

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

- 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:
  - **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** in HMHWRC006 (hole terminated in mineralisation);
  - **13m at 1.20% Cu** 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**

### 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

### CAPITAL STRUCTURE

ASX Code: HMX

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

**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 world-class 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.

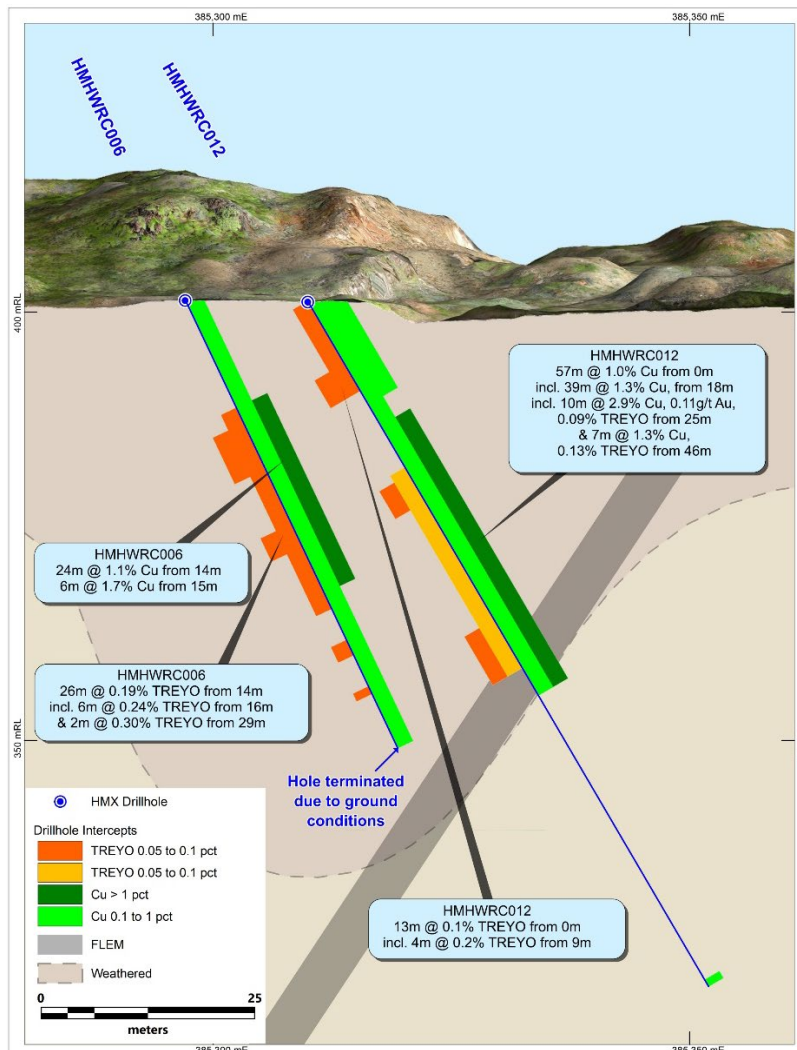
## Hardway

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 HMMHWR012, 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 HMMHWR006;
- 13m at 1.20% Cu from 35m within 38m at 0.66% Cu from 13m in HMMHWR010;
- 9m at 1.51% Cu and 0.18% TREYO from 67m within 43m at 0.54% Cu from 48m in HMMHWR005;
- 43m at 0.52% Cu and 0.12% TREYO from 57m in HMMHWR002; and
- 30m at 1.1% Cu from 48m and 26m at 0.14% TREYO from 34m in HMMHWR001 (previously reported).



**Figure 3.** Hardway Cross Section through Holes HMMHWR006 and HMMHWR012. HMMHWR006 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:

- 58m at 0.05% Co from surface in HMMWRC006 including 8m at 0.11% Co from 15m;
- 24m at 0.07% Co from 26m in HMMWRC010 including 12m at 0.1% Co from 36m; and
- 13m at 0.09% Co from 38m in HMMWRC008 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).

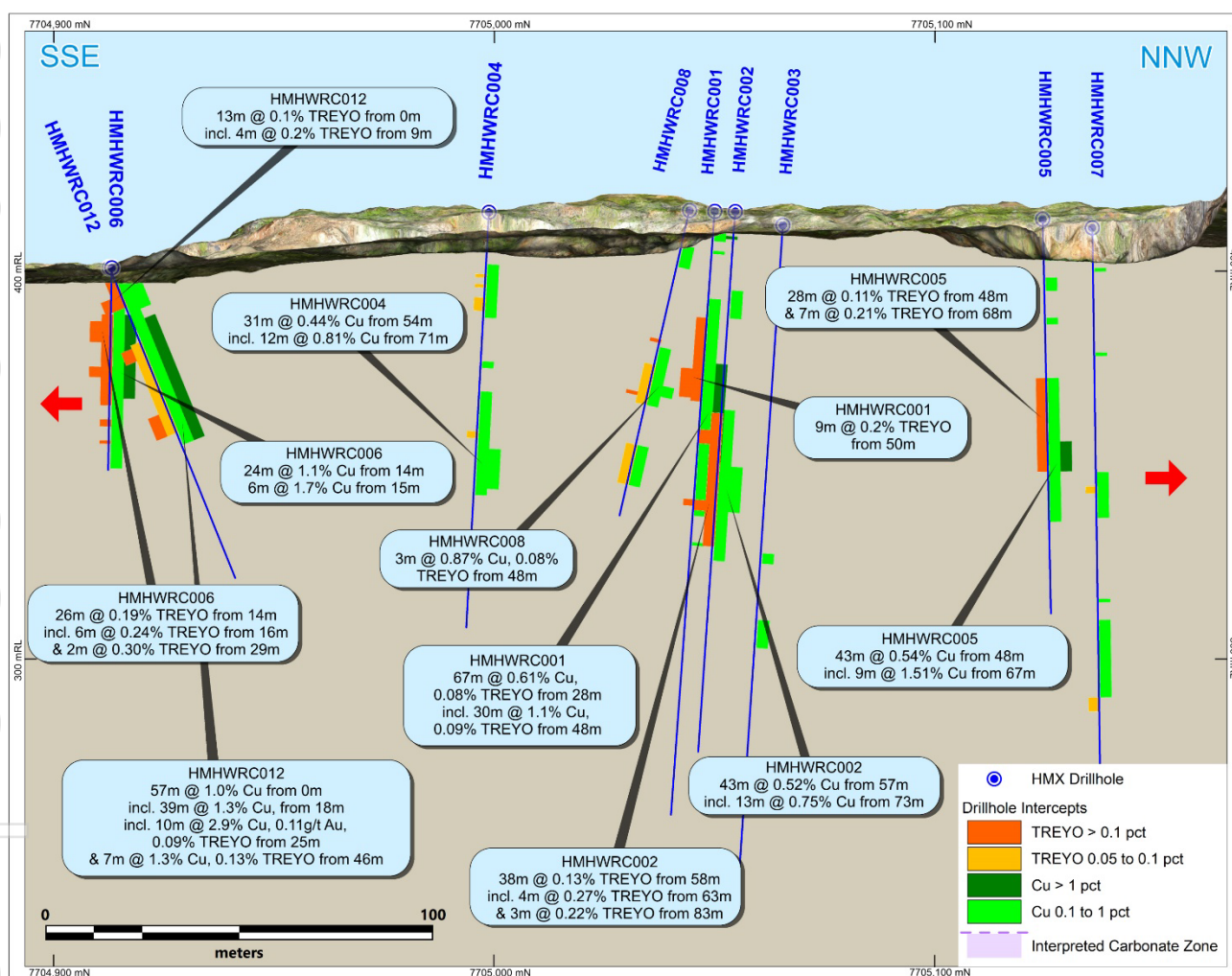


Figure 4. Hardway - Long section along the Hardway North Zone

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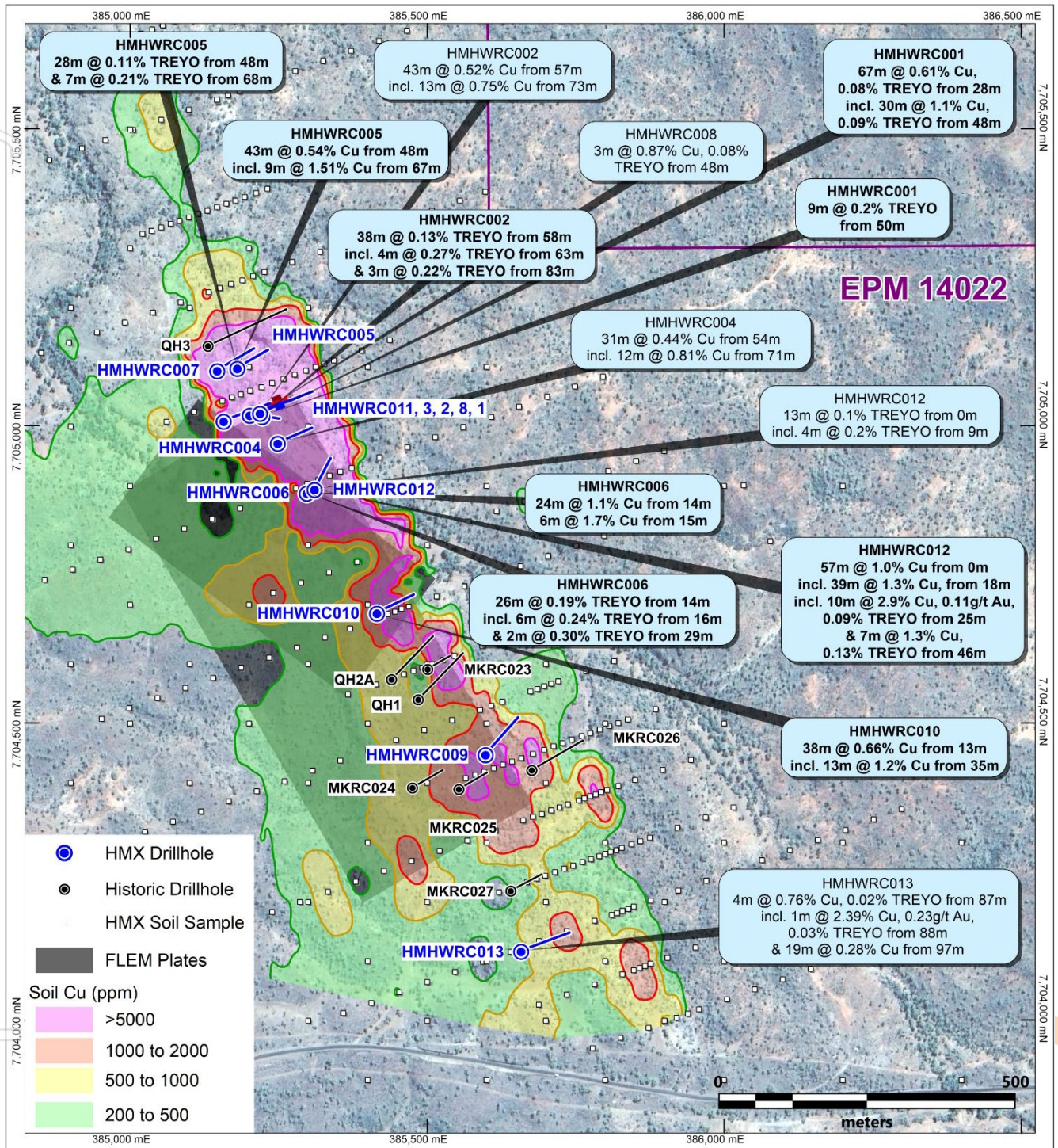


Figure 5. Hardway - Soil Cu contours and current drilling

**Table 1. Hardway – HMMHRC001 through HMMHRC013. 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.**

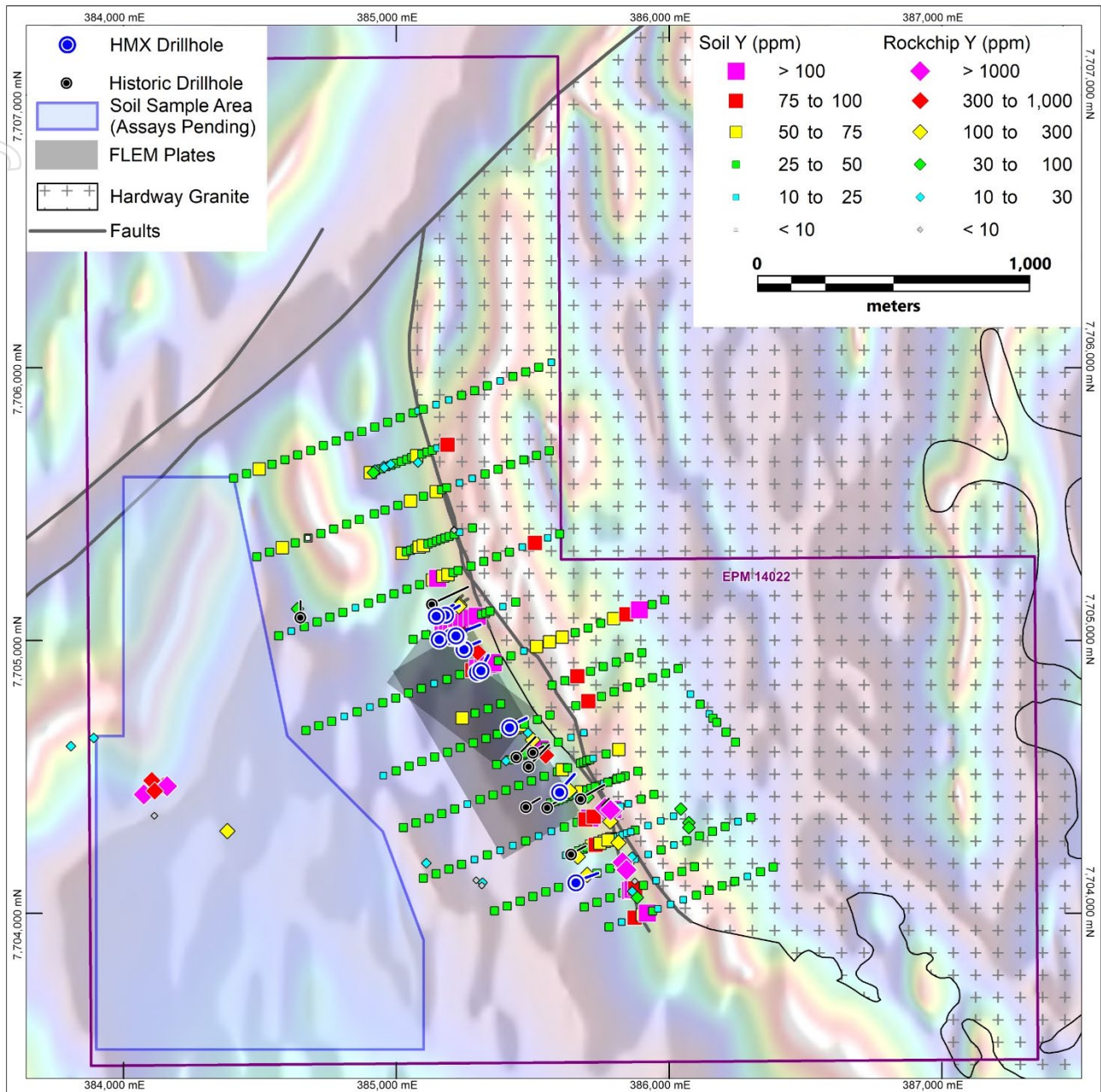
Hole	E_GDA94	N_GDA94	RL	Dip	Az_GDA	TD	Incl.	From	To	Interval	Cu(%)	Au(g/t)	TREYO (%)	HREYO/TREYO (%)	Y(ppm)	Comment																			
HMMHRC001	385210	7705030	415	-55.1	68	183	Cu Zone	6	10	4	0.65	0.05	0.11	58%	361	incl. 2m at 0.07% Co from 8m and 1m at 0.06% Co from 13m																			
								incl.	8	9	1	1.76	0.08	0.27	58%		888																		
									13	14	1	0.10	0.01	0.03	54%		89																		
									28	95	67	0.61	0.04	0.08	68%		85																		
								incl.	48	78	30	1.05	0.05	0.09	71%		338																		
									103	104	1	0.13	0.01	0.01	47%		35																		
									34	60	26			0.14	65%		510																		
								incl.	50	59	9			0.20	65%		769																		
									90	92	2			0.17	61%		578																		
								HMMHRC002	385201	7705019	415	-66.2	107.8	154	Cu Zone		23	31	8	0.19	0.03		AA		incl. 4m at 0.07% Co from 63m and 1m at 0.05% Co from 71m										
incl.	57	100	43	0.52	0.02	0.12	64%									483																			
	73	86	13	0.75	0.03	0.16	73%									684																			
	58	96	38			0.13	0.67									528																			
incl.	63	67	4			0.27	0.64									991																			
	83	86	3			0.22	0.67									866																			
HMMHRC003	385157	7705009	412	-65.0	69.9	196	Cu Zone									94	97	3	0.23	0.01	0.04	54%	108	No Significant Intercepts											
																incl.	113	121	8	0.16	0.01	0.04	55%			107									
																HMMHRC004	385248	7704972	416	-64.9	69.6	124	Cu Zone			0	2	2	0.21	0.02	0.05	51%	144	incl. 1m at 0.05% Co from 25m	
																										incl.	16	32	16	0.18	0.02	0.04	59%		143
									45	47	2	0.31	0.01	0.03	75%										118										
									54	85	31	0.44	0.02		AA																				
								incl.	71	83	12	0.81	0.02		AA																				
								HMMHRC005	385180	7705098	415	-59.6	66.7	118	Cu Zone										9	13	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		
																									incl.	18	22	4	0.24	0.07		AA			
																										30	32	2	0.17	0.04		AA			
	48	91	43	0.54	0.02	0.08	64%																	312											
incl.	67	76	9	1.51	0.02	0.18	70%																	720											
HMMHRC006	385297	7704888	402	-59.7	59.7	58	Cu Zone									0	58	58	0.55	0.02	0.11	62%	369	58m at 0.05% Co incl. 8m at 0.11% Co from 15m. Also 1m at 0.10% Co from 57m											
																incl.	14	38	24	1.06	0.04	0.20	60%		675										
																incl.	15	21	6	1.68	0.05	0.22	55%		692										
																	14	40	26			0.19	0.61		650										
																incl.	16	22	6			0.24	0.55		753										
								HMMHRC007	385146	7705094	412	-64.6	63.8	172	Cu Zone	12	13	1	0.20	0.02	0.03	62%	101		incl. 2m at 0.06% Co from 74m										
																incl.	36	37	1	0.22	0.16		AA												
																	70	83	13	0.22	0.04		AA												
																	106	107	1	0.22	0.02	0.02	79%			106									
																incl.	112	134	22	0.31	0.02	0.03	80%			139									
HMMHRC008	385222	7705017	416	-65.3	59.8	84	Cu Zone									10	16	6	0.50	0.01	0.05	63%	176	incl. 13m at 0.09% Co from 38m (individual maximum of 0.21% Co)											
																incl.	38	54	16	0.35	0.03	0.06	62%			200									
																	48	51	3	0.87	0.05	0.08	60%			278									
																	65	76	11	0.14	0.01	0.07	71%			300									
																incl.	10	11	1			0.07	46%			180									
								HMMHRC009	385598	7704448	415	-69.7	99.6	142	Cu Zone	4	7	3	0.19	0.01		AA			incl. 3m at 0.07% Co from 55m and 2m at 0.06% Co from 64m										
																incl.	22	24	2	0.11	0.01		AA												
																	42	44	2	0.16	0.01		AA												
																	48	64	16	0.22	0.02		AA												
																incl.	54	55	1			0.07	67%			255									
HMMHRC010	385415	7704686	401	-54.6	41.7	118	Cu Zone									13	51	38	0.66	0.04		AA		incl. 24m at 0.07% Co from 26m											
																incl.	35	48	13	1.20	0.02		AA												
																	38	47	9			0.09	68%			328									
																	41	43	2			0.15	63%			543									
																HMMHRC011	385157	7705009	412	-54.2	63.9	178	Cu Zone			156	157	1	0.11	0.08		AA		No Significant Intercepts	
								HMMHRC012	385310	7704894	402	-90.0	-0.4	99	Cu Zone										0	57	57	1.0	0.05	0.07	0.59	252	incl. 1m at 0.05% Co from 25m		
																									incl.	0	15	15	0.42	0.02	0.09	62%			328
																										18	57	39	1.28	0.06		AA			
																									incl.	25	35	10	2.87	0.11	0.09	63%			300
																										38	39	1	1.72	0.09	0.08	76%			345
	46	53	7	1.25	0.05	0.13	62%																	447											
	98	99	1	0.27	0.01		AA																												
	0	13	13			0.10	63%																	367											
incl.	9	13	4			0.20	67%																	764											
	24	53	29			0.08	63%									298																			
HMMHRC013	385658	7704117	416	-53.9	27.4	151	Cu Zone	0	1	1	0.25	0.01		AA		incl. 2m at 0.07% Co from 89m																			
								incl.	23	47	24	0.16	0.02		AA																				
									50	52	2	0.36	0.06		AA																				
									87	91	4	0.76	0.09	0.02	47%		55																		
								incl.	88	89	1	2.39	0.23	0.03	79%		120																		
									97	116	19	0.28	0.03		AA																				
									119	120	1	0.15	0.01		AA																				
									26	28	2			0.11	53%		307																		
									1m at 0.09% Co from 95m																										

**Note**

TREYO is the sum of LREO and HREYO  
 LREO is calculated by summing the element oxide responses of Ce, Eu, Gd, La, Nd, Pm (not analysed), Pr and Sm.  
 HREYO is calculated by summing the element oxide responses of Dy, Er, Ho, Lu, Tb, Tm, Yb and Y  
 AA - Partial or no full suite REE analyses conducted across intercept interval  
 Locations are relative to GDA94 Zone54

\*HMMHRC001 was previously reported to the ASX on 6 February 2023

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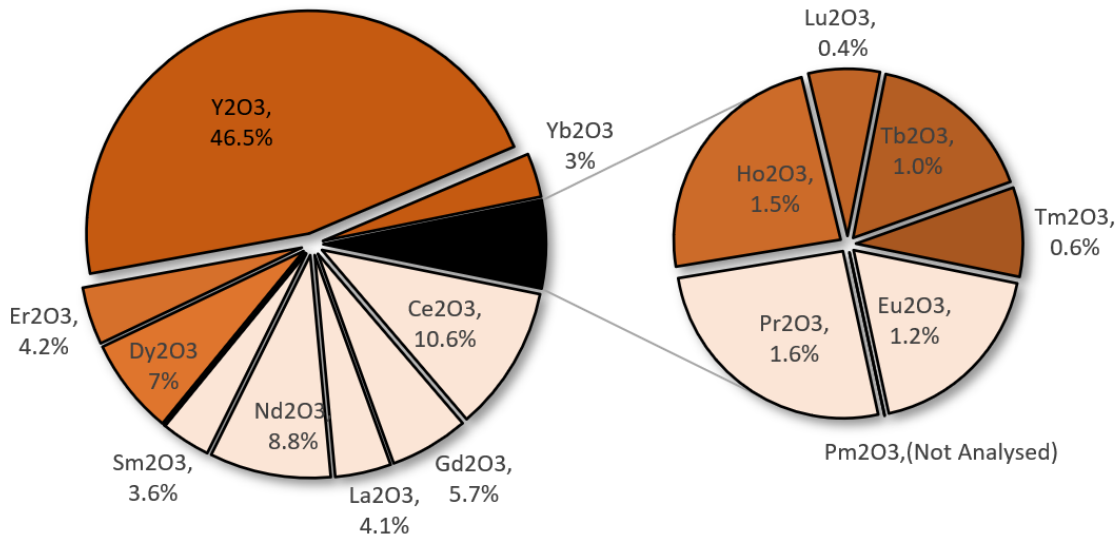


**Figure 6.** Overview of the Hardway prospect showing the location of recently completed drilling, rock chip and the Easy Life soil sampling area.

### Hardway REE's

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

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



**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 to HMHWRC013 (HREYO>100ppm) - Average and Individual Maximum individual REE component Element Oxides								
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
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 analysed in analytical suite								
TREYO is the sum of LREO and HREYO								
LREO is calculated by summing the element oxide responses of Ce, Eu, Gd, La, Nd, Pm (not analysed), Pr and Sm.								
HREYO is calculated by summing the element oxide responses of Dy, Er, Ho, Lu, Tb, Tm, 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.



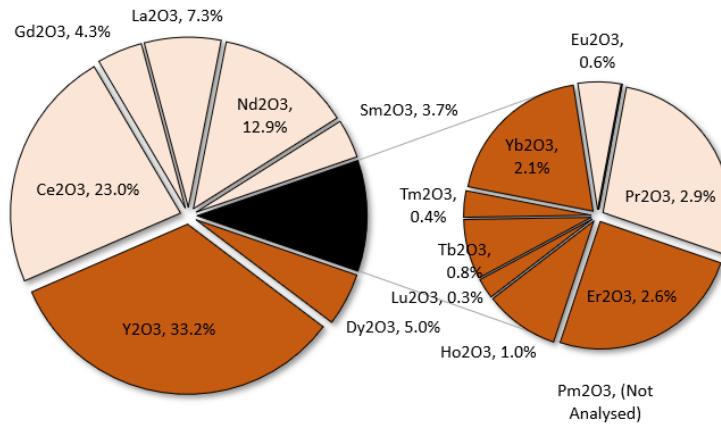


Figure 8. Hardway (Easy Life) - Average REE distribution for REE bearing rock chip samples

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
HREYO	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 analysed in analytical suite  
 TREYO is the sum of LREO and HREYO  
 LREO is calculated by summing the element oxide responses of Ce, Eu, Gd, La, Nd, Pm (not analysed), Pr and Sm.  
 HREYO is calculated by summing the element oxide responses of Dy, Er, Ho, Lu, Tb, Tm, Yb 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 (%)	HREYO (%)	Dy2O3 (ppm)	Er2O3 (ppm)	Ho2O3 (ppm)	Lu2O3 (ppm)	Tb2O3 (ppm)	Tm2O3 (ppm)	Y2O3 (ppm)	Yb2O3 (ppm)
Easy Life	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
	MJB1538	384075	7704442	0.34	0.01	1.20	0.56	644	336	126	35	104	45	4013	262
	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)			
Easy Life	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			
	MJB1538	384075	7704442	0.64	2870	73	542	680	1487	N/A	319	446			
	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 sum of LREO and HREYO  
 LREO is calculated by summing the element oxide responses of Ce, Eu, Gd, La, Nd, Pm (not analysed), Pr and Sm.  
 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

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

Prospect	Sample ID	E_GDA94	N_GDA94	Cu (%)	Au (g/t)	TREYO (%)
Hardway West	MJB1542	383890	7704646	0.45	0.01	0.01
	MJB1546	385313	7704105	0.16	0.01	0.01
	MJB1547	385109	7704187	0.79	0.01	0.01
	MJB1548	384381	7704306	0.11	0.01	0.03
	FHB022	384113	7704361	0.00	0.01	0.00
	FHB024	384384	7704305	0.00	0.01	0.00
	FHB025	384384	7704305	0.22	0.01	0.01
	FHB026	385316	7704116	0.13	0.02	0.01
	FHB027	385293	7704124	0.00	0.01	0.00
Hardway North	FHB014	384954	7705643	0.00	0.1	0.01
	FHB015	384956	7705638	0.00	0.09	0.01
	FHB016	384979	7705650	0.01	0.01	0.02
	FHB017	385079	7705657	0.00	0.02	0.02
	FHB018	384921	7705630	0.00	0.11	0.01
	FHB019	384917	7705620	0.00	0.01	0.02
	FHB020	384916	7705620	0.00	0.01	0.04
Hardway South	FHB021	385699	7704145	0.09	0.08	0.02
<b>Note</b>						
TREYO is the sum of LREO and HREYO						
LREO is calculated by summing the element oxide responses of Ce, Eu, Gd, La, Nd, Pm (not analysed), Pr and Sm.						
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						

**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.**

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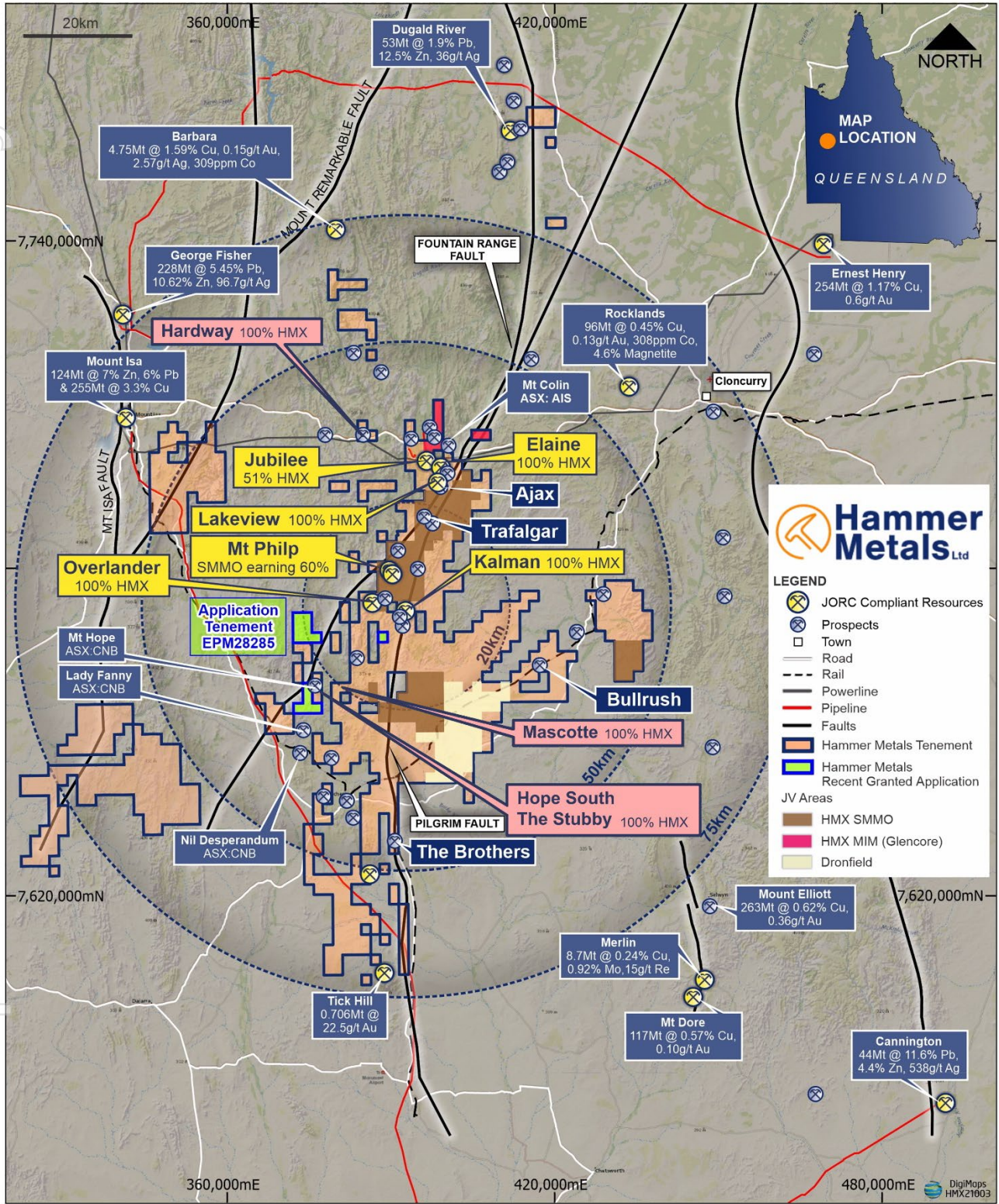


Figure 9. Mt Isa Project Area

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

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**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 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 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
<b>Sampling techniques</b>	<p><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc).</i></p> <p><i>These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>The drilling was conducted using reverse circulation.</p> <p><b>Drilling</b> 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.</p> <p>The average interval for the 12 hole, 1594m program was 1.84m and the average sample weight submitted to the lab was 2.78kg.</p> <p><b>Drilling Analysis</b> All samples submitted for assay underwent fine crush with 1kg riffled off for pulverising to 75 microns.</p> <p>Samples were submitted to ALS for:</p> <ul style="list-style-type: none"> <li>• Fire Assay with AAS finish for gold.</li> <li>• 4 acid digest followed by ICP-MS for a comprehensive element suite.</li> </ul> <p>Portable XRF analysis was conducted in the field on each 1m interval to provide guidance on sampling. Re-analyses will be conducted as required to investigate element repeatability.</p> <p><b>Rock Chip Sampling</b> Soil sampling consisted by taking 2-3kg of sample. Sampling was conducted on variable spacing and designed to highlight and characterise mineralisation observed in the region.</p> <p>Samples were submitted to ALS for:</p> <ul style="list-style-type: none"> <li>• Fire Assay with AAS finish for gold.</li> <li>• 4 acid digest followed by ICP-MS for a comprehensive element suite.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Drilling techniques</b>	<i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i>	<b>Drilling</b>  The hole at Hardway were drilled by Remote drilling using a Hydco 70 drilling rig using the reverse circulation drilling method.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>  <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>  <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i>	<b>Drilling</b>  Sample recoveries were generally in excess of 80%. Recoveries are typically low in the first 5m of each hole.  In holes where recovery issues, excessive water, or significant sampling bias occurred, the hole was terminated.  No sample recovery bias has been noted.
<b>Logging</b>	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>  <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>  <i>The total length and percentage of the relevant intersections logged.</i>	<b>Drilling</b>  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 and lab assays are reported herein.
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>  <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>  <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>  <i>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</i> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<b>Drilling</b> 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.  <b>Rock Chip Sampling</b> Rock Chip samples consisted of grab samples. Grab sampling is used to characterise tenor and lithochemical characteristics of mineralisation within a region. The sample pattern is dictated by the outcrop distribution.

Criteria	JORC Code explanation	Commentary
		<p>All samples were initially analysed by portable XRF. Samples were subsequently submitted to ALS for:</p> <ul style="list-style-type: none"> <li>• Fire Assay with AAS finish for gold.</li> <li>• 4 acid digest followed by ICP-MS for a comprehensive element suite.</li> </ul> <p><b>Drilling and Soil sampling QA/QC</b> Standard reference samples and blanks were each inserted into the laboratory submissions at a rate of 1 per 25 samples. Duplicate samples were taken at an interval of approximately 1 in 50 samples.</p> <p><b>Sampling Comment</b> The sample collection methodology and sample size are considered appropriate to the target-style and drill method, and appropriate laboratory analytical methods were employed.</p>
<b>Quality of assay data and laboratory tests</b>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p> <p><i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></p> <p><i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></p>	<p><b>Drilling Analysis</b> All samples were analysed for gold by flame AAS using a 50gm charge in addition to 4-acid multielement ICP OES and MS.</p> <p>In addition to the Hammer in-house certified reference materials, the assay laboratory maintains a comprehensive QAQC regime, including check samples, duplicates, standard reference samples, blanks, and calibration standards.</p> <p><b>Rock Chip Analysis</b> Samples were initially analysed by portable XRF. Samples were subsequently submitted to ALS for:</p> <ul style="list-style-type: none"> <li>• Fire Assay with AAS finish for gold.</li> <li>• 4 acid digest followed by ICP-MS for a comprehensive element suite.</li> </ul>
<b>Verification of sampling and assaying</b>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p> <p><i>The use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i></p>	<p><b>Drilling and Rock Chip Sampling</b> All lab analyses were verified by alternate company personnel.</p> <p>Assay files were received electronically from the laboratory.</p>
<b>Location of data points</b>	<p><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></p> <p><i>Specification of the grid system used.</i></p>	<p><b>Drilling and Rock Chip Sampling</b> Datum used is GDA 94 Zone 54. RL information will be merged later utilising the most accurately available elevation data. Drillholes will be surveyed by DGPS prior to rehabilitation.</p>

Criteria	JORC Code explanation	Commentary
	<i>Quality and adequacy of topographic control.</i>	
<b>Data spacing and distribution</b>	<p><i>Data spacing for reporting of Exploration Results.</i></p> <p><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <p><i>Whether sample compositing has been applied.</i></p>	<p><b>Drilling</b> This release documents results from the Hardway Prospect. The drill density is not sufficient to establish mineralisation continuity. Sample compositing has been applied to calculate intercepts.</p> <p><b>Rock Chip Sampling</b> See included figures and location table.</p>
<b>Orientation of data in relation to geological structure</b>	<p><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></p> <p><i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></p>	<p><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.</p>
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	<p><b>Samples</b> Pre-numbered bags were used, and samples were transported to ALS by company personnel. Samples were packed within sealed polywoven sacks.</p>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<p><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.</p>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<p><i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></p> <p><i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i></p>	<p>The Mt Isa Project consists of 34 tenements. The Hardway drilling and soil sampling reported herein was conducted on EPM14022. This tenement is held by Mulga Minerals Pty Ltd, a 100% owned subsidiary of Hammer Metals Limited.</p> <p>The areas reported herein are <b>not</b> part of the Mt Isa East Joint Venture with Sumitomo Metal Mining Oceania ("SMMO").</p> <p>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</p>



Criteria	JORC Code explanation	Commentary
		<p>proportional ownership change occurs until such time as the \$6,000,000 is expended and the current SMMO interest is 0%.</p> <p>See ASX announcement dated 25 November 2019, for details of the Joint Venture.</p>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Previous holders held title either covering the tenement in part or entirely and previous results are contained in Mines Department records.
<b>Geology</b>	<i>Deposit type, geological setting, and style of mineralisation.</i>	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.
<b>Drill hole Information</b>	<p><i>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.</i></p> <p><i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i></p>	See the attached tables.
<b>Data aggregation methods</b>	<p><i>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.</i></p> <p><i>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.</i></p> <p><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></p>	<p><b>Drilling</b></p> <p>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.</p> <p>Rare earth intercepts are also quoted at a 500ppm TREYO cut-off.</p> <p>In addition Co intercepts are quoted with a cut-off of 500ppm.</p> <p>The reader should assume that there are no other grades encountered in the hole apart from those quoted in the body of this report.</p> <p>Rock Chip Sampling</p> <p>Sample responses for Cu and TREYO are presented as hand contoured figures.</p> <p>TREYO is the sum of LREO and HREYO</p>

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
<b>Relationship between mineralisation widths and intercept lengths</b>	<p>These relationships are particularly important in the reporting of Exploration Results.</p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></p>	<p><b>Drilling</b></p> <p>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.</p>
<b>Diagrams</b>	<p>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</p>	See attached figures.
<b>Balanced reporting</b>	<p>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.</p>	<p><b>Drilling</b></p> <p>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 500ppm TREOY cut-off. In addition Co intercepts are quoted with a cut-off of 500ppm</p> <p>The reader should assume that there are no other grades encountered in the hole apart from those quoted in the body of this report.</p>
<b>Other substantive exploration data</b>	<p>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</p>	All relevant information is disclosed in the attached release and/or is set out in this JORC Table 1.
<b>Further work</b>	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	Hardway will be subject to further drilling, soil, rock chip sampling and drilling during the 2023 field season.