^{+3})_3(SiO_4)_3(OH)$ ) within a Pyroxene Skarn - HMKPDD001, 155.5m. The interval 155-156m assayed at 0.9% TREOY.



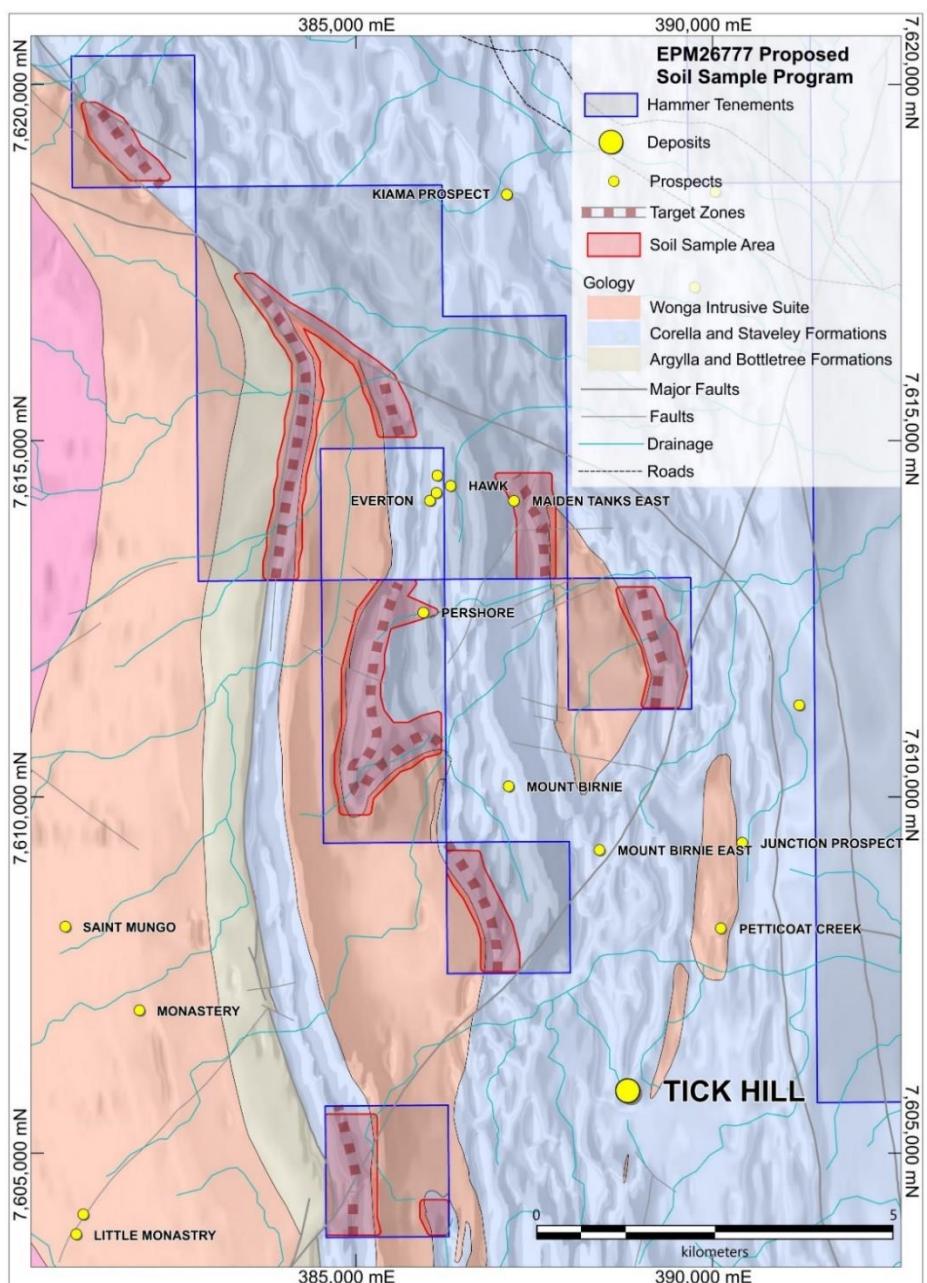
**Figure 3.** Section showing the broad west dipping REE zone and the steeper dipping ISCG target corridor

## Hammer Metals 100%

### **Tick Hill and the Tick Hill Soil Program**

The Tick Hill Deposit was discovered in October 1989 and was mined by Mount Isa Mines Limited between 1991 and 1993, yielding 0.5Moz from 0.7Mt (equating to a grade of 22.5g/t Au). The deposit is discrete being approximately 150m in length and an average width of 20m with an alteration zone restricted to the immediate area surrounding gold mineralisation.

The Hammer Metals Project area covers prospective structural zones to the north and west of the Tick Hill Deposit. The company has identified the key structural positions within the tenement holding and a soil program is underway to test these areas. Results from this sampling are expected towards the end of this year.



**Figure 4.** Hammer Metals tenements in the vicinity of the Tick Hill Deposit. Soil sampling will target areas of similar structural setting the former deposit.

### **Kalman**

Kalman is one of the highest-grade molybdenum deposits globally and contains a current Indicated and Inferred resource of 20Mt at 0.61% Cu, 0.34g/t Au, 0.14% Mo and 3.7g/t Re with 222koz of contained gold (in both Inferred and Indicated resource category)<sup>2</sup>. Examples of the gold mineralisation encountered in drilling includes significant wide intercepts such as:

- 77m at 1.4% Cu and 1.3g/t Au from 698m in K-106A including 7.65m at 23.38g/t Au and 23.38% Cu; and
- 15m at 1.94% Cu and 2.57g/t Au from 480m in K-65.

Kalman also contains multiple high-grade thinner zones which, significantly do not necessarily have associated copper mineralisation. Examples of higher-grade intercepts are:

- 1m at 23.2g/t Au and 2.67g/t Au from 324m in K-23; and
- 1m at 36.5g/t Au and 0.07% Cu from 125m in K-34;

Kalman occupies a similar geological position to the Tick Hill Deposit to the west of the Pilgrim Fault and like Tick Hill can contain high grade zones which are often associated with mylonitic textures.

**Table 1. Tabulation of contained gold within Mineral Resource Estimates**

Deposit	Classification	Weathering Doman	Mining Method	Tonnes	Au (g/t)	Au	Au
				Mt	g/t	Ounces	Ounces HMX
Jubilee	Inferred	Mod-Slightly Weathered	Open Pit	0.07	0.55	1238	14,475
		Fresh	Open Pit	1.34	0.63	27145	
Kalman	Indicated	Fresh	Open Pit	7.10	0.27	61640	222,026
	Inferred	Fresh	Open Pit	6.20	0.24	47846	
	Inferred	Fresh	Underground	7.00	0.5	112540	
<b>Contained Gold within Mineral Resource Estimates (rounded to nearest 1000 ounces)</b>							<b>237,000</b>
The reader is referred to the resource statements present in Appendix 2 of this release							

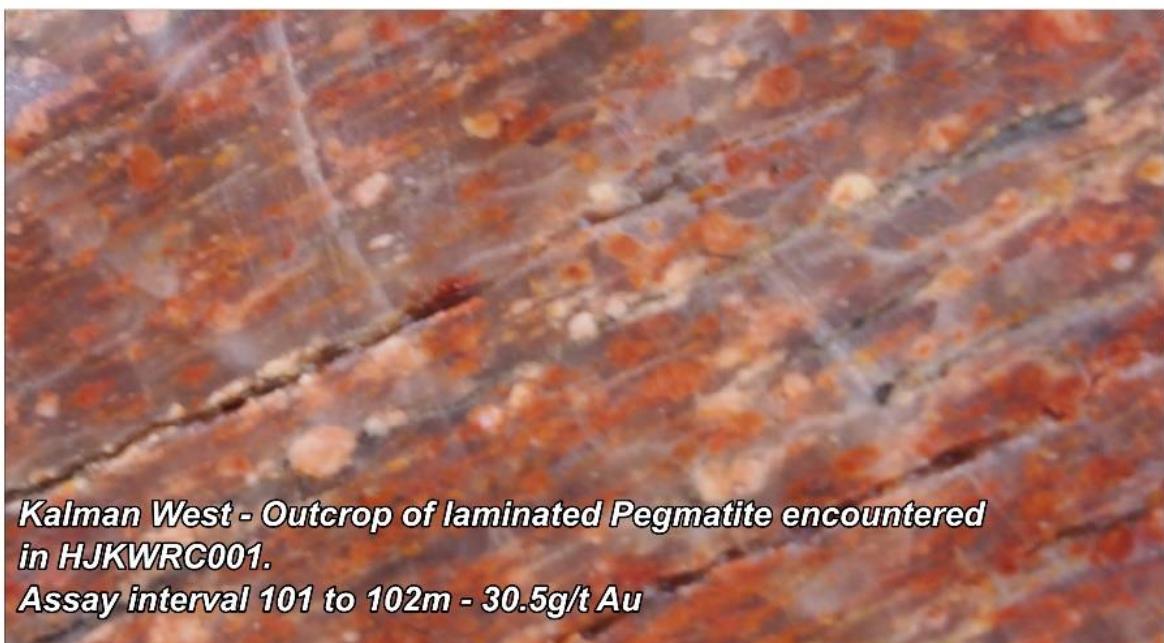
### **Kalman West**

The Kalman West Prospect is located on a north trending shear zone which intersects the Pilgrim Fault Zone to the north and south. The zone is typified by elevated Au, Cu, Pb and Zn soil responses over a 17-kilometre strike length. In late 2017 and 2018 Hammer Metals undertook an 8-hole reverse circulation program to follow up on early positive rock chip results. Gold mineralisation was encountered over 100m of strike length in association with mylonitised pegmatites and sheared quartz veins. Significant intercepts encountered were:

- 1m at 36.9g/t Au from 101m in HKWRC001; and
- 1m at 3.93g/t Au from 13m in HKWRC002.

(Refer to Hammer ASX Release dated 28 August 2017 and 25 January 2018)

<sup>2</sup> Refer to the Resources Statement included in this announcement

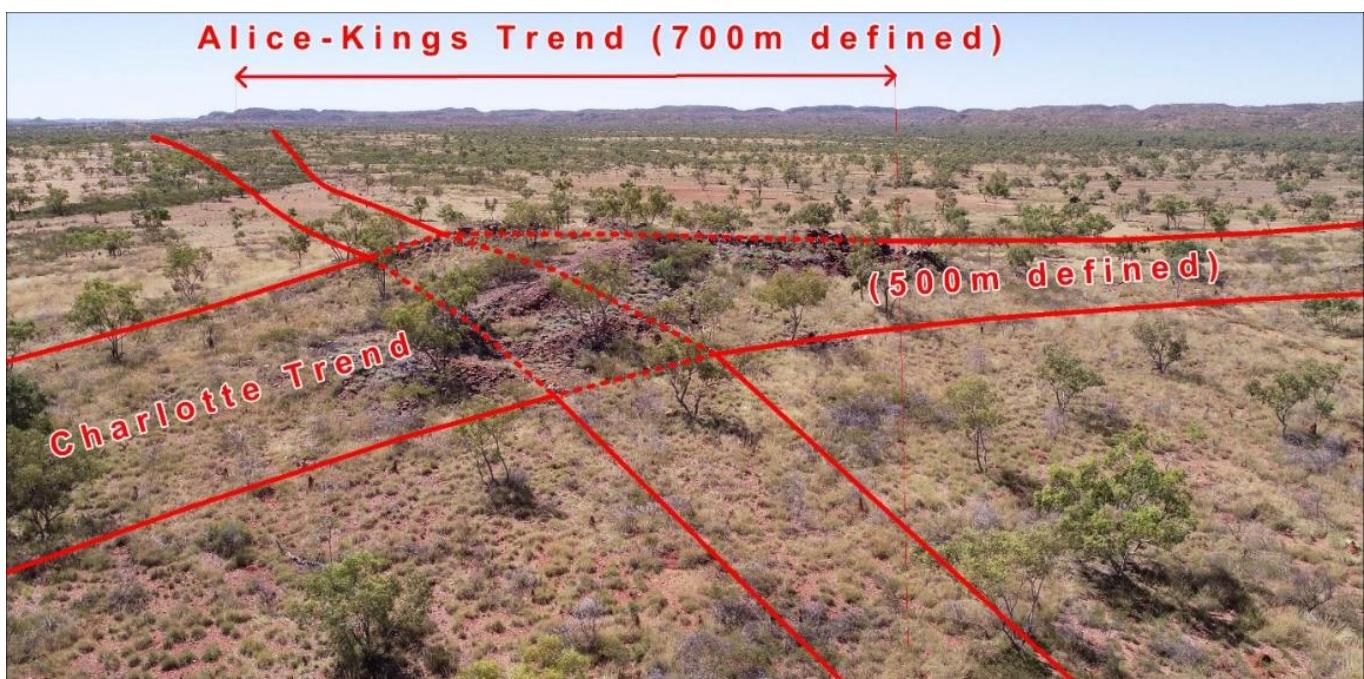


**Figure 5.** Photographs showing zones of gold enrichment associated with mylonitised textures at Tick Hill (top), Kalman (middle) and Kalman West. All three prospects are in a similar geological and structural setting.

### **Kings-Charlotte Trend**

The Kings, Alice and Deadlock prospects are located approximately 40km east of Kalman in the Malbon region of the eastern fold belt. Multiple mineralised structural trends (up to 1.8km in strike length) are present within 100% Hammer owned tenements and these trends are specifically enriched in gold relative to copper. Surface rock chip sampling along these trends has reported gold levels of up to 12.9g/t Au. (Refer to Hammer ASX release dated 8 May 2019).

The Kings-Charlotte trend has recently been geologically mapped. The Kings trend consists of stacked quartz veins individually up to 2m wide but collectively covering a width of up to 30m. Possible shoots are developed on structural intersections. Notably outcrop is sparse in the area with a thin veneer of colluvium masking bedrock. A preliminary hole design has been completed and drilling of this target will be considered along with any potential targets identified during the Tick Hill soil sampling program.



**Figure 6.** Oblique view of the Kings Trend above the intersection zone with the Charlotte trend. The intersection is marked by a southeast plunging mineralised shoot.

### **Elaine**

The Elaine Deposit is in the northern portion of the Mount Isa project area. The deposit is associated with a zone of skarn alteration with copper and gold mineralisation defined through drilling over a considerable area. Significant gold intersections include:

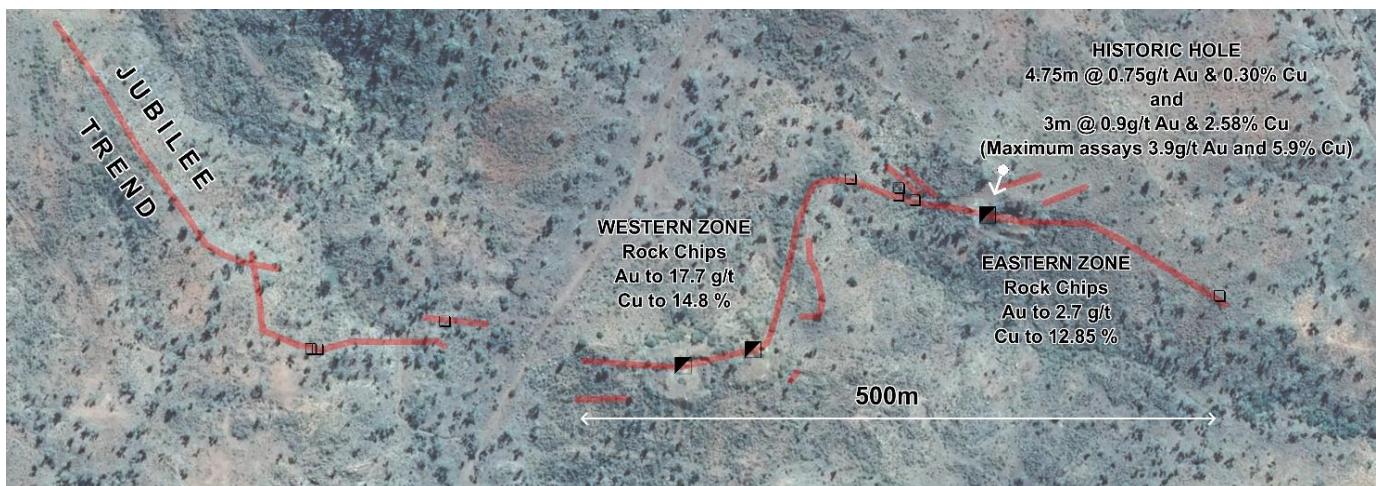
- 30m at 6.7g/t Au from 508m in MKED009; and
- 9m at 3.6g/t Au from 177m within 26m at 1.7g/t Au from 160m in MKED026.

Refer to CYU ASX releases dated 7 November 2013 and 13 June 2012 and HMX ASX release dated 15 December 2016.

## Lakeview

The Lakeview prospect is located 4.5km south of Jubilee along the mineralised Jubilee structural trend close to the intersection between the Pilgrim and Fountain Range Fault systems. The prospect consists of several pits and shafts over a 500m strike length. Rock chip sampling conducted by Hammer Metals encountered individual maximum grades of up to 17.7g/t Au and 14.8% Cu. (Refer to HMX ASX release dated 20 April 2018).

This prospect is at drill ready stage and will be considered along with potential targets on the Kings/Charlotte Trend and at potential targets identified in the Tick Hill region.



**Figure 7.** Plan view of the Lakeview Prospect

**Table 2.** Copper intercepts in the HMX Koppany drilling

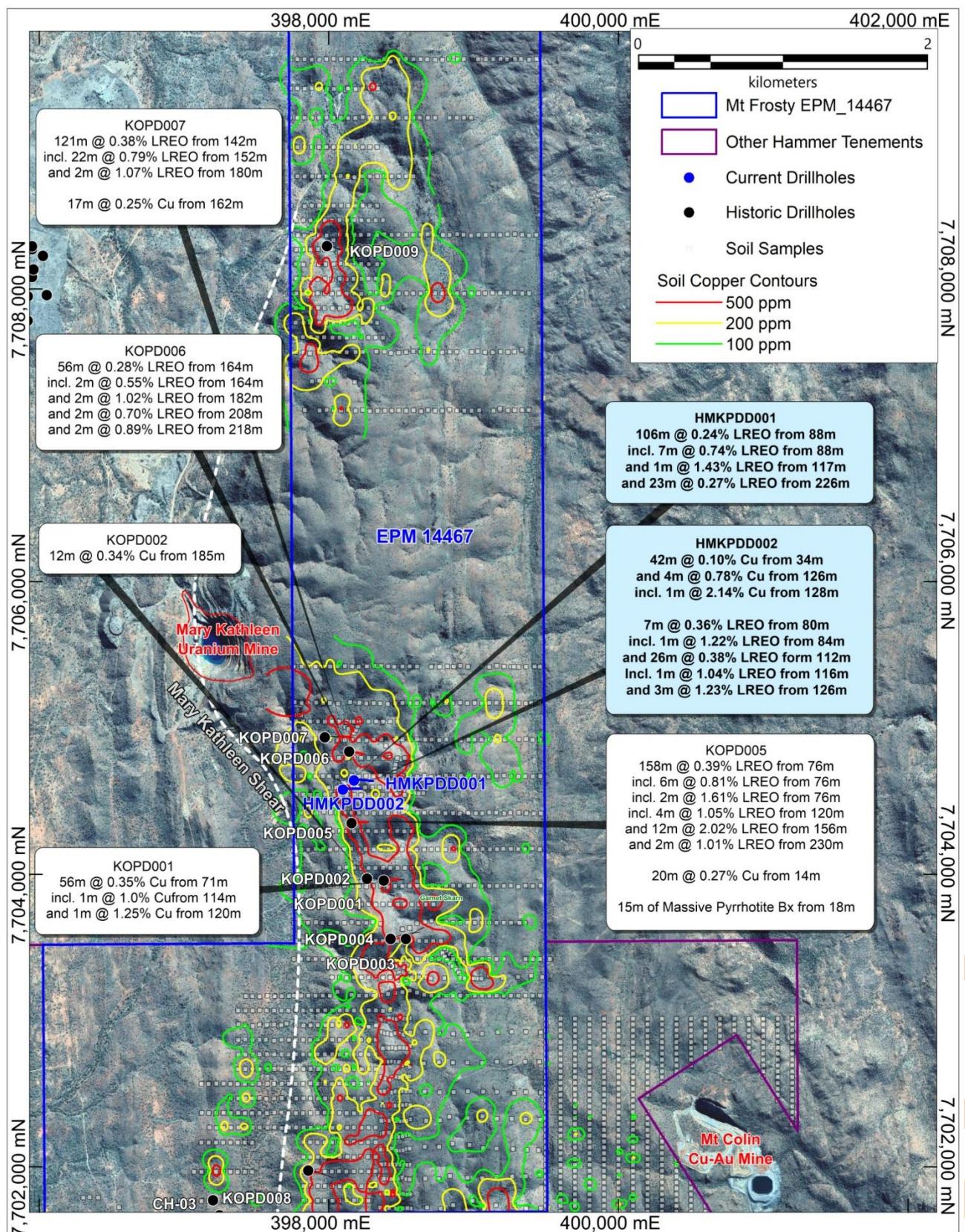
KOPPANY PROSPECT - INTERCEPTS AT 0.1% Cu Cut-off																				
Prospect	Hole	E_GDA94	N_GDA94	RL	TD	Dip	Az_GDA	From	To	Width	Cu (%)	Au (g/t)								
Koppany	HMKPDD001	398173	7704649	456.9	255.3	-60	95	9	10	1	0.10	0.02								
								23	24	1	0.10	0.01								
								59	60	1	0.20	0.03								
								181	182	1	0.15	0.01								
								190	191	1	0.15	0.01								
								251	252	1	0.12	0.01								
	HMKPDD002	398097	7704586	449.5	251.8	-60	90	34	76	42	0.10	0.02								
								incl.	34	35	1	0.74	0.08							
								&	58	59	1	0.60	0.13							
									126	130	4	0.78	0.06							
								incl.	128	129	1	2.14	0.15							
									152	153	1	0.10	0.02							
									158	159	1	0.15	0.05							
									178	179	1	0.16	0.05							
									184	185	1	0.33	0.01							
									230	231	1	0.10	0.01							
Note																				
Coordinates and azimuth relative to GDA 94 Zone 54																				

**Table 3.** Rare Earth element intercepts in the HMX Koppany drilling. Concentrations are expressed as weight percent oxide

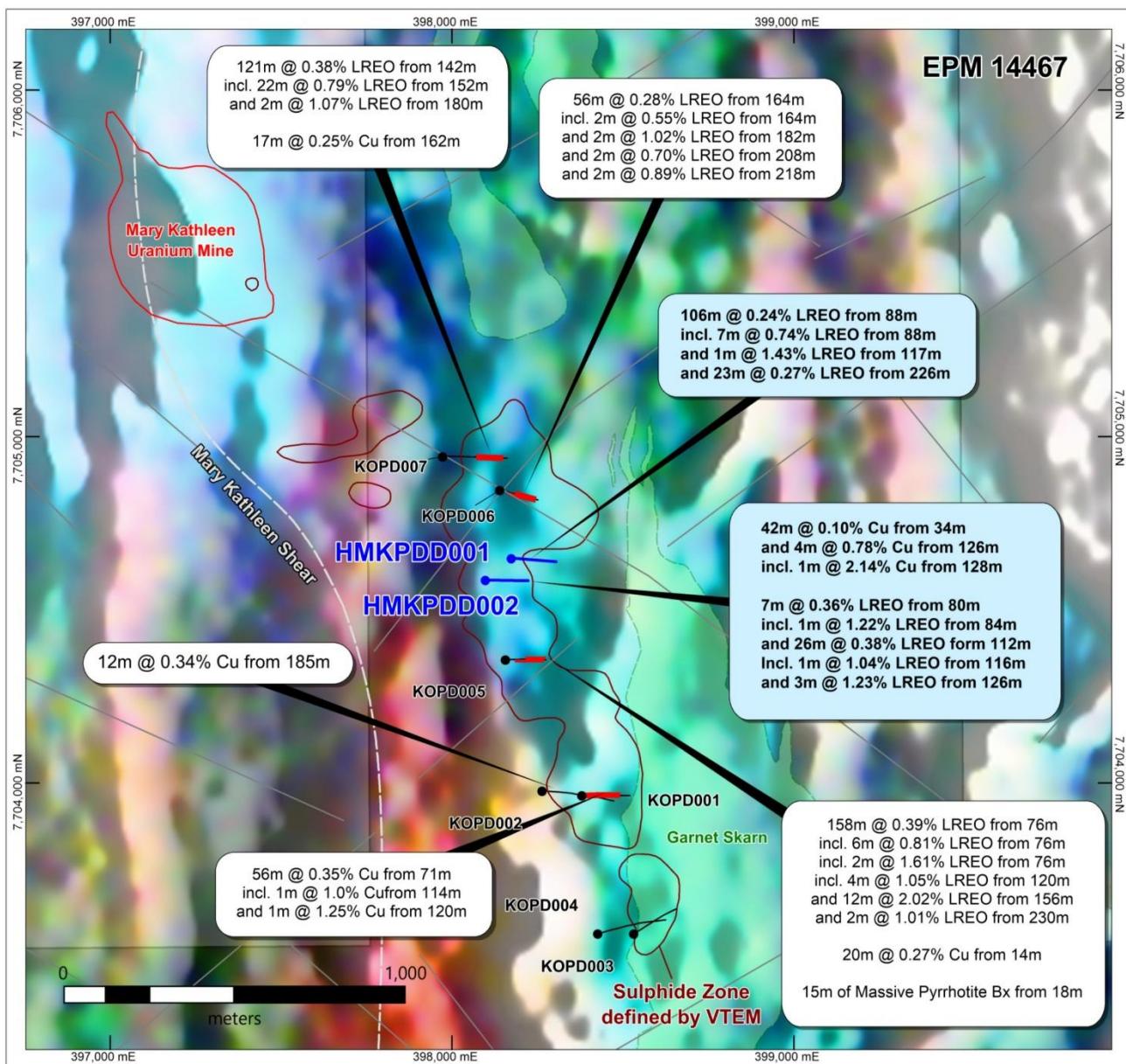
KOPPANY PROSPECT - INTERCEPTS AT (at 0.2, 0.5 and 1% TREYO)															
Prospect	Hole ID	E GDA94 (1)	N GDA94 (1)	RL	Dip	Az GDA	TD		From	To	Width	LREO %	HREO %	TREYO %	
Koppany	HMKPDD001	398173	7704649	456.9	255.3	-60	95		0	12	12	0.31	0.00	0.31	
								incl.	7	8	1	0.73	0.01	0.74	
									31	32	1	0.47	0.01	0.48	
									40	41	1	0.63	0.01	0.64	
									70	75	5	0.56	0.01	0.57	
								incl.	72	74	2	1.04	0.01	1.04	
									88	194	106	0.24	0.01	0.25	
								incl.	88	95	7	0.74	0.01	0.74	
								&	117	118	1	1.43	0.00	1.43	
									226	249	23	0.27	0.01	0.28	
								incl.	246	247	1	0.98	0.02	1.00	
									58	59	1	0.38	0.01	0.39	
									73	74	1	0.25	0.01	0.26	
									80	87	7	0.36	0.01	0.37	
								incl.	84	85	1	1.22	0.01	1.23	
									112	138	26	0.38	0.00	0.39	
Koppany	HMKPDD002	398097	7704586	449.5	251.8	-60	90		incl.	116	117	1	1.04	0.01	1.05
									126	129	3	1.23	0.00	1.23	
									152	154	2	0.25	0.01	0.26	
									192	193	1	0.24	0.01	0.24	
									237	238	1	0.22	0.01	0.22	
									<b>Note</b>						
									Coordinates and azimuth relative to GDA 94 Zone 54						

**Table 4.** Rock Chip sampling in the Kings-Charlotte region (Results previously released – Refer to Hammer ASX release dated 8 May 2019)

PROJECT	DATASET	SAMPLE	E_GDA94	N_GDA94	Au (g/t)	Cu (%)	Bi (g/t)	Co (ppm)
Malbon	Alice-Charlotte Trend	MJB137	428503	7674747	3.60	15.80	657	42
		MJB138	428503	7674747	2.56	9.54	26100	171
		MJB141	428530	7674750	12.95	10.90	3420	1445
		MJB144	428907	7675101	0.54	15.10	26.4	1110
		MJB145	428906	7675104	1.10	3.94	27.6	3400
		MJB146	428910	7675102	0.34	7.41	28.3	666
		MJB179	428101	7675542	2.45	6.15	547	1330
		MJB180	427952	7675450	9.60	7.99	35.2	724
		MJB181	428009	7675090	0.67	0.00	44	826
		MJB182	428022	7675044	9.49	6.10	19200	21
		ZL465	428801	7675893	3.12	4.94	13.45	297
		ZL468	428801	7675893	12.30	0.64	9.3	2220
		ZL469	428801	7675893	3.30	0.01	5.66	76
		ZL471	428789	7675916	0.97	0.03	4.75	73
		ZL472	428801	7675929	4.70	0.06	49.3	1670
		ZL473	428793	7675964	0.53	7.30	11.2	328
		ZL474	428793	7675964	4.86	0.84	31.2	1225
	Deadlock	ZL479	426961	7675671	5.48	2.06	5.69	892
		ZL480	426981	7675686	9.91	1.79	18.2	513



**Figure 8.** Location plan Koppany drilling showing significant intercepts encountered in HMX and previous drilling and Cu soil geochemistry. Refer to HMX ASX release dated 3 July 2019.



**Figure 9.** Location plan Koppany drilling showing significant intercepts encountered in HMX and previous drilling. Background image is ternary radiometrics. Refer to HMX ASX release dated 3 July 2019.

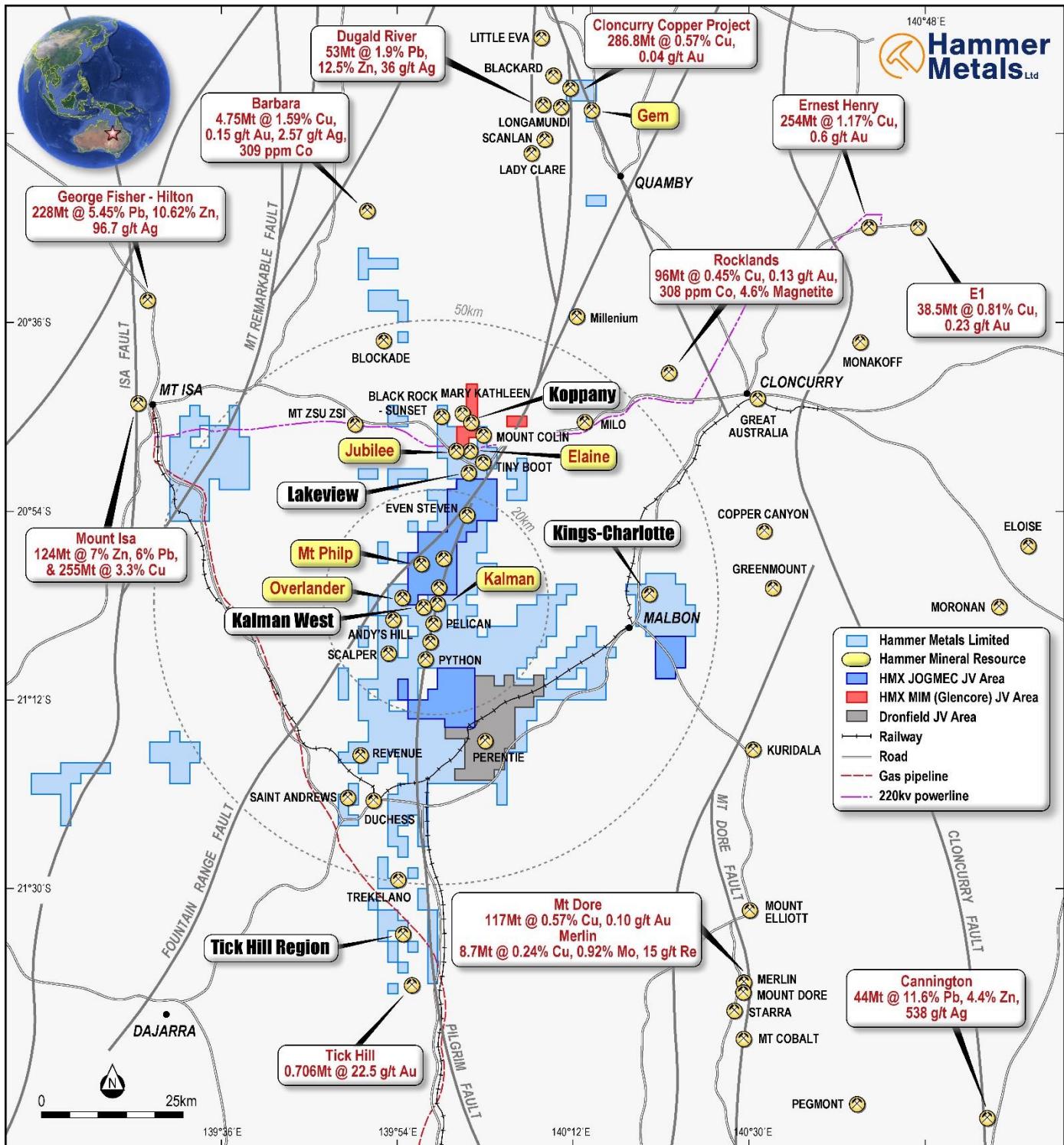


Figure 10. Mt Isa Project tenements

*This announcement has been authorised for issue by Mr Daniel Thomas, Managing Director, Hammer Metals Limited.*

For further information please contact:

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Managing Director

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E [info@hammermetals.com.au](mailto:info@hammermetals.com.au)

- END -

### About Hammer Metals

Hammer Metals Limited (ASX: HMX) holds a strategic tenement position covering approximately 2,200km<sup>2</sup> 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 (Cu-Au) deposit. Hammer also has a 51% interest in the emerging Jubilee (Cu-Au) deposit. Hammer is an active mineral explorer, focused on discovering large copper-gold deposits of Ernest Henry style and has a range of prospective targets at various stages of testing. Hammer has recently acquired a 100% interest in the Bronzewing South Gold Project located adjacent to the 2.3 million-ounce Bronzewing gold deposit in the highly endowed Yandal Belt of Western Australia.

### Competent Person Statements

The information in this report as it relates to exploration results and geology was compiled by Mr. Mark Whittle, who is a Fellow of the AusIMM and an employee of 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.

Where the Company refers to Mineral Resource Estimates previously disclosed It confirms that it is not aware of any new information or data that materially affects the information included in those announcements and all material assumptions and technical parameters underpinning the resource estimates with those announcements continue to apply and have not materially changed.

## Appendix 1 – Mineral Resource Statement

### KALMAN DEPOSIT JORC 2012 MINERAL RESOURCE ESTIMATE (27 September 2016)

Classification	Mining Method	CuEq Cut-off	Tonnes Kt	CuEq	Cu	Mo	Au	Ag	Re
				%	%	%	ppm	ppm	ppm
Indicated	Open Pit	0.75%	7,100	1.5	0.48	0.12	0.27	1.4	2.9
Inferred	Open Pit	0.75%	6,200	1.6	0.44	0.15	0.24	1.5	3.9
Inferred	Underground	1.4%	7,000	2.4	0.89	0.16	0.50	2.9	4.5
<b>Total</b>			<b>20,000</b>	<b>1.8</b>	<b>0.61</b>	<b>0.14</b>	<b>0.34</b>	<b>1.9</b>	<b>3.7</b>

- Note: (1) The copper equivalent equation is:  $CuEq = Cu + (0.864268 * Au) + (0.011063 * Ag) + (4.741128 * Mo) + (0.064516 * Re)$
- Note: (2) Copper Equivalent Price assumptions are: Cu: US\$4,650/t; Au: US\$1,250/oz; Ag: US\$16/oz; Mo: US\$10/lb; and Re: US\$3,000/kg.

The Kalman Molybdenum-Rhenium-Copper-Gold-Silver (Mo-Re-Cu-Au-Ag) deposit is situated 60 kilometres southeast of Mt Isa within the Mt Isa Inlier, and forms part of the company's Kalman Project.

Drilling extends to a maximum down hole depth of 998.3 metres and the mineralisation was modelled from surface to a depth of approximately 800 metres below surface. The estimate is based on good quality RC and diamond core drilling data. The drill hole spacing is approximately 100 metres along strike with some 50 metre-spaced infill drilling.

In September 2016, Haren Consulting was contracted by Hammer Metals Limited to complete an update of the Mineral Resource estimate for the deposit. The estimate was reported to comply with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' by the Joint Ore Reserves Committee (JORC).

The Kalman Mineral Resource has been reported at two cut-off grades to reflect both open pit and underground mining scenarios. The Kalman Mineral Resource estimate comprises a combined **20 million tonnes at 1.8% copper equivalent (CuEq)** at 0.61% copper, 0.34 g/t gold, 0.14% molybdenum and 3.7 g/t rhenium in the Indicated and Inferred categories at revised cut-off grades. (Refer to the ASX release dated 27 September 2016).

### JUBILEE DEPOSIT JORC 2012 MINERAL RESOURCE ESTIMATE (12 December 2018)

(Reported at 0.5% Cu cut-off)

Classification	Weathering	Tonnes	Cu	Au (Cut)	Cu	Au (Cut)
	Domain		%	g/t	Tonnes	Ounces
Inferred	Mod-Slightly Weathered	0.07	1.51	0.55	1,000	1,200
Inferred	Fresh	1.34	1.41	0.63	19,000	27,100
<b>Total</b>		<b>1.41</b>	<b>1.41</b>	<b>0.62</b>	<b>20,000</b>	<b>28,300</b>

- Note: (1) Numbers rounded to two significant figures to reflect appropriate levels of confidence
- Note: (2) Totals may differ due to rounding

The 51%-owned Jubilee Deposit is situated 50 kilometres west of Mount Isa in North West Queensland.

In November 2018, H&S Consultants Pty Ltd was commissioned to undertake a resource estimate on the Jubilee Cu-Au Deposit. The resource was issued on 12 December 2018.

The estimate is based on good quality RC and Diamond drilling data. The estimate was based on a 42 reverse circulation holes for 5475m and 3 diamond holes for 261m. Of these holes 26 were drilled by Hammer Metals Ltd and the remaining 19 drilled by the previous operator. Drilling extends to a maximum depth of 325m below surface. The drill hole spacing is approximately 50m along strike.

There has been no material change to the Jubilee Resource estimate since its initial release to the ASX dated 20 December 2018.

Refer to the ASX release dated 20 December 2018. The company is not aware of any new information or data that materially affects the information in the HMX ASX announcement. All material assumptions and technical parameters underpinning the mineral resource estimate continue to apply and have not materially changed.

## Table 1 report – Koppany Results Update

This table is to accompany an ASX release updating the market with results of drilling conducted on the Koppany Prospect. At Koppany, 2 holes were drilled for 507.1m

Other substantive information is mentioned in this release and this data is accompanied by references to ASX releases in all instances.

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<p><i>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).</i></p> <p><i>These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>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.</i></p>	<p>2 diamond holes are reported for a total meterage of 507.1m.</p> <p>Samples were taken at 1m intervals and were predominantly composed of half cut core with the exception of duplicates which were composed of quarter cut core. The average sample weight across the 2 holes was 2.65kg.</p> <p>All samples submitted for assay underwent fine crush with 1kg riffled off for pulverising to 75 microns.</p> <p>Samples were submitted to SGS in Townsville for:</p> <ul style="list-style-type: none"> <li>Fire Assay with AAS finish for gold.</li> <li>Multielement analysis via ICP MS and OES</li> </ul> <p>Reanalyses will be conducted as required to investigate gold and multielement assay repeatability.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Drilling techniques</b>	<p><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (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).</i></p>	<p>Holes were drilled by Drill North Pty Ltd utilising an in house designed small-footprint diamond drill rig.</p> <p>Holes were drilling using HQ diameter until competent rock was reached then transitioning to NQ diameter for the remainder of the hole.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>

Criteria	JORC Code explanation	Commentary
<b>Drill sample recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>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.</i></p>	<p>With the exception of the first 3 metres sample recoveries were in excess of 95%.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Logging</b>	<p><i>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.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<p>All core was geologically logged by Hammer Metals Limited Geologists.</p> <p>Core was photographed for each hole.</p> <p>Each drillhole was qualitatively logged in its entirety for geology.</p> <p>Selected intervals from each drillhole were quantitatively logged on-site using an Olympus Vanta portable XRF instrument. The aim of these limited analysis was for rock type identification.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Sub-sampling techniques and sample preparation</b>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><i>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</i></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<p>Samples consist of half cut drill core with the exception of duplicate assay intervals which were composed of quarter cut core.</p> <p>Samples were composed of 1m intervals.</p> <p>Sample collection methodology and sample size is considered appropriate to the target-style and drill method, and appropriate laboratory analytical methods were employed.</p> <p>Standard reference samples and blanks were each inserted into the laboratory submissions at a rate of 2 per 50 samples.</p> <p>The average sample weight submitted to the lab was 2.65kg. This sample sizes submitted for analysis were appropriate for the style of mineralisation sought.</p> <p>The method of sample collection, use of compositing where appropriate and lab methods are appropriate for this style of mineralisation.</p>

Criteria	JORC Code explanation	Commentary
		For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.
<b>Quality of assay data and laboratory tests</b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>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.</i></p> <p><i>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.</i></p>	<p>All samples were analysed for gold by flame AAS using a 30gm charge and for multi elements by ICP MS and OES</p> <p>Standard reference samples and blanks were inserted at 50 sample intervals. SGS also maintained a comprehensive QAQC regime, including check samples, duplicates, standard reference samples, blanks and calibration standards.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Verification of sampling and assaying</b>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p>All assays have been verified by alternate company personnel.</p> <p>Assay files were received electronically from the laboratory.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Location of data points</b>	<p><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></p> <p><i>Specification of the grid system used.</i></p> <p><i>Quality and adequacy of topographic control.</i></p>	<p>Datum used is UTM GDA 94 Zone 54.</p> <p>RL information was generated by the most accurate DEM data held by the company.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Data spacing and distribution</b>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><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></p> <p><i>Whether sample compositing has been applied.</i></p>	<p>The drill density is not sufficient to establish grade continuity.</p> <p>Assays were taken on 1m sample lengths.</p> <p>The average grade has been utilised where multiple repeat analyses have been conducted on a single sample.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>

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<b>Orientation of data in relation to geological structure</b>	<p><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></p> <p><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></p>	<p>Drill holes were oriented as close to perpendicular as possible to the orientation of the targets based on interpretation of previous exploration.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Sample security</b>	The measures taken to ensure sample security.	Numbered bags were used, and samples were transported to SGS in Townsville by a commercial carrier.
<b>Audits or reviews</b>	The results of any audits or reviews of sampling techniques and data.	<p>The dataset associated with this reported exploration has been subject to data import validation.</p> <p>All assay data has been reviewed by two company personnel.</p> <p>No external audits have been conducted.</p>

## 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>	<p><i>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.</i></p> <p><i>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.</i></p>	<p>The Mt Isa Project is composed of multiple granted tenements. See the last HMX quarterly report for a tenement listing.</p> <p>Koppany is located within EPM14467. This tenement is part of the Mt Frosty JV which is 51% Hammer Metals Limited and 49% Mount Isa Mines Limited (a Glencore company). EPM14467 is a granted tenement.</p>
<b>Exploration done by other parties</b>	Acknowledgment and appraisal of exploration by other parties.	At Koppany, Mount Isa mines has previously conducted soil sampling, geological mapping, Heli-borne VTEM and diamond drilling. The reader is referred to a HMX ASX release dated 3/7/2019.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	The Koppany prospect is located immediately to the east and southeast of the Mary Kathleen Uranium Deposit. Koppany is hosted within calc silicate rocks of the Corella Formation. These rocks have been subject to skarn alteration which has associated rare earth element enrichment. To the west of the rare earth zone there are a series of VTEM anomalies over a 5km strike length. These anomalies have been

Criteria	JORC Code explanation	Commentary
		partly tested by Mount Isa Mines and found to contain copper bearing pyrrhotite rich zones. This style of base metal mineralisation is ISCG in type and similar to deposits such as Eloise and Osborne.
<b>Drill hole Information</b>	<p>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.</p> <p>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.</p>	<p>See the attached tables.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Data aggregation methods</b>	<p>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.</p> <p>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.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	<p>Primary assays were reported in ppm. Intercepts were then calculated, and the calculation method is described below.</p> <p>With Copper:</p> <p>Intercepts are quoted at a 0.1% Cu cut-off with included intercepts highlighting zones of increased Cu grades.</p> <p>With REE:</p> <p>REE elements were converted to weight percent oxide with the following elements grouped after conversion to their relative oxides:</p> <p>LREE – Ce, Eu, Gd, La, Nd, Pr &amp; Sm HREE – Dy, Er, Ho, Lu, Sc, Tb, Tm, Y and Yb</p> <p>Intercepts for LREO, HREO and TREOY were calculated at 0.2% and 0.5% weight percent TREOY ("Total Rare Earth Oxides plus Yttrium").</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Relationship between mineralisation widths and</b>	These relationships are particularly important in the reporting of Exploration Results.	The relationship between intersected and true widths for HMX drilling is currently not known with a high degree of certainty however an estimate of 90m

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<b>intercept lengths</b>	<p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>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').</i></p>	was made solely based on information from one hole and surface information.
<b>Diagrams</b>	<p>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.</p>	See attached figures
<b>Balanced reporting</b>	<p>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.</p>	<p>Intercepts are quoted at a 0.1% Cu cut-off with included intercepts highlighting zones of increased Cu grades.</p> <p>Rare earth element intercepts are quoted at 0.2% and 0.5% weight percent TREOY ("Total Rare Earth Oxides plus Yttrium").</p> <p>The reader can therefore assume that any portions of a drillhole that are not quoted in the intercept tables contain grades less than the quoted cut-off.</p> <p>For information pertaining to historical drill intersections at Koppany the reader is referred to a HMX ASX release dated 3/7/2019.</p>
<b>Other substantive exploration data</b>	<p>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.</p>	<p><b>HISTORIC DRILLING</b></p> <p>The reader is referred to HMX ASX releases dated 12 May 2020 and 3 July 2019 for further information on the areas discussed in this release.</p>
<b>Further work</b>	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	Downhole EM has been conducted on HKPDD002 and processing of this data is underway.