EXCEPTIONAL HITS BOLSTER IMPENDING RESOURCE UPDATE AT KALMAN

Assays include 24m at 5.1% CuEq from 194m in K-153*†

- **Extensional drilling at Kalman has intersected broad zones of copper/gold/molybdenum/rhenium mineralisation,** extending the deposit to the north of the existing JORC resource. Significant intercepts include**:**
  - **89m* at 0.40% Cu and 0.18g/t Au, 0.14% Mo and 2.9g/t Re (1.74% CuEq†)** from 143m in K-153;
    - including **24m* at 0.44% Cu and 0.29g/t Au, 0.5% Mo, and 10.2g/t Re (5.1% CuEq†) from 194m**
  - 107m* at 0.42% Cu, 0.12g/t Au, 0.06% Mo, and 1.8g/t Re (0.97% CuEq†) from 98m in K-146;
    - **including 23m* at 0.73% Cu, 0.21g/t Au, 0.23% Mo, and 7.5g/t Re (2.88% CuEq†)** from 178m**;**
      - including **9m*** at 0.89% Cu, 0.19g/t Au, 0.55% Mo, and 17.8g/t Re **(5.97% CuEq†)** from 182m**;**
- The latest results will form part of the Kalman Resource update now underway, which will also take into account recent positive results from ore sorting testwork (see ASX announcement 1 November 2022) and stronger global molybdenum and copper prices.
- **Molybdenum prices have more than doubled since the start of 2023, trading recently in excess of US$95,000/t.**
- The most recent Mineral Resource Estimate for the Kalman deposit, reported to the ASX on 27 September 2016, was 20Mt at 1.8% CuEq based on commodity price assumptions of US$4,650t for copper, US$1,250/oz for gold, US$16/oz for silver, US$22,040/t for molybdenum and US$3000/kg for rhenium.
- Updated Mineral Resource Estimate for Kalman on-track to be completed in Q1/Q2 of calendar 2023.
- **Drilling is scheduled to resume at the Hardway Cu-REE prospect and the Mount Hope region in late February.**

Hammer Managing Director Daniel Thomas said: *"These outstanding results underscore Kalman's status as one of the Mount Isa Inlier's largest undeveloped deposits. The new intersections extend mineralisation at the shallow northern end of the deposit, with an anticipated positive impact on the upcoming Resource update, adding to the benefits of the ore sorting test work. The updated Resource model will also use refreshed long term commodity prices, which have increased significantly since 2016.*

"The upcoming drilling program will see Hammer test several highly prospective systems that we drilled at the end of 2022. This is aimed at growing our mineral inventory and positioning Hammer as a future copper developer in the Mount Isa region."

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* *True thicknesses are interpreted to be approximately 45-65% of the intersected thicknesses. These percentages vary between holes and true thicknesses are detailed in Table 2.*

† *"Recovered Copper Equivalent" – includes metallurgical recovery factors for each metal. A detailed explanation of the assumptions and price underpinning the copper equivalent calculations are present in JORC Table 1 at the end of this document.*

ASX RELEASE
13 February 2023

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 (10/02/2023)	$0.079
Shares on Issue	821m
Market Cap	$65m
Options Unlisted	23.6m
Performance Rights	8m
Cash (31/12/2022)	$2.6m

***Figure 1**: Kalman structure looking south*

Hammer Metals Ltd (**ASX:HMX**) ("**Hammer**" or the "**Company**") is pleased to release results from shallow reverse circulation drilling conducted on the northern margin of the Kalman deposit.

Kalman Cu-Au-Mo-Re Deposit

The 100%-owned Kalman deposit, located 50km southeast of Mt Isa, is one of the few polymetallic deposits in Queensland to contain significant molybdenum and rhenium in addition to copper and gold. With open pit and underground mining potential, the deposit remains open at depth and along strike.

The most recent Mineral Resource estimate completed for the Kalman deposit, reported to the ASX on 27 September 2016, was 20Mt at 1.8% CuEq#.

***Table 1.** Kalman JORC Resource Estimate (refer to ASX announcement dated 27 September 2016)*

Classification	Mining Method	CuEq Cut-Off	Mt	Cu Eq %	Cu %	Mo %	Au g/t	Ag g/t	Re g/t
Indicated	*Open Pit*	*0.75%*	7.1	1.5	0.48	0.12	0.27	1.4	2.9
Inferred	*Open Pit*	*0.75%*	6.2	1.6	0.44	0.15	0.24	1.5	3.9
Inferred	*Underground*	*1.40%*	7.0	2.4	0.89	0.16	0.5	2.9	4.5
	Total		**20.0**	**1.8**	**0.61**	**0.14**	**0.34**	**1.9**	**3.7**

#Numbers rounded to two significant figures. Totals may differ due to rounding.
*Note that the CuEq calculation reported in 2016 is based on 2014 commodity prices - CuEq = Cu + (0.864268 * Au) + (0.011063 * Ag) + (4.741128 * Mo) + (0.064516 * Re)*

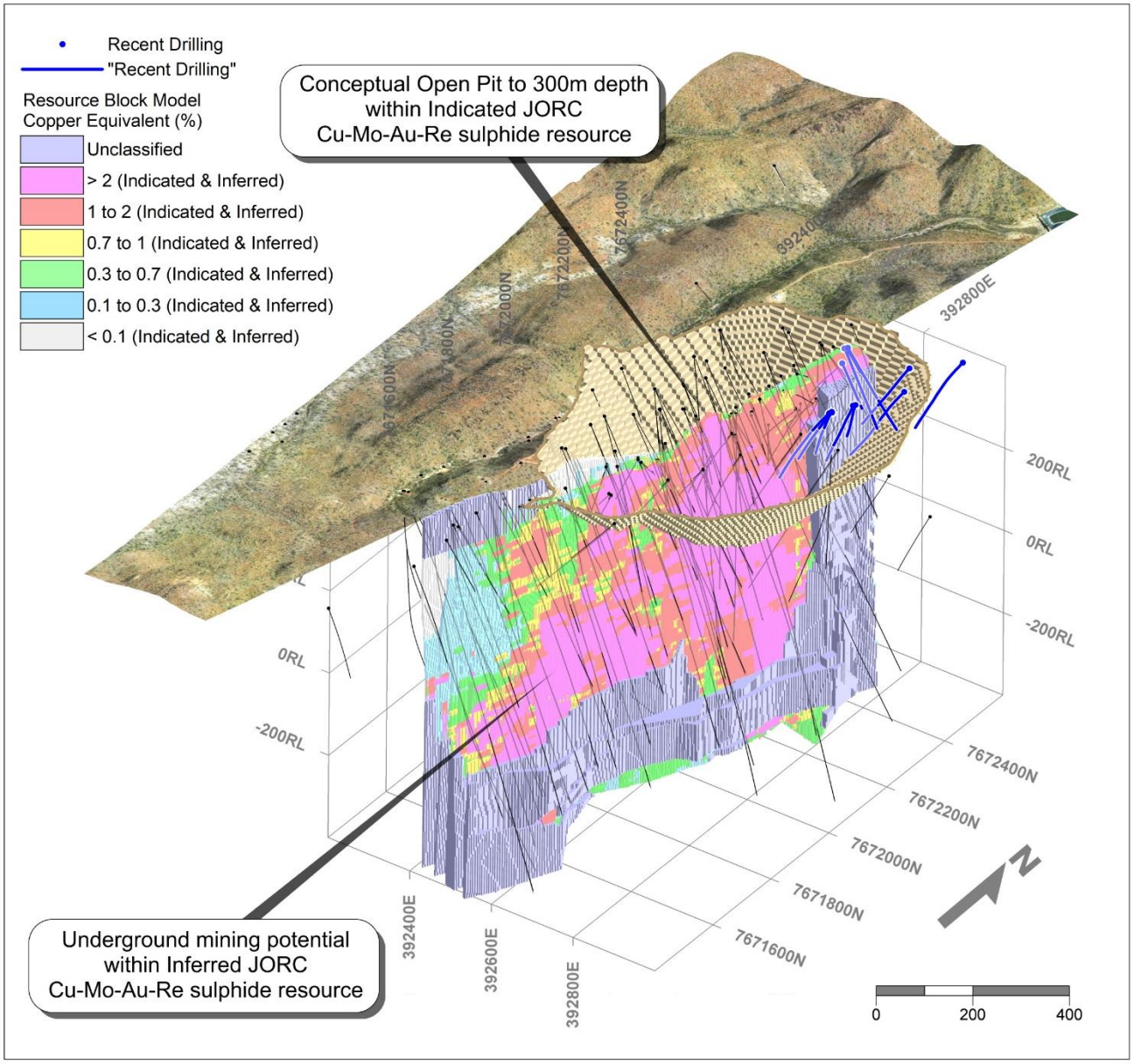

Figure 2. *Kalman oblique view looking northwest copper equivalent % blocks (Refer ASX announcement 27 September 2016). The figure shows uncategorised portions of the MRE (in grey) which, at the northern end of Kalman, were the focus of the recent shallow drilling program.*

Kalman Drilling

Drilling undertaken in early 2022 identified the potential for further shallow Resources at the northern end of the Kalman deposit (refer to ASX announcement dated 15 February 2022). Given the improving metal prices, testing this portion of the Resource at a shallow depth was seen as a priority. Twelve holes for 2,218m were drilled in late 2022, with assay results reported in this announcement.

These holes specifically tested a zone of mineralisation referred to as the Eastern Target Zone. This zone, previously intersected in K-145, had the potential to extend the Kalman Resource to the north and east (refer to ASX announcement dated 15 February 2022). Significant intercepts from K145 included:

- 22m* at 0.82% Cu, 0.03% Mo, 0.37g/t Au, 0.8g/t Ag and 0.63% Re (1.16% CuEq[†]) from 99m in K-145;
    - Including 8m* at 1.41% Cu, 0.08% Mo, 0.75g/t Au, 1.5g/t Ag and 1.7g/t Re (2.29% CuEq[†]) from 99m; and

- 6m* at 0.4g/t Au, 1.3g/t Ag, 1.13% Cu, 0.13% Mo and 2.71g/t Re (2.39% CuEq†) from 161m in K-145.

The December 2022 program focused on this area of the deposit, with significant intersections including:

- **89m* at 0.40% Cu, 0.18g/t Au, 0.14% Mo and 2.9g/t Re (1.74% CuEq†)** from 143m in K-153;
  - **including 24m* at 0.44% Cu, 0.29g/t Au, 0.5% Mo and 10.2g/t Re (5.07% CuEq†)** from 194m
- **107m* at 0.42% Cu, 0.12g/t Au, 0.06% Mo and 1.8g/t Re (0.97% CuEq†)** from 98m in K-146;
  - **including 23m* at 0.73% Cu, 0.21g/t Au, 0.23% Mo and 7.5g/t Re (2.88% CuEq†)** from 178m;
    - including 9m* at 0.89% Cu, 0.19g/t Au, 0.55% Mo and 17.8g/t Re (5.97% CuEq†) from 182m;
- **66m* at 0.40% Cu, 0.17g/t Au and 0.03% Mo (0.69% CuEq†) from 133m in K-147;**
  - **including 14m* at 0.68% Cu, 0.33g/t Au, 0.05% Mo (1.67% CuEq†)** from 150m.

Holes K-151 and K-156 failed to intercept this zone, with mineralisation apparently displaced. An upcoming DHEM program aims to define this dislocation with a view to further extending the deposit to the north.

Mineralisation intercepted in the Eastern Target Zone and at the northern end of the deposit will now be modelled, with an updated Mineral Resource Estimate to be completed in Q1/Q2 of calendar 2023.

Next Steps at Kalman

The recent drilling has highlighted the exploration potential and upside near Kalman. In addition to the DHEM survey, a number of surface Fixed Loop EM ("FLEM") surveys will be completed within the target zone along the Pilgrim Fault. Additional 'unclassified' mineral zones within the deposit will also be considered for future drilling to further add to the resources with the Kalman deposit (Figure 2). Several untested geochemical anomalies are also being investigated with additional infill geochemical sampling planned for after the wet season.

After the success of the trial ore sorting test work (refer to ASX announcement 1 November 2022), a second more comprehensive program of testing is currently underway in Perth. Further metallurgical studies across the mineral system are being considered with the aim of increasing metal recoveries. Pending the success of the Resource and metallurgical investigations, Hammer will assess the potential to complete a Scoping Study and financial evaluation of the Kalman deposit.

Results from these programs will be reported as they become available.

Mount Isa – Ongoing Exploration Activities

FLEM surveys are planned to commence this week at the Hardway, Mascotte and Pommern drill targets prior to the commencement of drilling. Within Hammer's 100%-owned tenement areas, preparation is underway for further drilling at Hardway, Hope South, Mascotte, Tourist Zone and new prospects, Bulonga and Pommern.

Geophysical modelling at the Bullrush prospect will enable targeting of possible IOCG style mineralisation beneath Cambrian Georgina Basin sediments.

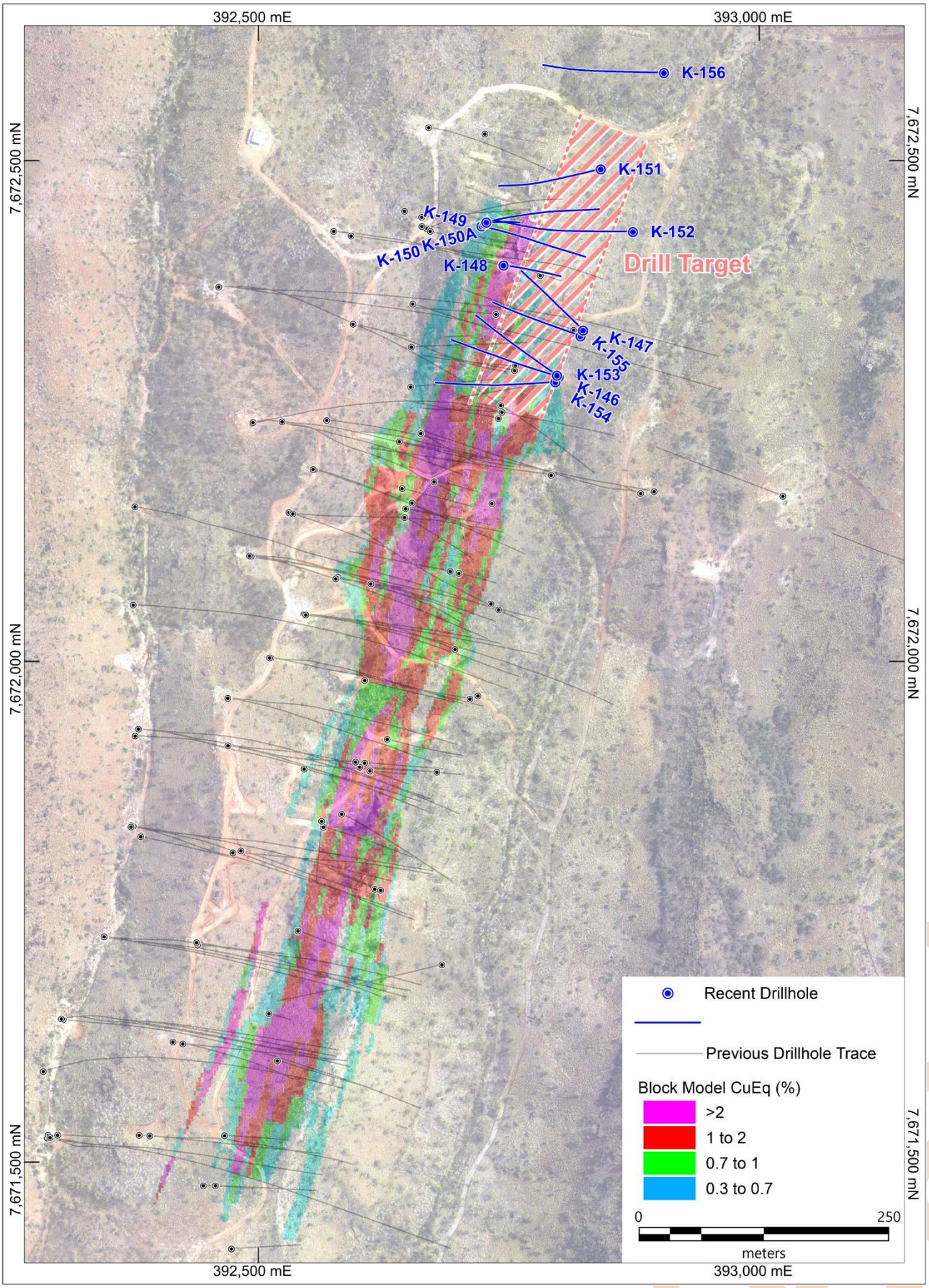

Figure 3. *Plan view of the Kalman Deposit showing the current Resource model, location of K-146 through K-156 and the eastern target zone.*

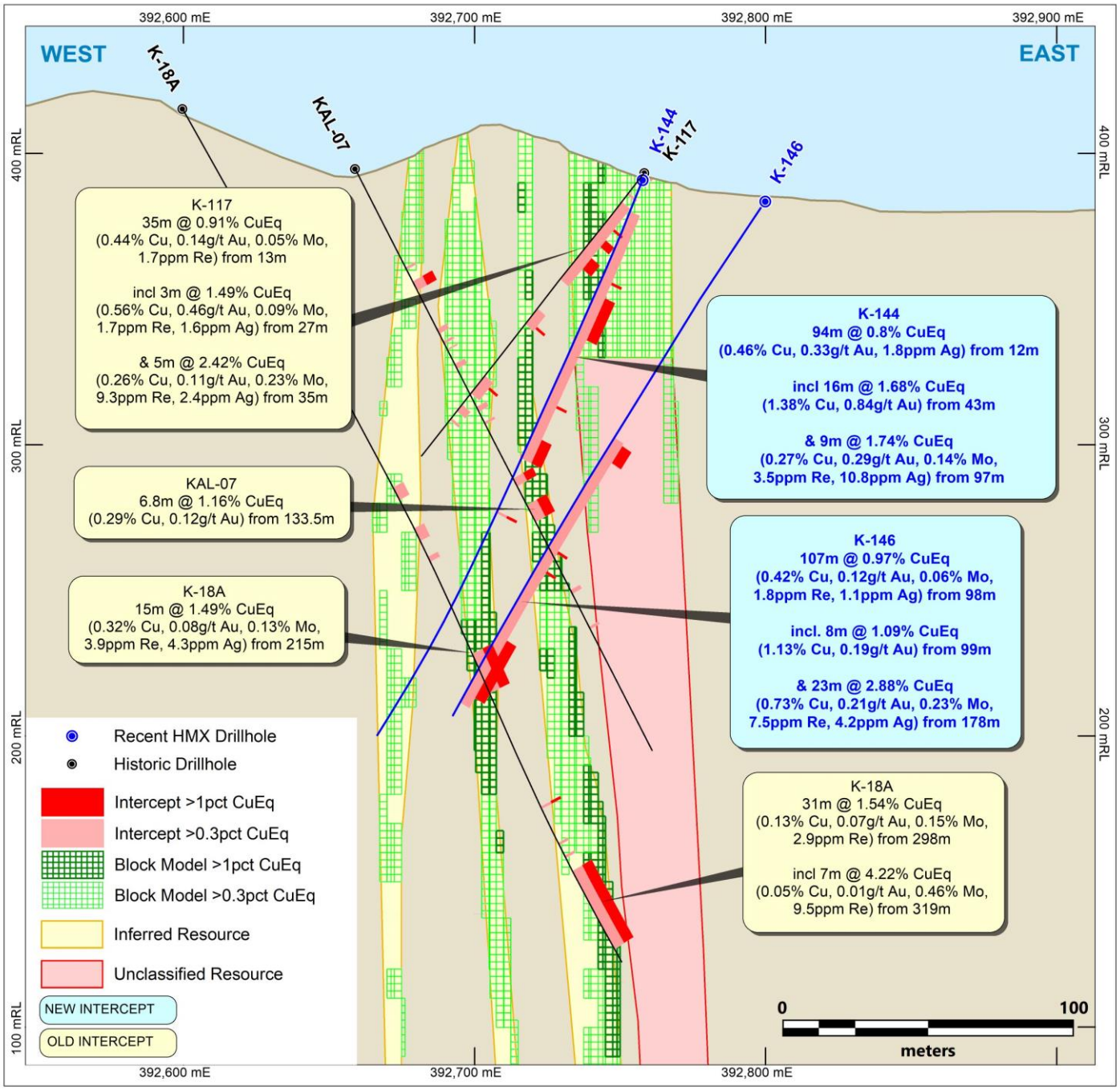

Figure 4. *Section through K-144 and K-146 showing the potential for a down-dip target volume outside of the current JORC Resource Model.*[‡]

[‡] The data underlying historic and current intercepts have been validated by Hammer Metals Limited personnel and it is the opinion of Hammer Metals that the historic exploration data are reliable. (refer also ASX announcement 27 September 2016)

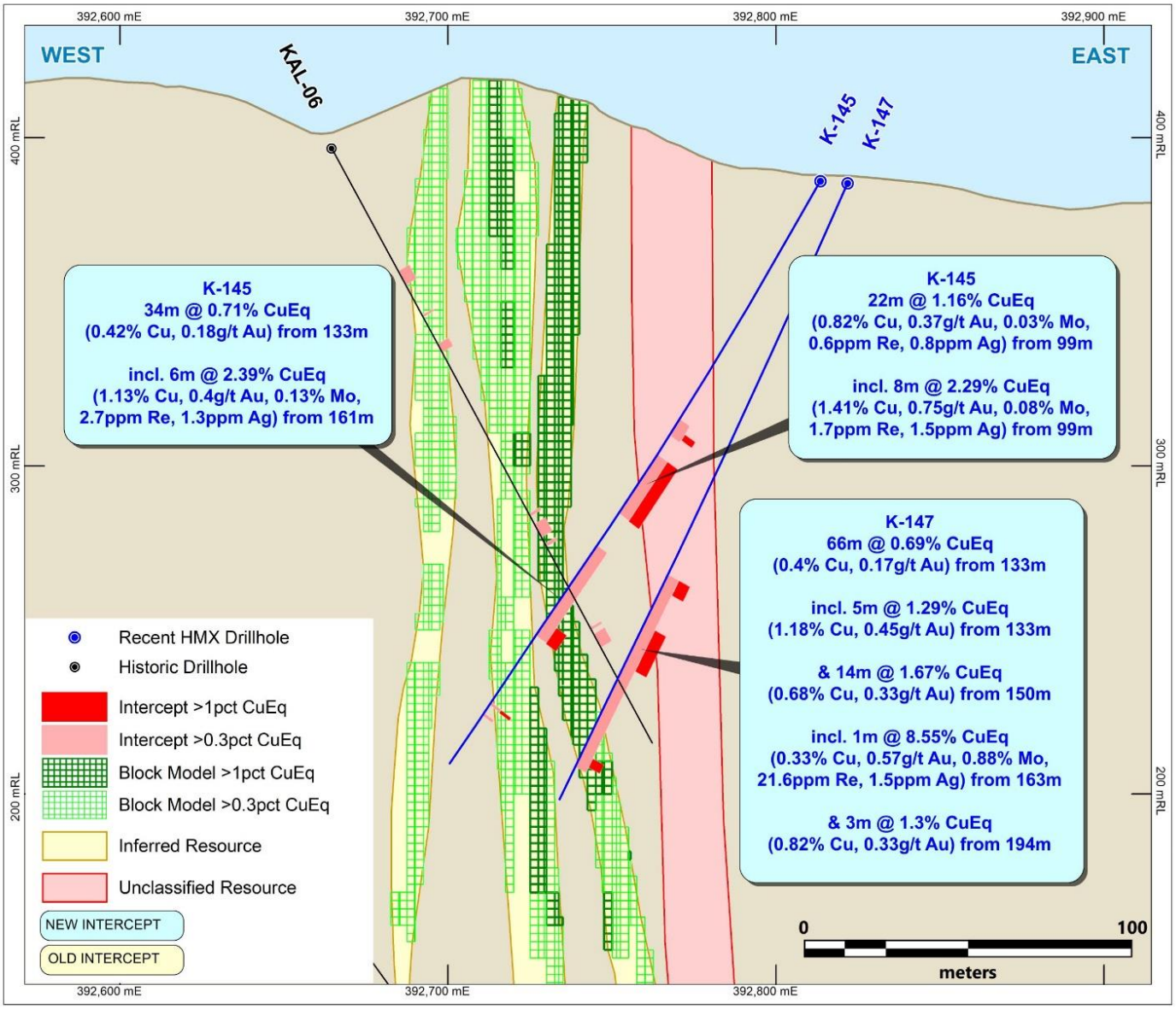

Figure 5. *Section through K-147 with high grade intercept outside of the current JORC Resource Model.* [§]

[§] The data underlying historical and current intercepts have been validated by Hammer Metals Limited personnel and it is the opinion of Hammer Metals that the historical exploration data are reliable. (refer also ASX announcement 27 September 2016)

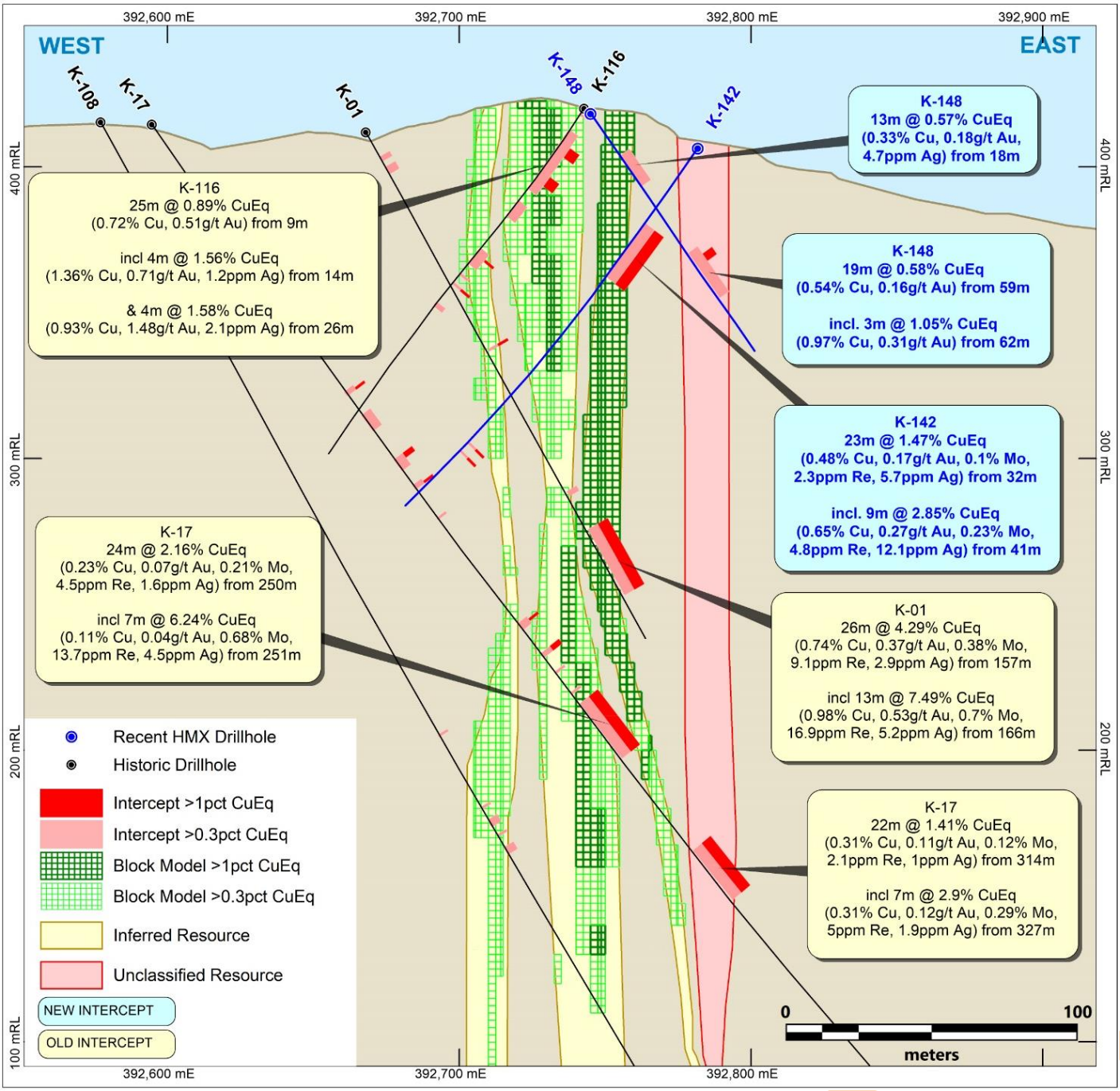

Figure 6. *Section through K-148 with high grade intercept outside of the current JORC Resource Model.* **

** The data underlying historical and current intercepts have been validated by Hammer Metals Limited personnel and it is the opinion of Hammer Metals that the historical exploration data are reliable. (refer also ASX announcement 27 September 2016)

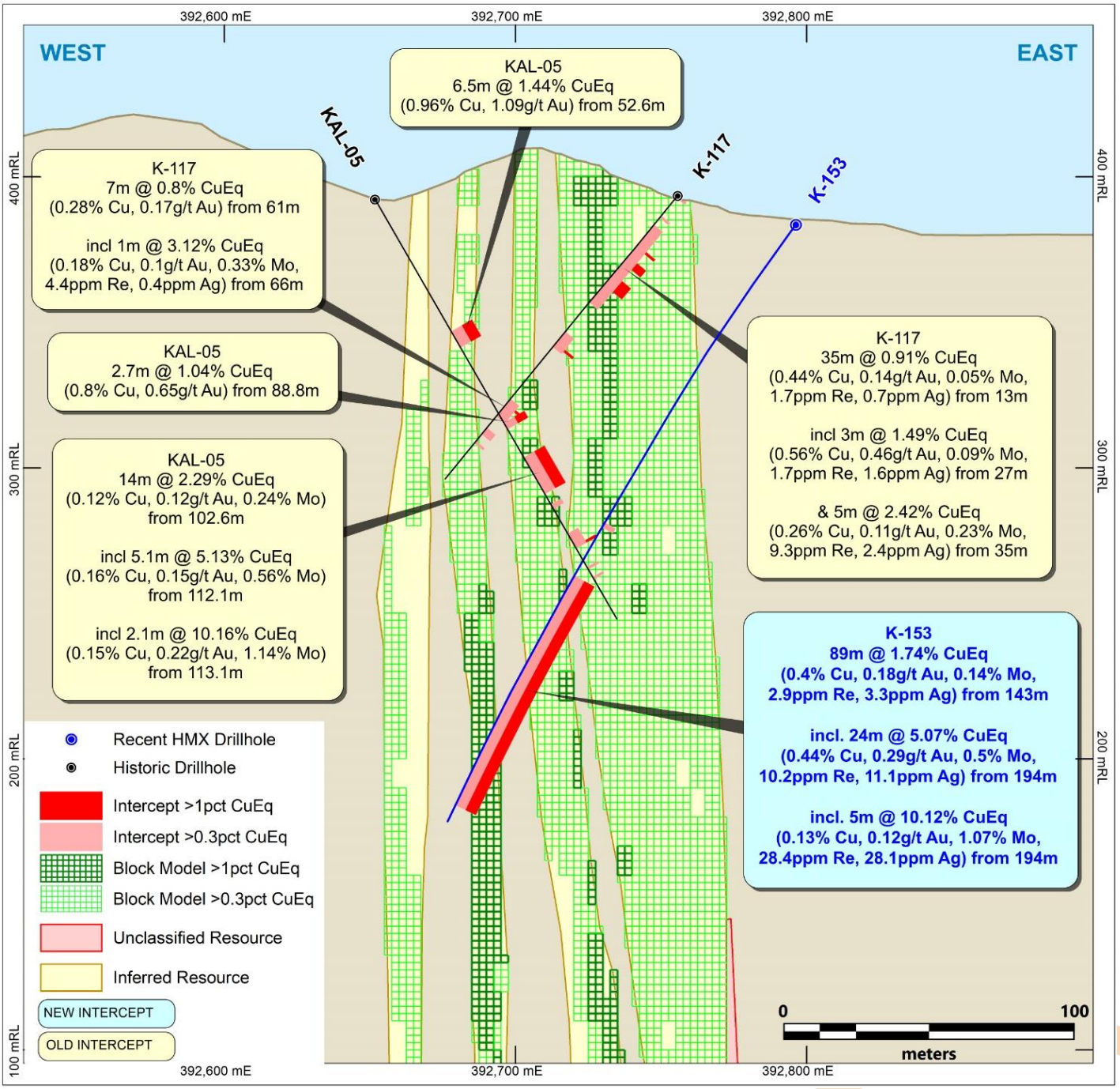

Figure 7. *Section through K-153.* [††]

[††] The data underlying historical and current intercepts have been validated by Hammer Metals Limited personnel and it is the opinion of Hammer Metals that the historical exploration data are reliable. (refer also ASX announcement 27 September 2016)

Table 2: *Kalman Deposit – Significant Intercepts from December 2022 Drilling. All intersections quoted are based on laboratory assays and are calculated at a 0.3% CuEq cut-off. The copper equivalence calculation is based on pricing factors and metallurgical recoveries noted at the base of the table.*

Hole	E_GDA94^	N_GDA94^	RL^	Dip	Az_GDA	TD		From	To	Interval	True Width	Au_ppm	Ag_ppm	Cu %	Mo %	Re_ppm	CuEq %*
K-146	392799.8	7672284.3	383.9	-55	286.5	210		98	205	107	58.3	0.12	1.1	0.42	**0.06**	1.8	0.97
							incl.	*99*	*106*	*7*	3.8	*0.19*	*0.7*	***1.13***	*0.00*	*0.1*	*1.09*
							&	*142*	*143*	*1*	0.5	*0.21*	*0.0*	*0.54*	***0.11***	*1.3*	*1.58*
							&	*150*	*151*	*1*	0.5	*0.32*	*1.7*	*0.93*	*0.05*	*0.3*	*1.45*
							&	*178*	*201*	*23*	12.5	*0.21*	***4.2***	*0.73*	***0.23***	*7.5*	*2.88*
							incl.	*182*	*191*	*9*	4.9	*0.19*	***8.7***	*0.89*	***0.55***	*17.8*	*5.97*
							incl.	*184*	*186*	*2*	1.1	*0.2*	***17.8***	*0.48*	***1.30***	*34.1*	*12.44*
K-147	392821.77	7672325.1	386.2	-65	289.6	210		133	199	66	30.0	0.17	0.2	0.40	0.03	0.6	0.69
							incl.	*133*	*138*	*5*	2.3	*0.45*	*0.7*	***1.18***	*0.01*	*0.0*	*1.29*
							&	*150*	*164*	*14*	6.4	*0.33*	*0.0*	*0.68*	***0.05***	*0.8*	*1.67*
							incl.	*163*	*164*	*1*	0.5	***0.57***	*1.5*	*0.33*	***0.88***	*21.6*	*8.55*
							&	*194*	*197*	*3*	1.4	*0.33*	*0.5*	*0.82*	***0.05***	*0.6*	*1.30*
K-148	392744.88	7672395.9	418.5	-55	99.69	100		18	31	13	7.6	0.18	**4.7**	0.33	0.02	0.0	0.57
								59	78	19	11.2	0.16	0.2	**0.54**	0.00	0.1	0.58
							incl.	*62*	*65*	*3*	1.8	*0.31*	*0.0*	***0.97***	*0.01*	*0.2*	*1.05*
K-149	392722.73	7672434.8	423.9	-55	105	174		0	13	13	8.0	0.18	0.1	0.26	0.01	0.0	0.36
								63	101	38	23.4	0.19	1.1	0.39	**0.05**	1.5	0.88
							incl.	*65*	*77*	*12*	7.4	*0.43*	***2.1***	*0.78*	***0.06***	*3.8*	*1.51*
							&	*83*	*90*	*7*	4.3	*0.11*	*1.7*	*0.41*	***0.15***	*1.3*	*1.74*
K-150	392726.36	7672437.6	424	-55	85	58		4	10	6	3.3	**0.50**	0.2	0.49	0.00	0.0	0.68
							incl.	*6*	*8*	*2*	1.1	***1.23***	*0.5*	*0.68*	*0.00*	*0.0*	*1.21*
								17	18	1	0.5	0.40	0.0	0.33	0.00	0.0	0.49
K-150A	392727.65	7672438.8	424	-58	78	196		9	24	15	7.0	0.44	0.1	0.35	0.00	0.0	0.53
							incl.	*20*	*22*	*2*	0.9	***2.20***	*0.8*	*0.82*	*0.00*	*0.0*	*1.83*
								67	68	1	0.5	0.03	0.5	0.38	0.00	0.7	0.37
								81	95	14	6.6	0.32	**2.5**	0.60	0.04	1.2	1.08
							incl.	*84*	*94*	*10*	4.7	*0.39*	***3.4***	*0.63*	***0.06***	*0.1*	*1.30*
K-151	392841.85	7672491.9	392	-57	256	196	*No significant intercepts*										
K-152	392874	7672429.4	383	-55	270	256		207	208	1	0.6	0.03	0.7	0.39	0.00	0.0	0.37
								229	230	1	0.6	0.10	0.5	0.38	0.00	0.7	0.41
K-153	392796.55	7672279.3	384	-55	265	238		122	124	2	0.9	0.12	0.3	0.40	0.00	0.0	0.43
								143	232	89	41.8	0.18	**3.3**	0.40	**0.14**	2.9	1.74
							incl.	***194***	***218***	***24***	11.3	***0.29***	***11.1***	***0.44***	***0.50***	***10.2***	***5.07***
							incl.	*194*	*199*	*5*	2.3	*0.12*	***28.1***	*0.13*	***1.07***	*28.4*	***10.12***
K-154	392797.99	7672285.9	384	-55	305	196		75	76	1	0.5	0.12	0.5	0.41	0.00	0.0	0.45
								85	88	3	1.5	0.06	0.4	0.35	0.00	0.0	0.34
								113	175	62	31.0	0.15	0.2	0.38	0.00	0.1	0.45
							incl.	*113*	*124*	*11*	5.5	*0.33*	*0.7*	***0.98***	*0.00*	*0.2*	*1.05*
							&	*151*	*157*	*6*	3.0	*0.40*	*0.5*	*0.88*	*0.01*	*0.1*	*1.09*
								193	196	3	1.5	0.02	2.4	0.08	**0.12**	3.1	1.22
K-155	392824.2	7672331	386	-55	314	160		159	160	1	0.5	0.07	0.00	0.17	0.02	0.82	0.38
K-156	392904.92	7672588.1	378	-55	270	224	*No significant intercepts*										

Note	
^	Coordinates relative to GDA94 Zone54. Location via DGPS.
*	CuEq Price Assumptions are: Cu: US$8,864/t; Au: US$1,891/oz; Ag: US$22.42/oz; Mo: US$40.83/lb; and Re: US$1,600/kg
*	The Copper Equivalent calculation is: CuEq = (Cu*0.86) + (0.68589*Au*0.74) + (0.00813*Ag*0.74) + (10.15343*Mo*0.86) + (0.01805*Re*0.77)
*	Assumed metallurgical recoveries are factored into CuEq calculation. Recoveries of 74% for Au and Ag, 86% for Cu and Mo and 77% for Re

Expected Newsflow

- **February: Kalman West, Lord Nelson and Ajax drilling results**
- **February 2023: Follow up drilling programs to commence: Hardway, South Hope, Mascotte, Mascotte Junction and Stubby.**
- **Q1/Q2 2023: Yandal Lithium air core drilling program**
- **Q1/Q2 2023: Kalman Resource Upgrade**

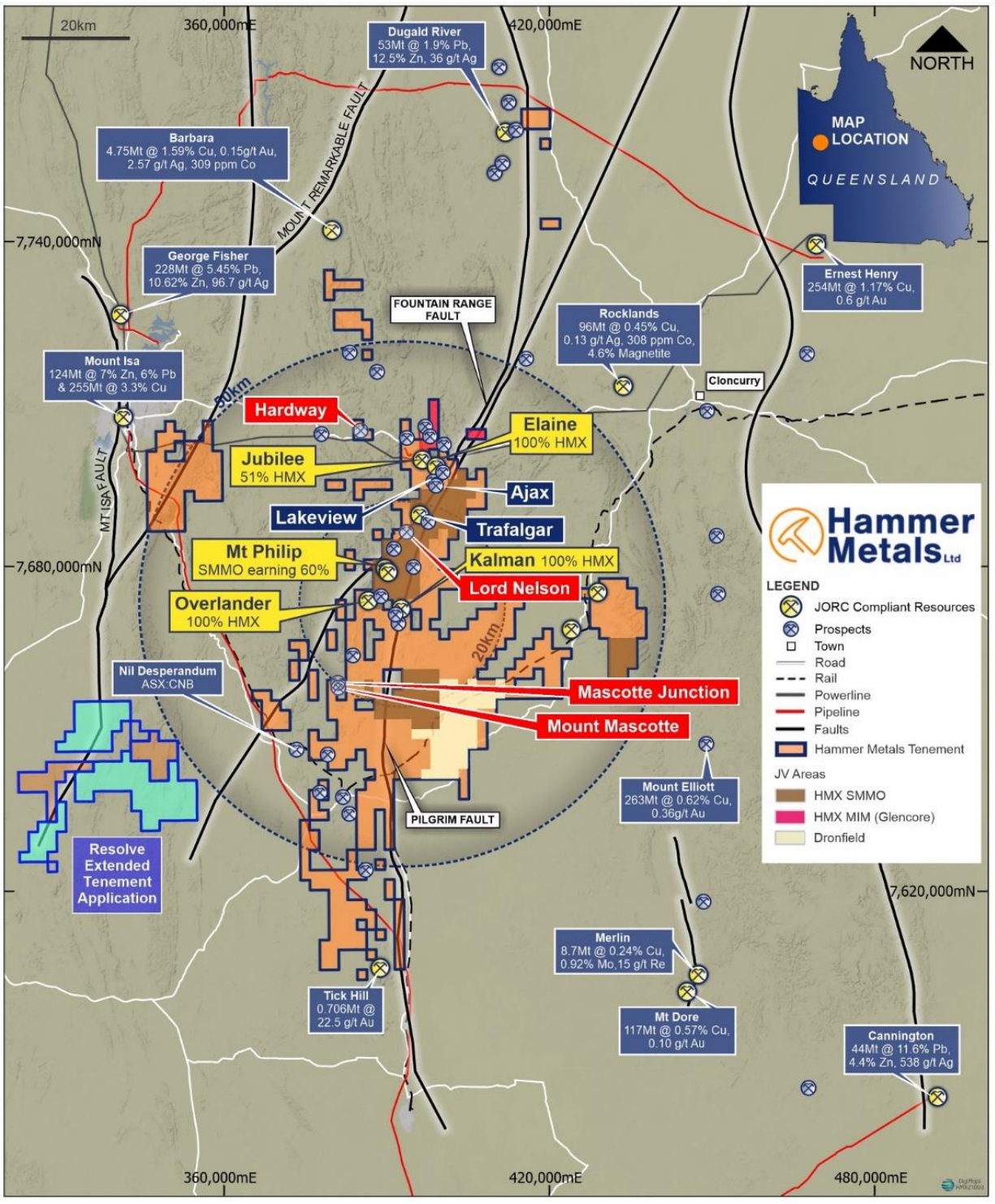

Figure 8. *Mt Isa Project Area*

This announcement has been authorised for issue by the Board of Hammer Metals Limited in accordance with ASX Listing Rule 15.5.

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About Hammer Metals

Hammer Metals Limited (ASX: HMX) holds a strategic tenement position covering approximately 2,600km^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 (Cu-Au) deposit. Hammer also has a 51% interest in the 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 holds 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 styles of mineralisation and types of deposit under consideration and to the activities 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.

The information in this report that relates to historic exploration results was prepared and first disclosed under a pre-2012 edition of the JORC code. The data has been compiled and validated. It is the opinion of Hammer Metals that the exploration data is reliable. Nothing has come to the attention of Hammer Metals that causes it to question the accuracy or reliability of the historic exploration results. In the case of the pre-2012 JORC Code exploration results, they have not been updated to comply with 2012 JORC Code on the basis that the information has not materially changed since it was last reported.

Where the Company references Mineral Resource Estimates previously announced, 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.

Notes on Recovered Copper Equivalent Calculation

Copper equivalent (CuEq) grades were calculated from downhole assays for Cu, Au, Ag, Mo and Re. The CuEq calculation is based on commodity process and metallurgical recovery assumptions as detailed in this release. Prices utilised by Hammer reflect the current metal prices as of early February 2023.

CuEq Price Assumptions are: Cu: US$8,864/t; Au: US$1891/oz; Ag: US$22.42/oz; Mo: US$40.83/lb; and Re: US$1,600/kg

The recovered CuEq equation is: CuEq = (Cu*0.86) + (0.68589*Au*0.74) + (0.00813*Ag*0.74) + (10.15343*Mo*0.86) + (0.01805*Re*0.77)

The use of Copper Equivalents is consistent with the JORC resource published by Hammer for the Kalman deposit. Copper is the dominant metal of the Kalman mineral system and it generated the highest proportion of revenue from the deposit at the time of the resource estimation.

Assumed Metallurgical Recoveries

Based on the testing completed and the current understanding of the material characteristics it has been assumed that the Kalman material can be processed using a “typical” concentrator process flowsheet. The mass balance and stage metallurgical recovery of the four major elements were based on the metallurgical test results from the molybdenum zone sample and benchmarks. The final overall recovery (table below) was established from the mass balance and benchmarked against other operations and projects.

It is the company’s opinion that the metals used in the metal equivalent equation have reasonable potential for recovery and sale based on based on metallurgical recoveries in floatation test work undertaken to date. There are a number of well-established processing routes for copper-molybdenum deposits and the sale of the resulting copper and molybdenum concentrates.

Molybdenum concentrates with rhenium require roasting to capture the rhenium from the process off-gas. There are several offshore facilities that process molybdenum concentrates.

Because of the relatively small market for Re there is limited public information available for the payments of credits for rhenium. Enquiries by the company provides the company with sufficient confidence to believe that a credit for the rhenium content of the molybdenum concentrate can be obtained.

Table 2: *Assumed Metallurgical Recoveries*

Process Stage	Molybdenum Recovery (%)	Rhenium Recovery (%)	Copper Recovery (%)	Gold Recovery (%)	Silver Recovery (%) *
Bulk Rougher	95	86	95	82	82
Overall	86	77	86	74	74
* - No Data available for Silver recoveries so they have been assumed similar to Gold recoveries					

JORC Table 1 report – Mount Isa Project Exploration Update

- This table is to accompany an ASX release updating the market with drilling results from the drilling conducted on the Kalman Deposit in late 2022.
- The drilling reported herein was conducted on EPM26775.
- All ancillary information presented in figures herein has previously been reported to the ASX.
- Historic exploration data noted in this, and previous releases has been compiled and validated. It is the opinion of Hammer Metals that the exploration data are reliable.

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.*	Drill chip samples were taken at dominantly 1m intervals. When multiple metre intervals were sampled, a riffle split of each metre interval was conducted with the split portions then being combined to produce a composite sample. Where mineralisation was anticipated or encountered, the sample length was reduced to 1m with lab submission of the 1m samples. The average sample length and weight for the assays reported herein is 2.08m and 2.98kg respectively. All samples submitted for assay underwent fine crush with 1kg riffled off for pulverising to 75 microns. Samples were submitted to ALS for: • Fire Assay with AAS finish for gold. • 4 acid digest followed by ICP-MS and ICP-OES for a variable element suite. Portable XRF analysis was conducted in the field on each 1m interval. Re-analyses will be conducted as required to investigate element repeatability.
Drilling techniques	*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).*	Holes were drilled by remote drilling using a Hydco 70 drilling rig using the reverse circulation drilling method. The holes were drilled by the reverse circulation method. The reverse circulation technique which uses a face sampling hammer to reduce contamination.

Criteria	JORC Code explanation	Commentary
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.*	Sample recoveries were generally in excess of 80%. Recoveries are typically low in the first 5m of each hole. In holes where recovery or significant sampling bias was observed, the hole was terminated. No sample recovery bias has been noted.
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 drilling was geologically logged by Hammer Metals Limited Geologists. Quantitative portable XRF analyses were conducted on metre intervals on site. All metres drilled were analysed by the lab methods listed above.
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 duplicate/second-half sampling.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	Samples consist of RC drill chips. Samples from the hole were collected by a three-way splitter with A and B duplicates taken for every sample. Samples were taken at dominantly one metre intervals however where 2 or 4 metre composites were created, samples were composited by riffle splitting material from each one metre sample bag. Where evidence of mineralisation was encountered or anticipated, the sample length was reduced to 1m. Sample collection methodology and sample size is considered appropriate to the target-style and drill method, and appropriate laboratory analytical methods were employed. Standard reference samples and blanks were each inserted into the laboratory submissions at a rate of 1 per 25 samples.
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*	Each metre drilled was subject to site portable XRF analysis. All samples were analysed for gold by flame AAS using a 50gm charge.

Criteria	JORC Code explanation	Commentary
	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.*	Each sample was also analysed by 4-acid multielement ICP OES and MS. 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.*	All assays have been verified by alternate company personnel. Assay files were received electronically from the laboratory.
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.*	Datum used is GDA 94 Zone 54. Location was determined by DGPS 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 Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	The drill density is sufficient to establish broad trends of mineralisation and the holes are located on the margins of an established JORC resource. See ASX release dated 27 September, 2016. The average grade has been utilised where multiple repeat analyses have been conducted on a single sample.
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.*	Drill holes were oriented as close to perpendicular as possible to the orientation of the targets based on interpretation of previous exploration.
Sample security	*The measures taken to ensure sample security.*	Pre-numbered bags were used, and samples were transported to ALS by company personnel. Samples were packed within sealed polywoven sacks.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	The dataset associated with this reported exploration has been subject to data import validation.

Criteria	JORC Code explanation	Commentary
		All assay data has been reviewed by two company personnel. No external audits have been conducted.

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.*	The Mt Isa Project consists of 28 tenements. The drilling reported herein was conducted on EPM26775. These tenements are held by Mt Dockerell Mining Pty Ltd, a 100% owned subsidiary of Hammer Metals Limited.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Exploration at Kalman has been conducted since 2005 by Kings Minerals NL (now Santana Minerals Ltd) Syndicated Metals Ltd (now Discoverex Resources Ltd) and Hammer Metals Ltd. Prior to this period work was also undertaken by Texins (1970's), PIMEX (1980's) and MIM (early 1990's).
Geology	*Deposit type, geological setting and style of mineralisation.*	Kalman Deposit The Kalman Deposit is a polymetallic Deposit hosted within with the Kalman Fault on the western side of the Pilgrim Fault Zone. The Deposit is hosted by strongly altered calc silicates of the Corella Formation. Mineralisation consists of separate Cu-Au and Mo-Re zones which occupy the same spatial position but were emplaced separately.
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*	See the attached tables.

Criteria	JORC Code explanation	Commentary
	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.*	Intercepts are quoted at a 0.3% recovered CuEq cut-off with included intercepts highlighting zones of increased grade of Cu, Au, Mo and Re. See the notes on the copper equivalent calculation and assumed metallurgical recoveries in the body of this report. CuEq Price Assumptions are: Cu: US$8,864/t; Au: US$1,891/oz; Ag: US$22.42/oz; Mo: US$40.83/lb; and Re: US$1,600/kg The Copper Equivalent calculation is: CuEq = (Cu*0.86) + (0.68589*Au*0.74) + (0.00813*Ag*0.74) + (10.15343*Mo*0.86) + (0.01805*Re*0.77)
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').*	True thicknesses are quoted in the intercept table presented in this report. The estimation of true thickness is specific to individual drillholes therefore the ratio between intersected and true thickness will change between holes. In general, true thicknesses vary between 45-65% of the intersected thicknesses.
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 avoiding misleading reporting of Exploration Results.*	Intercepts are quoted at a 0.3% Cu equivalent grade. See the notes on the copper equivalent calculation and assumed metallurgical recoveries in the body of this report. CuEq Price Assumptions are: Cu: US$8,864/t; Au: US$1,891/oz; Ag: US$22.42/oz; Mo: US$40.83/lb; and Re: US$1,600/kg The Copper Equivalent calculation is: CuEq = (Cu*0.86) + (0.68589*Au*0.74) + (0.00813*Ag*0.74) + (10.15343*Mo*0.86) + (0.01805*Re*0.77) Portions of a drillhole that are not quoted in the intercept table contain grades less that the quoted cut-off.

Criteria	JORC Code explanation	Commentary
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	All relevant information is disclosed in the attached release and/or is set out in this JORC Table 1.
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.*	Hammer Metals Limited has incorporated these results into an upcoming resource re-estimation.