

ASX RELEASE 24 May 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



Share Price (23/05/2023)	\$0.066
Shares on Issue	821m
Market Cap	\$54m
Options Unlisted	23.6m
Performance Rights	8m
Cash (31/03/2022)	\$2.6m

# OUTSTANDING NEW WIDE COPPER AND HEAVY REE HITS AT HARDWAY, INCLUDING <u>57m @ 1% Cu</u>

- Broad, shallow intercepts of copper & rare earth element (REE) mineralisation from wide-spaced follow-up drilling confirm the Hardway Prospect as an exciting new discovery within Hammer's Mount Isa portfolio.
- Significant results include:
  - <u>57m at 1.0% Cu from surface</u> in HMHWRC012, including:
    - ➢ 10m at 2.87% Cu, 0.11g/t Au and 0.09% Total Rare Earth and Yttrium Oxides (TREYO) from 25m;
  - <u>24m at 1.06% Cu and 0.20% TREYO</u> from 14m within 58m at 0.55% Cu from surface in HMHWRC006 (hole terminated in mineralisation);
  - <u>13m at 1.20% Cu</u> from 35m within 38m at 0.66% Cu from 13m in HMHWRC010;
  - 9m at 1.51% Cu and 0.18% TREYO from 67m within 43m at 0.54% Cu from 48m in HMHWRC005;
  - 43m at 0.52% Cu and 0.12% TREYO from 57m in HMHWRC002; and
  - **30m at 1.1% Cu** from 48m and **26m at 0.14% TREYO** from 34m in HMHWRC001 (previously reported).
- Cobalt mineralisation also observed in numerous holes, with a maximum individual assay of 0.21% Co.
- New high-grade REE zone identified at the Easy Life Prospect, 1.2km south-west of Hardway, where rock chip sampling has identified a new Cu/REE-bearing gossan:
  - Individual assays of up to 1.2% TREYO and 1.6% copper, including maximum individual REE values of 0.40% yttrium oxide, 0.06% dysprosium oxide and 0.15% neodymium oxide.
- Planning underway for a follow-up drilling program at Hardway, focusing on a 500m strike extent which has returned elevated grades of copper and REE mineralisation.
- Drilling at high-grade copper prospects at South Hope, Mascotte, Mascotte Junction and Stubby is expected to commence within the next fortnight.



Figure 1. HMHW005 60-80m showing copper oxide mineralisation. 9m at 1.51% Cu and 0.18% TREYO from 67m

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

"The Hardway Prospect is continuing to deliver exceptional drilling results, with these latest assays confirming that the copper and heavy rare earth mineralisation continues along the previously identified ~2km long trend. With this drilling still being very wide-spaced, a follow-up program for Hardway is now being designed with the aim of optimising the discovery and focusing in on zones with the best potential to add metal inventory at higher grades.

"Pleasingly, a geological review of this tenement has identified a new zone of higher grade REE and copper mineralisation at the Easy Life Prospect, which lies just 1.2km south-west of the main Hardway workings. This will be a priority target for follow-up exploration.

"With drilling soon to also commence at our high-grade Mount Hope copper targets, shareholders can look forward to strong upcoming news-flow from our ongoing drilling of fertile copper and gold systems in the worldclass Mt Isa district."

**Hammer Metals Ltd** (**ASX: HMX**) ("**Hammer**" or the "**Company**") is pleased to advise that follow-up Reverse Circulation (RC) drilling at the Hardway Prospect, part of the Company's Mt Isa portfolio in NW Queensland, has delivered further broad, shallow intercepts of significant copper and rare earth element (REE) mineralisation.

These latest results further enhance the previously reported intercepts from the initial drill-hole, HMHWRC001, which included 30m at 1.1% copper from 48m and 26m at 0.14% Total Rare Earth and Yttrium Oxides (TREYO) from 34m (see ASX announcement dated 6 February 2023).

The Hardway Prospect is unique in the Mt Isa inlier due to the combination of copper and REE mineralisation, the heavy rare earth (HREE) dominated REE assemblage and its location near regional infrastructure.



Figure 2. Hardway North Pit looking North.

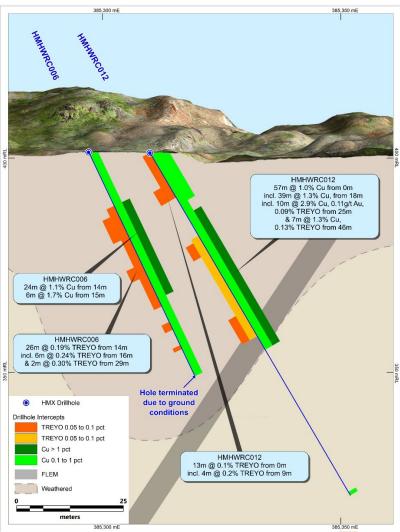
#### Hardway

The Hardway Prospect is situated within Hammer Metals' 100%-owned EPM14022, located between Mount Isa and Cloncurry and 1km north of the Barkly Highway.

The prospect is located on the margin of the Hardway Granite within the Corella Formation. The Corella Formation also hosts mineralisation at the Mary Kathleen U-REE deposit and Hammer's Kalman Cu-Au-Mo-Re deposit, Jubilee Cu-Au deposit, Elaine Cu-Au deposit, Overlander Cu deposit and the Lakeview Cu-Au deposit, in addition to other Hammer prospects such as Ajax, Trafalgar and Hammertime.

Following the receipt of positive assay results from an initial exploration drill hole reported on 6 February 2023, 12 additional holes (1725m) were drilled at the prospect in late March. The key objectives of the program were to determine the oxide-sulphide transition depth and extend Cu-REE mineralisation along strike. Most intercepts are located within the oxide zone. Significant intercepts include:

- 57m at 1.0% Cu from surface in HMHWRC012, including 10m at 2.87% Cu, 0.11g/t Au and 0.09% Total Rare Earth and Yttrium Oxides (TREYO) from 25m;
- 24m at 1.06% Cu and 0.20% TREYO from 14m within 58m at 0.55% Cu from surface to the end of hole in HMHWRC006;
- o 13m at 1.20% Cu from 35m within 38m at 0.66% Cu from 13m in HMHWRC010;
- $\circ$  9m at 1.51% Cu and 0.18% TREYO from 67m within 43m at 0.54% Cu from 48m in HMHWRC005;
- o 43m at 0.52% Cu and 0.12% TREYO from 57m in HMHWRC002; and
- 30m at 1.1% Cu from 48m and 26m at 0.14% TREYO from 34m in HMHWRC001 (previously reported).



**Figure 3.** Hardway Cross Section through Holes HMHWRC006 and HMHWRC012. HMHWRC006 was terminated due to poor ground conditions.

The mineralisation appears to be spatially associated with a younger zone of marble which has formed close to the contact with the Hardway Granite. Copper and REE mineralisation have partly replaced the marble. At Hardway South, copper and REE mineralisation are slightly overlapping.

Significant zones of cobalt mineralisation have also been identified in this latest round of drilling, including:

- o 58m at 0.05% Co from surface in HMHWRC006 including 8m at 0.11% Co from 15m;
- o 24m at 0.07% Co from 26m in HMHWRC010 including 12m at 0.1% Co from 36m; and
- 13m at 0.09% Co from 38m in HMHWRC008 including a program-high assay of 1m at 0.21% Co from 39m.

Two tranches of fixed loop electromagnetic (FLEM) surveying have been conducted and these surveys have identified two conductive plates, one of which is yet to be drilled (see ASX announcement dated 7 March 2023).

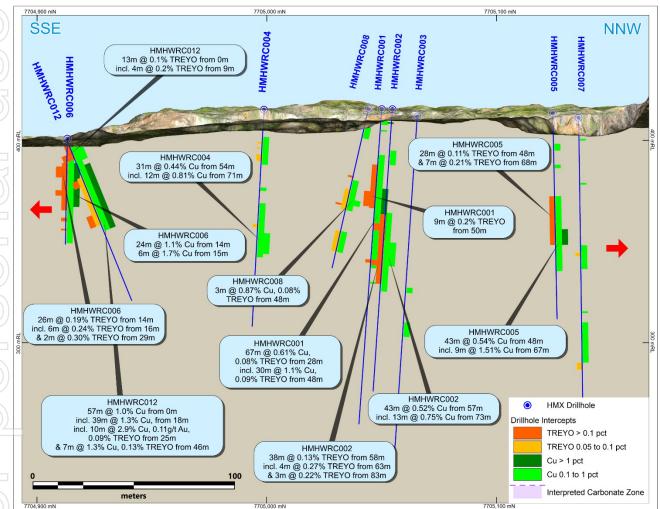


Figure 4. Hardway - Long section along the Hardway North Zone

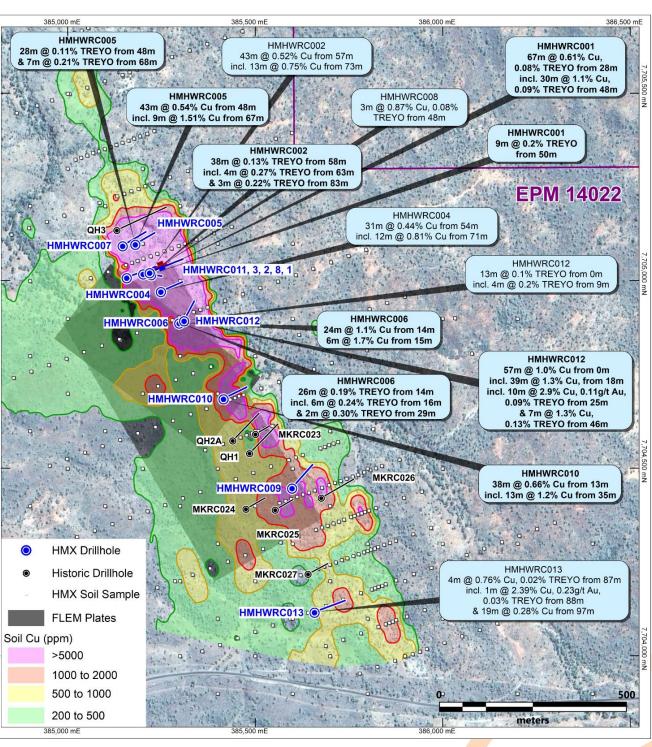


Figure 5. Hardway - Soil Cu contours and current drilling

- 1																HREYO/TREYO		
	Hole	E_GDA94	N_GDA94	RL	Dip	Az_GDA	TD		Incl. I			Interval			TREYO (%)	(%)	Y(ppm)	
									incl.		10 9	4	0.65	0.05	0.11 0.27	58% 58%	861 888	incl. 2m at 0.07% Co from 8m and 1m at 0.06% Co from 13m
)								Cu Zone			14	1	0.10	0.01	0.03	54%	89	
	HMHWRC001	385210	7705030	415	-55.1	68	183		incl.	48	95 78	67 30	0.61	0.04	0.08	68% 71%	85 338	
											104 60	26	0.13	0.01	0.01 0.14	47% 65%	35 510	
								REE Zone	incl.	50	59	9			0.20	65%	769	
										90	92	2			0.17	61%	578	
[								Cu Zono			31	8	0.19	0.03	0.12	AA C 40/	400	
	HMHWRC002	385201	7705019	415	-66.2	107.8	154	Cu Zone	incl.		100 86	43	0.52	0.02	0.12 0.16	64% 73%	483 684	incl. 4m at 0.07% Co from 63m and 1m at 0.05% Co from 71m
	HIVIH WKC002	303201	7703019	413	*00.2	107.0	134	REE Zone	incl.		96 67	38 4	]		0.13 0.27	0.67	528 991	
								HEE LOINE	&		86	3			0.22	0.67	866	
										94	97	3	0.23	0.01	0.04	54%	108	
	HMHWRC003	385157	7705009	412	-65.0	69.9	196	Cu Zone REE Zone		113 1	121	8	0.16	0.01	0.04	55%	107	
								REE ZONE					INO SIG	mjicanti	nercepts			
									_		2 32	2	0.21	0.02	0.05	51% 59%	144 143	incl. 1m at 0.05% Co from 25m
								Cu Zone		45	47	2	0.31	0.01	0.04	75%	118	
									incl.		85 83	31	0.44	0.02		AA AA		
	HMHWRC004	385248	7704972	416	-64.9	69.6	124				1	1			0.06	49%	157	
								REE Zone			20 23	1			0.07	65% 55%	237	
											30 68	4			0.06	58% 49%	199 150	
	ا ا				· · · · ·	· · · · · · · · · · · · · · · · · · ·	· · · ·		!									
											13 22	4	0.40	0.03	0.04	52%	107	incl. 1m at 0.06% Co from 9m and 1m at 0.056% Co from 12m
	HMHWRC005	385180	7705098	415	-59.6	66.7	118	Cu Zone	H	30	32 91	2 43	0.17	0.04	0.08	^^ 64%	312	incl. 10m at 0.05% Co form 51m
	HIVIN WKC005	202100	7703036	415	-39.0	00.7	110		incl.	67	76	43	1.51	0.02	0.18	70%	720	incl. 10m at 0.05% Co form 51m incl. 1m at 0.07% Mo & 0.11g/t Re from 55m and 6m at 0.06% Co from 69m
								REE Zone			76 75	28			0.11	66% 70%	416 842	
																	_	
								Cu Zone	incl.		58 38	58 24	0.55	0.02	0.11 0.20	62% 60%	369 675	58m at 0.05% Co incl. 8m at 0.11% Co from 15m. Also 1m at 0.10% Co from 57m incl. 8m @ 0.11% Co from 15m
									incl.		<b>21</b> 40	6 26	1.68	0.05	0.22	55% 0.61	692 650	
	HMHWRC006	385297	7704888	402	-59.7	59.7	58		incl.		22	6			0.24	0.55	753	
								REE Zone			32 46	3			0.30 0.12	0.68	<b>1171</b> 441	
											51	1			0.11	68%	423	
										12	13	1	0.20	0.02	0.03	62%	101	
										36	37	1	0.22	0.16	0.05	^^	101	
	HMHWRC007	385146	7705094	412	-64.6	63.8	172	Cu Zone			83 107	13 1	0.22	0.04	0.02	79%	106	incl. 2m at 0.06% Co from 74m
										112	134	22	0.31	0.02	0.03	80%	139	
								REE Zone		74 134	76 138	2			0.05	69% 12%	200	
										10	16	6	0.50	0.01	0.05	63%	176	
								Cu Zone		38	54	16	0.35	0.03	0.06	62%	200	incl. 13m at 0.09% Co from 38m (individual maximum of 0.21% Co)
									incl.		51 76	3	0.87	0.05	0.08	60% 71%	278	incl. 3m at 0.07% Co from 68m
	HMHWRC008	385222	7705017	416	-65.3	59.8	84				11 37	1			0.07	46% 76%	180 440	
								REE Zone		43	54	11			0.07	61%	243	
									inc.		52 76	1			0.14 0.07	52% 71%	402	
																^^		
								Cu Zono	E	4 22	7 24	3	0.19	0.01		AA AA		
	HMHWRC009	385598	7704448	415	-69.7	99.6	142	Cu Zone		42	44 64	2	0.16	0.01		AA AA		incl. 3m at 0.07% Co from 55m and 2m at 0.06% Co from 64m
ļ								REE Zone			55	1			0.07	67%	255	
	I							Cu Zone			51	38	0.66	0.04		^^		incl. 24m at 0.07% Co from 26m
	HMHWRC010	385415	7704686	401	-54.6	41.7	118		incl.		48 47	13 9	1.20	0.02	0.09	68%	328	Incl. 12m at 0.10% Co from 36m (individual maximum of 0.15% Co)
ļ								REE Zone			43	2			0.09	63%	543	
	HMHWRC011	385157	7705009	412	-54.2	63.9	178	Cu Zone		156 1	157	1		0.08		^^		
		555157		-12	54.2	55.5	1/0	REE Zone					No Sig	nificant I	ntercepts			
Ì									incl		57	57	1.0	0.05	0.07	0.59	252	
									incl. &	18	15 57	15 39	0.42	0.02	0.09	62%	328	
								Cu Zone	incl. &		35 39	10 1	2.87 1.72	0.11 0.09	0.09	63% 76%	300 345	incl. 1m at 0.05% Co from 25m
	HMHWRC012	385310	7704894	402	-90.0	-0.4	99		&	46	53	7	1.25	0.05	0.13	62%	447	incl. 6m at 0.07% Co from 46m
										0	99 13	1	0.27	0.01	0.10	63%	367	
								REE Zone	incl.		13 53	4 29			0.20	67% 63%	<b>764</b> 298	
										25	29	4			0.11	64%	870	
ł				!					&		53				0.13	62%	447	
	T						1		H		1 47	1 24	0.25	0.01		AA AA		
										50	52	2	0.36	0.06		٨٨	n	
	HMHWRC013	385658	7704117	416	-53.9	27.4	151	Cu Zone	incl.		91 89	4	0.76	0.09	0.02	47% 79%	55 120	incl. 2m at 0.07% Co from 89m
										97 3	116 120	19 1	0.28	0.03		^^ ^^		1m at 0.09% Co from 95m
								REE Zone			28	2	0.15	0.01	0.11	53%	307	
	Note TREYO is the sur	n of LREO :	ind HREYO															
	LREO is calculat	ted by sum	ming the ele										r and Sm.					

 Table 1. Hardway – HMHWRC001 through HMHWRC013. Significant intercepts derived from lab analyses.

 Cu intercepts calculated at a 0.1% Cu cut-off. REE intercepts calculated at a 500ppm TREYO cut-off.\*

 Significant Co assays at a 0.05% cut-off also noted.

-Partial or no full suite REE analyses conducted across intercept interval cations are relative to GDA94 Zone54 \*HMHWRC001 was previously reported to the ASX on 6 February 2023 C of 19

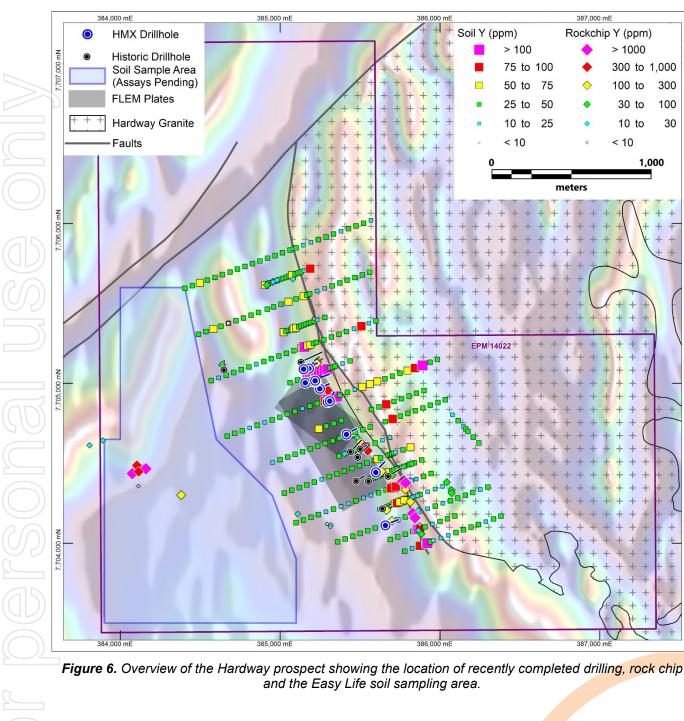
of Dy, Er, Ho, Lu, Tb, Tm

oxide respo

s calcul

by summing the ele

ASX:HMX hammermetals.com.au



## Hardway REE's

As noted previously Cu-REE occurrences are uncommon in the Mt Isa district. Utilising a 100ppm HREE cutoff, heavy rare earth elements constitute approximately 63% of the total rare earth content.

Maximum element grades are: 1,490ppm yttrium, 256pmm dysprosium, 299ppm neodymium and 137ppm samarium.

30

705,000

В

,704,000

Nm

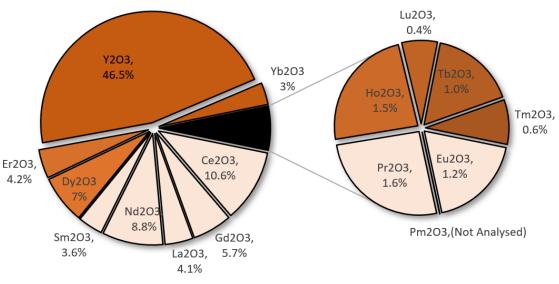


Figure 7. Hardway – Drilling average REE distribution for HREYO>100ppm

Table 2. Hardway – Average rare earth element distribution for HREYO>100ppm lab analyses utilised in
Figure 7.

HMHW001 t	HMHW001 to HMHWRC013 (HREYO>100ppm) - Average and Individual Maximum individual REE component Element Oxides								
LREO	LREO Ce2O3 Eu2O3 Gd2O3 La2O3 Nd2O3 Pm2O3 Pr2O3 Sm2O3								
Maximum	456	50	233	171	349	N/A	70	158	
Average	74	8	40	29	62	N/A	12	25	
0									
HREOY	Dy2O3	Er2O3	Ho2O3	Lu2O3	Tb2O3	Tm2O3	Y2O3	Yb2O3	
Maximum	294	161	61	16	41	21	1,892	119	
Average	49	29	11	3	7	4	327	22	
-	-	-			-		-		
				Note					
			N/A - Not an	alysed in ana	lytical suite				
			TREYO is the	e sum of LREO	and HREYO				
LREO is	s calculated b	y summing the	element oxide	e responses of	Ce, Eu, Gd, La,	Nd, Pm (not a	nalysed), Pr an	id Sm.	
	HREYO is cal	culated by sur	mming the eler	ment oxide res	ponses of Dy,	Er, Ho, Lu, Tb, 1	Гm, Yb and Y		

#### Easy Life Rock Chip and Soil sampling

Extensional soil and rock chip sampling has identified a new copper and heavy rare earth enriched zone of mineralisation at the Easy Life Prospect, located approximately 1.2km south-west of the Hardway trend.

Notable maximum rock chip assays included 4,013ppm yttrium oxide, 644ppm dysprosium oxide and 1,487ppm neodymium oxide. Heavy rare earth elements constitute approximately 45% of the total in this prospect.

The soil samples are currently being analysed and geological mapping is underway to determine the extent of the mineralised zone.

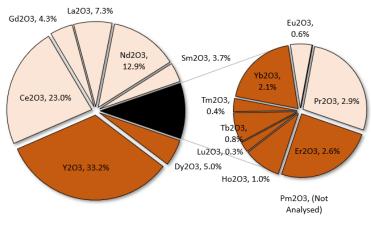


Figure 8. Hardway (Easy Life) - Average REE distribution for REE bearing rock chip samples

 Table 3. Hardway (Easy Life) - Average rare earth element distribution for samples with anomalous rare earth elements. Data used in Figure 8

	Easy-Life Rock Chips - Average and Individual Maximum individual REE component Element Oxides									
LREO	Ce2O3	Eu2O3	Gd2O3	La2O3	Nd2O3	Pm2O3	Pr2O3	Sm2O3		
Maximum	2,870	73	542	680	1,487	N/A	319	446		
Average	1,500	37	281	473	842	N/A	188	240		
HREOY	Dy2O3	Er2O3	Ho2O3	Lu2O3	Tb2O3	Tm2O3	Y2O3	Yb2O3		
Maximum	644	336	126	35	104	45	4,013	262		
Average	328	170	65	18	52	23	2,159	133		
	·						•			
Note										
N/A - Not analy	ysed in analytic	cal suite								
TREYO is the su	um of LREO and	HREYO								
LREO is calcula	ated by summir	ng the element	oxide response	es of Ce, Eu, Gd	. La, Nd, Pm (no	ot analysed), Pr	and Sm.			
HREYO is calcu	lated by summ	ing the elemen	t oxide respon	ses of Dy, Er, H	o, Lu, Tb, Tm, Yl	b and Y				

Table 4. Hardway (Easy Life) - Rock Chip sample results for samples anomalous in rare earth elements

Prospect	Sample ID	E_GDA94	N_GDA94	Cu (%)	Au (g/t)	TREYO (%)	HREOY (%)	Dy2O3 (ppm)	Er2O3 (ppm)	Ho2O3 (ppm)	Lu2O3 (ppm)	Tb2O3 (ppm)	Tm2O3 (ppm)	Y2O3 (ppm)	Yb2O3 (ppm)
71	MJB1536	384146	7704472	0.62	0.01	0.35	0.15	164	88	33	9	26	12	1055	69
	MJB1537	384160	7704472	0.48	0.01	0.89	0.41	441	224	86	22	70	30	3060	170
Easy Life	MJB1538	384075	7704442	0.34	0.01	1.20	0.56	644	336	126	35	104	45	4013	262
Easy Life	MJB1539	384103	7704492	0.17	0.03	0.27	0.12	127	77	26	9	20	10	903	64
))	MJB1540	384114	7704453	1.60	0.01	0.42	0.16	181	91	36	10	30	12	1126	72
	FHB023	384077	7704443.04	0.35	0.01	0.78	0.38	409	206	82	21	63	29	2794	164
Prospect	Sample ID	E_GDA94	N_GDA94	LREO (%)	Ce2O3 (ppm)	Eu2O3 (ppm)	Gd2O3 (ppm)	La2O3 (ppm)	Nd2O3 (ppm)	Pm2O3 (ppm)	Pr2O3 (ppm)	Sm2O3 (ppm)			
	MJB1536	384146	7704472	0.21	845	19	139	341	490	N/A	113	125			
	MJB1537	384160	7704472	0.48	2026	49	377	622	1162	N/A	259	325			
Easy Life	MJB1538	384075	7704442	0.64	2870	73	542	680	1487	N/A	319	446			
Lasy Life	MJB1539	384103	7704492	0.14	560	14	101	259	325	N/A	76	87			
	MJB1540	384114	7704453	0.26	1110	23	166	427	608	N/A	143	157			
	FHB023	384077	7704443.04	0.40	1587	47	360	510	982	N/A	215	299			
Note															
TREYO is the su	m of LREO and	HREYO													
LREO is calculat	ted by summin	g the element of	oxide response	s of Ce, Eu	, Gd, La, Nd, Pm	(not analysed),	Pr and Sm.								
HREYO is calcul	lated by summ	ing the elemen	t oxide respons	ses of Dy, I	Fr, Ho, Lu, Tb, Tn	n, Yb and Y									
HREYO is calculated by summing the element oxide responses of Dy, Er, Ho, Lu, Tb, Tm, Yb and Y Locations are relative to GDA94 Zone54															

Prospect	Sample ID	E_GDA94	N_GDA94	Cu (%)	Au (g/t)	TREYO (%)
	MJB1542	383890	7704646	0.45	0.01	0.
	MJB1546	385313	7704105	0.16	0.01	0.
	MJB1547	385109	7704187	0.79	0.01	0.
	MJB1548	384381	7704306	0.11	0.01	0.
Hardway West	FHB022	384113	7704361	0.00	0.01	0.
	FHB024	384384	7704305	0.00	0.01	0
	FHB025	384384	7704305	0.22	0.01	0
	FHB026	385316	7704116	0.13	0.02	0
	FHB027	385293	7704124	0.00	0.01	0
	FHB014	384954	7705643	0.00	0.1	0
	FHB015	384956	7705638	0.00	0.09	0
	FHB016	384979	7705650	0.01	0.01	0
Hardway North	FHB017	385079	7705657	0.00	0.02	0
	FHB018	384921	7705630	0.00	0.11	0
	FHB019	384917	7705620	0.00	0.01	0
	FHB020	384916	7705620	0.00	0.01	0
Hardway South	FHB021	385699	7704145	0.09	0.08	0

Table 5. Hardway (Easy Life) - Rock Chip results for samples not anomalous in rare earth elements

#### Expected Newsflow

- May Mount Hope region drilling commencement.
- June EM results and interpretation.
- June/July South Hope, Mascotte, Mascotte Junction and Stubby drilling results.
- June/July Easy Life soil sampling program results.
- June/July Exploration Update Tourist Zone, Overlander, Pommern, Bulonga and others.
- June/July MIE JV Target Update.
- July Yandal lithium-nickel-gold air-core drilling program.

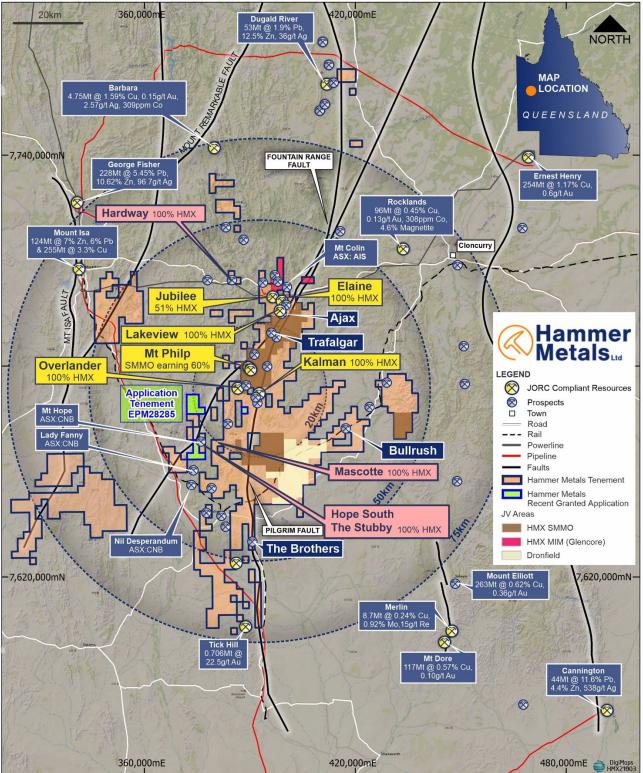


Figure 9. Mt Isa Project Area

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

For further information please contact:

### Daniel Thomas

Managing Director

**T** +61 8 6369 1195 **E** <u>info@hammermetals.com.au</u>

Media Enquiries: Nicholas Read – Read Corporate

T +61 9 9388 1474 E <u>info@readcorporate.com.au</u>

- END -

#### About Hammer Metals

Hammer Metals Limited (ASX: HMX) holds a strategic tenement position covering approximately 2,600km<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 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 optionholder, 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 previous 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.

# JORC Table 1 report – Mount Isa Project Exploration Update

This table is to accompany an ASX release updating the market with drill and rock chip results from the Hardway Prospect. Hardway is located within 100% Hammer Metals controlled tenement EPM14022.

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	<ul> <li>The drilling was conducted using reverse circulation.</li> <li>Drilling</li> <li>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.</li> <li>The average interval for the 12 hole, 1594m program was 1.84m and the average sample weight submitted to the lab was 2.78kg.</li> <li>Drilling Analysis</li> <li>All samples submitted for assay underwent fine crush with 1kg riffled off for pulverising to 75 microns.</li> <li>Samples were submitted to ALS for:</li> </ul>
Page 13 of 18	that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	<ul> <li>Fire Assay with AAS finish for gold.</li> <li>4 acid digest followed by ICP-MS for a comprehensive element suite.</li> <li>Portable XRF analysis was conducted in the field on each 1m interval to provide guidance on sampling.</li> <li>Re-analyses will be conducted as required to investigate element repeatability.</li> <li>Rock Chip Sampling</li> <li>Soil sampling consisted by taking 2-3kg of sample.</li> <li>Sampling was conducted on variable spacing and designed to highlight and characterise mineralisation observed in the region.</li> <li>Samples were submitted to ALS for: <ul> <li>Fire Assay with AAS finish for gold.</li> <li>4 acid digest followed by ICP-MS for a comprehensive element suite.</li> </ul> </li> </ul>

ИX hammermetals.com.au

		Commentary			
Drilling techniques	Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka,	Drilling			
	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).	The hole at Hardway were drilled by Remote drilling using a Hydco 70 drilling rig using the reverse circulation drilling method.			
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	<b>Drilling</b> Sample recoveries were generally in excess of 80%. Recoveries are typically low in the first			
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	5m of each hole. In holes where recovery issues, excessiv			
	Whether a relationship exists between sample recovery and grade and whether	water, or significant sampling bias occurred the hole was terminated.			
1	sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No sample recovery bias has been noted.			
Logging	Whether core and chip samples have been geologically and geotechnically logged to a	Drilling			
	level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	All drilling was geologically logged by Hamme Metals Limited Geologists.			
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Quantitative portable XRF analyses wer conducted on metre intervals on site.			
	The total length and percentage of the relevant intersections logged.	All metres drilled were analysed by the la methods listed above and lab assays ar reported herein.			
Sub- sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	<b>Drilling</b> Samples consist of RC drill chips.			
and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Samples from the hole were collected by three-way splitter with A and B duplicate taken for every sample.			
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples were taken at dominantly one metr intervals however where 2 or 4 metr composites were created, samples wer			
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	composited by riffle splitting material from each one metre sample bag.			
	Measures taken to ensure that the sampling is representative of the insitu material	Where evidence of mineralisation wa encountered or anticipated, the sample lengt was reduced to 1m.			
	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.	Rock Chip Sampling Rock Chip samples consisted of grab sample Grab sampling is used to characterise tend and lithochemical characteristics mineralisation within a region. The samp			

Criteria	JORC Code explanation	Commentary
		<ul> <li>All samples were initially analysed by portabl XRF. Samples were subsequently submitte to ALS for:</li> <li>Fire Assay with AAS finish for gold.</li> <li>4 acid digest followed by ICP-MS for comprehensive element suite.</li> </ul>
		<b>Drilling and Soil sampling QA/QC</b> Standard reference samples and blanks wer each inserted into the laboratory submission at a rate of 1 per 25 samples. Duplicate samples were taken at an interval of approximately 1 in 50 samples.
		Sampling Comment
		The sample collection methodology an sample size are considered appropriate to th target-style and drill method, and appropriat laboratory analytical methods were employed
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,	<b>Drilling Analysis</b> All samples were analysed for gold by flam AAS using a 50gm charge in addition to 4-aci multielement ICP OES and MS.
	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.	In addition to the Hammer in-house certifier reference materials, the assay laborator maintains a comprehensive QAQC regime including check samples, duplicates, standar reference samples, blanks, and calibration standards.
	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.	<ul> <li>Rock Chip Analysis</li> <li>Samples were initially analysed by portable XRF. Samples were subsequently submitted to ALS for: <ul> <li>Fire Assay with AAS finish for gold.</li> <li>4 acid digest followed by ICP-MS for comprehensive element suite.</li> </ul> </li> </ul>
Verification of sampling and	The verification of significant intersections by either independent or alternative company personnel.	Drilling and Rock Chip Sampling All lab analyses were verified by alternat company personnel.
assaying	The use of twinned holes.	Assay files were received electronically from the laboratory.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to 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.	Drilling and Rock Chip Sampling Datum used is GDA 94 Zone 54. RL information will be merged later utilising th most accurately available elevation data Drillholes will be surveyed by DGPS prior to rehabilitation.
	Specification of the grid system used.	renabilitation.

	Criteria	J	ORC
		G	uali
	Data	_	ata
	spacing		esu
	and		
	distribution		/het
			uffic
			eolo or th
			stim
			oplie
			/het
			oplie
	Orientation		/het
	of data in relation to		nbia ne ex
	geological		ie ez
	structure		th
			rient
			iner
			troa
		-	sses
	Sample security		he ecur
	Security	30	Juan
	Audits or	Т	he
	reviews	Sá	amp
	Section 2 Re	ро	rtin
	(Criteria listed i	n tl	he p
7	Criteria		JC
	Mineral		Ty
	tenement an	d	ow
	land tenui		iss
	status		ve
			na
			wil en

<b>A</b> 11 <b>1</b>								
Criteria	JORC Code explanation	Commentary						
	Quality and adequacy of topographic control.							
Data spacing and distribution	Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is	<b>Drilling</b> This release documents results from the Hardway Prospect. The drill density is not						
aistribution	sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve	sufficient to establish mineralisation continuity. Sample compositing has been applied to calculate intercepts.						
	estimation procedure(s) and classifications applied.	Rock Chip Sampling						
	Whether sample compositing has been applied.	See included figures and location table.						
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.	<b>Drilling</b> 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.						
Sample security	The measures taken to ensure sample security.	Samples 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.	<b>Drilling and Rock Chip Sampling</b> The dataset associated with this reported exploration has been subject to data import validation. All assay data has been reviewed by two company personnel. No external audits have been conducted.						
	Section 2 Reporting of Exploration Results							
0								
Criteria	JORC Code explanation	Commentary						
Mineral tenement an	<i>d Type, reference name/number, location and ownership including agreements or material</i>							

Ontonia		Commentary
Mineral	Type, reference name/number, location and	The Mt Isa Project consists of 34
tenement and	ownership including agreements or material	tenements.
land tenure	issues with third parties such as joint	The Hardway drilling and soil sampling
status	ventures, partnerships, overriding royalties,	reported herein was conducted on
	native title interests, historical sites,	EPM14022. This tenement is held by Mulga
	wilderness or national park and	Minerals Pty Ltd, a 100% owned subsidiary
	environmental settings.	of Hammer Metals Limited.
	_	
	The security of the tenure held at the time of	The areas reported herein are <u>not</u> part of
	reporting along with any known	the Mt I <mark>sa</mark> East Joint Venture with
	impediments to obtaining a licence to	Sumitomo Metal Mining Oceania ("SMMO").
	operate in the area.	
		SMMO has the right to earn a 60% interest
		by expending \$6,000,000 by 31 March 2024
		with a minimum expenditure commitment of
		\$1,000,000 by 31 March 2020. No

Criteria	JORC Code explanation	Commentary
		proportional ownership change occurs until such time as the \$6,000,000 is expended and the current SMMO interest is 0%.
		See ASX announcement dated 25 November 2019, for details of the Joint Venture.
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 Departmen records.
Geology	Deposit type, geological setting, and style of mineralisation.	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.
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.	See the attached tables.
	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	
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.	<b>Drilling</b> Drillhole intercepts with a Cu focus are quoted at a 0.1% Cu cut-off with included intercepts quoted to highlight zones of increased width or grade. Rare earth intercepts are also quoted at a
	Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation	500ppm TREOY cut-off. In addition Co intercepts are quoted with a cut-off of 500ppm.
	should be stated and some typical examples of such aggregations should be shown in detail.	The reader should assume that there are no other grades encountered in the hole apar from those quoted in the body of this report
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Rock Chip Sampling Sample responses for Cu and TREOY are presented as hand contoured figures. TREYO is the sum of LREO and HREYO

Criteria	JORC Code explanation	Commentary
)		LREO is calculated by summing the element oxide responses of Ce, Eu, Gd, La Nd, Pm (not analysed), Pr and Sm. HREOY is calculated by summing the element oxide responses of Dy, Er, Ho, Lu Tb, Tm, Yb and Y
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	<b>Drilling</b> The relationship between intersected and true thicknesses is difficult to interpret with any certainty along both trends due to the drilling density and the presence of cross cutting structures.
	lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	
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.	<b>Drilling</b> Drillhole intercepts with a Cu focus ar quoted at a 0.1% Cu cut-off with include intercepts quoted to highlight zones of increased width or grade. Rare earth intercepts are also quoted at 500ppm TREOY cut-off. In addition Co intercepts are quoted with cut-off of 500ppm
		The reader should assume that there are n other grades encountered in the hole apa from those quoted in the body of this repor
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	All relevant information is disclosed in the attached release and/or is set out in thi JORC Table 1.
	survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	Hardway will be subject to further drilling soil, rock chip sampling and drilling durin the 2023 field season.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	