HEAVY RARE EARTH ELEMENT MINERALISATION IDENTIFIED AT HARDWAY

ASX RELEASE
26 July 2022

DIRECTORS / MANAGEMENT

Russell Davis
Chairman

Daniel Thomas
Managing Director

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Non-Executive Director

David Church
Non–Executive Director

Mark Pitts
Company Secretary

Mark Whittle
Chief Operating Officer

CAPITAL STRUCTURE

ASX Code: HMX

Share Price (25/07/2022)	$0.079
Shares on Issue	815m
Market Cap	$64m
Options Unlisted	28m
Performance Rights	8m
Cash (31/3/2022)	$6.4m

Hardway

- **Hammer has successfully incorporated the former Hardway Copper Mining Lease into its Exploration Permit (EPM 14022)** at no cost.
- Rare Earth Element (REE) potential identified at Hardway and in the surrounding area following a review of historic data and recent rock chip sampling.
- **Heavy Rare Earth Oxide dominant REE's identified in multiple rock chips – maximum individual grades of 0.56%TREOY and 0.39% HREOY.**
- **Average HREOY/TREOY ratio of 62%.** Maximum element grades of note recorded as follows 2,430ppm Yttrium, 298pmm Dysprosium, 752ppm Neodymium, 900ppm Cerium, 336ppm Lanthanum, and 210ppm Samarium.
- **Broad Yttrium-in-soil response (pXRF analysis only) recorded** over a strike length of 1.9km.
- Soil sampling and detailed geological mapping has commenced to identify prospective horizons and determine potential mineralised structures.

Mascotte

- Mascotte and Mascotte Junction historical workings and surrounds have been mapped with drilling targets defined - **maximum rock chip assays of 9.5% Cu and 0.4g/t Au recorded.**

Lord Nelson

- **New target zone identified along trend from the Neptune and Trafalgar prospects. Samples from copper zones with maximum assays of up to 8.3% Cu.**

Ongoing Exploration and Upcoming Drilling

- Preparations for upcoming drilling program progressing well with native title clearances completed and earthworks underway. **Drill rig expected to arrive at the end of July with multiple targets to be tested, including**:
    - **Ajax East** – testing of EM conductors along prospective high-grade copper trend;
    - **Kalman** northern resource extensions;
    - Near-field **Kalman** exploration targets;
    - **Lady Amy (Neptune)**;
    - **Lord Nelson**; and
    - **South Hope** and **Mascotte/Mascotte Junction**.
- **Kalman ore-sorting beneficiation test work in progress on an initial 500kg composite sample**.
- Off-hole EM anomalies defined at Overlander South.
- **Ongoing IP surveys being conducted** at Kalman, Hammertime, Mount Hope and in the Mount Isa East JV at Trafalgar and Pearl.
- **VTEM survey underway** along southern Pilgrim fault tenement holdings
- Loupe EM and ground magnetic surveys completed at Ajax and Ajax East to aid in the differentiation between pyrrhotite and chalcopyrite mineralisation.

Hammer's Managing Director, Daniel Thomas said:

"Hammer's work program in Mount Isa is continuing to deliver a strong pipeline of drill-ready targets. Our geophysical programs are continuing on a number of fronts, with this update providing a snapshot of some of the exciting emerging targets within our portfolio. The addition of the former Hardway Mining Lease adds another advanced prospect with surface copper mineralisation to the portfolio.

"In addition to the copper potential within the prospect, the team has unearthed a unique rare earth mineralisation style that will be the subject of further work. It's pleasing to see progress with our review of the Kalman deposit, as well as advancement of some of our southern prospects at South Hope and Mascotte. The imminent commencement of a substantial drilling program at Ajax East will provide near-term news-flow along a broad sulphidic system capable of delivering high-grade copper intercepts."

Hammer Metals Ltd (**ASX: HMX**) ("**Hammer**" or the "**Company**") is pleased to provide an update on ongoing exploration programs across its Mount Isa portfolio, including the identification of significant rare earth element (REE) mineralisation on the former Hardway Mining Lease, which has now been successfully incorporated into Hammer's tenure.

Hammer continues to progress its geophysical and geochemical programs, successfully delineating drill-ready targets at Mount Hope South Mascotte and Lord Nelson. An off-hole EM conductor has been identified at Overlander from recent diamond drilling, while IP and EM surveys continue at both of Hammer's 100%-owned prospects and within the Mount Isa East JV with Sumitomo Metal Mining.

Figure 1. *Hardway North Pit looking South*

Hardway

The Hardway mine (formerly ML2760) is situated within Hammer Metals EPM14022, located between Mount Isa and Cloncurry approximately 1km north of the Barkly highway. The Mining Lease lapsed and has now been incorporated into the 100% Hammer-held EPM14022.

Figure 2. *Aerial Photo old Hardway workings looking north*

The Hardway Copper mine is an open cut mine, located along a long quartz breccia structure trending north-west. It is hosted within the Corella formation, a geological unit which also hosts mineralisation at Hammer's Kalman Au-Cu-Mo-Re deposit, Jubilee Cu-Au deposit, Elaine Cu-Au deposit and other Hammer prospects such as Ajax, Trafalgar, Overlander and Hammertime.

The former mine pit is approximately 30m in diameter at its widest point and approximately 15m high, with secondary workings approximately 400m and 700m to the south-east. The workings extend for over a distance of approximately 1,000m.

Aquitaine Australia Minerals Pty Ltd (CR5199) reported that the grade of the historic copper production at the Hardway mine approximated 5% with an unknown tonnage.

The copper potential of the historical workings is not well understood with only three drill holes testing its potential dating back to the early 1960's. Hammer has confirmed the potential within the deposit recording a number of high-grade samples from within and near the deposit with rock chip results recording values of 3.6% Cu (Table 1).

A drilling program by Goldsearch in 2007 along strike from the main workings noted Yttrium assays exceeding 500ppm, which, at the time, was the upper limit of the analytical method utilised. A grade of >500ppm was recorded over 3m in MKRC023 (see Table 3). No over grade or rare earth element analyses were conducted on the samples and no further investigations to determine the nature of Yttrium were completed. It is Hammer's view that Goldsearch's drilling did not focus on the Yttrium potential of the project area, with Hammer's geochemical soil survey highlighting two broad Yttrium highs which remain untested by drilling (see Figure 5).*

Hammer's recent rock chip sampling and assaying of an extensive element suite identified a unique mix of high-value heavy rare earth oxides. Individual samples recorded Total Rare Earth Oxide of 0.56% TREOY with maximum HREOY grades of 0.39% -The average ratio across the samples collected of HREOY to TREOY is 62% (see Figure 3). The Hardway rare earth mineralisation is also unique in that it contains low levels of uranium and thorium.

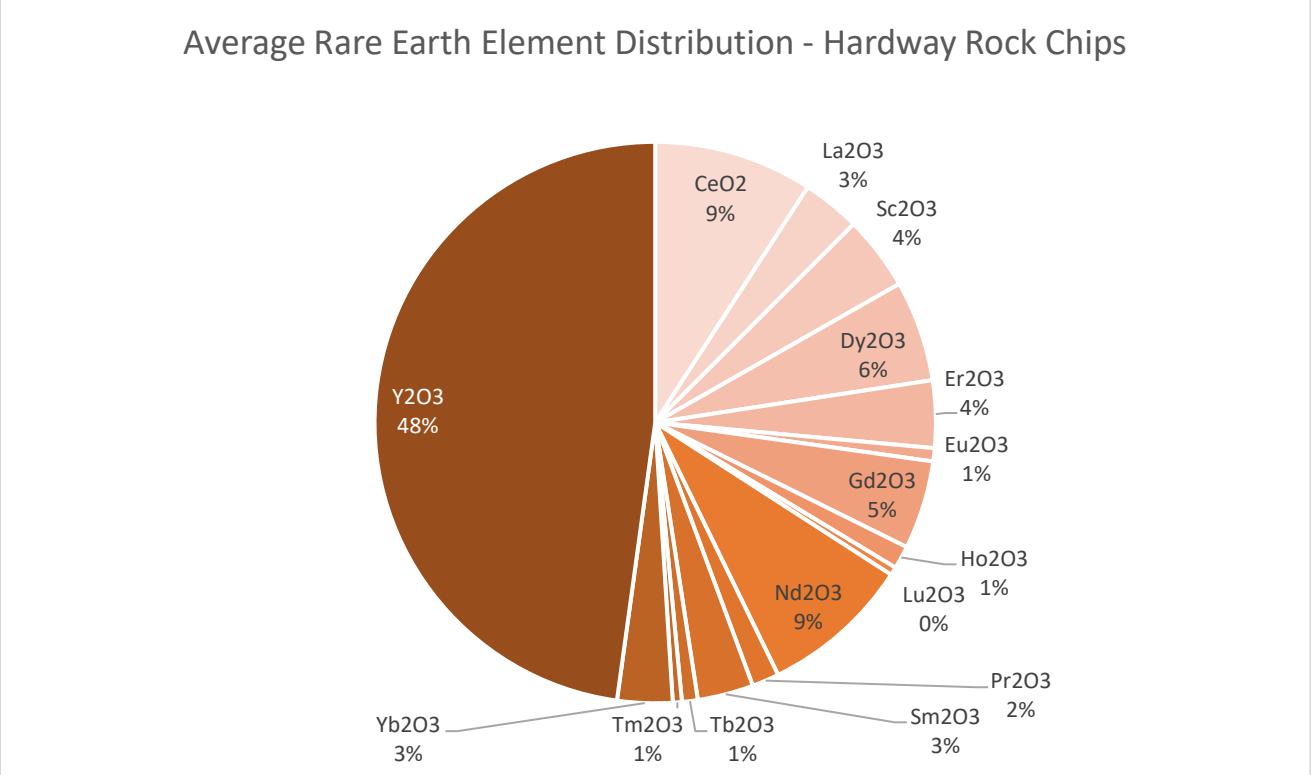

Figure 3. *Average Rare Earth Element Distribution Hardway rock chip samples (DT001 through DT006). See Tables 1 and 2 for individual analyses.*

Maximum individual grades of rare earth elements were recorded as follows: 2,430ppm Yttrium, 298pmm Dysprosium, 752ppm Neodymium, 47ppm Terbium, 31ppm Thulium, 900ppm Cerium, 336ppm Lanthanum, 192ppm Scandium, 40ppm Europium, 222ppm Erbium, 70ppm Holmium, 30ppm Lutetium, 198ppm Ytterbium, 147ppm Praseodymium and 210ppm Samarium.

* *Sourced from data obtained during the acquisition of EPM14022, in addition to Goldsearch Limited ASX release dated 7/10/2008. The data underlying these intercepts have been validated by Hammer Metals Limited personnel and it is the opinion of Hammer Metals that the historic exploration data are reliable.*

A recent soil sampling program was completed with PXRF analysis confirming broad trends of soils containing Yttrium anomalism. These zones will be subject to further field interrogation and in-fill soil sampling with the aim of identifying drill ready targets.

Scanning Electron Microscope examination of a selected sample indicated the Yttrium-bearing mineral within that sample was Xenotime.

Figure 4. *Hardway samples containing REE – Left, DT003 (TREOY 0.55% & HREOY of 0.22%). Right, TP003 (TREOY 0.56% & HREOY of 0.32%)*

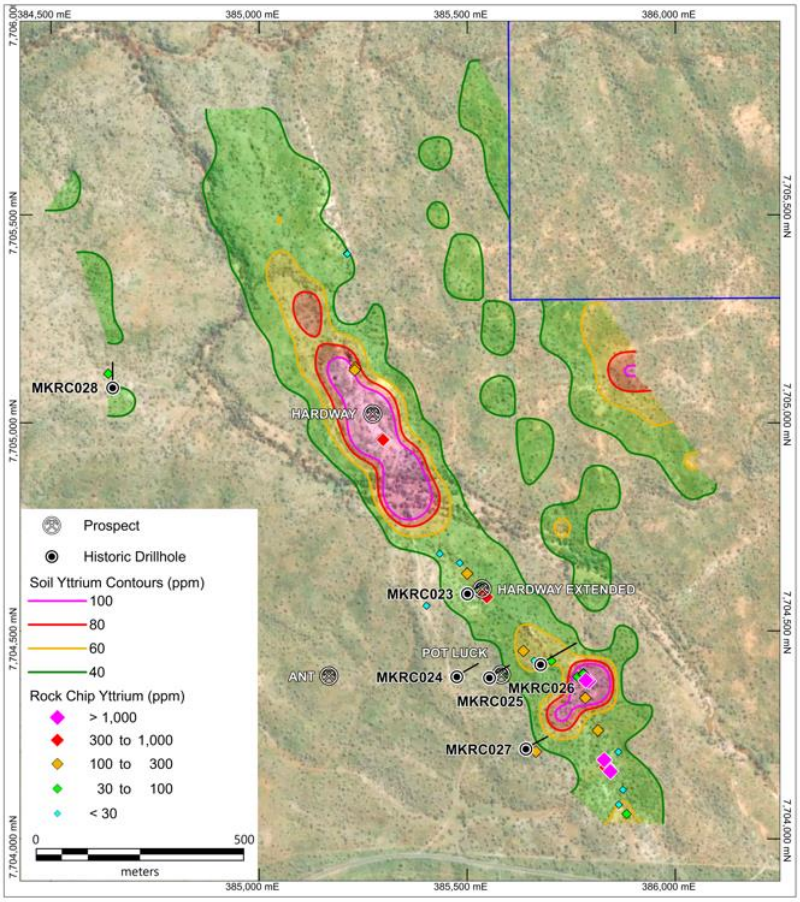

Figure 5. *Hardway soil (PXRF contours) and rock chip sampling.*

Table 1. *Hardway Rock Chip sampling. Au, Cu and Heavy Rare Earth Element Response. Note that rock chip sampling was conducted for two main outcomes: Firstly, to attempt to define the nature and tenor of Cu-Au mineralisation; and later to determine the nature of TREE mineralisation.*

Sample	E_GDA94	N_GDA94	TREOY (%)	HREOY (%)	HREOY to TREOY	Au (g/t)	Cu (%)	Dy_2O_3 (ppm)	Er_2O_3 (ppm)	Ho_2O_3 (ppm)	Lu_2O_3 (ppm)	Tb_2O_3 (ppm)	Tm_2O_3 (ppm)	Y_2O_3 (ppm)
TP002	385844	7704165	0.29	0.18	63%	-0.01	0.10	174	113	40	15	28	15	1448
22RK102	385765	7704392	0.56	0.37	66%	0.03	1.53	333	230	79	31	49	33	2946
TP003	385785	7704384	0.56	0.32	58%	0.08	3.61	342	220	75	24	56	28	2495
DT001	385837	7704175	0.29	0.21	74%	0.01	0.05	173	128	42	17	25	17	1714
DT002	385832	7704175	0.23	0.15	65%	<0.01	0.01	178	90	35	6	31	10	1112
DT003	385829	7704193	0.55	0.22	40%	<0.01	0.06	242	137	50	16	42	18	1689
DT004	385792	7704382	0.56	0.39	68%	0.03	2.25	323	254	81	34	48	35	3086
DT005	385785	7704386	0.08	0.05	64%	<0.01	0.27	43	34	11	5	6	5	387
DT006	385814	7704263	0.03	0.02	63%	<0.01	0.01	15	12	4	2	2	2	137
Maximum Individual Grade			**0.56**	**0.39**	**74%**			**342**	**254**	**81**	**34**	**56**	**35**	**3086**
Average^			**0.35**	**0.21**	**62%**			**203**	**135**	**46**	**17**	**32**	**18**	**1668**
Note														
Coordinates relative to GDA94 Zone54														
^ - Average grade utilised in the pie chart reported herein														

Table 2. *Hardway Rock Chip sampling. Au, Cu and Light Rare Earth Element Response.*

Sample	E_GDA94	N_GDA94	TREOY (%)	HREOY (%)	HREOY to TREOY	CeO_2 (ppm)	Sc_2O_3 (ppm)	Eu_2O_3 (ppm)	Gd_2O_3 (ppm)	Nd_2O_3 (ppm)	Pr_2O_3 (ppm)	Sm_2O_3 (ppm)	Yb_2O_3 (ppm)
TP002	385844	7704165	0.29	0.18	63%	260	81	25	155	248	44	88	96
22RK102	385765	7704392	0.56	0.37	66%	380	290	37	250	372	64	157	204
TP003	385785	7704384	0.56	0.32	58%	559	294	42	308	495	94	171	168
DT001	385837	7704175	0.29	0.21	74%	146	62	18	127	140	24	61	106
DT002	385832	7704175	0.23	0.15	65%	122	20	27	190	209	28	118	50
DT003	385829	7704193	0.55	0.22	40%	1054	136	46	286	877	172	244	104
DT004	385792	7704382	0.56	0.39	68%	314	281	38	248	346	59	155	225
DT005	385785	7704386	0.08	0.05	64%	21	151	4	28	17	2	12	32
DT006	385814	7704263	0.03	0.02	63%	20	26	2	11	16	3	6	12
Maximum Individual Grade			**0.56**	**0.39**	**74%**	**1054**	**294**	**46**	**308**	**877**	**172**	**244**	**225**
Average^			**0.35**	**0.21**	**62%**	**319**	**149**	**26**	**178**	**302**	**54**	**112**	**111**
Note													
Coordinates relative to GDA94 Zone54													
^ - Average grade utilised in the pie chart reported herein													

Table 3. *Goldsearch Drilling. Au, Cu Co and Yttrium Significant Intercepts.*

Hole	E_GDA94	N_GDA94	Az	Dip	TD		From	To	Interval	Gold (g/t)	Cu (%)	Co (%)	Y_ppm
MKRC023	385500	7704595	60	-55	86		29	49	20	0.04	0.46	0.07	168*
						incl.	45	48	3	0.09	1.43	0.19	500*
MKRC024	385470	7704385	60	-55	102		10	16	6	0.03	0.25	0.02	25
							52	57	5	0.07	0.25	0.05	23
							84	101	17	0.02	0.29	0.01	26
MKRC025	385550	7704385	60	-55	95		12	24	12	0.04	0.29	0.03	21
							40	89	49	0.02	0.26	0.01	11
MKRC026	385680	7704415	60	-55	198		26	30	4	0.02	0.32	0.0128	125
MKRC027	385620	7704234	60	-55	102		24	40	16	0.02	0.13	0.01	14
MKRC028	384650	7705045	0	-55	102		45	49	4	0.01	0.33	0.01	46
Note													
Coordinates relative to GDA94. Default RL utilised													
* - Includes assays which were not subject to over grade analyses													

Mascotte and Mascotte Junction

Mascotte is located approximately 20km to the south-west of Kalman and 15km north-east of Carnaby Resources' (ASX: CNB) Nil Desperandum copper-gold discovery.

Mascotte is a former copper mine, mined in the early 1900's. Production records documented in an historical exploration report (CR22223) indicated that Mount Mascotte produced 4,824 tonnes of copper, yielding 248.4 ounces of gold. There are no records of historical drilling at Mascotte with recent Hammer rock chips confirming the presence of high-grade zone of mineralisation.

The nearby prospect of Mascotte Junction is located approximately 900m north-east of Mount Mascotte and can be categorised as a 200m zone of gossanous breccia with a mineralised fracture system of approximately 100m in length.

Two previous drill holes from Texins Development in 1970 are interpreted to be incorrectly orientated with the target effectively untested by drilling.

Both targets will be considered for drilling in the upcoming drilling program.

Figure 6. *Mascotte Junction Gossan and spade from historical workings.*

Kalman

Drilling is planned to test for northern extensions to the deposit's northern resource envelope at shallow depths (refer to ASX release dated 15/2/2022). Several other high-priority target zones along trend from Kalman have also been selected for testing.

Hammer continues with its review of the development the project's potential and has now collected a 500kg composite bulk sample for an initial ore sorting trial. Samples were obtained from historical diamond core drilling and chosen to replicate the overall grade of the copper/gold/molybdenum/rhenium system.

The test work will be designed to upgrade the mineralised material with minimal effect on the overall recoveries of the valuable elements. Results from the trial program are expected to be delivered during the next quarter.

Lord Nelson

Lord Nelson is a new prospect located at the southern end of the Neptune trend on the northern side of the regional-scale Fountain Range Fault Zone. Recent prospecting at the site has returned a number of rock chip samples with copper grades of up to 8.34% Cu. Gold assays are yet to be reported.

The Lord Nelson prospect offers another walk-up drilling prospect for the upcoming program.

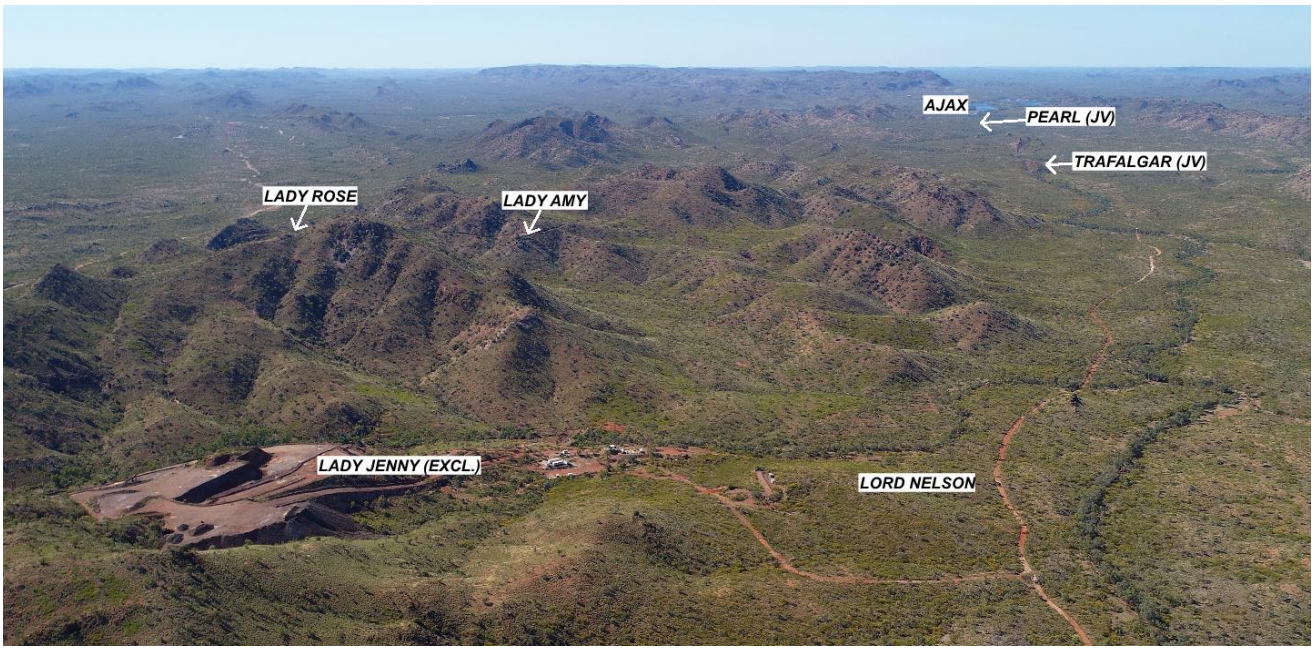

Figure 7. *Oblique view showing the location of Lord Nelson through to Ajax.*

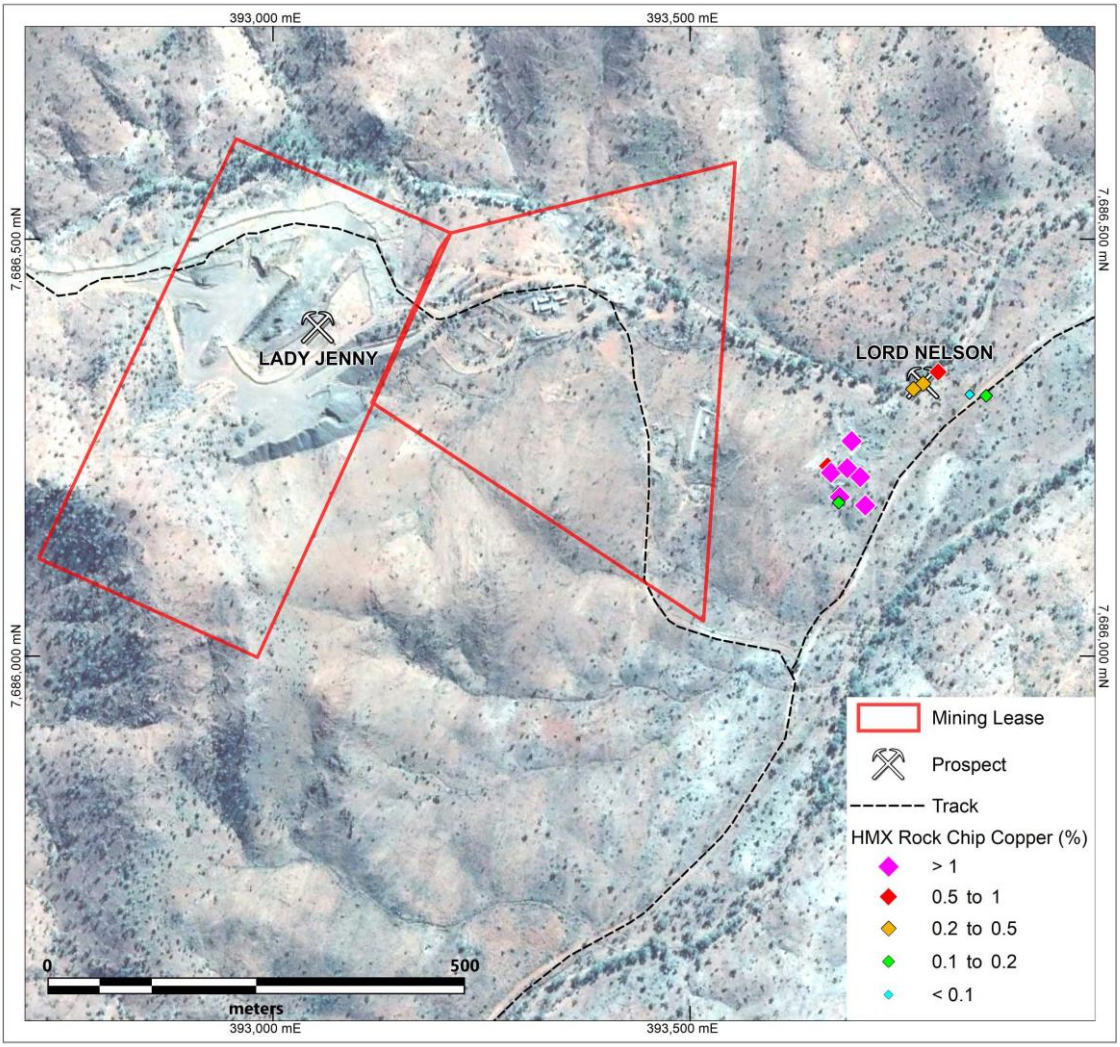

Figure 8. *Plan view showing the location of Lord Nelson relative to the Lady Jenny Mining Lease.*

Table 4. *Reconnaissance rock chip sampling from Mt Mascotte, Mascotte Junction and Lord Nelson*

MT MASCOTTE, MASCOTTE JUNCTION AND LORD NELSON ROCK CHIP SAMPLING							
PROSPECT	SAMPLE	E_GDA94	N_GDA94	Au (g/t)	Cu (%)	Co (ppm)	Ni (ppm)
MT MASCOTTE AND MASCOTTE JUNCTION	KBH001	381321	7658253	<0.01	0.04	47	161
	KBH002	381296	7658258	0.01	0.20	33	116
	KBH003	381277	7658249	0.01	0.16	33	96
	KBH004	381285	7658261	0.12	0.07	42	133
	KBH005	381270	7658291	0.03	0.19	87	293
	KBH006	381256	7658312	0.01	0.19	93	210
	KBH007	381213	7658344	0.01	0.27	35	73
	KBH008	380963	7658610	0.01	0.30	240	988
	KBH009	380959	7658631	<0.01	0.32	413	1495
	KBH010	380953	7658646	<0.01	0.35	670	2720
	KBH011	380943	7658802	0.01	0.39	179	841
	KBH012	380940	7658842	0.03	4.35	203	946
	KBH013	380872	7658886	0.26	9.45	284	369
	KBH014	380967	7658959	0.01	0.14	146	611
	KBH015	381175	7657472	0.08	0.14	89	36
	KBH016	381224	7657610	0.01	0.17	36	42
	KBH017	381226	7657610	<0.01	0.39	82	69
	KBH018	381228	7657610	0.39	5.35	1055	1140
	KBH019	381230	7657610	<0.01	0.19	40	57
	KBH020	381232	7657610	<0.01	0.19	39	47
	KBH021	381017	7658537	0.01	0.18	193	737
	KBH023	381031	7658539	0.03	0.42	478	1500
	KBH024	381065	7658491	0.02	0.85	311	916
	KBH025	381085	7658454	0.04	0.37	425	1635
LORD NELSON	MJB1435	393710	7686183	Results pending	4.91	193	508
	MJB1436	393678	7686198		0.16	176	227
	MJB1437	393680	7686193		3.93	192	337
	MJB1438	393678	7686186		0.13	121	249
	MJB1439	393665	7686230		0.81	490	648
	MJB1440	393669	7686222		1.13	82	245
	MJB1441	393689	7686227		1.69	138	148
	MJB1442	393704	7686217		8.34	252	618
	MJB1443	393694	7686260		4.56	201	210
	MJB1444	393855	7686314		0.16	60	222
	MJB1445	393797	7686343		0.68	75	165
	MJB1446	393779	7686328		0.41	346	281
	MJB1447	393768	7686322		0.21	423	102
	MJB1448	393835	7686315		0.07	358	150
	MJB1449	398733	7692815		0.91	1005	2760
	MJB1450	398735	7692812		3.86	867	1825
	MJB1451	398733	7692818		0.34	330	632
	MJB1452	398733	7692802		0.17	329	843
	MJB1453	398726	7692795		0.53	639	1020
	MJB1454	398719	7692764		7.31	261	443
	MJB1455	398730	7692758		0.23	42	120
	MJB1456	398712	7692735		5.16	319	632
	MJB1457	398702	7692737		0.19	793	2690
	MJB1458	398680	7692699		0.66	1355	3320
	MJB1459	398646	7692674		0.40	280	765
	MJB1460	398689	7692764		1.51	800	1045
	MJB1461	398696	7692762		2.53	707	1080
Note							
Coordinates are relative to GDA94 Zone54							

Overlander EM anomaly

Down-hole EM was conducted on OVDD004 at Overlander South. The survey identified three EM plates, two of which are located in positions which are down-plunge of the known mineralisation. Hammer will consider drill testing these plates, most likely with diamond drilling. The third plate is located in a position previously untested for copper mineralisation.

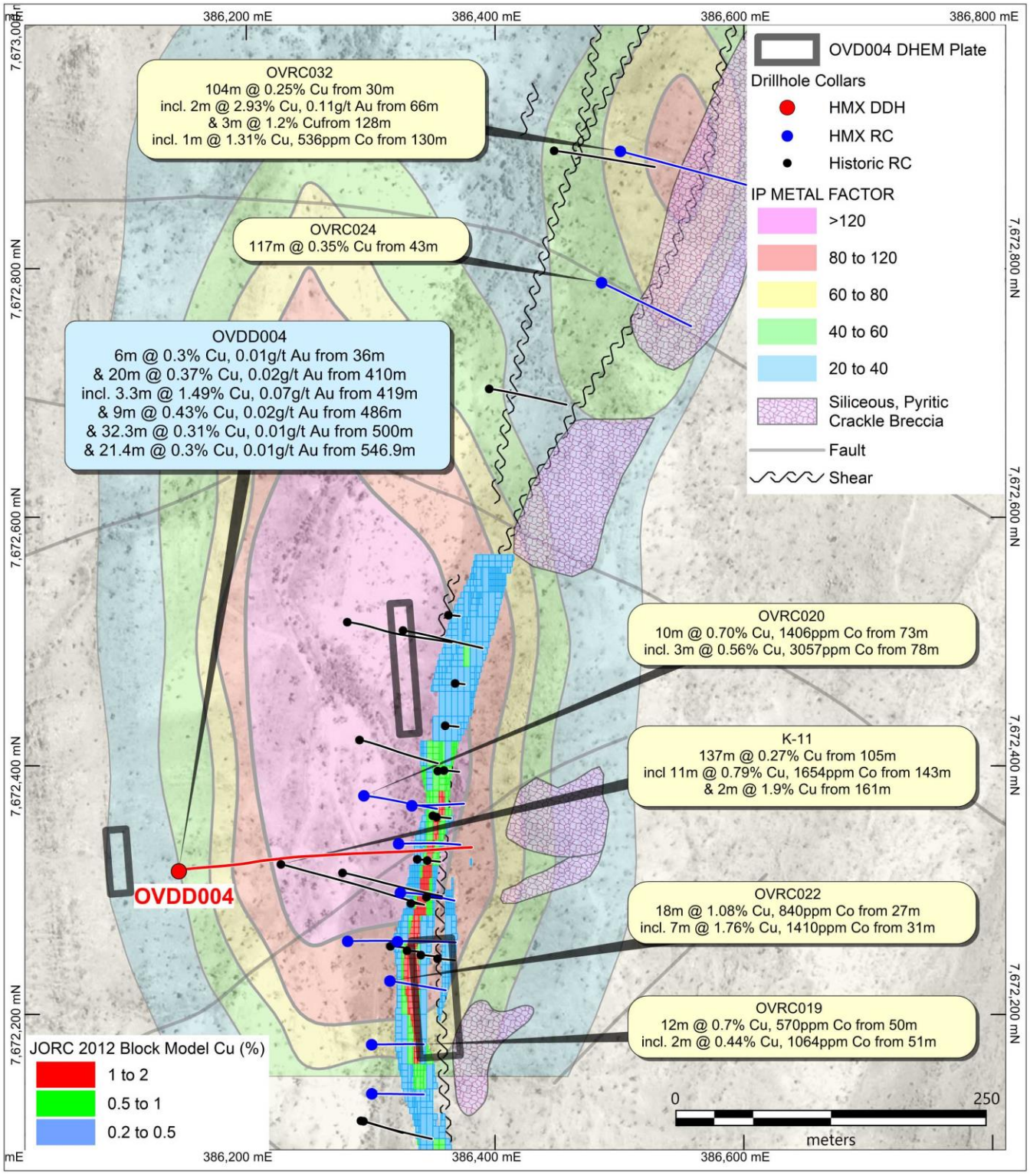

Figure 8. *Plan view showing the plates developed from the DH EM on OVDD004. (Refer ASX 12 May 2022)*

Ongoing Exploration Activities

Preparation for the upcoming drilling program is progressing well with native title clearances completed and earthworks commencing. The drill rig is expected to arrive within the week and will test multiple targets, including:

- Ajax East – testing of EM conductors sited under copper soil anomaly;
- Kalman northern resource extensions;
- Near-field Kalman exploration targets;
- Lady Amy (Neptune) – not drilled in the last program;
- Lord Nelson; and
- Mount Hope and Mascotte drill targets.

A heliborne VTEM survey has started today which aims to identify conductive targets along the regional-scale Pilgrim fault zone between Dronfield and the former Trekelano Copper Mine – a total strike length of approximately 27km at a line spacing of 200m. The survey, which will cover approximately 2,000-line kilometres, is designed to identify conductors located on secondary structures within 2km of the main fault zone.

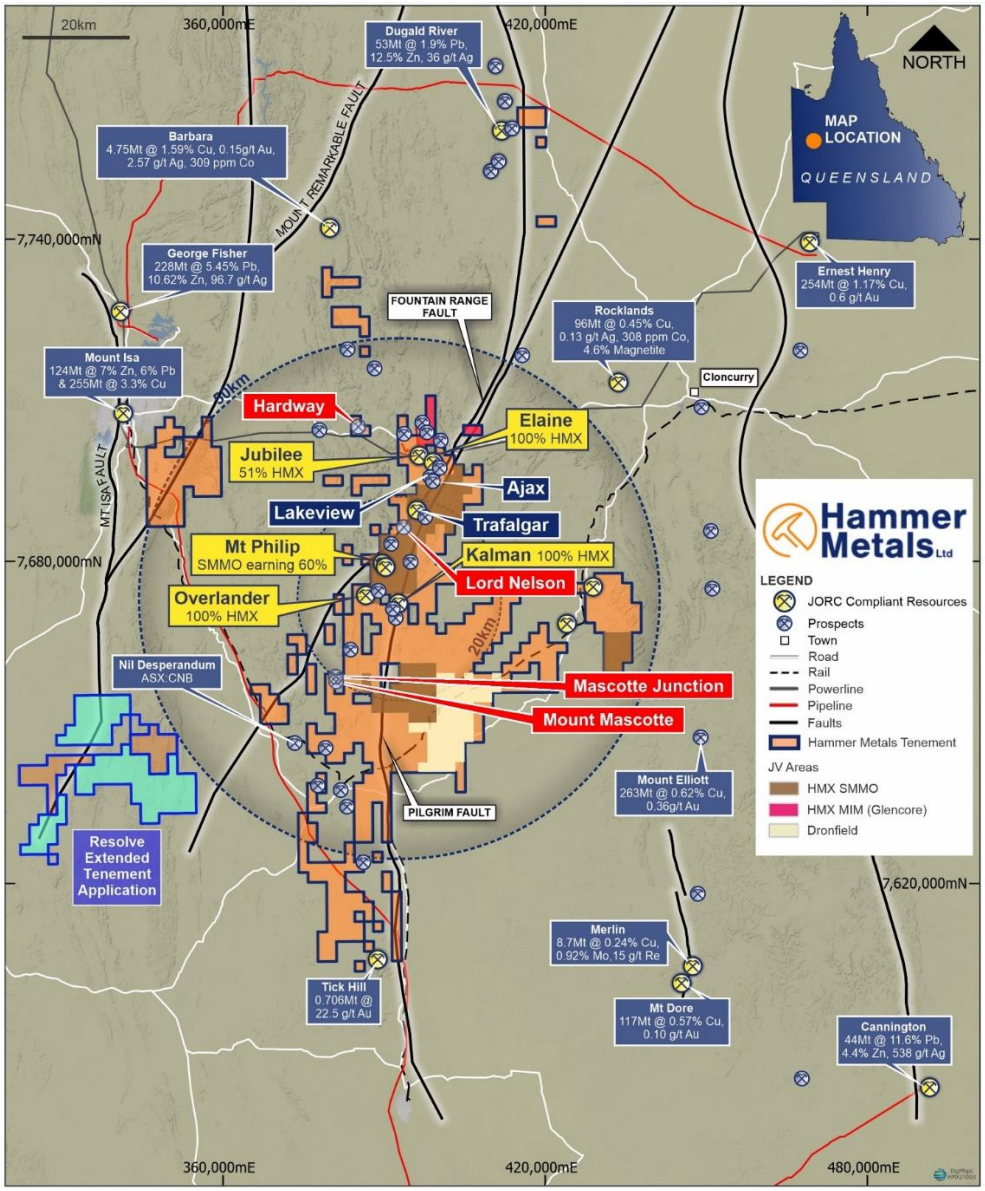

Figure 9. *Mt Isa Project Area*

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^2 within the Mount Isa mining district, with 100% interests in the Kalman (Cu-Au-Mo-Re) deposit, the Overlander North and Overlander South (Cu-Co) deposits and the Elaine (Cu-Au) deposit. Hammer also has a 51% interest in the Jubilee (Cu-Au) deposit. Hammer is an active mineral explorer, focused on discovering large copper-gold deposits of Ernest Henry style and has a range of prospective targets at various stages of testing.

Hammer holds a 100% interest in the Bronzewing South Gold Project located adjacent to the 2.3 million-ounce Bronzewing gold deposit in the highly endowed Yandal Belt of Western Australia

Competent Person Statements

The information in this report as it relates to exploration results and geology was compiled by Mr. Mark Whittle, who is a Fellow of the AusIMM and an employee of the Company. Mr. Whittle, who is a shareholder and option-holder, has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activities which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Whittle consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

The information in this report that relates to 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.

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JORC Table 1 report – Mount Isa Project Exploration Update

This table is to accompany an ASX release updating the market with rock chip results from the multiple prospects in the Hammer Metals portfolio in addition to outlining the forward program for the next 3 months.

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.

The release details, portable XRF (PXRF) soils and rock chip results. The reader must be aware that PXRF analyses are not considered definitive. All samples reported herein will subject to multielement ICP MS analysis.

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.*	No Drilling is reported in this release. **Rock Chip Sampling** Samples reported herein are a mix of continuous chip face sampling and grab sampling. The samples are tabulated separately in the body of the report. **Rock Chip Analysis** All samples submitted for assay underwent fine crush with 1kg riffled off for pulverising to 75 microns. Samples were submitted to ALS for: • Fire Assay with AAS finish for gold. • 4 acid digest followed by ICP-MS for a comprehensive element suite. Re-analyses will be conducted as required to investigate element repeatability. **Soil sample PXRF Analysis** Portable XRF analyses were conducted using an Olympus Vanta on a subset of each soil sample. Standards are inserted into portable XRF analyses to monitor possible instrument drift. Calibration checks are also conducted daily. Samples will be submitted to the lab for analysis in due course.
Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	No Drilling is reported in this release.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	No Drilling is reported in this release.

Criteria	JORC Code explanation	Commentary
	Measures taken to maximise sample recovery and ensure representative nature of the samples. *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* *The total length and percentage of the relevant intersections logged.*	No Drilling is reported in this release.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.* *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* *Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	No Drilling is reported in this release.
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.*	No Drilling is reported in this release. **Rock Chip Samples** All samples were analysed for gold by flame AAS using a 50gm charge. Each sample was also analysed by 4-acid multielement ICP OES and MS. 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.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes.* *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* *Discuss any adjustment to assay data.*	All assays have been verified by alternate company personnel. Assay files were received electronically from the laboratory. **Soil Sampling** Soil samples were analysed by an Olympus Vanta portable XRF. Each soil sample weighs between 100 and 200 grams and comprises -2mm sieved material. A 50gram subset was taken from each sample and placed in an analysis cup. During PXRF analysis standards and blanks were regularly inserted into the sample sequence to monitor instrument drift. Whilst not being a substitute for laboratory analysis the portable XRF is a useful tool to analyse for elements such as Y.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used.* *Quality and adequacy of topographic control.*	Datum used is GDA 94 Zone 54. RL information will be merged at a later date utilising the most accurately available elevation data.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.* *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* *Whether sample compositing has been applied.*	**Rock Chip Samples** The nature of rock chip sampling was grab sampling. This was done in an effort to identify and characterise the REE bearing zones **Soil Sampling** The soil sampling was conducted on 100m or 200m line spacing with a 50m sample spacing.
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.*	**Soil Sampling** Soil lines were oriented close to perpendicular to the interpreted structural trends in the prospect area.
Sample security	*The measures taken to ensure sample security.*	**Rock Chip Samples** Pre-numbered bags were used, and samples were transported to ALS by company personnel. Samples were packed within sealed polywoven sacks. **Soil Sampling**

Criteria	JORC Code explanation	Commentary
		Pre-numbered bags were used, and samples will be transported to ALS by company personnel. At this stage the samples have not been submitted to the lab.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	The dataset associated with this reported exploration has been subject to data import validation. All assay data has been reviewed by two company personnel. No external audits have been conducted.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	The Mt Isa Project consists of 34 tenements. The Hardway Prospect is located on EPM14022. The tenement is held by a Mulga Minerals Pty Ltd, a 100% owned subsidiary of Hammer Metals Limited. Mt Mascotte and Mascotte Junction are located on EPM26777. Lord Nelson is located on EPM26904. Both EPM26775 and EPM26904 are held by Mt Dockerell Mining Pty Ltd, a 100% owned subsidiary of Hammer Metals Limited.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	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.*	The Hardway prospect is located on EPM14022. The nature of rare earth mineralisation at the prospect is as yet unknown, although it appears to be related to a NNW trending shear zone which also commonly shows evidence of Cu mineralisation. The Lord Nelson Prospect is located on the northern side and within 200m of the Fountain Range Fault. It presents as a series of foliation parallel gossanous zones which strike north-south across a 50m wide zone. Mt Mascotte and Mascotte Junction are located on a major lithological contact between resistant felsic volcanics and a more mafic metasedimentary unit. The style of mineralisation is shear

Criteria	JORC Code explanation	Commentary
		zone hosted.
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 why this is the case.*	No Drilling is reported in this release.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	**Rock Chip Samples** All rock chip samples are tabulated. In relation to the depiction and explanation relating to rare earth elements, average values of rare earth element response are also tabulated. In order to depict this response, the average values were presented as a pie chart. **Soil Sampling** Portable XRF Y response was contoured, and this is presented as a figure reported herein.
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	No Drilling is reported in this release. The relationship between intersected and true thicknesses cannot be reported with any certainty given the nature of sampling reported herein.

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.*	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.*	**Rock Chip Samples** All samples taken from the rare earth mineralised zone are depicted.
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.*	**Rock Chip Samples** A sample was submitted to ALS metallurgy for scanning electron microscope studies. The HREE mineral identified during this process was Xenotime.
Further work	*The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Hammer Metals is planning to drill Mt Mascotte, Mascotte Junction and Hardway in 2022. Mapping will be conducted at Lord Nelson to better understand mineralisation.