

# **ASX RELEASE**

26 August 2024

# DIRECTORS / MANAGEMENT

Russell Davis
Chairman

**Daniel Thomas**Managing Director

James Croser
Non-Executive Director

David Church
Non–Executive Director

Mark Pitts
Company Secretary

Mark Whittle Chief Operating Officer

# **CAPITAL STRUCTURE**

# **ASX Code: HMX**

 Share Price (23/08/2024)
 \$0.04

 Shares on Issue
 886m

 Market Cap
 \$35.4m

 Options Unlisted
 20.5m

 Performance Rights
 12m

 Cash (30/06/2024)
 \$5.2m

# NEW COPPER-GOLD DRILL TARGETS IDENTIFIED IN NORTH QUEENSLAND

# **Tourist Zone (100% HMX)**

- Extensive, high-priority copper-gold soil anomaly identified at the Tourist **Zone**, with peak soil results of 0.49g/t Au and 0.74% Cu.
- Soil surveys extended to the south of the known mineralisation and previous drilling, with soils reporting higher grades of anomalism than the previously drilled anomaly, which now stretches for up to 3km with width of up to 150m.
- Field mapping and geological reconnaissance has defined a prospective trend for an upcoming Reverse Circulation drilling program. Rock chip sample results of up to 3.96g/t Au and 14.3% Cu returned.

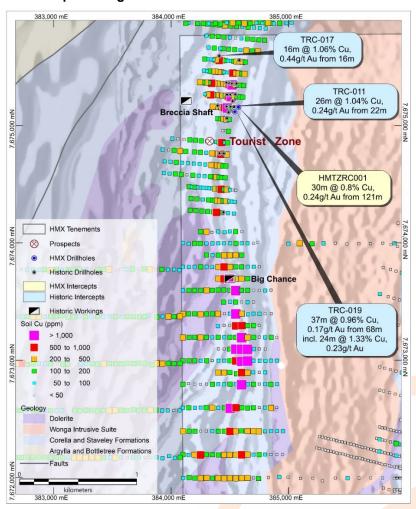


Figure 1. Tourist Zone – New copper-in soil anomaly (see ASX Announcement 30 November 2023).

# Kalman (100% Hammer)

- Geological reconnaissance of gold mineralisation intersected previously at the Kalman North EM target has identified a prospective target with a surface rock chip sample of 7.0g/t Au.
- Soil sampling program extended to the east and the south of the Kalman deposit
  with anomalous copper, gold and molybdenum zones identified at Kalman
  East, Kalman South and Kalman South-East.

# Overlander (100% HMX)

- New targets along the Overlander trend identified and earmarked for drilling in the upcoming program.
- Anomalous Rare Earth Element system detected over the Overlander granite. Results of up to 0.22% TREYO in soils and 0.27% TREYO in rock chips observed.

# Mascotte and Surrounds (100% HMX)

- First-pass soil sampling completed with follow-up in-fill soil sampling now underway based on preliminary PXRF results.
- VTEM survey planned for September to cover parts of the Mascotte and Revenue trends.

# Hardway (100% Hammer)

- Diamond drilling at Hardway has identified low-grade copper and rare earth element mineralisation at depth. Drilling part-funded by a Collaboration Exploration Incentive (CEI) grant from the Queensland Department of Resources.
- Ongoing spectral research study underway on the Hardway drill core to determine vectors to additional mineralisation.

# Dipvale (100% Hammer)

- Hammer has submitted an application (EPM29066) for additional tenure along the Pilgrim Fault system, in close proximity to the Dugald River lead-zinc deposit.
- The ground position complements Hammer's existing tenure and IOCG targets at Moonlight and GEM. The area was previously held by Rio Tinto Exploration.

# Hammer Managing Director, Daniel Thomas, said:

"An extensive soil sampling program at Tourist Zone and Kalman continues to generate high-quality drill targets. The identification of a more significant gold and copper trend to the south of previous drilling is highly encouraging given that the historical drilling at the northern target generated copper intercepts of up to 37m at 1% Cu (TRC-019).

"These trends are highly anomalous and are supported by our geological reconnaissance which has identified mineralisation on surface. These prospects have never been drilled before and offer potential for further discoveries on our 100%-owned Mount Isa tenure."

"Hammer has been systematically identifying untested trends and anomalies within our extensive tenement position for further investigation by soil sampling and geological reconnaissance. The exciting results emerging from Hammer's initial work at Kalman and Tourist Zone are very pleasing and highlight the untapped potential of this project for further discoveries."



Figure 2. Tourist Zone - Workings located at Big Chance (top) and Breccia Shaft (base).

Hammer Metals Ltd (ASX: HMX) ("Hammer" or "the Company") is pleased to advise that it has identified several new high-quality copper-gold targets within its 100%-owned tenure that forms part of its Mount Isa Project in north-west Queensland.

Soil sampling continues across multiple targets within 100%-owned Hammer areas. Field crews have been busy concentrating on soil sampling and geological mapping at the Tourist Zone, Overlander North, Kalman East and South, as well as Mascotte North.

This work is generating significant new targets to test as part of the Company's next Mount Isa drilling program.

Forward preparations for an upcoming drilling program are underway with activities including refining drilling locations, environmental authorisations, heritage clearances and preparatory earthworks. Drilling is expected to commence in late September 2024.

On other fronts, the Hardway diamond drilling program has been completed. This program was partly funded by a grant from the Queensland Department of Resources Collaborative Exploration Initiative (CEI). Activities to be completed under the grant include a spectral analysis of the drill core and zones of copper and rare earth mineralisation intercepted in Hammer's previous RC drilling programs.

Analysis of the system generally, and the drill core specifically, is being conducted with a view to determining next steps at the prospect.

Hammer Metals has also taken out an application in the Dugald River Region. EPM29066, known as "Dipvale", encompasses ground along the Pilgrim and Mount Roseby Fault Zones and is located south-east of Harmony Gold's Eva Copper development project.

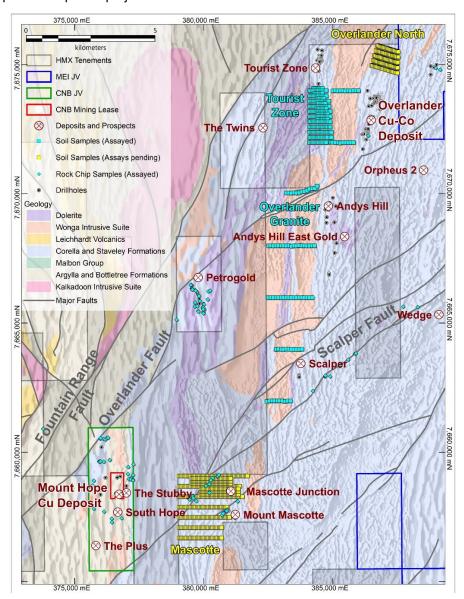


Figure 3. Location of soil sampling areas at the Tourist Zone, Overlander Granite, Overlander North and Mascotte Areas.

# **Tourist Zone**

The Tourist Zone was initially drilled by Hammer Metals in late 2023 with significant intercepts including (see ASX announcement 30 November 2023):

- 30m at 0.8% Cu and 0.24g/t Au from 121m in HMTZRC001 including 15m at 1.13% Cu and 0.24g/t Au; and
- 12m at 1.14% Cu and 0.18g/t Au from 107m in HMTZRC002 including 2m at 3.02% Cu and 0.53g/t Au.

Extensional soil sampling was conducted at 50m sample spacing on 200m line spacing and 100m line-spaced in-fill. This sampling extended the existing anomalous trend by a further 1.6km to 3.2km in total. Gold and copper responses are similar to historic soil sampling conducted in the northern portion of the trend.

Geological mapping indicates that the area comprises a package of mafic and sandy calc silicate units abutting a north-south shear zone on the eastern margin of the prospect.

Within these host lithologies, alteration is composed of variably brecciated impure marble, calcite and jasperoidal silica with the alteration envelope dipping at variable amounts to the west. A series of pits are present along this zone, with the largest pits being present at the Big Chance workings.

Malachite and chalcocite are present in zones of up to 10m in width at surface. Rock chip sampling analyses returned individual maximum grades of 3.96g/t Au and 14.3% Cu.

The shear zone style of mineralisation observed appears similar to Aeris Resources' Barbara or Mt Colin Deposits. The delineation of mineralisation at this prospect has the potential to augment the existing JORC Mineral Resources within the Mt Isa Project.

A drilling program at Tourist Zone will be completed as part of Hammer's next RC drilling program.

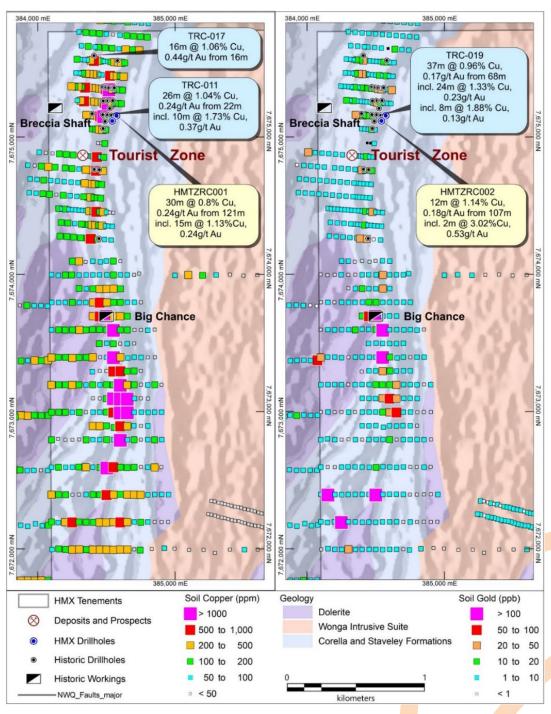


Figure 3. Tourist Zone showing historic and current soil responses for Cu (left) and Au (right). Drillholes TRC-011and

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<sup>\*</sup> Sourced from open file data from reports of Summit Gold (Aust) Pty Ltd for EPM9300M, report numbers CR25870, CR26461 and CR30180. This data underlying these intercepts has been validated by Hammer Metals Limited personnel and it is the opinion of Hammer Metals that the historic data are reliable. For further information see ASX announcement dated 30 November 2023.

### Kalman Surrounds

Soil sampling has been conducted to the east and south of the Kalman Cu-Au-Mo-Re deposit to complete soil geochemical coverage. The aim of the sampling was to effectively define the limit to previously reported molybdenum anomalism associated with the Pilgrim Fault (see ASX announcement dated 30 July 2024) and also to augment historic sampling to the south of Kalman which did not include molybdenum in the analytical suite. The sampling has been partly reported.

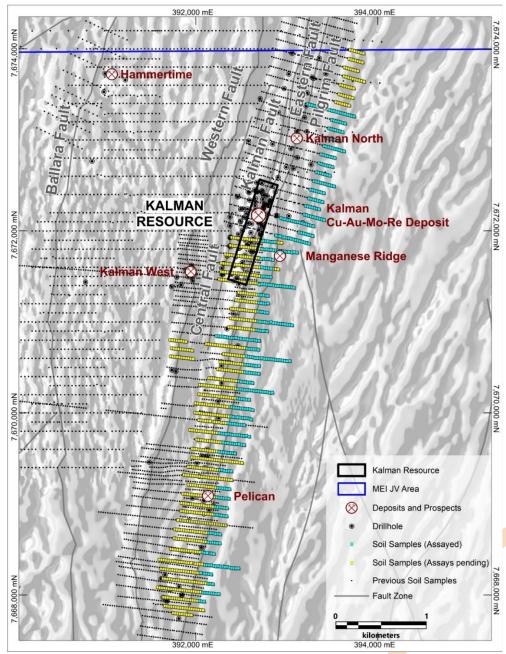


Figure 5. Kalman Trend showing recently completed soil samples along the Kalman trend and the Pilgrim Fault Zone.

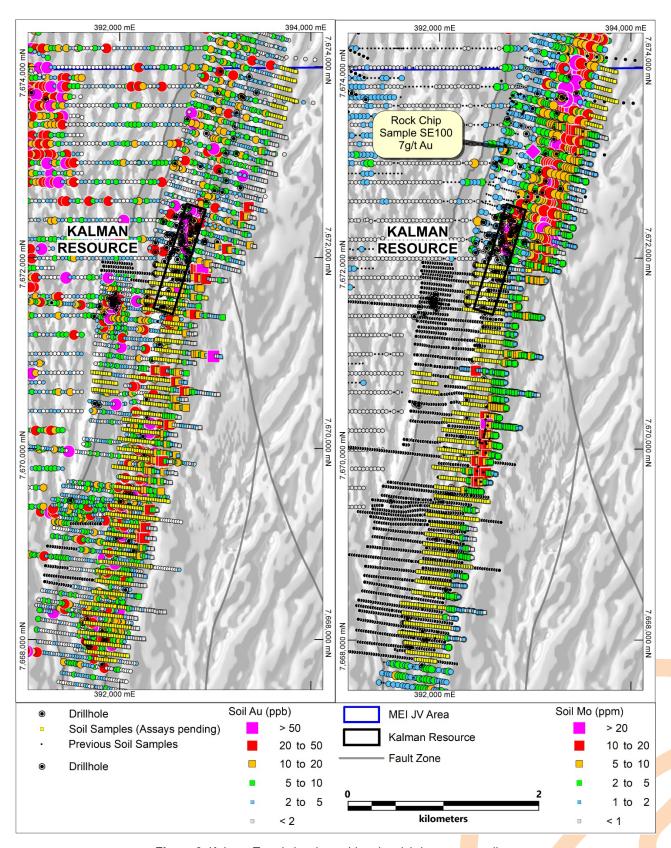


Figure 6. Kalman Trend showing gold and molybdenum anomalism.

Geological reconnaissance and rock chip sampling was undertaken at Kalman North to investigate Hammer's previously reported end-of-hole gold intercept from drilling in late 2023. The Kalman North drilling targeted an EM anomaly and recorded anomalous end-of-hole gold of 4m at 1.1g/t Au in K-158 from 128m.

The rock chip sampling returned a peak assay of 7.0g/t Au and 0.85% Cu.



Figure 7. Kalman North Rock Chip result of 7.0g/t Au and 0.85% Cu – see Table 3.

# **Overlander REE**

The Overlander Granite (OVG) is an A-type, radiometrically "hot" granite which has a higher rare earth element background than the surrounding metasediments of the Corella Formation. Eight lines of reconnaissance soils were conducted with a 50m sample spacing.

The soils confirmed that the OVG, which is enriched in rare earth elements. Maximum Total Rare Earth Yttrium Oxide (TREYO) values of >2000ppm in soils were reported with rock chips sampling also indicative maximum value of ~2700ppm TREYO.

Elevated Nd and Pr occur in the western portion of the OVG with multiple sample anomalies above 200ppm combined Nd and Pr oxide. Zones of elevated Y in soil above 200ppm occur in the eastern portion of the OVG. Rock chip sampling along these soil lines reported results of up to a combined Nd and Pr oxide maximum of 791ppm.

### **Overlander North**

Soil sampling has been conducted on 200m line spacing to the north of the Overlander Cu-Co deposit. Analyses are underway.

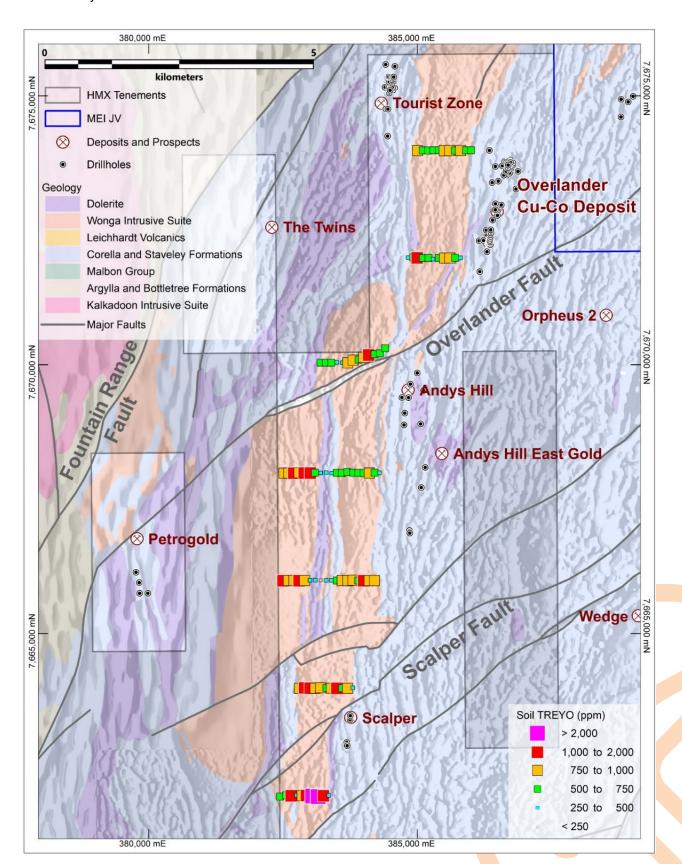


Figure 8. Overlander Granite soil sampling showing TREYO response.

# **Hardway**

Hammer Metals also recently received laboratory analyses from drilling conducted at the Hardway Cu-REE prospect, located on EPM14022. Two diamond holes for 600m were drilled in the first half of May with the drill-holes designed to intersect possible shoot positions at depth within fresh rock. Drilling is partly funded by a \$300,000 Queensland Government Collaborative Exploration Initiative (CEI) grant.

The assays have returned the following elevated intercepts:

- In HMHWDD001: 1m at 1.14% Cu from 109m and 1.65m at 0.38% Cu were both sulphidic, albeit with significant fracture related oxidation; and
- In HMHWDD002: 7.45m at 0.32% Cu, which was sulphidic.

It is considered that either the drilling missed the postulated plunging shoot positions or that there is a significant degree of supergene enrichment associated with the deep weathering profile. As part of the CEI research project, samples from the drill core and historical drilling will be subject to a detailed spectral study. This program will build further knowledge of the prospect and potentially identify vectors for future exploration activities along the trend.

Hammer will review information gained from the drilling to determine if further drilling is warranted at Hardway and the potential for defining a shallow oxide copper resource at the prospect.

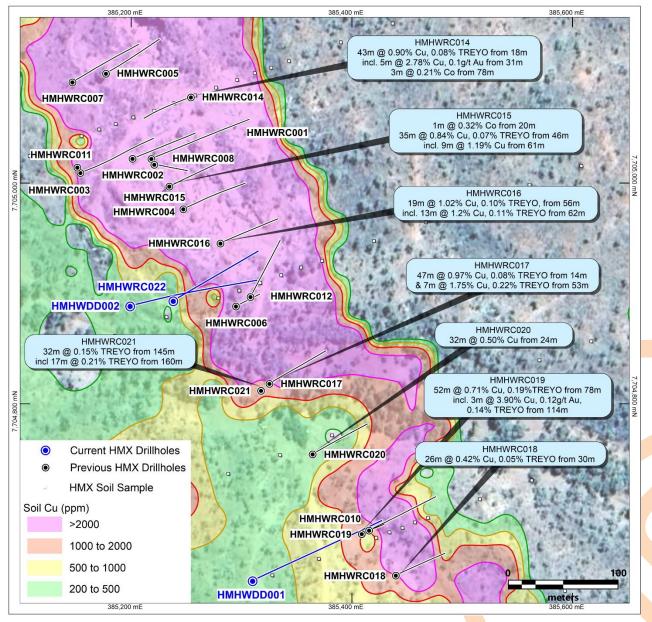


Figure 9. Hardway - Plan showing Cu in soil geochemistry, drilling and significant intercepts along the northern half of the Hardway Cu-REE mineralised trend. (see ASX announcement 31 October 2023)

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Table 1. Hardway Significant intercepts from Lab assays utilising a 0.1% Cu cut-off

							ots (from Lab				_	a (ac)			
Prospect	Hole	E_GDA94	N_GDA94	RL	TD	Dip	Az_GDA94		From	То	Int	Cu(%)	Au(glt)	TREOY_%	Co_ppm
									41	42	1	0.01	0.10	0.02	45
									44	45	1	0.01	0.11	0.03	740
									69	70	1	0.16	0.04	0.01	23
									75	77	2	0.23	0.06	0.01	55
									81	86	5	0.16	0.05	0.03	47
									91	92	1	0.21	0.10	0.02	43
					287.8	-64.65			94.7	97	2.3	0.25	0.05	0.01	146
	HMHWDD001	385310	7704640	400			64.72		102	103	1	0.13	0.03	0.03	55
	HIMHANDDOOT	365310	7704640	409					108	112	4	0.44	0.10	0.01	128
								incl.	109	110	1	1.14	0.30	0.01	228
									139.6	141.25	1.65	0.38	0.01	0.03	1099
									151.4	152	0.6	0.11	0.03	0.02	78
Hardway									162	163	1	0.02	0.13	0.02	45
пашwау									191	192	1	0.34	0.04	0.02	95
									208.05	209	0.95	0.12	0.01	0.02	279
									225.3	230.1	4.8	0.06	0.01	0.14	500
									11	12	1	0.17	0.01	0.02	149
									28	29	1	0.10	0.04	0.01	82
									44	45	1	0.16	0.08	0.01	75
									112	113	1	0.10	0.06	0.03	186
	HMHWDD002	385199	7704889	402	312.6	-70.22	76.28		144	145	1	0.31	0.01	0.04	42
	⊓MUMMDD002	383199	7704889	403	312.6	-/0.22	70.28		152	159.45	7.45	0.32	0.02	0.04	97
									178	181	3	0.13	0.01	0.02	47
									185	191	6	0.31	0.02	0.04	197
									194	195	1	0.10	0.01	0.04	139
									276	283	7	0.01	0.01	0.09	2

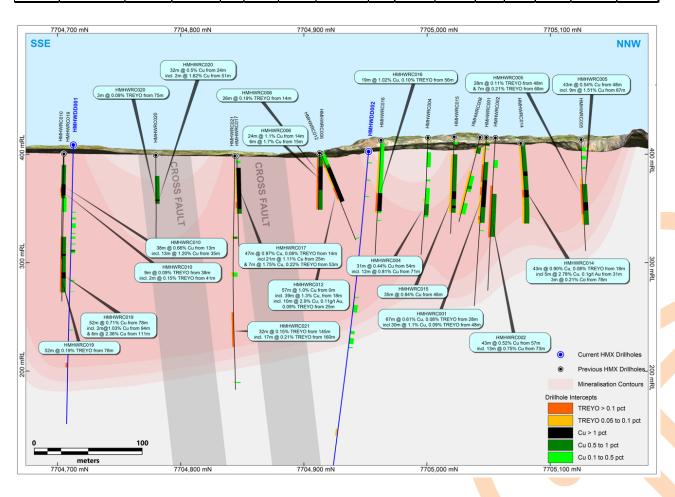


Figure 10. Hardway – Long Section looking west showing significant Cu and TREOY intercepts.

# Dipvale, Moonlight GEM and Cobb

Hammer has submitted an application (EPM29066) for prospective tenure along the Fountain Range Fault system in close proximity to the Dugald River lead-zinc deposit. This new application complements Hammer's existing tenure and IOCG targets at Moonlight and GEM., The area was previously being held by Rio Tinto Exploration.

Hammer's existing tenure in this area was acquired from China Yunnan Copper Limited (former ASX Code: CYU) in 2017. China Yunnan Copper had defined an IOCG target at the Moonlight prospect and significant mineralisation at the GEM Cu-Au Deposit.

The proximity of these prospects to Dugald River and the Eva Copper Project (Harmony Gold), together with an expanded ground position, will bring increased focus to Hammer's prospects in this region.

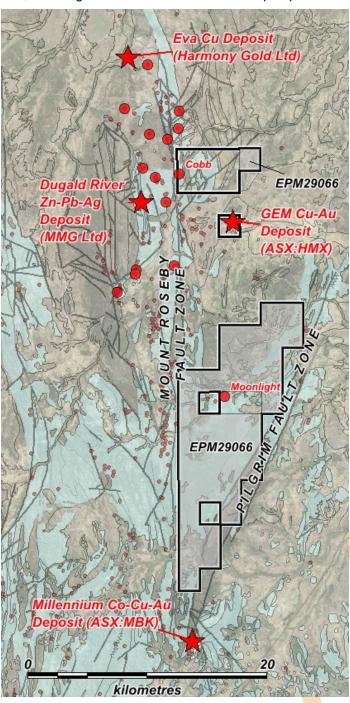


Figure 11. New application EPM29066 Dipvale showing the Pilgrim and Mount Roseby Faults with deposits in the region.

 Table 2. Rock Chip sampling at Overlander showing REE response (from Laboratory Assays)

Sample	E_GDA94	N_GDA94	RL	LREO (ppm)	HREOY (ppm)	TREOY (ppm)	Sum NdPr Oxide (ppm)	Sample	E_GDA94	N_GDA94	RL	LREO (ppm)	HREOY (ppm)	TREOY (ppm)	Sum NdPr Oxide (ppm)
OVG001	382475	7662000	459	296	62	358	64	OVG042	383100	7668000	486	484	77	562	74
OVG002	382575	7662000	478	616	97	714	142	OVG043	383525	7668000	473	102	60	162	23
OVG003	382675	7662000	461	557	104	660	118	OVG044	383625	7668000	494	177	94	271	42
OVG004	382875	7662000	442	647	148	795	156	OVG045	383725	7668000	482	204	112	315	53
OVG005	382950	7662000	422	701	158	860	170	OVG046	383825	7668000	482	304	250	555	83
OVG006	383000	7662000	424	2283	408	2691	791	OVG047	383925	7668000	494	89	80	169	23
OVG007	383050	7662000	426	510	107	617	72	OVG048	384025	7668000	485	197	88	284	44
OVG008	383100	7662000	441	558	136	694	84	OVG049	384125	7668000	479	325	143	468	93
OVG009	383175	7662000	457	561	136	697	110	OVG050	384225	7668000	483	114	75	189	25
OVG010	383275	7662000	419	76	70	146	19	OVG051	383225	7670050	418	105	70	175	34
OVG011	382850	7664000	515	868	172	1040	264	OVG052	383325	7670050	432	84	85	169	12
OVG012	382950	7664000	514	118	76	194	30	OVG053	383425	7670050	435	56	71	126	5
OVG013	383025	7664000	513	1831	211	2042	531	OVG054	383525	7670050	451	44	68	112	11
OVG014	383125	7664000	510	286	93	379	43	OVG055	383625	7670100	459	37	71	108	7
OVG015	383225	7664000	500	108	93	201	21	OVG056	383725	7670100	449	110	72	182	9
OVG016	383325	7664000	492	139	93	231	40	OVG057	383825	7670100	453	126	84	210	14
OVG017	383425	7664000	490	280	142	422	68	OVG058	383925	7670100	458	36	66	102	6
OVG018	383625	7664000	468	44	88	132	9	OVG059	384025	7670100	469	965	288	1252	334
OVG019	383725	7664000	458	171	106	277	46	OVG060	384125	7670150	469	1427	201	1628	424
OVG020	383800	7664000	432	113	69	181	34	OVG061	384275	7670200	481	245	104	349	70
OVG021	382500	7666000	460	806	151	957	210	OVG062	384375	7670200	491	244	55	299	56
OVG022	382550	7666000	460	758	140	897	181	OVG063	384800	7672000	454	95	92	188	27
OVG023	382625	7666000	460	714	122	836	178	OVG064	385000	7672000	484	125	83	208	16
OVG024	382700	7666000	460	515	95	610	114	OVG065	385100	7672000	465	211	86	297	23
OVG025	382750	7666000	460	905	122	1026	197	OVG066	385200	7672000	461	272	118	391	25
OVG026	382825	7666000	460	801	128	929	201	OVG067	385400	7672000	479	174	94		50
OVG027	382950	7666000	460	702	144	846	170	OVG068	385500	7672000	470	1349	440	1789	511
OVG028	383425	7666000	514	443	81	524	95	OVG069	385600	7672000	470	52	99	151	16
OVG029	383600	7666000	536	103	95	197	25	OVG070	385700	7672000	471	99	93	192	28
OVG030	383725	7666000	534	1204	229	1433	294	OVG071	385025	7674000	426	196	119		61
OVG031	383925	7666000	530	135	75		21	OVG072	385125	7674000	446	130	97		38
OVG032	384025	7666000	527	411	154	565	134	OVG073	385225	7674000	433	222	144	366	61
OVG033	384125	7666000	450	67	72	139	11	OVG074	385325	7674000	415	129	78	206	16
OVG034	382525	7668000	442	474	89	563	69	OVG075	385425	7674000	395	326	177	503	112
OVG035	382600	7668000	438	405	87	492	94	OVG076	385500	7674000	392	601	136	737	105
OVG036	382650	7668000	443	1080	165	1245	344	OVG077	385550	7674000	395	269	157	426	72
OVG037	382725	7668000	447	539	102	641	117	OVG078	385625	7674000	398	872	412	1284	319
OVG038	382800	7668000	440	610	113	723	149	OVG079	385725	7674000	408	681	142	823	174
OVG039	382925	7668000	477	296	85	381	74	OVG080	385825	7674000	405	107	66	173	26
OVG040	383000	7668000	452	540	78	617	115	OVG081	385925	7674000	391	97	80	177	25
OVG041	383050	7668000	469	145	52	198	30	OVG082	386000	7674000	388	302	117	418	87

**Table 3**. Rock Chip sampling at Overlander, Kalman East and Tourist Zone showing Cu and Au response (from Laboratory Assays)

Prospect	Sample	E_GDA94	N_GDA94	RL	Au (g/t)	Cu (%)
	FHB175	387564	7677058	404	0.02	0.00
	FHB176	387576	7677068	404	0.02	0.0
	FHB177	387598	7677083	402	0.04	0.0
	FHB178	387618	7677095	400	0.03	0.0
Overlander	FHB179	387639	7677096	400	0.01	0.0
	FHB180	387635	7677105	399	0.01	0.0
	FHB181	387687	7677188	397	0.02	0.0
	FHB182	387691	7677207	396	0.03	0.0
	FHB183	387760	7677418	401	-0.01	0.0
	SE074	392468	7670162	455	-0.01	0.0
	SE075	392477	7670188	450	-0.01	0.0
	SE076	392491	7670057	473	0.02	0.0
	SE077	392480	7670078	482	0.02	0.0
	SE078	392446	7670064	474	0.01	0.0
	SE079	392417	7670072	462	0.03	0.1
	SE080	392392	7669963	450	0.01	0.0
	SE081	392485	7669961	455	0.01	0.0
	SE082	392457	7669759	430	-0.01	0.0
	SE083	392391	7669771	438	-0.01	0.0
	SE084	392405	7669818	438	0.01	0.0
Kalaaa Faak	SE085	392429	7669660	432	0.3	0.2
Kalman East	SE086	392378	7669675	430	-0.01	0.0
	SE087	392520	7670110	458	0.01	0.0
	SE088	392488	7670444	431	-0.01	0.0
	SE089	392494	7670448	437	-0.01	0.0
	SE090	392503	7670344	455	-0.01	0.0
	SE091	392481	7670311	453	0.01	0.0
	SE092	392501	7670250	450	-0.01	0.1
	SE093	392479	7670208	450	-0.01	0.0
	SE094	392467	7670154	454	0.01	0.0
	SE095	392461	7670129	461	0.01	0.0
	SE096	392420	7670102	466	0.03	0.2
	SE097	392277	7669567	439	0.03	0.1
	SE098	393691	7676570	337	0.36	0.1
Kalasaa Naath	SE099	392972	7673080	399	0.01	1.1
Kalman North	SE100	392974	7673128	399	7.04	0.8
	SE101	393499	7673327	431	-0.01	0.0
Tourist 7ons	SE102	384495	7672558	461	3.96	14.3
Tourist Zone	SE103	384616	7673098	446	0.13	1.0

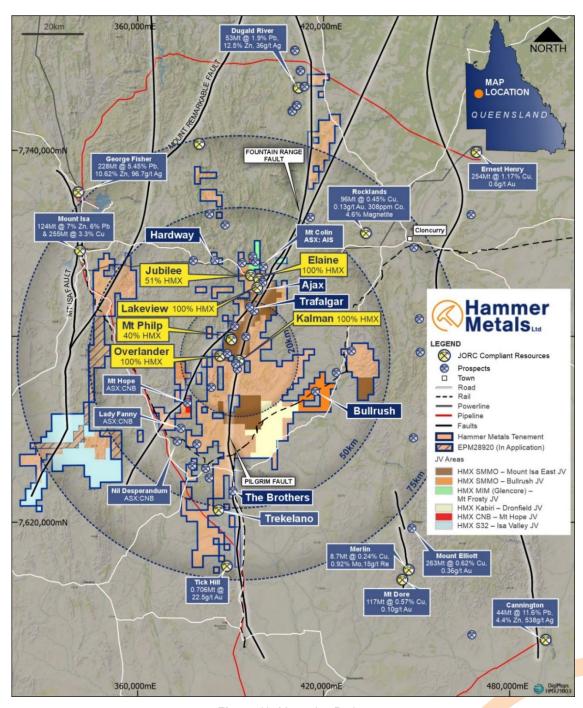


Figure 12. Mount Isa Project

# **Upcoming Activities and Expected Newsflow**

- August/September Soil sampling programs continue Kalman South, Tourist Zone Infill, Cambrian Pb/Zn
- August/September Yandal air-core gold program Sword and Harrier results
- August/September Ionic Leach Soil sampling program within the Isa Valley Joint Venture
- September Resources Rising Stars Gold Coast Conference, 3 4 September
- September Bullrush JV Geophysical program to commence
- September RC Drilling Program Mount Isa

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 2,800km² 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, the Lakeview (Cu-Au) deposit 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 also 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 Statement**

The information in this report as it relates to exploration results and geology is based on, and fairly represents, information and supporting documentation that was compiled by Mr. Mark Whittle, who is a Fellow of the AuslMM 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.

Where the Company references exploration results and 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.

# JORC Table 1 report - Mount Isa Exploration Update

- This table is to accompany an ASX release providing an exploration update over multiple tenements for 100% HMX activities.
- 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. Instances of historic sampling have
  been referenced.

# **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.	Drilling The drilling was conducted using diamond coring. Samples were taken at approximately 1m intervals.  Drilling Analysis All samples reported 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 for a comprehensive element suite which included rare earths.  Portable XRF analysis was conducted prior to sampling to provide guidance on geological logging.  Re-analyses will be conducted as required to investigate element repeatability.
Drilling techniques	Drill type (eg core, reverse circulation, openhole 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).	Drilling Drilling was conducted by DDH1, diamond drilling was employed, and hole diameters varied between PQ 85mm), HQ (63.5mm) through to NQ (47.6mm). The holes started in PQ at surface, transitioned through HQ with the majority of the hole being drilled in NQ.
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.	Drilling Sample recovery was recorded during geologic logging. Sample recoveries were generally in excess of 80%. Recoveries are typically low in the first 5m of each hole. No sampling was conducted which crossed zones of core loss.

Criteria	JORC Code explanation	Commentary
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.	Fire assay with AAS finish for gold and 4 acid digest followed by ICP-MS for a comprehensive element suite.  Sampling Comment The sample styles reported herein have been collected using appropriate methodologies. Sample size is appropriate for the target-style. Appropriate laboratory analytical methods were employed.  Drilling Gold analyses were conducted fire assay with AAS finish.  Multielement analyses were conducted via ICP MS (for a plus 50 element suite) after a 4-acid digest.  Rock Chip Sampling Gold analyses were conducted fire assay with AAS finish.  Multielement analyses were conducted via ICP MS (for a plus 50 element suite) after a 4-acid digest.  Soil Sampling Gold analyses were conducted fire assay with AAS finish.  Multielement analyses were conducted via ICP MS (for a plus 50 element suite) after a 4-acid digest or ICP OES (for a smaller element suite) after a 4-acid digest or ICP OES (for a smaller element suite) after a 4-acid digest.  Certified reference (CRM) samples and certified blank samples were inserted into the sample sequence at rate of 1 CRM and 1 blank per 25 samples. Duplicates were conducted at a rate not exceeding 1 duplicate per 50 samples.  The analytical methods and QA/QC procedures employed are appropriate for
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	the nature of the surveys described herein.  All sampling conducted is verified by a minimum of two company personnel apart from the Competent Person.
assaying	The use of twinned holes.	The Hardway dr <mark>illin</mark> g described herein has not
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	been twinned.  Data from the field is transferred onto head office digital storage daily.
	Discuss any adjustment to assay data.	Assay values below detection were stored in the database as minus the detection limit. Intervals with no samples were recorded in the sample table and excluded from the assay table in the database.

Criteria	JORC Code explanation	Commentary
		Assay files were received electronically from the laboratory.
		No alterations have been made to primary assay data.
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.	Drilling Locations are captured by a licenced surveyor to centimetre accuracy using a DGPS instrument. Downhole orientation surveys are captured using a downhole gyro tool. Both surface location and downhole orientation data is captured electronically.  Soil and Rock Chip Sampling Soil and rock chip sampling was located in 3D using GPS instruments. However, RL information captured by GPS can be lower quality, so where available, a DTM RL was assigned to the rock and soil point where the DTM accuracy is higher than the GPS RL point. All location information captured during this process is electronic.
		For all data reported herein, information is captured in GDA94 datum Zone 54.
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	Drilling The two diamond holes reported herein were drilled at a wide spacing. The aim of these holes was to attempt to target potential shoots at depth. This spacing is insufficient to establish continuity.  Sample compositing has been applied to calculate intercepts. The nature of the compositing is length weighted conducted at a cut-off grade stated in the table title.
	applied.	Soil Sampling Soil sampling spacing is considered appropriate to delineate geochemical dispersions.
		Rock Chip Sampling Grab sampling is not undertaken at an orderly spacing and cannot be used to assign a grade to a rock mass with any degree of confidence.
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.	Drilling Drill holes and sample sites are generally oriented as close to perpendicular as possible to the orientation of the targets based on interpretation of previous exploration.  Soil Sampling Soil traverses were taken at an orientation dominantly perpendicular to structure.

Criteria	JORC Code explanation	Commentary		
		Rock Sampling Samples are usually oriented across structures at an outcrop scale, but the sampling method cannot be considered unbiased.		
Sample security	The measures taken to ensure sample security.	Samples are packed into poly bags and/or bulk bags which are sealed and conveyed to ALS Mount Isa by Hammer personnel.  Bags are pre-numbered bags are used.		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	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	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint	The Mt Isa Project consists of 36 tenements.
status	ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	These tenements are held by three subsidiaries, Mulga Minerals Pty Ltd (MM), Mt Dockerell Mining Pty Ltd (MDM) and Hammer Bulk Commodities Pty Ltd (HBC).
	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.	Areas discussed herein are all located on 100% held portions of: Hardway – 14022 (MM) Kalman Extensional – 26775 & 13870 (both MDM) Tourist Zone – 26776 (MDM) Overlander Granite – 26776, 26775 and 26474 (MDM) Mascotte region – 26777 (MDM) All these tenements are granted and in good standing.
Evaloration	Asknowledgment and engrained of	Dravious halders hald title either covering
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Previous holders held title either covering the tenement in part or entirely and previous results are contained in Mines Department records.
Geology	Deposit type, geological setting and style of mineralisation.	Hardway (EPM14022) The Hardway Prospects are located on EPM14022. Mineralisation is structurally emplaced in a foliation sub parallel shear zone and appears to consist of two events dominated by Cu and Rare Earths respectively.  Kalman East (EPM13870 and EPM26775) Kalman Southeast is an early-stage soil geochemical anomaly approximately 600m in length (at the 200ppm response level). The anomaly is located on the Pilgrim fault

Criteria	JORC Code explanation	Commentary
		elongate gossans of up to 1m in width sandwiched between the east and west faults. The anomaly is underlain by the Overhand Jaspelite.
		Tourist Zone (EPM26776)  Tourist Zone is located on the north-western side of the Overlander Granite within carbonate rich sediments of the Corella Formation. Mineralisation is associated with Jasper and carbonate rich zones.
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length.  If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain	See the attached tables.
Data aggregation methods	why this is the case.  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	Drilling Drilling assay information was collated and presented herein as length weighted intercepts primary utilising Cu (at a 0.1% Cu cut-off grade). Significant intersections of Gold at TREOY were also extracted and presented in the drilling intercept table.  Rock Chip Sampling Rock Chip sampling is depicted and reported as point data with select elements tabulated.
	shown in detail.  The assumptions used for any reporting of metal equivalent values should be clearly stated.	Soil Sampling Soil sampling is depicted as point data and/or contours based on point data.
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	Drilling The two holes reported herein at Hardway have been oriented to attempt to test possible shoot positions. As such their orientation is not necessary as close to perpendicular as possible.
	lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	

Criteria	JORC Code explanation	Commentary
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.	Appropriate figures are in the body of this report.
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.	<b>Drilling</b> Drilling results have been distilled to intercepts which are tabulated herein. The reader should assume that all results excluded from these tables are below the quoted cut-off grade.
		Soil samples Soil samples are depicted either as distinct points or as contours generated from the primary data
		Rock Chip Samples All samples are depicted and tabulated.
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 substantive exploration data depicted or discussed herein have been disclosed to the market previously.
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.	Hardway will be reviewed in order to determine whether further work is warranted and whether a oxide resource estimate should be conducted.  At Kalman, Mascotte and Tourist Zone the soil sampling being conducted will serve to form the basis for drill testing.