

## ASX RELEASE

12 May 2020

### DIRECTORS / MANAGEMENT

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Non – Executive Chairman

**Daniel Thomas**

Managing Director

**Nader El Sayed**

Non-Executive Director

**Ziggy Lubieniecki**

Non-Executive Director

**Mark Pitts**

Company Secretary

**Mark Whittle**

Chief Operating Officer

### CAPITAL STRUCTURE

#### ASX Code: HMX

Share Price (11/5/2019)	\$0.023
Shares on Issue	559m
Market Cap	\$12.9m
Options Listed	190m
Options Unlisted	33m
Performance Rights	8m

## DRILL TARGETS CONFIRMED – MT ISA JOGMEC JOINT VENTURE

### HIGHLIGHTS

- **Compelling drilling targets** have been confirmed at the **Shadow and Toby** prospects with **diamond drilling planned for June**
- Mapping at the Shadow prospect has delineated a mineralised multiphase breccia unit outcropping over a strike length of 450m with a maximum width of 150m
- **Copper mineralisation** is visible at surface in the form of chalcocite and chalcopyrite. Further rock chip sampling of this prospect has identified additional high-grade samples with maximum individual grades of **6.7g/t Au and 28.2% Cu**
- Ground Electro Magnetic (EM) survey at Toby has identified prospective conductive plates which will be used to guide drilling
- Queensland Government Collaborative Exploration Initiative (CEI) funded Magneto telluric (MT) survey **identifies** the **Kalman mineralisation structure** whilst also identifying **new untested conductive targets**

**Hammer Metals Ltd** (ASX HMX) (“Hammer” or the “Company”) is pleased to provide an update on its Mount Isa exploration activities. Results from the Phase 1 exploration program on the JOGMEC Joint Venture project have now been received. Planning of a second phase program including drilling, further grassroots exploration activities and comprehensive data review is underway. Compelling initial drilling targets have emerged at Shadow and Toby which will be tested in Phase 2.

The Phase 1 program was successfully completed at the end of FY20 Q3. The aims of the Phase 1 program were to collect high-quality baseline geophysical data at each of the joint venture areas in addition to elevating the Shadow and Toby prospects to drill ready status.

Geological mapping at the Shadow prospect has been successful in delineating a mineralised multiphase breccia on the margin of the Mt Philp Breccia. Mapping has defined this unit over a strike length of 450m and a maximum width of 150m. Broader potential of this system has been identified with field observations of copper sulphide visible sporadically over a 4km magnetic trend extending to the south.

Copper mineralisation was observed on surface at Shadow in the form of chalcocite and chalcopyrite. Further rock chip sampling at this prospect has continued to identify high grade gold and copper samples with maximum recorded grades of 6.7g/t Au and 28.2% Cu.

A ground EM survey at the Toby and Charlie prospects identified conductive plates at Toby which provide a compelling target and will assist guiding Phase 2 drilling. Historical reconnaissance rock chip sampling at Toby has obtained individual peak grades of up to 18.4g/t Au, 76g/t Ag and 15.1% Cu (see ASX announcement 15 October 2018).

Detailed gravity surveys over portions of the Even Steven, Mount Philp, Dronfield West and Malbon joint venture areas have outlined multiple grassroots targets which will be evaluated during the Phase 2 program.

Hammer also continues to advance its 100% owned projects in Mount Isa with the completion of a MT survey across the Pilgrim and Fountain Range Fault structures, split across two transects. The MT survey was 100% funded by the Queensland Government as part of its CEI program (see ASX announcement dated 26 February 2020).

The southern transect of the survey went across Hammer's Kalman Copper Gold deposit (20Mt at 0.61% Cu, 0.34g/t Au, 0.14% Mo, 3.7g/t Re and see Table 1) with the aim of further understanding the surrounding geological structures and their importance to the high grade mineralisation identified at the project (7m @ 23.4% Cu, 0.5g/t Au from 582m (K-106C) (refer ASX announcement 27 September 2016). The survey is now complete, and preliminary imagery indicates that the MT method has identified new several conductors including the Kalman structure at depth. An interesting off-section conductor requiring further investigation was delineated to the north of Kalman.

Hammer is also preparing to initiate its CEI diamond drilling program at the Koppany copper and REE prospect as part of its upcoming field activities in Mount Isa.

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

*"The first program of the JOGMEC Joint Venture has positioned Hammer for success in 2020 with the definition of a number highly prospective Copper/Gold drill targets. Diamond drilling at Shadow will test the depth extent of surface Cu-Au mineralisation that has already been observed. The upcoming program will also see Hammer embark on significant field work to elevate earlier stage targets that have been identified during this program. These upcoming work programs should ensure a steady stream of results from the Mount Isa projects throughout the remainder of 2020.*

*Initial results from the Queensland Government funded CEI MT survey are encouraging. The results from this survey illustrate the potential around our Kalman deposit highlighting a number of structures and conductive bodies with the potential to host high grade mineralisation."*

## **Mount Isa Project – JOGMEC JV Phase 1 Program**

The Phase 1 JOGMEC JV program commenced on 26 January with all field work programs completed by 31 March 2020. The main aims of the Phase 1 program were to delineate drill targets at the Shadow and Toby Prospects and to collect high quality baseline geophysical data in all Joint Venture areas (Figure 1).

### ***Shadow Geological Mapping***

The Shadow prospect was discovered by Hammer during ground follow-up of soil geochemical anomalies. The prospect is located on the western margin of the Mt Philp Breccia to the east of the Mt Philp Hematite Deposit (Figures 2 and 3). There is no historical drilling at this target with the nearest focussed copper drilling having occurred approximately 4.5km to the north. Drilling at the Mt Philp iron project (600m to the west) focussed on the delineation of the hematite deposit and did not consider the potential of the hematite alteration as an indicator of the presence of a copper-bearing IOCG alteration system.

Mapping indicates that surface mineralisation is associated with a multiphase magnetite-altered breccia which has a marginal zone of silica-magnetite alteration. The current extent of the breccia is approximately 450m in strike length and up to 150m in width (Figure 5). The silica-magnetite alteration zone extends for over 4km along strike and the zone is marked by a series of magnetic anomalies (Figure 6). Zones of copper mineralisation within the silica-magnetite alteration trend have been observed sporadically for up to 4km to the south.

The multiphase breccia hosts copper mineralisation (and associated gold) as fine disseminations, blebs and stringers with chalcopyrite commonly observed in rock chips at surface (Figure 4).

During the **Phase 2** program, Shadow will initially be diamond drilled to gather high quality geological information. Surface exploration will consist of mapping and prospecting along the broader Shadow magnetic trend to the south. Follow up reverse circulation drilling is planned primarily over these prospects however a number of other high-ranking targets and advancing grassroots targets may be considered by the Joint Venture prior to the start of a follow-up program.

### ***Toby and Charlie ground EM Program***

The Toby prospect is located close to the intersection of the Ballara, Kalman West and Pilgrim Faults, a zone of major structural complexity on the eastern margin of the Mt Philp Breccia and west of the Pilgrim Fault. The prospects are approximately 8km along strike to the north of Hammer's Kalman Cu-Mo-Au-Re deposit. Historical reconnaissance rock chip sampling at Toby has obtained individual peak grades of up to 18.4g/t Au, 76g/t Ag and 15.1% Cu.

A fixed loop EM survey was conducted over Toby and Charlie to further define conductors which were discovered by a Heliborne VTEM survey Hammer Metals commissioned in 2016 along the Pilgrim Fault (see ASX announcement dated 21 December 2016).

Three conductive plates were modelled from the ground EM response (Figure 7). It is anticipated that these zones will be drill tested during the Phase 2 program.

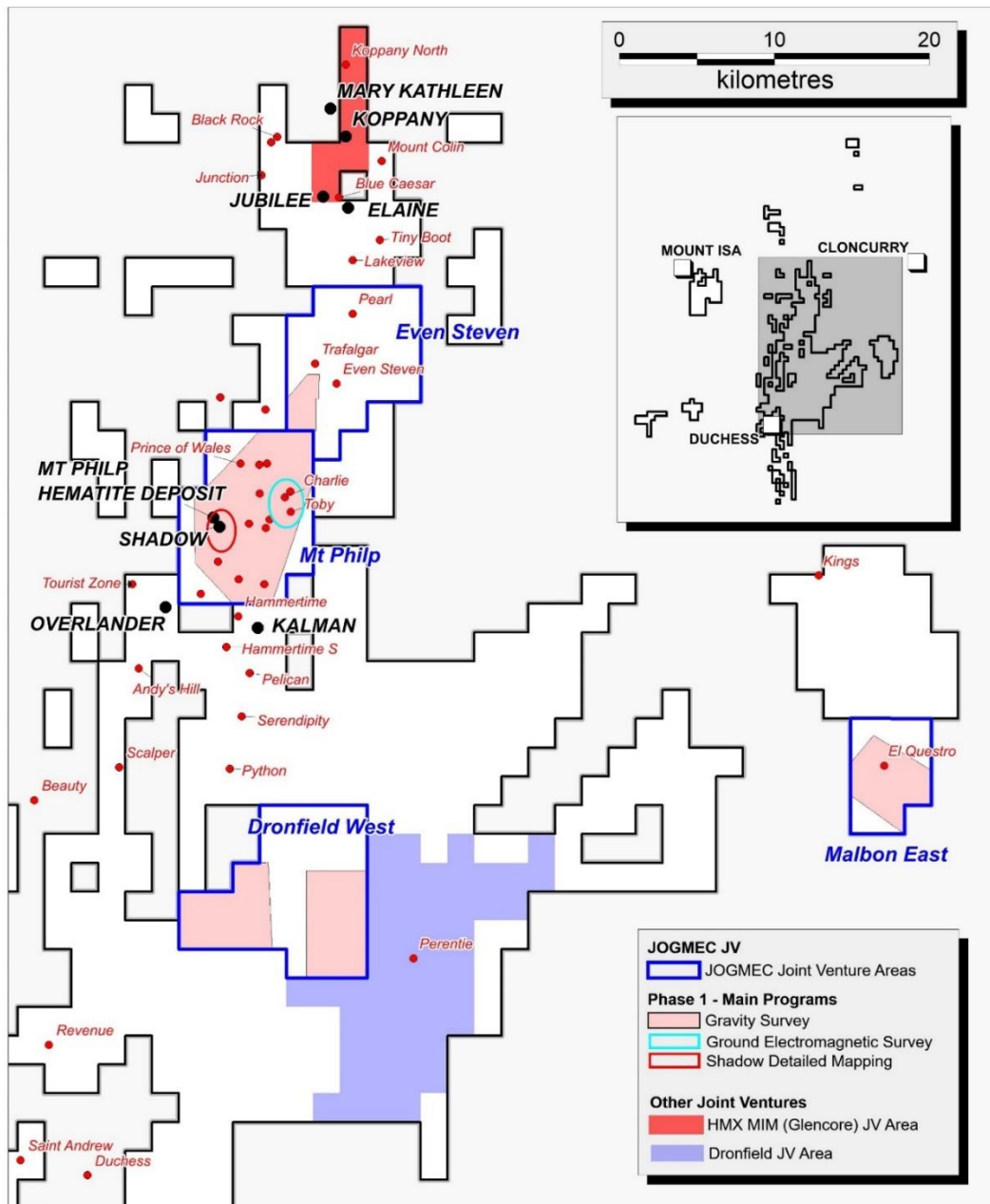
### ***Ground Gravity Surveys***

Ground gravity surveys were conducted by Atlas Geophysics in February and March over portions of each Joint Venture area (Figure 1). The resulting data has been imaged and three dimensionally modelled.

The surveys identified grassroots targets at Malbon on the northern margin of the Wimberu granite within the Timberu Formation (Figure 8). Anomalous gravity responses are also present in the Dronfield northwest JV area and below elevated soil geochemical responses within the Even-Sтивен JV area (Figures 9 and 10 respectively). These targets are interpreted to represent magnetite alteration zones associated with potential IOCG systems. In the Dronfield Northwest Joint Venture area, gravity anomalies have been identified underlying zones of elevated historical surface rock chip gold and copper anomalism (Figure 9).

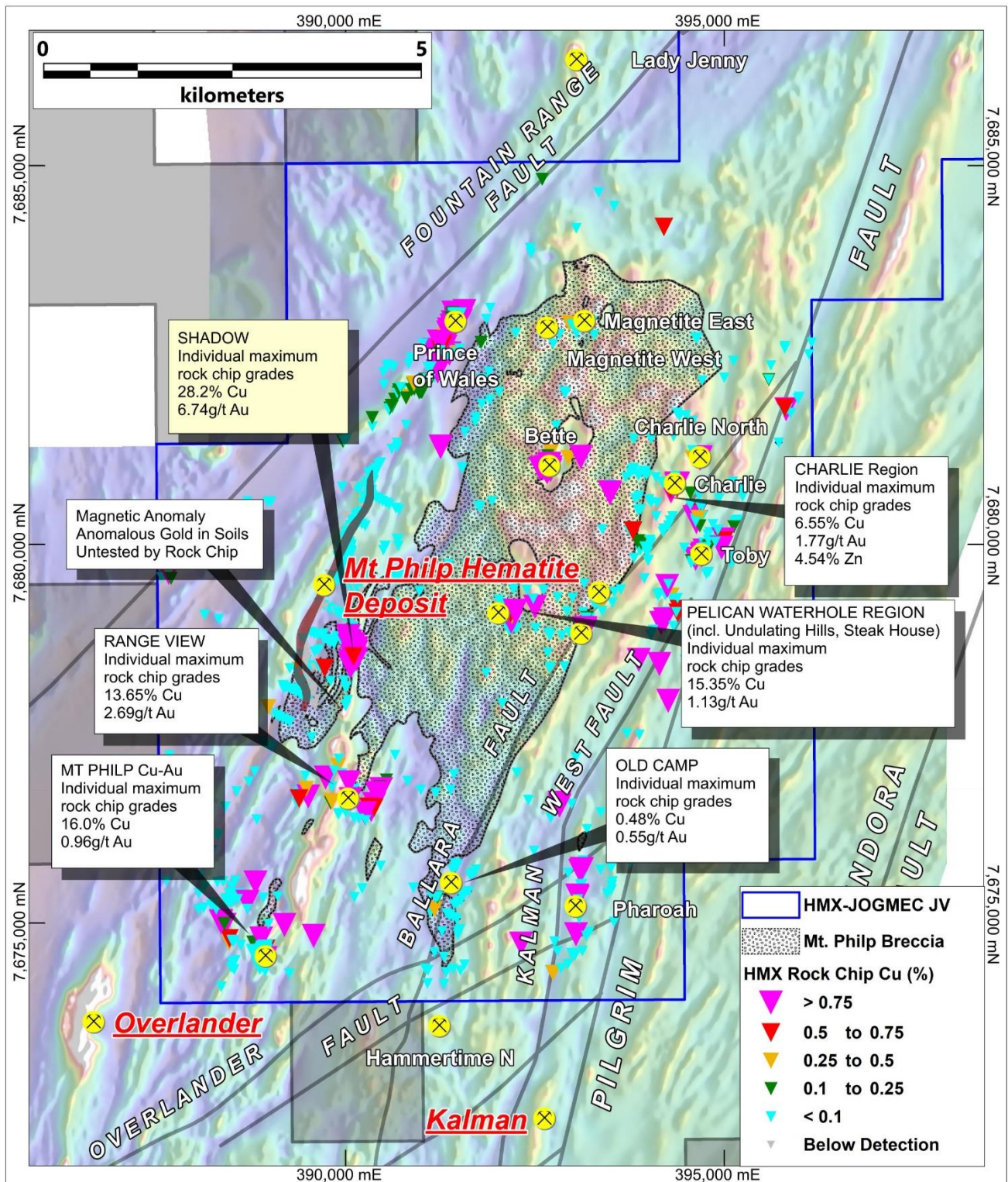
### **Multidisciplinary Interpretation by PGN Geoscience**

An updated geological interpretation was completed by PGN Geoscience with experienced consultants utilising and combining various information sources including the available geology, geochemical and high-resolution geophysical datasets. The detailed study has re-interpreted the geology across the Joint Venture areas and will aid in future interpretation detailed targeting.



**Figure 1. JOGMEC JV – Phase 1 Program activity**



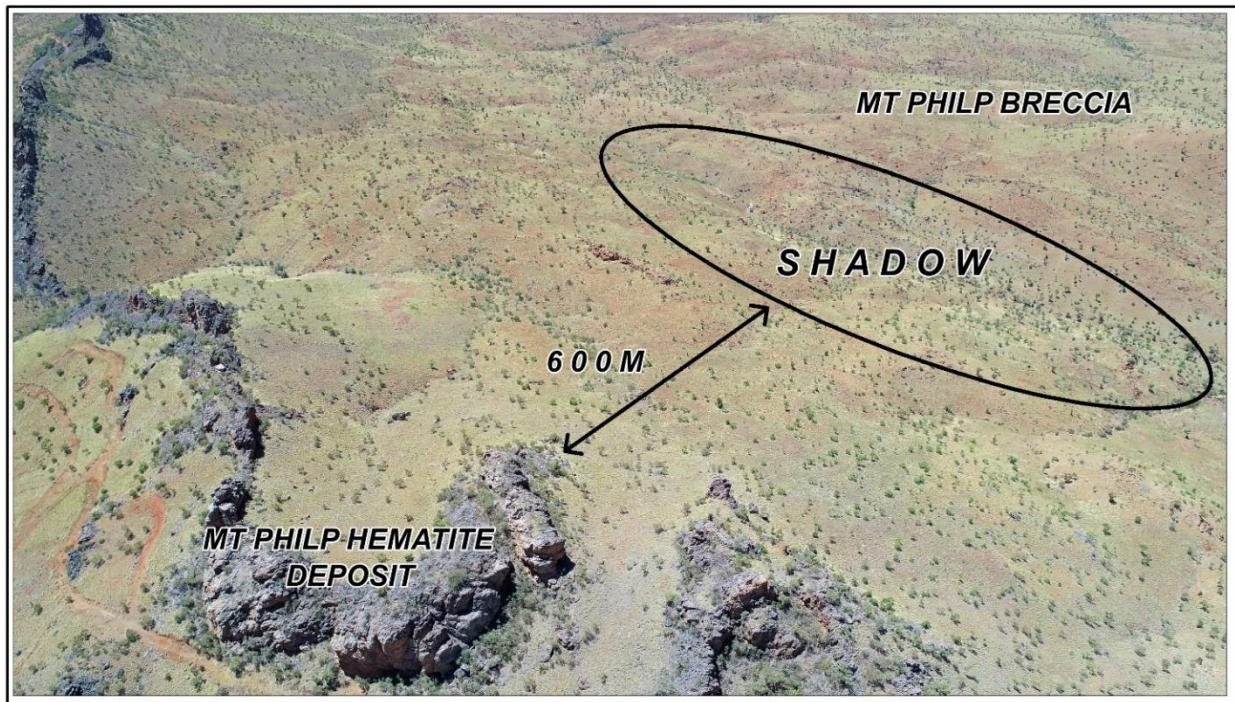


**Figure 2.** Mt Philp Project – Showing the location of key prospects



### Mount Isa Project – JOGMEC JV Phase 2 Program

Two phases of drilling are planned primarily to test the Shadow and Toby prospects. Diamond drilling will initially be conducted to gather high quality geological information. Follow up reverse circulation drilling is planned primarily over these prospects however a number of other high-ranking targets and advancing grassroots targets may be considered by the Joint Venture prior to the start of a follow up program (Figure 11).

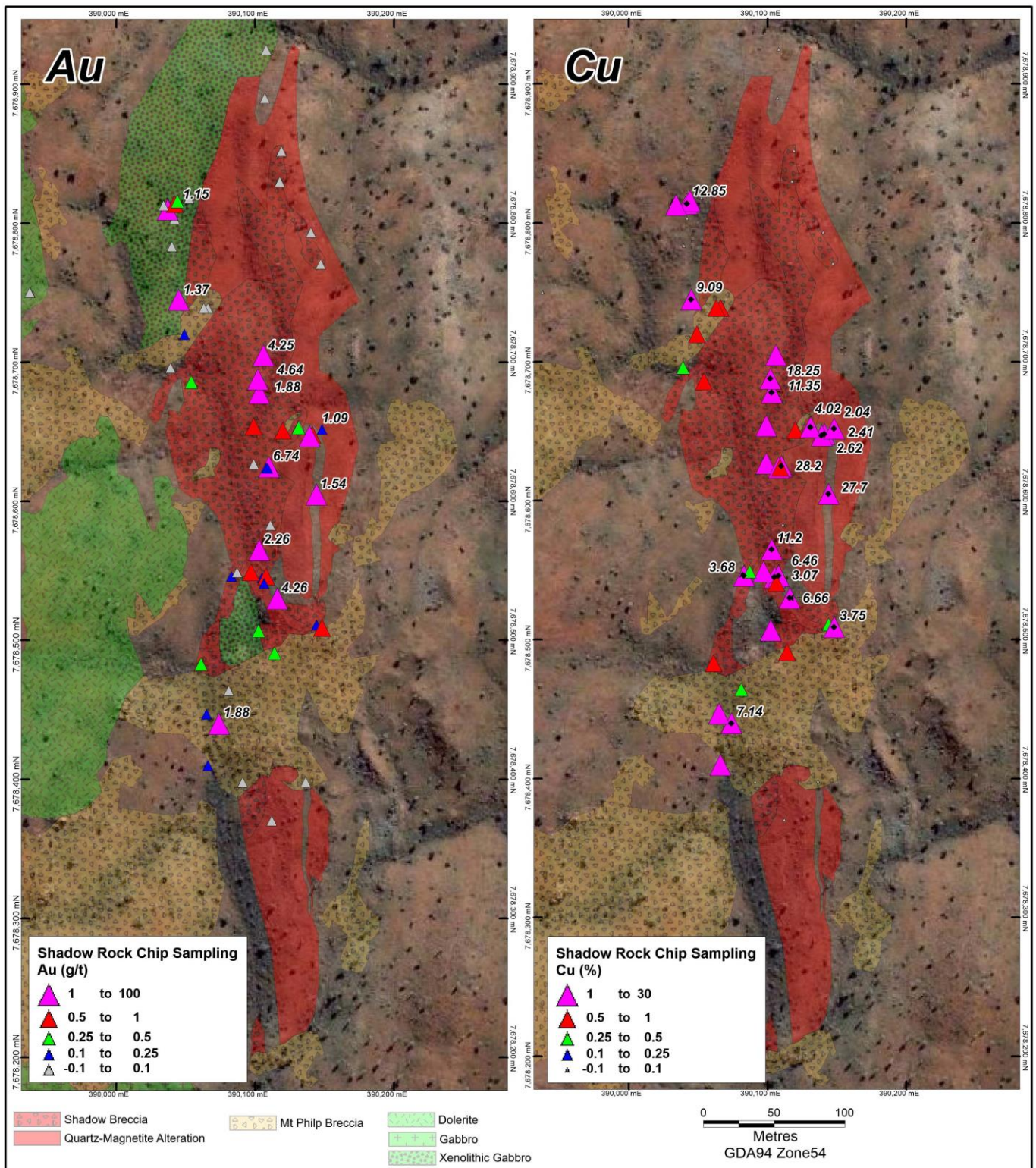


**Figure 3.** Oblique view looking northeast from the Mt Philp Hematite deposit to shadow. The hills in the background are composed of the Mt Philp Breccia intrusive complex



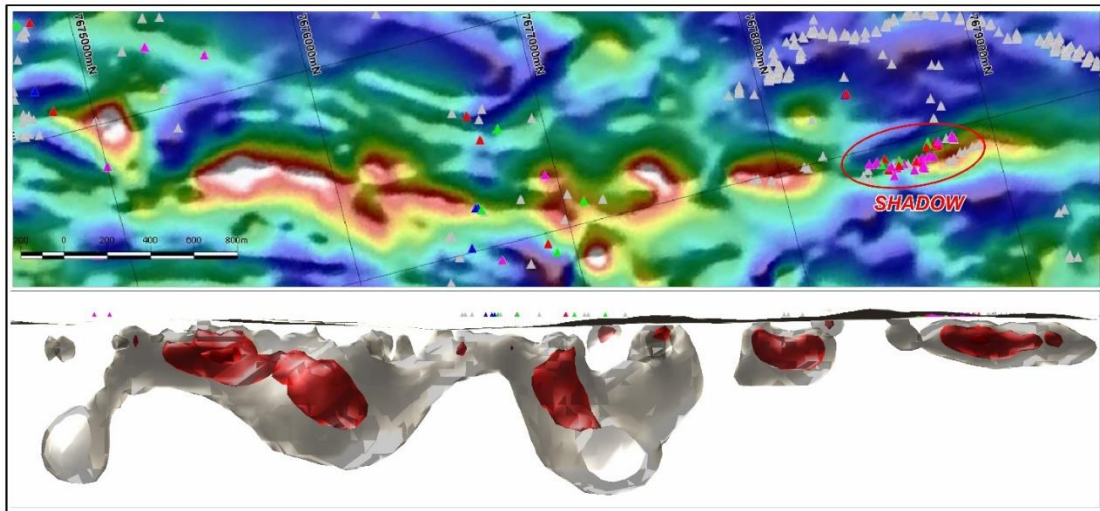
**Figure 4.** Shadow Breccia variant with mafic intrusive clasts



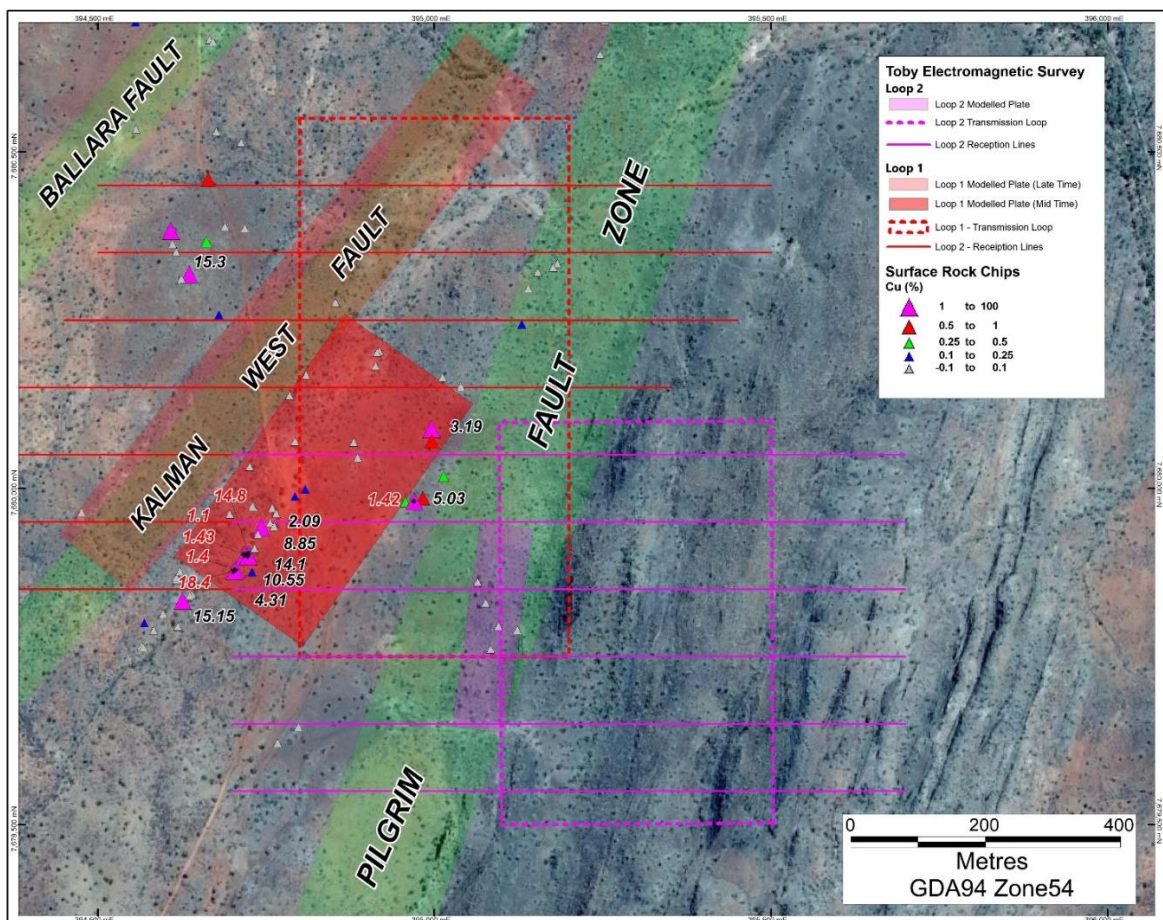


**Figure 5.** Shadow key geological units with rock chip sampling. Cu greater than 2% and Au greater than 1g/t annotated.



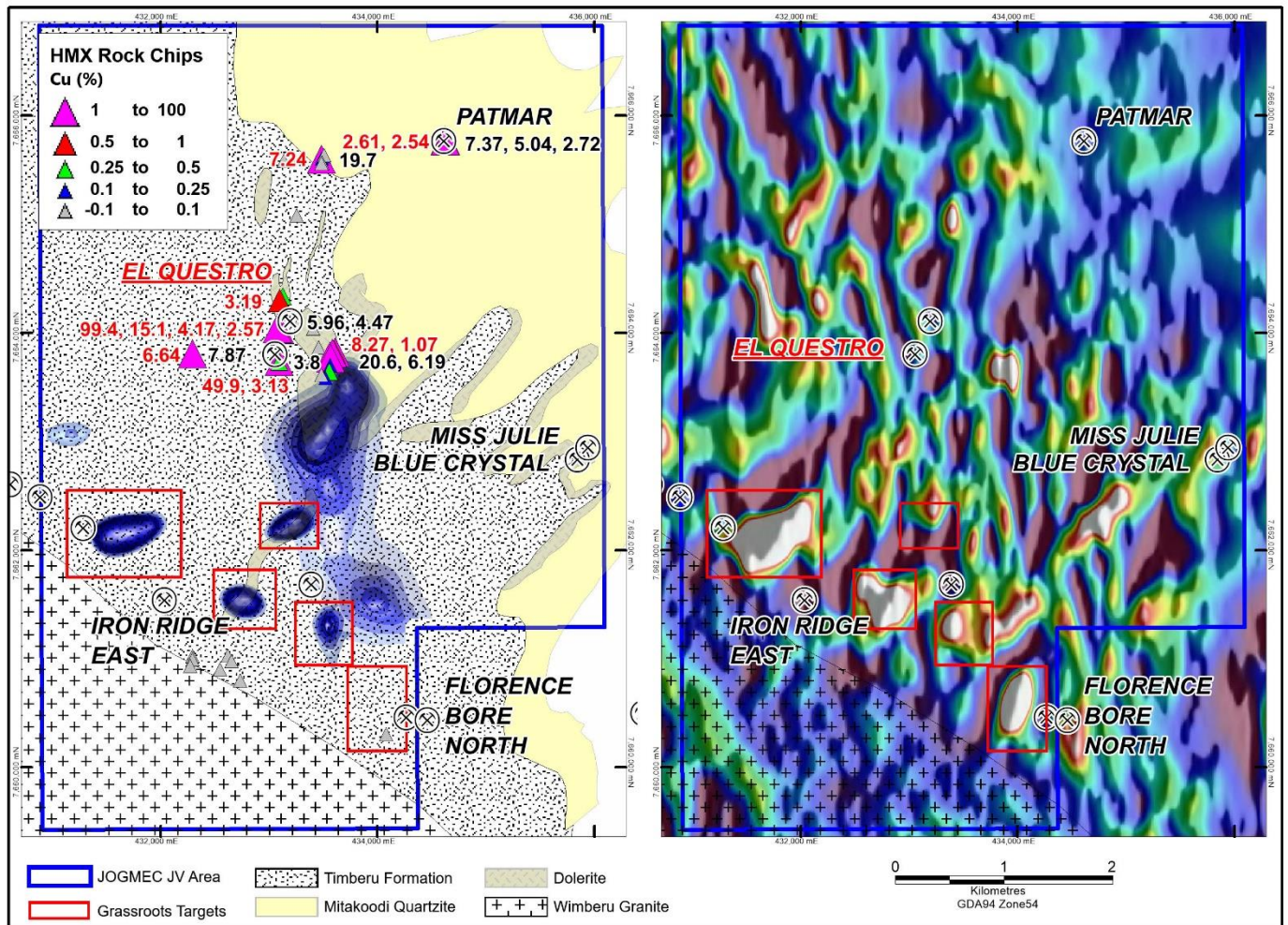


**Figure 6.** Long section (looking west) along the plus 4km Shadow Trend showing the magnetic response in plan (top) and as a long section looking west (base) with Cu rock chip response. The Shadow prospect is a rank 1 drilling target and the shadow trend will be evaluated in more detail during the Phase 2 program.



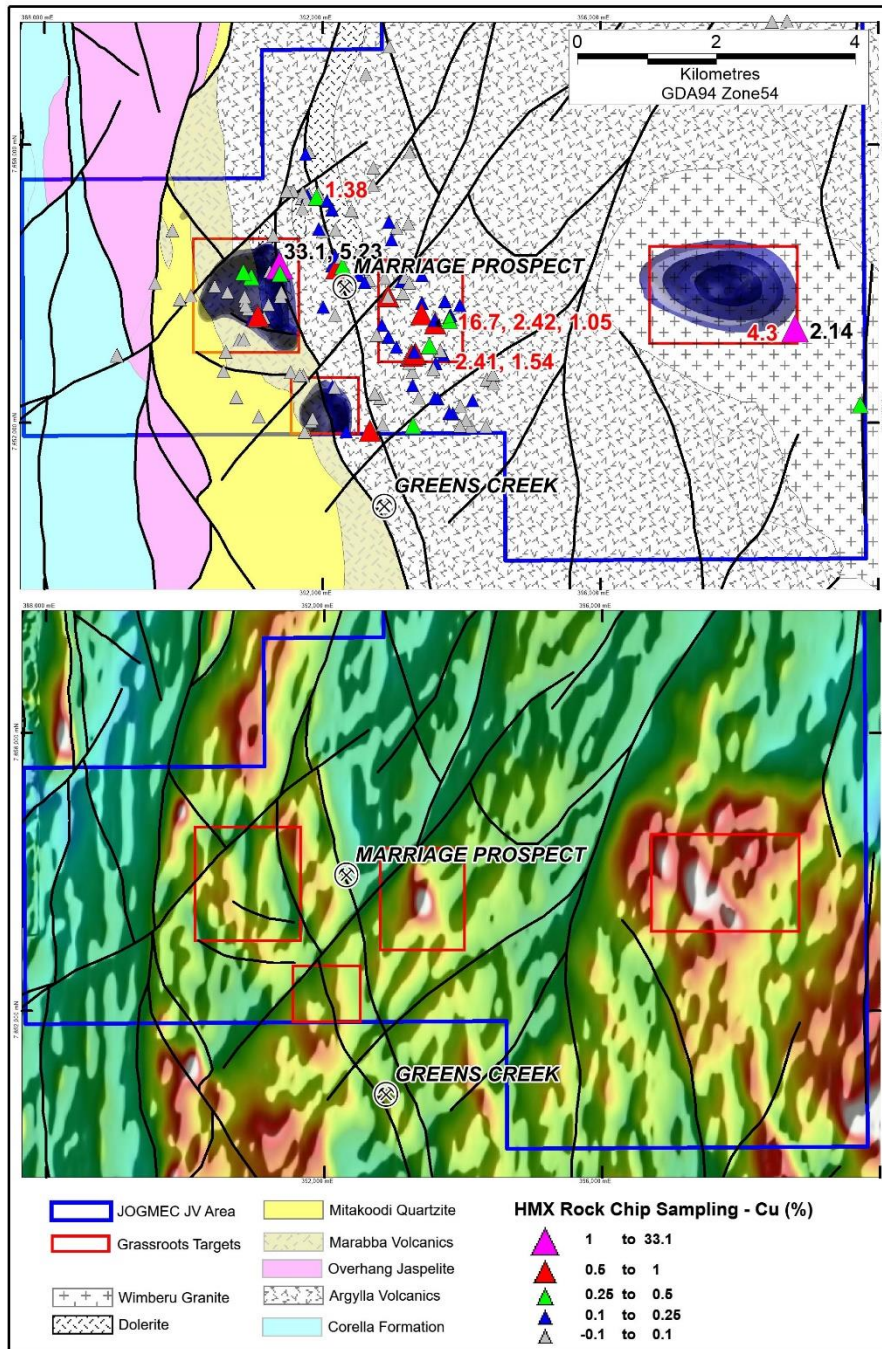
**Figure 7.** Toby Prospect showing the fixed loop ground EM survey layout, modelled conductive plates and rock chip sample Cu and Au response. Cu grades above 2% and Au grades above 1g/t annotated in black and red respectively.





**Figure 8.** JOGMEC JV Malbon East Project area showing zones of elevated gravity (blue 3D shells - left) and Aeromagnetic response (right). Hammer rock chip sampling is shown with Cu grades above 2% and Au grades above 1g/t annotated in black and red respectively. Refer to ASX announcement dated 23 July 2019 for details of this sampling. The El Questro Au prospect is a rank 2 drilling target. Grassroots targets will be reviewed in detail during the Phase 2 program.

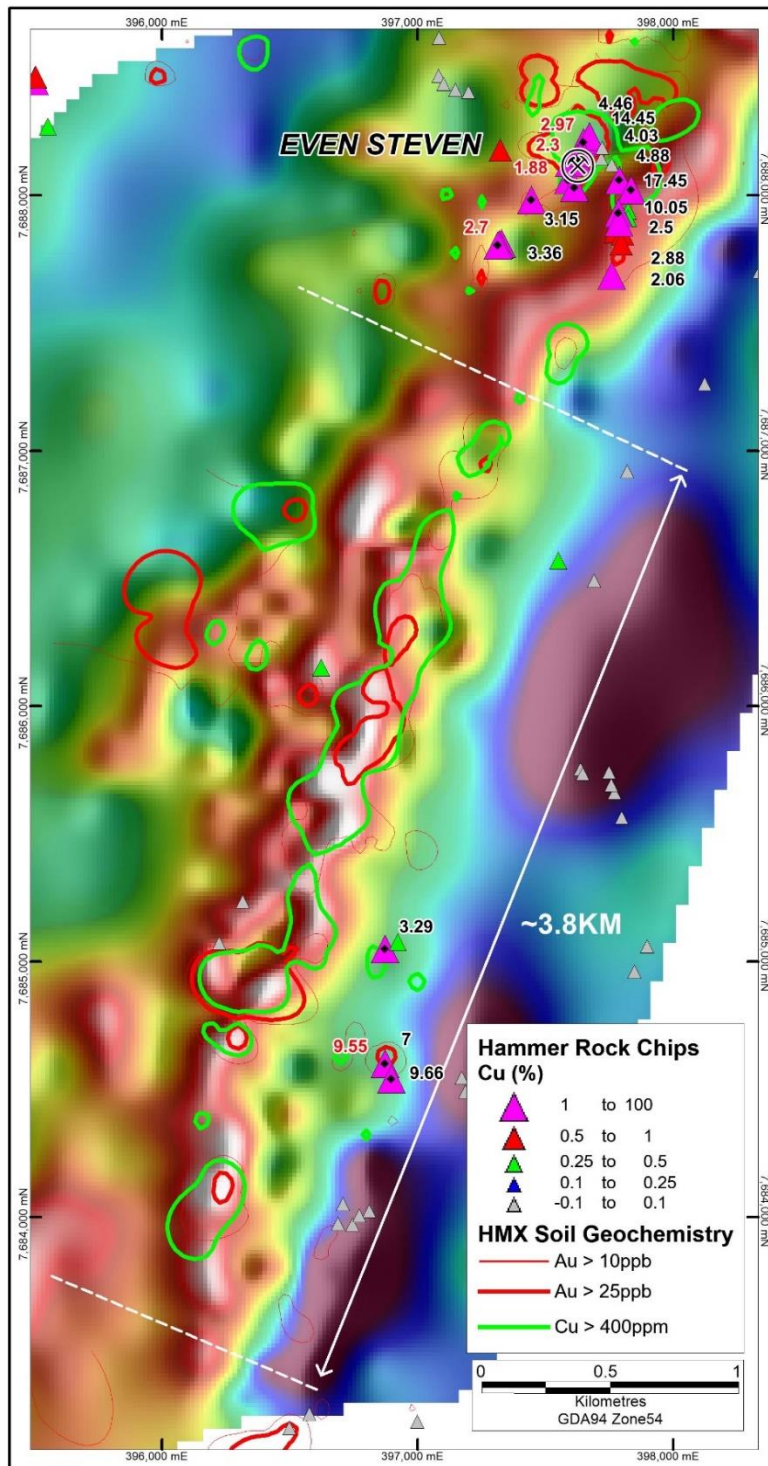




**Figure 9.** JOGMEC JV Dronfield Northwest Project area showing zones of elevated gravity (blue 3D shells - top) and Aeromagnetic response (base). Historic rock chip sampling is shown with Au greater than 1g/t and Cu greater than 1% annotated in red and black respectively.<sup>1</sup> Grassroots targets will be reviewed in detail during the Phase 2 program.

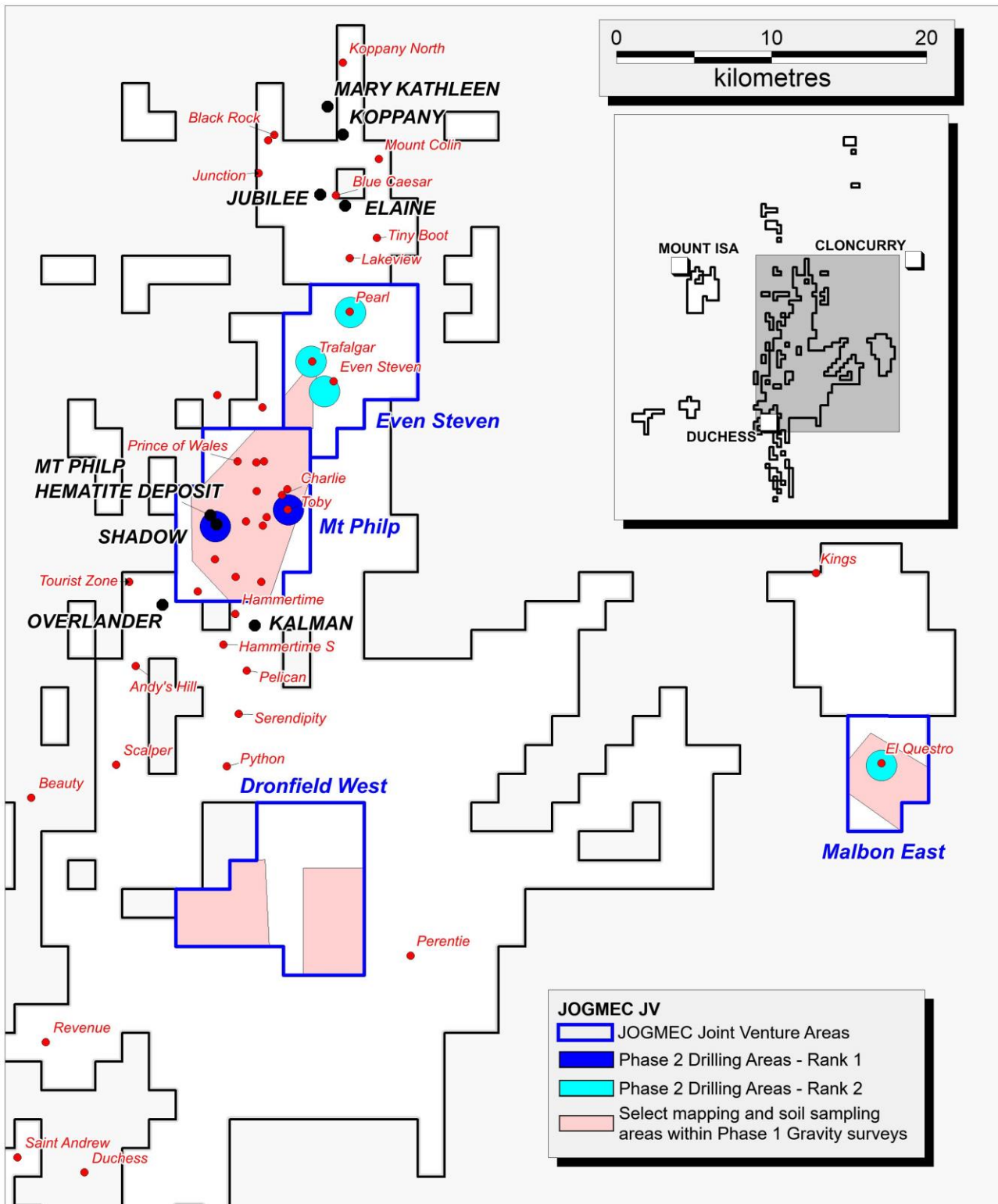
<sup>1</sup> Sourced from open files Mines Department reports by Eagle Mining Corporation NL in 1998. Work conducted on EPM10033 and referenced to report CR30416. The data underlying these rock chips have been validated by Hammer Metals Limited personnel and the competent person – Mark Whittle. It is not known whether this data had been previously released to the ASX. It is opinion of Hammer Metals that the historic exploration data is reliable and material to this release.





**Figure 10.** Even Steven South showing the zone of elevated gravity and soil geochemistry response. Little or no rock chip sampling has been conducted on the area overlying these gravity anomalies.

Hammer rock chip sampling is shown with Cu grades above 2% and Au grades above 1g/t annotated in black and red respectively. This grassroots target will be investigated during the Phase 2 program.



**Figure 11.** JOGMEC JV Phase 2 program, areas of activity



## **Mount Isa Project**

### ***Magneto telluric (MT) Survey***

Hammer was awarded a CEI grant to undertake a magneto telluric survey over Kalman (20Mt at 0.61% Cu, 0.34g/t Au, 0.14% Mo, 3.7g/t Re – Table 1) and the northern margin of the Mt Philp Breccia (see ASX announcement dated 26 February 2020) with the aim of further understanding the surrounding geological structures and their importance to the high grade mineralisation identified at the project (7m @ 23.4% Cu, 0.5g/t Au from 582m (K-106C) (refer ASX announcement 27 September 2016).

The survey is now complete, and preliminary imagery indicates that the MT method does identify the Kalman Deposit structure at depth. Unexplained near surface conductors and an interesting off section conductor was delineated to the north of Kalman. These anomalies require further investigation.

Preliminary imaging of the northern MT profile indicates zones of low resistivity associated with both the Kalman and Fountain Range Faults in addition to the margin of the Mt Philp Breccia.

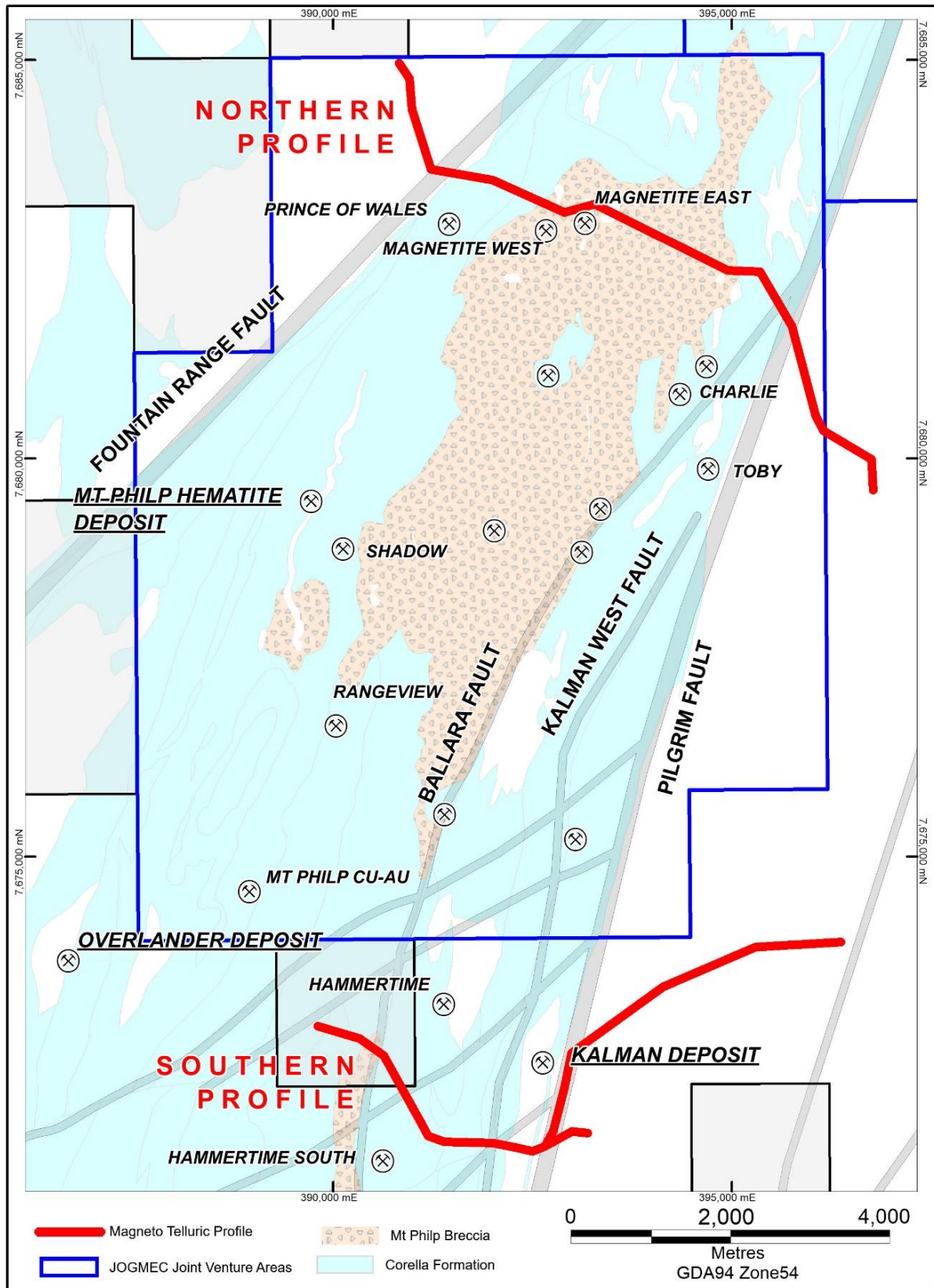
**Table 1.** Kalman Deposit JORC 2012 Mineral Resource Estimate (27 September 2016)

Classification	Mining Method	CuEq Cut-off	Tonnes Kt	CuEq	Cu	Mo	Au	Ag	Re
				%	%	%	ppm	ppm	ppm
Indicated	Open Pit	0.75%	7,100	1.5	0.48	0.12	0.27	1.4	2.9
Inferred	Open Pit	0.75%	6,200	1.6	0.44	0.15	0.24	1.5	3.9
Inferred	Underground	1.4%	7,000	2.4	0.89	0.16	0.50	2.9	4.5
<b>Total</b>			<b>20,000</b>	<b>1.8</b>	<b>0.61</b>	<b>0.14</b>	<b>0.34</b>	<b>1.9</b>	<b>3.7</b>

- Note: (1) The copper equivalent equation is:  $CuEq = Cu + (0.864268 * Au) + (0.011063 * Ag) + (4.741128 * Mo) + (0.064516 * Re)$
- Note: (2) Copper Equivalent Price assumptions are: Cu: US\$4,650/t; Au: US\$1,250/oz; Ag: US\$16/oz; Mo: US\$10/lb; and Re: US\$3,000/kg.

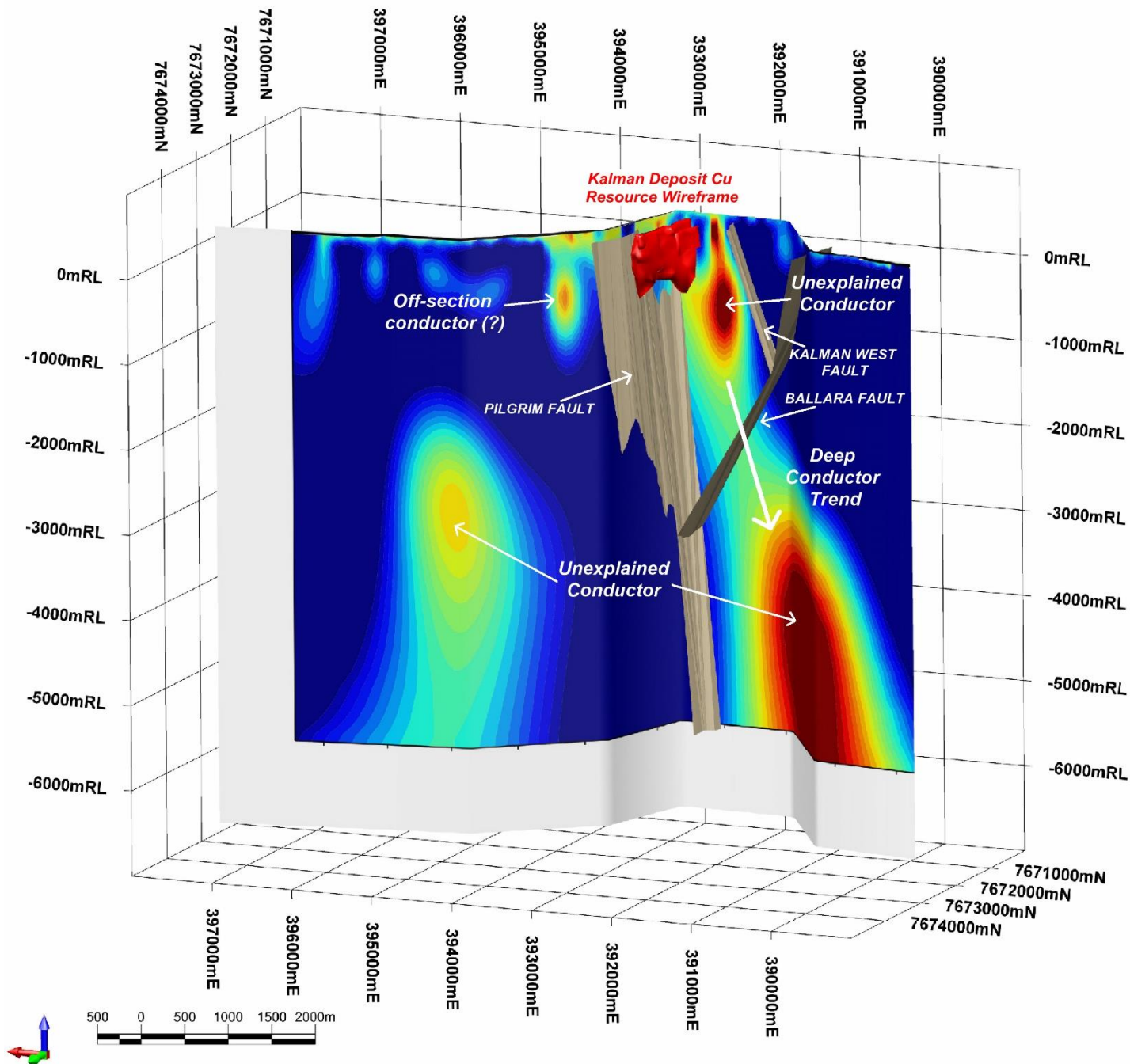
### ***Ashover Project***

The Ashover Project is located on EPM26127, approximately 60km to the south of Mount Isa on the eastern margin of the Mount Isa Fault. Follow-up of elevated drainage Au response has identified individual maximum rock chip responses of 0.44g/t Au, 78.2g/t Ag, 36.8% Cu and 0.14% Co (Figure 15 and Table 2). Further work is planned during the current field season to progress this target.

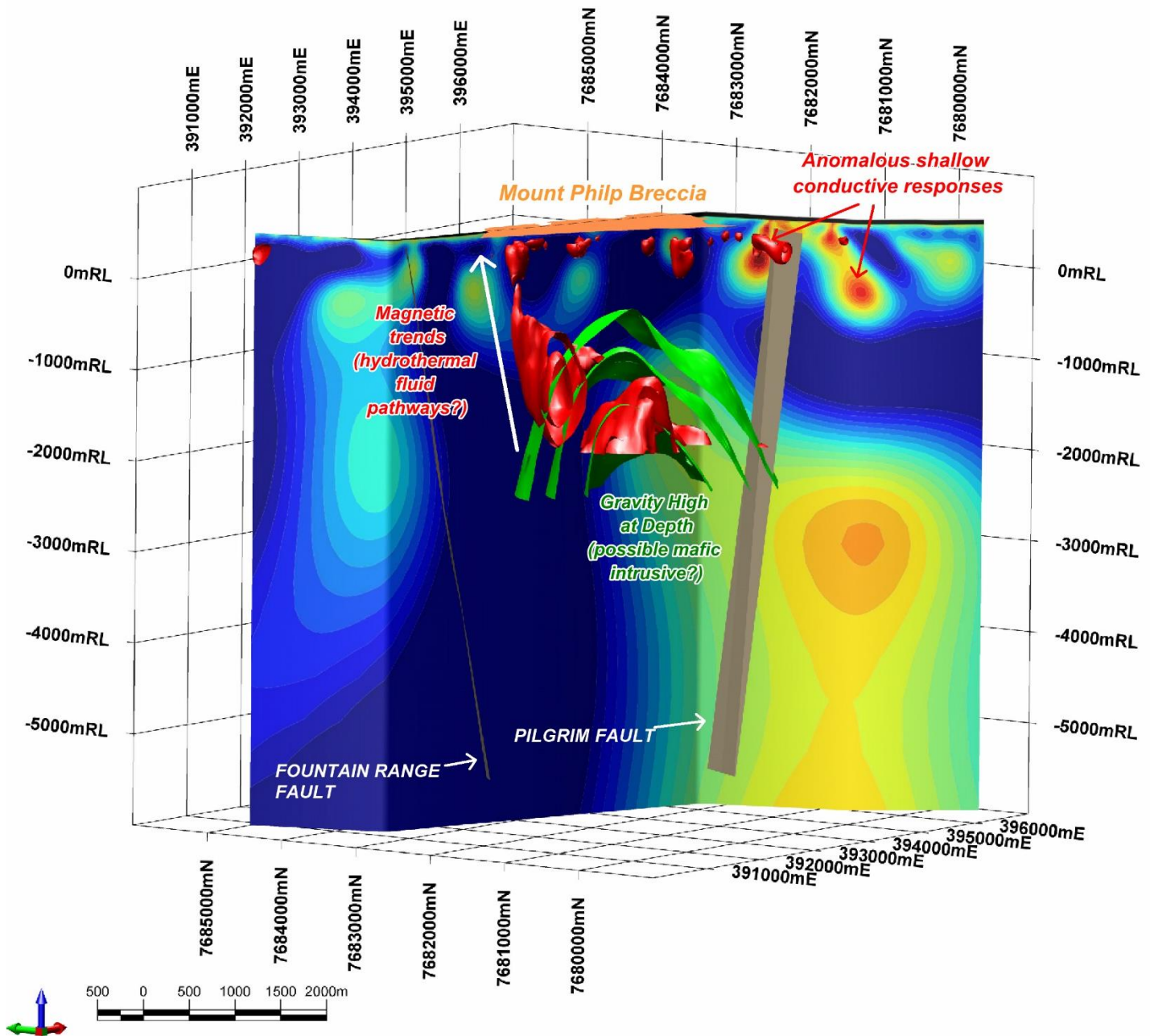


**Figure 12.** Magneto Telluric profile locations



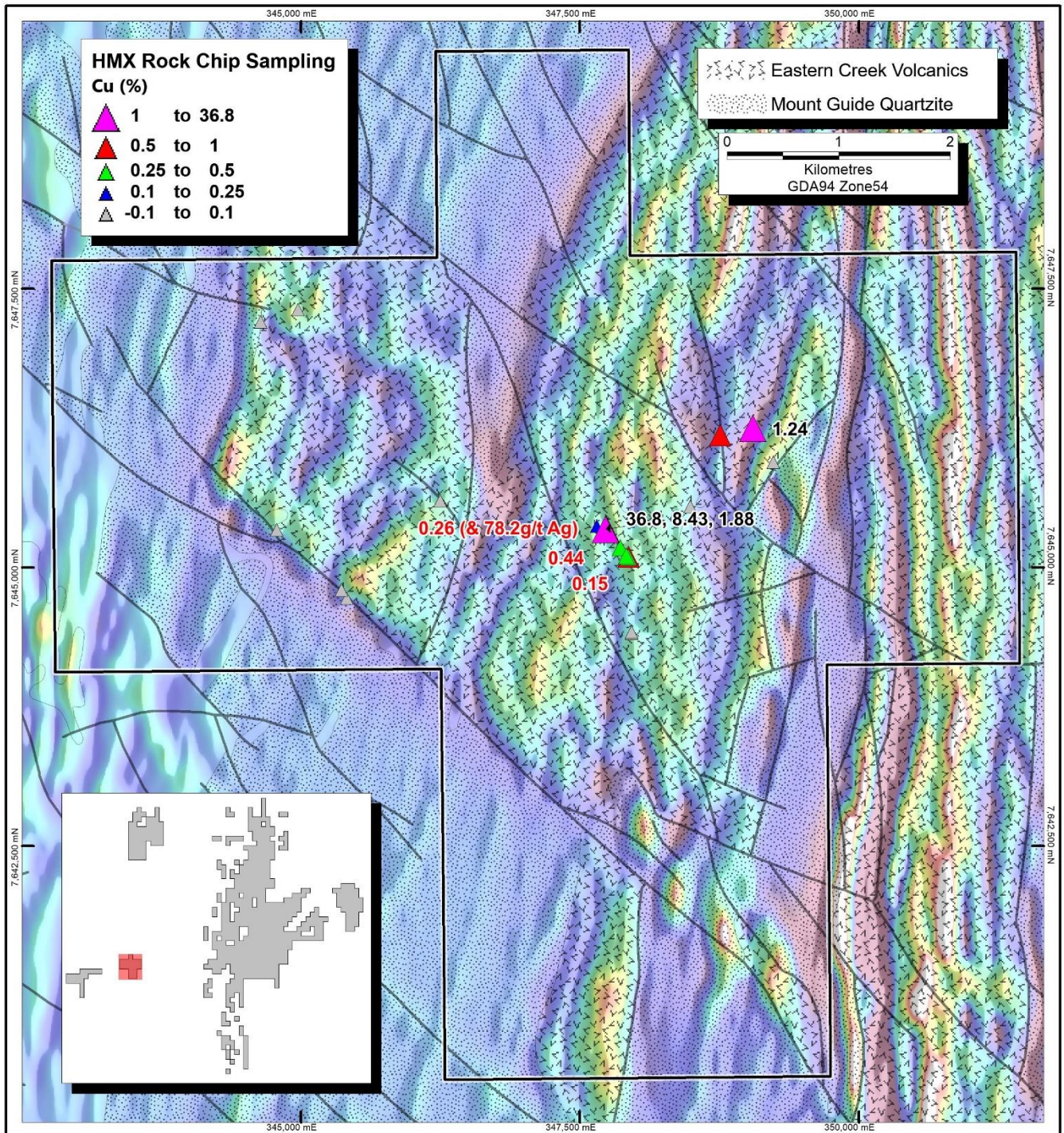


**Figure 13.** Southern magneto telluric profile looking southeast. The Kalman Cu resource wireframe is shown.



**Figure 14.** Northern magnetotelluric profile looking north. The interpreted position of the Pilgrim and Fountain Range Faults, Mount Philp Breccia and inverted magnetics and gravity shown.





**Figure 15.** Ashover Project showing location of HMX rock chip sampling on a magnetic and regional geology base. Grades above 1% Cu and 0.1g/t Au annotated.



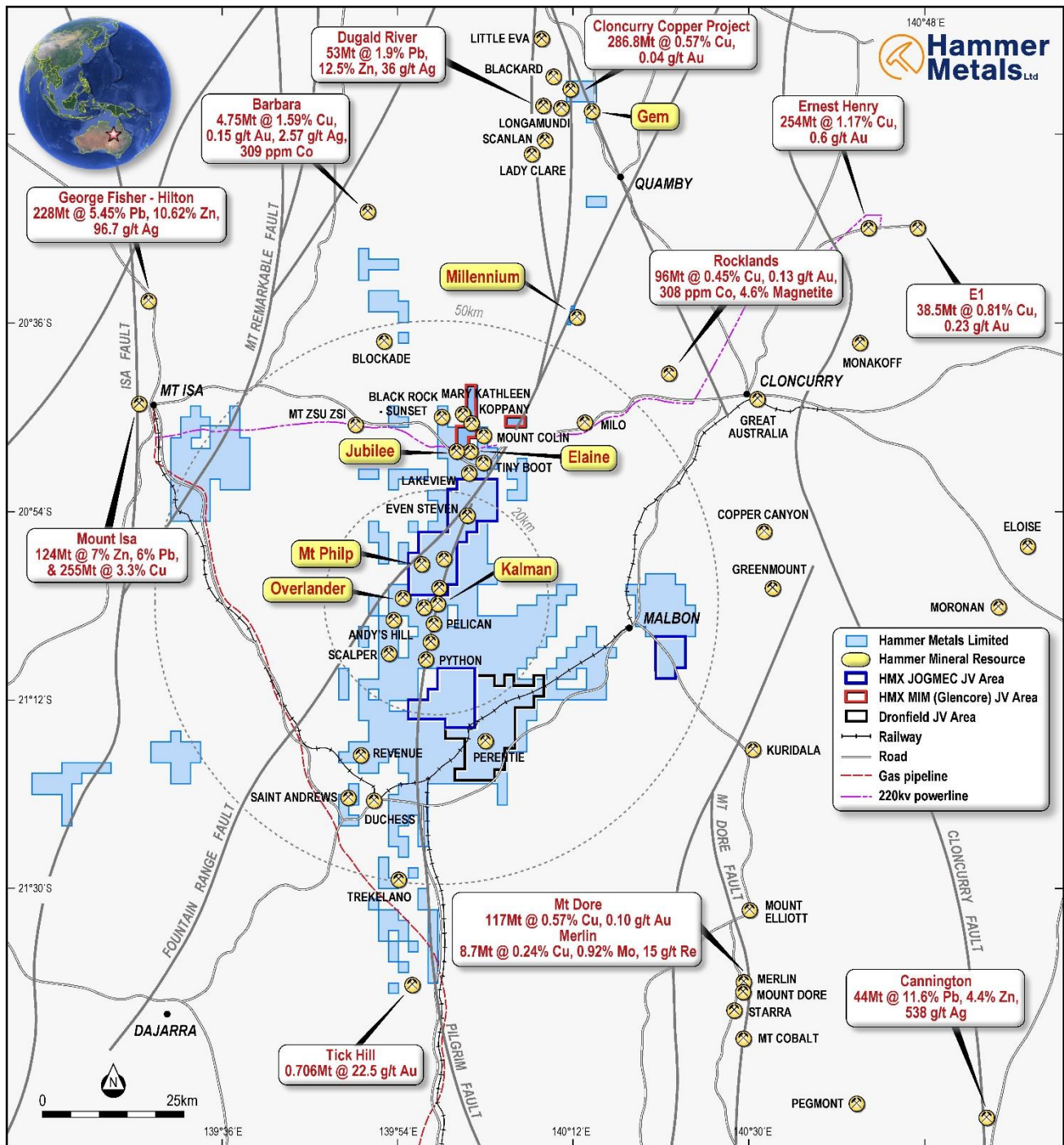
**Table 2.** Regional rock chip sampling results

PROJECT	PROSPECT	SAMPLE	E_GDA94	N_GDA94	Au (g/t)	Ag (g/t)	Cu (%)	Co (%)
JOGMEC JV	Greens Creek	MJB526	390724	7652971	-0.01	-0.5	0.00	0.00
	Shadow	MJB538	389485	7678024	0.01	-0.5	0.00	0.00
	Shadow	MJB539	389458	7678110	-0.01	-0.5	0.00	0.00
	Shadow	MJB540	389460	7678106	-0.01	-0.5	0.00	0.00
	Shadow	MJB541	389463	7678111	-0.01	-0.5	0.00	0.00
	Shadow	MJB542	389426	7678181	-0.01	-0.5	0.00	0.00
	Shadow	MJB543	389411	7678218	-0.01	-0.5	0.00	0.00
	Shadow	MJB544	389359	7678327	-0.01	-0.5	0.00	0.00
	Shadow	MJB545	389265	7678373	-0.01	-0.5	0.00	0.00
	Shadow	MJB546	389184	7678110	-0.01	-0.5	0.00	0.00
	Shadow	MJB547	388979	7677868	0.09	-0.5	0.31	0.01
	Mount Philp	MJB548	387667	7679648	0.21	-0.5	1.27	0.01
	Mount Philp	MJB549	387660	7679669	0.01	-0.5	0.48	0.00
	Mount Philp	MJB550	387667	7679687	-0.01	-0.5	0.01	0.00
	Mount Philp	MJB551	387669	7679686	-0.01	-0.5	0.01	0.00
	Mount Philp	MJB552	387696	7679565	0.01	-0.5	0.12	0.01
	Mount Philp	MJB553	389015	7680576	0.01	-0.5	0.03	0.02
	Shadow	MJB555	390105	7678545	0.23	-0.5	3.07	0.02
	Shadow	MJB556	390108	7678546	0.78	0.6	6.46	0.02
	Shadow	MJB557	390116	7678530	4.26	-0.5	6.66	0.02
	Shadow	MJB558	390097	7678549	0.7	-0.5	1.16	0.01
	Shadow	MJB559	390087	7678549	0.05	-0.5	0.45	0.00
	Shadow	MJB600	390045	7678745	1.37	1.7	9.09	0.02
	Shadow	MJB601	390066	7678739	0.09	0.3	0.85	0.00
	Shadow	MJB602	390063	7678739	0.02	0.2	0.60	0.00
	Shadow	MJB603	390034	7678813	0.02	0.5	1.04	0.00
	Shadow	MJB604	390049	7678720	0.16	0.5	0.74	0.01
	Shadow	MJB605	390039	7678696	0.09	0.2	0.29	0.00
	Shadow	MJB606	390054	7678686	0.48	0.4	0.82	0.01
	Shadow	MJB607	390081	7678464	0.05	0.2	0.33	0.00
	Shadow	MJB608	390074	7678440	1.88	1.8	7.14	0.02
	Shadow	MJB609	390061	7678483	0.27	0.4	0.87	0.01
	Shadow	MJB610	390108	7678624	0.12	0.9	1.05	0.01
	Shadow	MJB611	390109	7678624	0.18	3.3	0.79	0.00
	Shadow	MJB612	390042	7678814	0.79	0.7	12.85	0.01
	Shadow	MJB613	390044	7678816	0.41	1.5	1.89	0.00
	Shadow	MJB614	390037	7678810	1.15	0.3	0.21	0.00
	Shadow	MJB615	390110	7678625	6.74	12.3	28.20	0.02
	Shadow	MJB619	390099	7678627	0	0.7	1.69	0.01
	Shadow	MJB714	390144	7678511	0.19	0.1	0.34	0.00
	Shadow	MJB715	390148	7678509	0.68	1.3	3.75	0.00
	Shadow	MJB716	390114	7678491	0.32	0.6	0.96	0.00
Note: All locations in GDA94 Zone 54 Projection								



**Table 2. Continued**

PROJECT	PROSPECT	SAMPLE	E_GDA94	N_GDA94	Au (g/t)	Ag (g/t)	Cu (%)	Co (%)
Mt Frosty JV	Koppany	MJB617	397953	7704463	0.04	0.7	0.59	0.01
	Koppany	MJB618	398073	7704606	0.04	0.1	0.11	0.01
	Koppany	MJB624	398050	7704601	0.06	0.1	0.13	0.01
	Koppany	MJB625	398100	7704593	0.03	0.0	0.04	0.01
	Koppany	MJB626	398108	7704586	-0.01	0.0	0.00	0.00
	Koppany	MJB627	398112	7704579	0.03	0.1	0.01	0.00
	Koppany	MJB628	398116	7704568	0.04	0.0	0.13	0.02
Mt Isa	Ashover	MJB523	346250	7645599	-0.01	-0.5	0.00	0.00
	Ashover	MJB524	347915	7645105	0.15	15.3	0.44	0.02
	Ashover	MJB525	348491	7645548	-0.01	-0.5	0.00	0.00
	Greens Creek	MJB527	392469	7651781	-0.01	-0.5	0.03	0.00
	Greens Creek	MJB528	392417	7651656	0.01	-0.5	0.02	0.00
	Greens Creek	MJB529	392417	7651657	0.01	-0.5	0.00	0.00
	Greens Creek	MJB530	392413	7650841	-0.01	-0.5	0.00	0.00
	Greens Creek	MJB531	392919	7650805	0.56	-0.5	0.15	0.00
	Greens Creek	MJB532	392914	7650803	0.07	-0.5	0.03	0.00
	Greens Creek	MJB533	392930	7650683	0.07	-0.5	0.24	0.05
	Greens Creek	MJB534	392931	7650683	-0.01	-0.5	0.02	0.00
	Greens Creek	MJB535	392934	7650674	0.01	-0.5	0.05	0.01
	Greens Creek	MJB536	391782	7651730	0.02	-0.5	0.08	0.04
	Greens Creek	MJB537	391784	7651714	0.02	-0.5	0.36	0.02
	Ashover	MJB700	347934	7645094	0.06	15.1	0.55	0.00
	Ashover	MJB701	347936	7645092	0.05	7.0	0.33	0.02
	Ashover	MJB702	347860	7645179	0.44	1.0	0.48	0.01
	Ashover	MJB703	347652	7645371	0.06	0.6	0.16	0.14
	Ashover	MJB704	347732	7645345	0.26	78.2	36.80	0.00
	Ashover	MJB705	347732	7645342	0.09	1.8	8.43	0.00
	Ashover	MJB706	347731	7645340	0.07	1.0	1.88	0.00
	Ashover	MJB707	348759	7646188	0.02	1.0	0.52	0.01
	Ashover	MJB708	349052	7646250	0.03	2.7	1.24	0.01
	Ashover	MJB709	349233	7645947	-0.01	0.0	0.01	0.00
	Ashover	MJB710	345409	7644725	-0.01	0.1	0.07	0.00
	Ashover	MJB711	345363	7644798	-0.01	0.0	0.01	0.00
	Ashover	MJB712	344760	76452276	0.01	0.0	0.02	0.00
	Ashover	MJB713	344781	7645339	0.01	0.0	0.03	0.00
Note: All locations in GDA94 Zone 54 Projection								



**Figure 16: Hammer Metals Mount Isa Project area showing the JOGMEC JV areas.**



*This announcement has been authorised for issue by Mr Daniel Thomas, Managing Director, Hammer Metals Limited.*

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**- END -**

**About Hammer Metals**

Hammer Metals Limited (ASX: HMX) holds a strategic tenement position covering approximately 2,200km<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 emerging Jubilee (Cu-Au) deposit. Hammer Metals also recently acquired 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.

**About JOGMEC:** Japan Oil, Gas and Metals National Corporation is a Japanese government Independent Administration Institution tasked to ensure a stable supply of mineral resources for Japan. JOGMEC has a demonstrated track record of participating in the Australian mineral exploration industry. Further details about JOGMEC can be found on the corporations website: <http://www.jogmec.go.jp/english/index.html>

**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 style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Whittle consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

Where the company refers to historic rock chip results recorded by Eagle Mining Corporation NL, it notes that these results may not have previously been released to the ASX. The information has been compiled and validated. It is the opinion of Hammer Metals that the exploration data are reliable and no further information has come to the attention of Hammer Metals that causes it to question the accuracy or reliability of the historic exploration results.

Where reference is made to previous releases of exploration results and mineral resource estimates in this announcement, the Company 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 exploration results and mineral resource estimates included in those announcements continue to apply and have not materially changed.

## JORC Code, 2012 Edition

### Table 1 report – Mount Isa Exploration Update

- This table is to accompany an ASX release updating the market in relation to activities on the Hammer Metals Limited Mount Isa Project. It includes results from surface rock chip sampling, geological mapping, electromagnetic, gravity and magneto telluric geophysical surveys conducted between late January and Late April 2020.
- 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><b>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>• Reconnaissance rock chip sampling is reported in this release. The nature of sampling is termed grab sampling. Samples are collected across the strike of the zone of mineralisation, but sampling is not via the continuous chip method.</li> <li>• This style of sampling enables general grade and metal content to be established however it is not as representative as continuous chip sampling, costean sampling or drilling to establish grade continuity across a structure.</li> <li>• Samples tabulated in this release have been taken from both mineralised and unmineralised material. This is a common practice to determine background element concentrations in an area and for use in alteration characterisation.</li> </ul> <p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>• A 2317-station ground gravity survey was conducted over four areas within the JOGMEC Joint Venture area.</li> <li>• The ground Gravity Survey was initially conducted on 400m centres and then infilled at 200m and 100m centres depending on the response. The gravity survey was undertaken by Atlas Geophysics utilising a Scintrex CG-5 Autograv Gravity meter which has an accuracy of 0.01 mgal. Locations were captured using a VTK, V100, GNSS RTK system.</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>A fixed loop EM survey was conducted over three VTEM responses at the Charlie and Toby prospects within the JOGMEC Joint Venture area.</li> <li>The electromagnetic survey was conducted by Gap Geophysics. The transmitter loops were energised via a Gap GeoPak HPTX-70 transmitter which supplied a ~120 amp current to the loops. A fluxgate magnetometer (B Field) sensor coupled to an EMIT SMARTem24 receiver was used for data collection.</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>A magneto telluric survey was conducted by Zonge Engineering and Research Company on two profiles.</li> <li>This survey was conducted under the auspices of a Queensland State Government Collaborative Initiative Grant (or CEI)</li> <li>The survey was designed to test subsurface conductance along two profiles – the first across the Kalman Deposit and the second across the northern margin of the Mt Philp Breccia.</li> <li>108 stations were located at approximately 200m intervals along two profiles. The crew were equipped with 5 Phoenix MTC-150L broadband coils enabling the acquisition from multiple stations per day. The aim of the survey was to delineate broad conductive responses down to 3-6km below surface. No survey of its type had been conducted in the project are previously.</li> </ul>
<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>	<ul style="list-style-type: none"> <li>No drilling has been reported in this release.</li> </ul>
<b>Drill sample recovery</b>	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p>	<ul style="list-style-type: none"> <li>No drilling has been reported in this release.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<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>Logging</b>	<p><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></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></p> <p><i>The total length and percentage of the relevant intersections logged.</i></p>	<ul style="list-style-type: none"> <li>No drilling has been reported in this release.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<p><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></p> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <p><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></p> <p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<ul style="list-style-type: none"> <li>No drilling has been reported in this release.</li> </ul> <p><b>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>Rock chip sample weight was between 3 and 5kg per site.</li> <li>No standard samples were submitted with the rock chip samples.</li> </ul>
<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>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>Samples were analysed by ALS for a range of elements by ICP (OES and MS) after a four-acid digest. Gold was analysed via flame AAS using a 50gm charge.</li> <li>The analytical method is appropriate for reconnaissance rock chip sampling.</li> </ul> <p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>The ground Gravity Survey was initially conducted on 400m centres and then infilled at 200m and 100m centres depending on the response.</li> <li>The gravity survey was undertaken by Atlas Geophysics utilising a Scintrex CG-5 Autograv Gravity meter which has an accuracy of 0.01 mgal. Locations were</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>captured using a VTK, V100, GNSS RTK system</p> <p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>The electromagnetic survey was conducted by Gap Geophysics. The transmitter loops were energised via a Gap GeoPak HPTX-70 transmitter which supplied a ~120-amp current to the loops. A fluxgate magnetometer (B Field) sensor coupled to an EMIT SMARTem24 receiver was used for data collection.</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>108 stations were located at approximately 200m intervals along two profiles. The crew were equipped with 5 Phoenix MTC-150L broadband coils enabling the acquisition from multiple stations per day. The aim of the survey was to delineate broad conductive responses down to 3-6km below surface. No survey of its type had been conducted in the project are previously.</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></p> <p><i>Discuss any adjustment to assay data.</i></p>	<p><b>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>All assays have been verified by alternate company personnel.</li> <li>Assay files were received electronically from the laboratory.</li> </ul> <p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>After survey company validation, readings were transferred to Southern Geoscience and Hammer Metals personnel daily for review.</li> </ul> <p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>After survey company validation, readings were transferred to Southern Geoscience and Hammer Metals personnel daily for review.</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>After survey company validation, readings were transferred to Hammer Metals personnel daily for review.</li> </ul>
<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>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>Datum used is UTM GDA 94 Zone 54.</li> <li>Rock chip sample locations are captured via GPS.</li> <li>RL information will merged at a later date utilising the most accurately available elevation data.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>Quality and adequacy of topographic control.</i>	<p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>Locations were captured using a VTK, V100, GNSS RTK system.</li> <li>Datum GDA94 Zone54.</li> </ul> <p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>Receiver station locations and loop positions were located via GPS.</li> <li>Datum GDA94 Zone54</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>Receiver station locations were located via GPS</li> <li>Datum GDA94 Zone54.</li> </ul>
<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>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>Samples were not collected on a regularised grid.</li> <li>The assay response of reconnaissance rock chips cannot be utilised to infer grade continuity.</li> <li>No compositing has been applied to the assay results.</li> </ul> <p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>The ground gravity survey was conducted on 50m centres.</li> <li>The geophysical data density is considered appropriate to the target type being sought</li> </ul> <p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>Receiver lines for the fixed loop EM survey were conducted on 100m spaced lines.</li> <li>This receiver line spacing is considered appropriate for the target type being sought</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>As this survey was the first of its type to be conducted in the region of the Mt Isa Project, the station density was chosen to achieve broad responses not to delineate small-scale targets.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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><b>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>Sampling is typically conducted at right angles to the strike of the host structure.</li> </ul> <p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>Gravity station locations are initially</li> </ul>



Criteria	JORC Code explanation	Commentary
	<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>based on an even 400m or 200m spaced grid. 100m station locations are oriented perpendicular to major structural directions.</p> <p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>Loop orientation and receiver stations are oriented perpendicular to major structural directions.</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>The profile locations were chosen for their proximity to navigable station tracks and their ability to cross regional geological structures.</li> </ul>
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	<p><b>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>Pre-numbered bags were used, and samples were transported to ALS laboratory in Mt Isa by company personnel.</li> </ul> <p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>All readings were transferred to Southern Geoscience and Hammer Metals personnel daily for review.</li> </ul> <p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>All readings were transferred to Southern Geoscience and Hammer Metals personnel daily for review.</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>Collected data was transferred daily to the office of Zonge Engineering in Adelaide.</li> </ul>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<p><b>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>The dataset associated with this sampling has been subject to data import validation.</li> <li>All assay data has been reviewed by two company personnel.</li> </ul> <p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>Gravity data was independently reviewed by Southern Geoscience.</li> </ul> <p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>EM data was independently reviewed by Southern Geoscience</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>The data collected as part of this survey is still preliminary and has not been reviewed by parties other than Zonge</li> </ul>

Criteria	JORC Code explanation	Commentary
		Engineering and Hammer Metals Limited.

## 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>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.</p> <p>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.</p>	<p><b>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>Sampling was conducted on the following granted tenements</li> <li>EPM26127 – 100% Mulga Minerals Pty Ltd</li> <li>EPM14467 – 51% Mulga Minerals Pty Ltd and 49% Mount Isa Mines Ltd. Parties are associated through the Mt Frosty Joint Venture.</li> <li>EPM26775, EPM26902 &amp; EPM25145 – 100% Mt Dockerell Mining Pty Ltd. Portions of EPM26902 and EPM26775 are located within the JOGMEC Mt Isa East Joint Venture.</li> </ul> <p><b>GRAVITY SURVEYS</b></p> <ul style="list-style-type: none"> <li>The Gravity Surveys were conducted four main areas and 15 granted tenements which are detailed below. The number of stations in each area are in brackets.</li> </ul> <p><b>Mt Philp and Even Steven</b></p> <ul style="list-style-type: none"> <li>Mulga Minerals Pty Ltd – EPM14019 (43)</li> <li>Mt Dockerell Mining Pty Ltd – EPM26474 (29), EPM26628 (10), EPM26694 (145), EPM26675 (871), EPM26776 (20) &amp; EPM11919 (12)</li> </ul> <p><b>Dronfield Northwest</b></p> <ul style="list-style-type: none"> <li>Mulga Minerals Pty Ltd – EPM25145 (20)</li> <li>Mt Dockerell Mining Pty Ltd – EPM26511 (16), EPM26776 (45), EPM26777 (70), EPM26902 (370), EPM27018 (223)</li> </ul> <p><b>Malbon East</b></p> <ul style="list-style-type: none"> <li>Mulga Minerals Pty Ltd – EPM26130 (425)</li> </ul> <p><b>ELECTROMAGNETIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>The survey was undertaken on granted Mt Dockerell Mining Pty Ltd EPM26994 and EPM26775</li> </ul> <p><b>MAGNETO TELLURIC SURVEYS</b></p> <ul style="list-style-type: none"> <li>The survey was undertaken on granted tenements EPM14019 (Mulga Minerals</li> </ul>



Criteria	JORC Code explanation	Commentary
		Pty Ltd) and EPM26775-EPM13870 (Mt Dockerell Mining Pty Ltd).
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>In the Dronfield Joint Venture area on historic tenement EPM10033, Eagle Mining Corporation NL conducted rock chip sampling during the mid-1990's. This work is documented in a Queensland Government Open File report CR30416. Hammer Metals has reviewed and validated this data and concludes that it is reliable and material to help explain the grassroots targets which will be examined during phase 2 of the JOGMEC Mt Isa East Joint Venture.</li> <li>No significant work has been done by other parties on the other prospects discussed in this release.</li> </ul>
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>Much of these surveys are associated with a large intrusive complex collectively termed the Mt Philp Breccia.</li> <li>The Malbon area is located on the northern margin of a Williams-aged granite termed the Wimberu Granite.</li> </ul>
<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:</i></p> <p><i>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>	<ul style="list-style-type: none"> <li>See the attached tables.</li> </ul>
<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>	<ul style="list-style-type: none"> <li>No drilling has been reported in this release.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></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>	<ul style="list-style-type: none"> <li>Any mineralised widths and strike lengths discussed in this report are based on surface geochemical sampling and/or geological mapping and is indicative only.</li> </ul>
<b>Diagrams</b>	<i>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.</i>	<ul style="list-style-type: none"> <li>See attached figures</li> </ul>
<b>Balanced reporting</b>	<i>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.</i>	<p><b>ROCK CHIP SAMPLING</b></p> <ul style="list-style-type: none"> <li>In relation to rock chip sampling all samples which are being released herein are tabulated in full.</li> <li>Any sampling depicted on figures as thematic maps are shown in full.</li> </ul>
<b>Other substantive exploration data</b>	<i>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.</i>	<ul style="list-style-type: none"> <li>All relevant information is disclosed in the attached release and/or is set out in this JORC Table 1.</li> </ul>
<b>Further work</b>	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<p><b>MT ISA EAST JOINT VENTURE</b></p> <ul style="list-style-type: none"> <li>The release notes that the parties have decided to proceed with a Phase 2 program which will involve drilling Tier 1 targets and conducting further sampling and mapping on grassroots targets.</li> </ul> <p><b>100% HMX – ASHOVER PROSPECT</b></p> <ul style="list-style-type: none"> <li>Hammer Metals will be reviewing the results of the sampling and conducting further field work in order to better delineate the observed mineralisation at the prospect.</li> </ul>