



HAMMER METALS TO ACQUIRE SUNSET AND BLACK ROCK COPPER-GOLD PROJECTS

30 October 2018

ASX Code: HMX

CAPITAL STRUCTURE:

Share Price (29/10/18)	\$0.032
Shares on Issue	278m
Market Cap	\$8.9m
Options Listed	165m
Options Unlisted	21m

Significant Shareholders	
Deutsche Rohstoff	13%
Resource Capital Fund VI	9.3%
Management	8.8%

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Non-Executive Director

Mark Pitts
Company Secretary

Mark Whittle
Chief Operating Officer

- Mt Dockerell Mining Pty Ltd (a wholly owned subsidiary of Hammer Metals Limited) has executed a Sale and Purchase Agreement to purchase two exploration permits that cover the **Sunset** and **Black Rock** copper-gold prospects located 5km northwest of Hammer's **Jubilee** and **Elaine-Dorothy** copper-gold deposits near the Mary Kathleen Mine.
- The Sunset Prospect has potential for Jubilee-style copper-gold deposits. Selected drill intersections include **24m @ 1.41% Cu and 0.49g/t Au** and **14m @ 2.57% Cu**.
- Black Rock returned broad drill intersections of up to **78m @ 0.54% Cu and 0.13g/t Au** and **94m @ 0.44% Cu**. The prospect extends over a strike length of 1.2km with true widths of the mineralised zone of up to 60m, indicating good potential to host a large tonnage copper-gold deposit similar to Hammer's Elaine-Dorothy deposit.
- The rock sequence that hosts the Black Rock and Sunset Prospects also hosts the Mary Kathleen, Jubilee and Elaine-Dorothy deposits as well as several other copper occurrences for over 20km along strike and is considered to have substantial exploration potential.

Hammer's Executive Chairman said: "The acquisition is an opportunity for Hammer Metals to acquire highly prospective exploration tenements that augment Hammer's Mount Isa project. With further drilling the tenements have good potential to add additional copper and gold resources to the existing inventory, and specifically complement Hammer's Elaine-Dorothy and Jubilee copper-gold deposits located nearby."



Oblique view of the Sunset and Black Rock trends looking south

SUNSET AND BLACK ROCK PROSPECTS

The **Sunset** and **Black Rock Prospects** occur on a mineralized trend termed the Wonga detachment surface. This trend is largely located along lithological boundaries and has been an important channel-way for hydrothermal fluids during mineralising events in the Mary Kathleen Fold Belt. The Hammer Prospects at **Jubilee** and **Lakeview** also occur on or close to the surface.

The **Sunset** Prospect occurs in a shear zone typified by the presence of remobilized carbonate. Mineralisation occurs as multiple stacked lenses which were mined by narrow vein methods. Drilling has delineated mineralisation over a 700m strike length. Significant intercepts include:

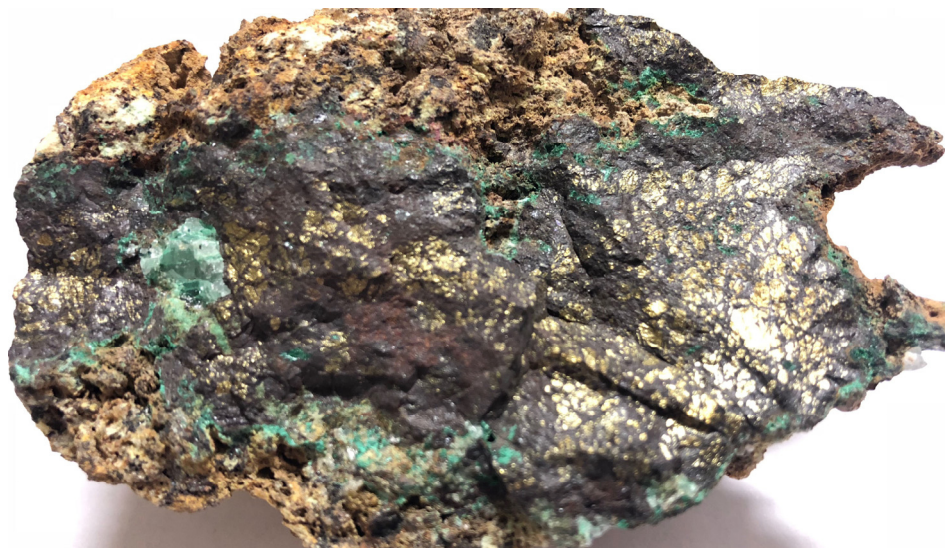
- 24m at 1.41% Cu and 0.49g/t Au from 10m including 4m at 4.57% Cu and 2.74g/t Au from 16m in CAMC004
- 17m at 1.40% Cu and 0.38g/t Au from 35m including 8m at 2.66% Cu and 0.18g/t Au from 40m in CAMC015
- 14m at 2.57% Cu from 21m in CR07002

The **Black Rock** Prospect is hosted within a magnetite-hematite altered fractured quartzite. Mineralisation occurs as quartz stockwork veining with pyrite-chalcocopyrite ($\pm$ hematite-magnetite). Mineralisation has been delineated by wide spaced drilling over a 1.2km strike length with a mineralised envelope true width of up to 60m. Significant intercepts include:

- 78m at 0.54% Cu and 0.13g/t Au from 140m in CAMD003
- 94m at 0.44% Cu from 159m in DDH-PN1 (no gold assays)
- 98m at 0.30% Cu including 3m at 4.05% Cu and 0.59g/t Au from 85m in CAMC033
- 70m at 0.33% Cu including 5m at 1.08% Cu and 0.23g/t Au from 206m in CAMC028

Together with existing Hammer tenements the Wonga Detachment surface is now covered for a distance of over 20km along strike. Along this trend, mineralisation is present at multiple locations, many of which have not been drill tested. This acquisition also completes Hammer Metals coverage over the core and surrounds of the **Mount Philp Breccia IOCG target**, specifically the northern strike extension of the Prince of Wales workings.

Consideration for the acquisition is \$25,000 cash and a 1.5% NSR royalty. Completion remains subject to the satisfaction of several conditions precedent.



Example of copper mineralisation consisting of chalcocopyrite, chalcocite, malachite and chrysocolla from the Sunset prospect

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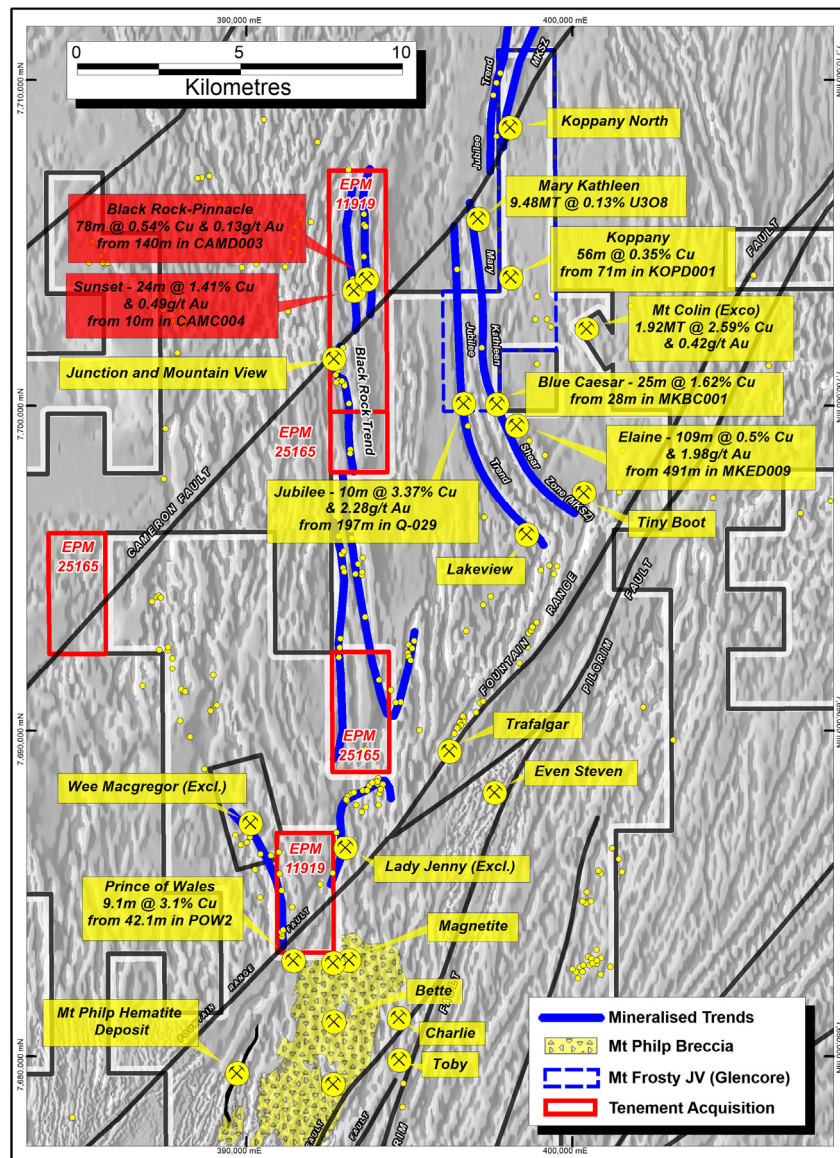
About Hammer Metals

Hammer Metals Limited (ASX: HMX) holds a strategic tenement position covering approximately 3000km² 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-Dorothy (Cu-Au) deposit. Hammer also has a 75% interest in the Millennium (Cu-Co-Au) deposit and a 51% interest in the emerging Jubilee (Cu-Au) project. Hammer is an active mineral explorer, focused on discovering large copper-gold deposits of the Ernest Henry style and has a range of prospective targets at various stages of testing.

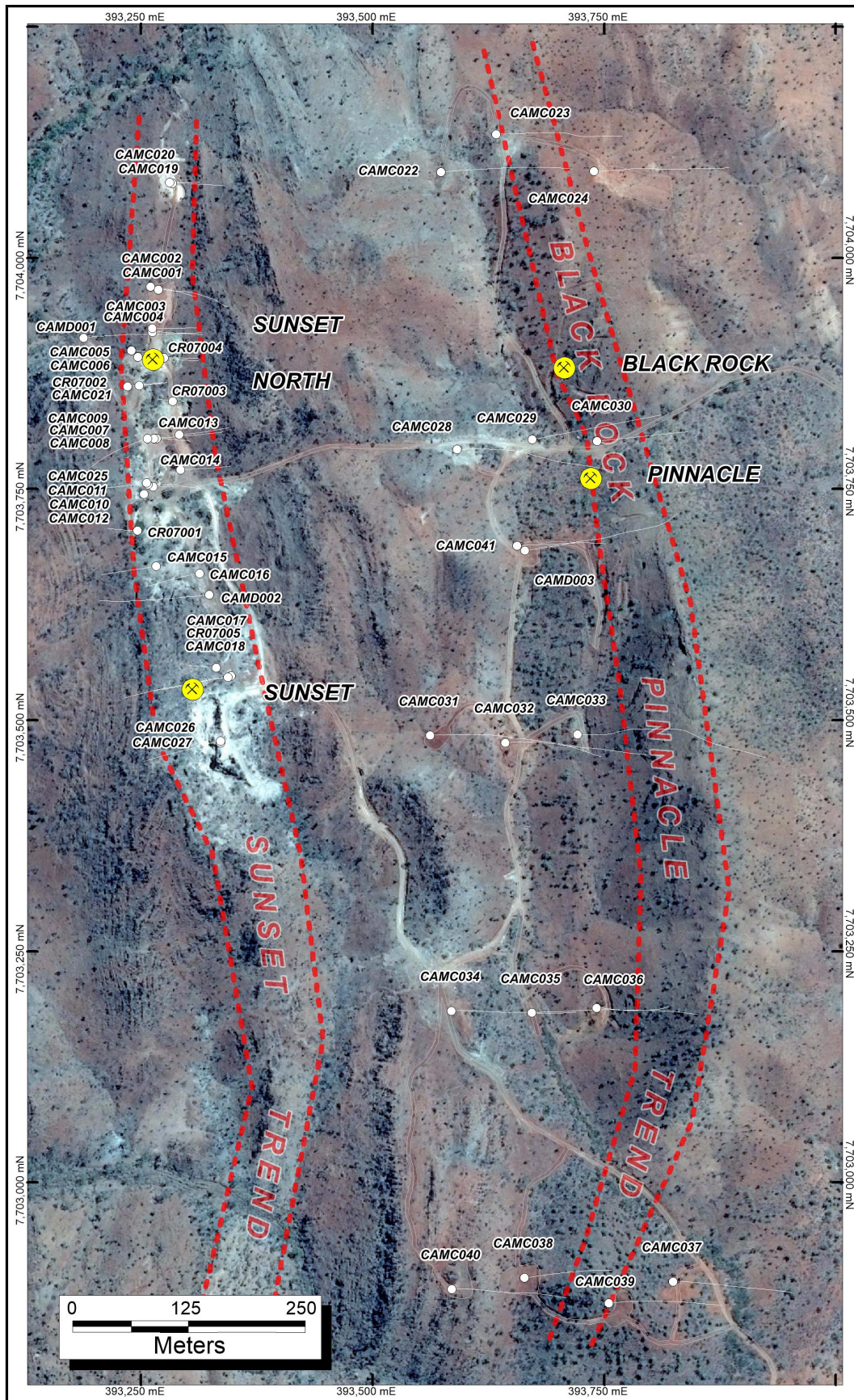
Competent Person's Statement:

Exploration Results

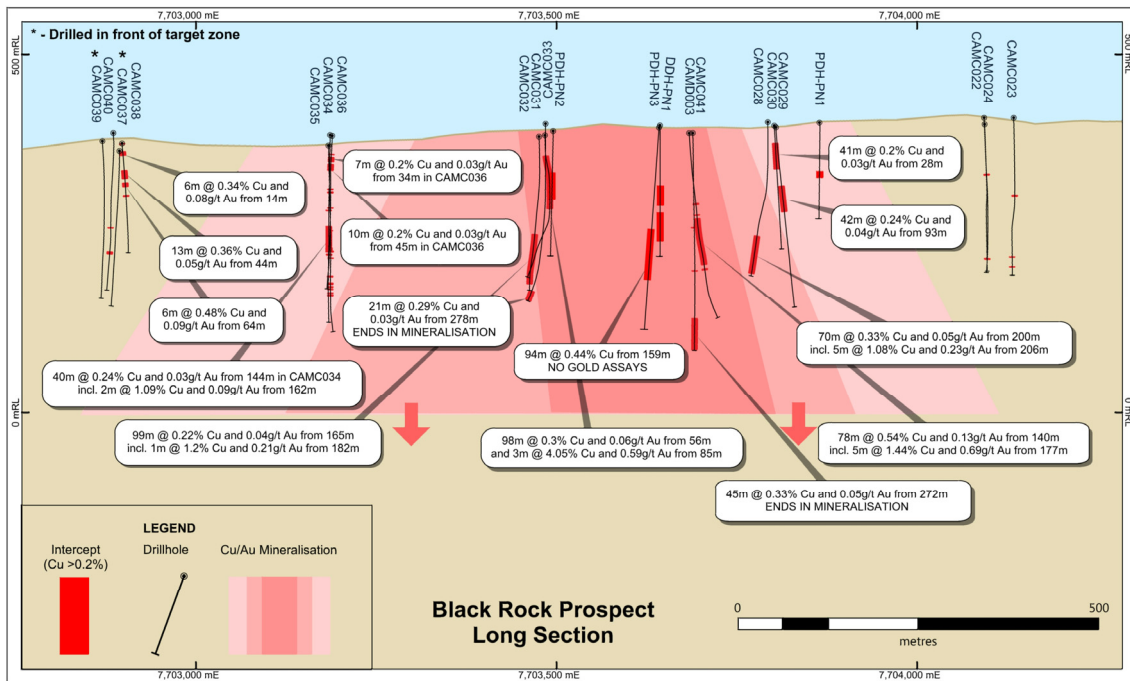
The information in this report as it relates to exploration results and geology was compiled by Mr. Mark Whittle, who is a Member of the AusIMM and a consultant to the Company. Mr. Whittle who is a shareholder and option-holder, has sufficient experience which is relevant to the style of mineralisation 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.



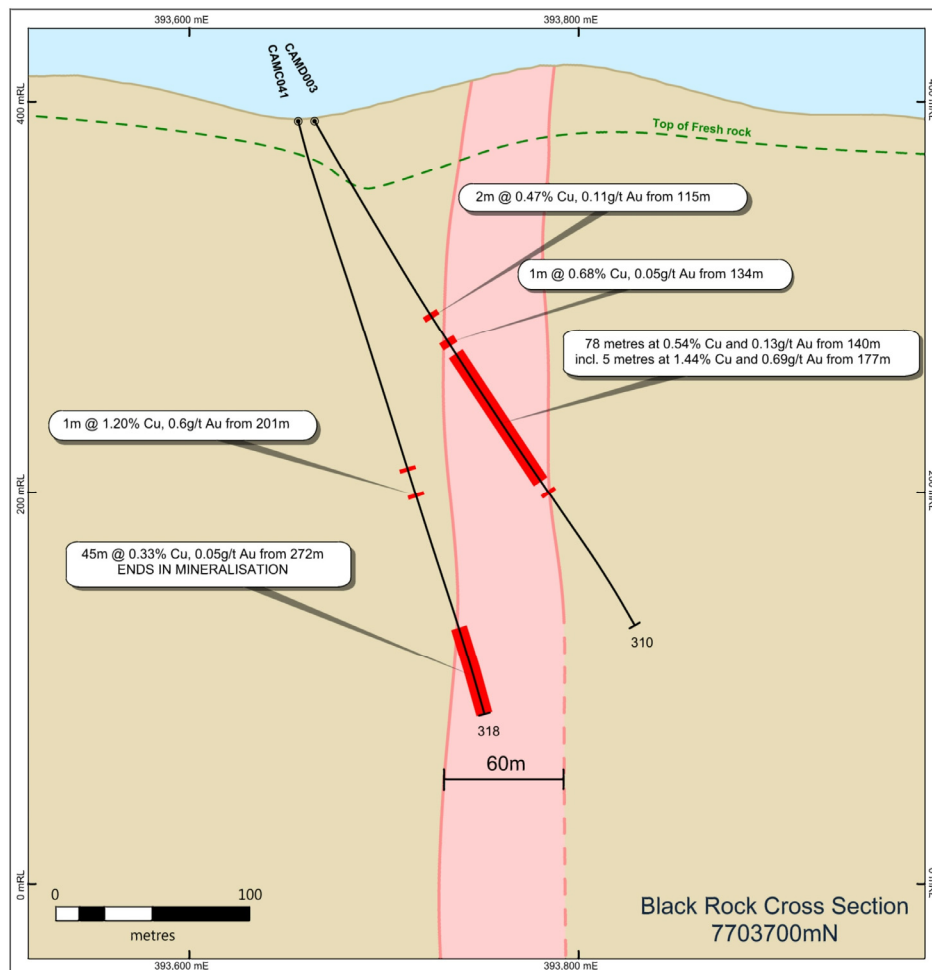
Location of EPM 11919 and EPM 25165 relative to the Hammer Metals Mount Isa Project Area.



Drill hole location plan for Sunset and Black Rock Prospects



Long section through Black Rock



Cross section through Black Rock

Table 1 – Sunset drill hole intercepts

SUNSET

EPM11919 - SUNSET - COPPER INTERSECTION EXTRACTION AT VARIABLE CUT-OFFS (0.2%, 0.5%, 1% and 2% Cu)																	
AREA	HOLE	TYPE (3)	Collar Location			Dip	Az_Grid (1)	TD	Intersection						Downhole Maximum Grade		
			East (1)	North (1)	RL (2)				From	To	Interval	Cu (%)	Au (g/t)	Co (ppm)	Cu (%)	Au (g/t)	Co (ppm)
CAMC001	RC	393269	7703966	393	-55	84	150		15	16	1	0.43	0.12	26	0.64	0.17	778
									43	51	8	0.23	0.04	156			
								Incl.	43	44	1	0.64	0.01	778			
CAMC002	RC	393260	7703969	392	-75	84	198		3	5	2	0.21	0.01	201	0.21	0.12	386
CAMC003	RC	393262	7703920	383	-60	84	120		6	7	1	2.94	0.05	104	2.94	0.13	104
									17	18	1	1.69	0.08	29			
									46	47	1	0.24	0.01	63			
CAMC004	RC	393262	7703924	385	-75	84	198		0	1	1	0.21	0.02	25	5.00	4.21	451
								Incl.	10	34	24	1.41	0.49	44			
									16	20	4	4.57	2.74	166			
								&	27	28	1	3.56	0.10	139			
									33	34	1	2.89	0.05	20			
									43	45	2	1.04	0.18	18			
	64	66	2	0.29	0.14	25											
CAMC005	RC	393247	7703893	389	-55	84	120	No Intersections above 0.2% Cu cut-off						0.12	0.02	83	
CAMC006	RC	393239	7703900	389	-75	84	150	No Intersections above 0.2% Cu cut-off						0.10	0.07	77	
CAMC007	RC	393267	7703805	385	-55	84	126		23	35	12	0.89	0.05	17	7.30	0.28	85
								Incl.	24	30	6	1.66	0.09	25			
								Incl.	25	26	1	7.30	0.28	85			
CAMC008	RC	393264	7703805	385	-75	84	150		7	17	10	0.31	0.06	21	1.59	0.26	87
								Incl.	11	12	1	1.20	0.26	41			
								&	16	17	1	0.87	0.05	42			
									33	36	3	0.91	0.09	9			
								Incl.	34	35	1	1.59	0.17	19			
CAMC009	RC	393257	7703805	385	-60	264	144		0	2	2	0.31	0.05	21	0.36	0.10	174
								Incl.	58	59	1	0.27	0.10	129			
CAMC010	RC	393263	7703753	394	-55	86	96		27	28	1	0.41	0.15	5	0.41	0.15	112
CAMC011	RC	393257	7703755	393	-75	84	138		22	23	1	0.20	0.01	0	0.22	0.05	67
								Incl.	57	58	1	0.22	0.01	4			
CAMC012	RC	393256	7703757	393	-60	264	162		20	22	2	0.51	0.05	117	1.28	0.12	487
								Incl.	64	65	1	1.28	0.12	487			
CAMC013	RC	393291	7703809	407	-55	84	96	No Intersections above 0.2% Cu cut-off						0.06	0.06	70	
CAMC014	RC	393293	7703771	395	-55	84	96		11	12	1	0.00	0.36	10	0.20	0.36	79
CAMC015	RC	393266	7703667	401	-60	264	126		14	24	10	0.55	0.14	3	10.67	4.69	95
								Incl.	23	24	1	3.86	0.17	12			
									35	52	17	1.40	0.38	21			
									40	48	8	2.66	0.18	26			
CAMC016	RC	393313	7703659	397	-70	264	216		147	148	1	0.00	3.47	4	0.08	3.47	56
CAMC017	RC	393347	7703548	405	-55	264	150		20	21	1	0.42	0.08	55	1.10	0.89	241
									60	63	3	0.72	0.4	24			
								Incl.	61	62	1	1.10	0.89	28			
CAMC018	RC	393344	7703547	405	-70	264	252		5	6	1	0.21	0.06	60	1.39	0.15	112
									35	43	8	0.33	0.04	10			
								Incl.	35	36	1	1.39	0.15	45			
								&	41	42	1	0.60	0.08	21			
CAMC019	RC	393284	7704081	401	-55	84	102		3	8	5	0.49	0.12	45	0.91	0.33	67
								Incl.	5	7	2	0.72	0.17	59			
CAMC020	RC	393281	7704082	401	-70	84	97		4	13	9	0.31	0.01	33	0.47	0.01	68
CAMC021	RC	393235	7703861	392	-75	86	131	No Intersections above 0.2% Cu cut-off						0.02	-0.01	50	
CAMC025	RC	393253	7703745	387	-90	0	30		0	1	1	0.20	0.02	33	0.29	0.05	33
								Incl.	22	23	1	0.29	0.03	6			
CAMC026	RC	393336	7703478	394	-55	264	150		13	16	3	1.31	0.14	49	2.10	0.27	83
								Incl.	13	14	1	2.10	0.27	83			
									36	40	4	0.24	0.06	6			
CAMC027	RC	393336	7703476	394	-75	264	186		14	15	1	0.05	0.12	3	0.20	0.19	119
								Incl.	44	45	1	0.04	0.19	0			
CAMD001	DD	393188	7703914	372	-75	84	435		81	82	1	0	0.26	8	0.06	0.26	111
CAMD002	DD	393324	7703636	397	-70	264	348.6	No Intersections above 0.2% Cu cut-off						0.12	-0.01	268	
CR07001	RC	393246	7703705	387	-60	262	60		0	3	3	0.48	N/A	N/A	2.71	N/A	N/A
									2	3	1	0.73					
								Incl.	15	19	4	1.46					
									18	19	1	2.71					
									40	44	4	0.55					
CR07002	RC	393248	7703862	382	-60	84	60		0	1	1	0.48	N/A	N/A	14.15	N/A	N/A
									7	12	5	0.36					
								Incl.	21	35	14	2.57					
									23	34	11	3.18					
CR07003	RC	393284	7703845	391	-60	84	40		16	22	6	0.24	N/A	N/A	0.60	N/A	N/A
								Incl.	16	17	1	0.60					
CR07004	RC	393275	7703892	390	-60	84	66		13	19	6	0.42	N/A	N/A	4.01	N/A	N/A
								Incl.	15	18	3	0.53					
									36	37	1	2.30					
									43	52	9	0.99					
								Incl.	43	44	1	1.37					
								&	51	52	1	4.01					
CR07005	RC	393331	7703557	400	-60	270	54	No Intersections above 0.2% Cu cut-off						0.12	N/A	N/A	
Note																	
1 - Datum GDA94 Zone54																	
2 - RL derived from a 50m line-spaced airborne magnetics																	
3 - Diamond Drilling (DD), Reverse Circulation (RC)																	
Data sourced from vendor database and reviewed by two Hammer Metals personnel																	

Table 2 – Black Rock drill hole intercepts

EPM11919 - BLACK ROCK - COPPER INTERSECTION EXTRACTION AT VARIABLE CUT-OFFS (0.2%, 0.5%, 1% and 2% Cu)																			
AREA	HOLE	TYPE (3)	Collar Location				Dip	Az_Grid (1)	TD	Intersection							Downhole Maximum Grade		
			East (1)	North (1)	RL (2)	From				To	Interval	Cu (%)	Au (g/t)	Co (ppm)	Cu (%)	Au (g/t)	Co (ppm)		
BLACK ROCK	CAMC022	RC	393574	7704093	412	-60	84	258			233	235	2	0.33	0.03	144	0.44	0.13	178
	CAMC023	RC	393633	7704134	411	-60	86	258		124	126	2	0.29	0.01	40	0.31	0.13	77	
										227	228	1	0.30	0.01	42				
										244	245	1	0.25	0.03	40				
	CAMC024	RC	393739	7704094	404	-60	90	252		80	82	2	0.43	0.14	85	0.51	0.14	88	
	CAMC028	RC	393591	7703793	402	-60	84	274		200	270	70	0.33	0.05	28	1.87	0.45	107	
									Incl.	200	216	16	0.56	0.10	48				
									Incl.	206	211	5	1.08	0.23	77				
									Incl.	207	208	1	1.87	0.45	99				
	CAMC029	RC	393672	7703804	383	-60	84	288		93	135	42	0.24	0.04	27	0.71	0.13	108	
									Incl.	105	106	1	0.71	0.13	108				
	CAMC030	RC	393742	7703802	383	-60	84	198		28	69	41	0.20	0.03	15	0.65	0.12	59	
									Incl.	44	45	1	0.65	0.11	33				
									&	62	63	1	0.61	0.12	32				
	CAMC031	RC	393562	7703484	385	-60	84	300		278	299	21	0.29	0.03	30	0.84	0.23	314	
									Incl.	297	298	1	0.44	0.23	51				
	CAMC032	RC	393643	7703476	367	-65	84	277		165	264	99	0.22	0.04	28	1.20	0.24	127	
									Incl.	182	183	1	1.20	0.21	91				
									&	193	196	3	0.46	0.11	40				
									&	222	223	1	0.31	0.24	57				
	CAMC033	RC	393721	7703485	374	-55	90	300		56	154	98	0.30	0.06	37	9.14	1.33	240	
									Incl.	67	69	2	0.41	0.52	152				
									&	85	88	3	4.05	0.59	110				
									&	131	133	2	0.10	0.30	8				
	CAMC034	RC	393585	7703186	374	-60	84	294		119	120	1	0.011	0.17	264	1.20	0.17	359	
									Incl.	144	184	40	0.24	0.03	75				
									Incl.	162	164	2	1.09	0.09	268				
	CAMC035	RC	393672	7703184	350	-60	84	300		171	173	2	0.36	0.13	29	0.43	0.20	242	
									182	183	1	0.43	0.04	23					
									211	213	2	0.27	0.06	23					
									222	225	3	0.21	0.06	35					
									228	230	2	0.30	0.09	29					
									232	233	1	0.23	0.20	28					
									238	239	1	0.21	0.04	70					
									241	243	2	0.30	0.09	38					
CAMC036	RC	393742	7703189	380	-60	84	240		29	30	1	0.27	0.01	23	0.45	0.08	1475		
									34	41	7	0.20	0.03	21					
									45	55	10	0.20	0.03	26					
									84	85	1	0.35	0.03	62					
									88	90	2	0.27	0.03	69					
									114	115	1	0.35	0.05	29					
									149	150	1	0.45	0.01	92					
									176	180	4	0.01	0.01	692					
	186	188	2	0.40	0.01	509													
CAMC037	RC	393825	7702894	357	-60	84	252	No Intersections above 0.2% Cu cut-off							0.04	0.02	78		
CAMC038	RC	393664	7702898	374	-60	84	180		1	2	1	0.24	0.14	39	0.87	0.39	285		
									14	20	6	0.34	0.08	38					
								Incl.	14	16	2	0.36	0.20	38					
									44	57	13	0.36	0.05	31					
								Incl.	55	56	1	0.58	0.10	34					
									64	70	6	0.48	0.09	51					
								Incl.	64	65	1	0.77	0.20	106					
								&	67	68	1	0.56	0.18	54					
Incl.	84	86	2	0.56	0.23	28													
	84	85	1	0.87	0.39	37													
CAMC039	RC	393755	7702871	379	-60	84	252	No Intersections above 0.2% Cu cut-off							0.06	0.03	115		
CAMC040	RC	393586	7702886	402	-60	84	252		153	154	1	0.43	0.10	27	0.43	0.10	142		
									191	195	4	0.21	0.03	39					
CAMC041	RC	393656	7703689	396	-75	84	318		138	139	1	0.29	0.01	27	2.45	0.60	89		
									201	202	1	1.20	0.60	78					
									272	317	45	0.33	0.05	22					
									272	273	1	1.05	0.15	42					
									291	292	1	1.18	0.11	53					
									303	305	2	1.63	0.12	61					
CAMD003	DD	393665	7703684	382	-60	84	309.5		115	117	2	0.47	0.11	63	2.11	1.88	700		
									134	135	1	0.68	0.05	16					
									140	218	78	0.54	0.13	64					
								Incl.	141	142	1	2.08	0.44	149					
								&	164	165	1	2.10	0.44	197					
								&	177	182	5	1.44	0.69	667					
								&	194	211	17	0.75	0.26	92					
								Incl.	210	211	1	0.25	1.88	26					
								&	214	215	1	0.46	0.03	61					
								&	217	218	1	0.24	0.03	21					
	225	227	2	0.34	0.08	29													
DDH-PN1	DD	393657	7703642	386	-65	91	332		159	253	94	0.44	Not assayed		8.9	Not assayed			
								Incl.	228	228.5	0.5	8.9							
PDH-PN1	RC	393682	7703865	402	-70	91	127		75	86	11	0.43	Not assayed		1.4	Not assayed			
PDH-PN2	RC	393713	7703495	401	-60	91	196		88	132	44	0.3	Not assayed		0.85	Not assayed			
PDH-PN3	RC	393731	7703642	390	-70	91	206		92	126	34	0.41	Not assayed		1.2	Not assayed			
									137	184	47	0.37							
Note																			
1 - Datum GDA94 Zone54																			
2 - RL derived from a 50m line-spaced airborne magnetics																			
3 - Diamond Drilling (DD), Reverse Circulation (RC)																			
Data sourced from vendor database and reviewed by two Hammer Metals personnel																			

Table 3 – Mountain View drill hole intercepts

EPM11919 - MOUNTAIN VIEW - COPPER INTERSECTION EXTRACTION AT VARIABLE CUT-OFFS (0.2%, 0.5%, 1% and 2% Cu)																		
AREA	HOLE	TYPE (3)	Collar Location			Dip	Az_Grid (1)	TD		Intersection					Downhole Maximum Grade			
			East (1)	North (1)	RL (2)					From	To	Interval	Cu (%)	Au (g/t)	Co (ppm)	Cu (%)	Au (g/t)	Co (ppm)
Mountain View	CAMD004	DD	393023	7700076	385	-55	84	500.4		53	79	26	0.34	0.31	239	1.74	2.37	852
									incl.	60.5	73	12.5	0.58	0.60	390			
									incl.	69.1	71	1.9	1.70	1.85	736			
										77.1	79	1.9	0.27	0.17	219			
										111	148	37	0.34	0.04	259			
									incl.	127	128	1	1.17	0.09	845			
									&	139.3	140.3	1	1.16	0.06	538			
	CAMD005	DD	393023	7700551	385	-75	90	381.3		310.25	311.9	1.65	0.36	0.01	1729	0.68	-0.01	1898
										333	334	1	0.68	0.01	188			
	CAMD006	DD	393023	7700551	385	-55	284	209.4		8	30	22	0.32	0.01	254	1.93	1.39	1435
									incl.	28	29	1	1.61	0.08	1435			
										40	48	8	0.25	0.01	140			
										58	61	3	0.28	0.02	108			
										67	71	4	0.35	0.03	178			
										99	101	2	1.21	0.14	86			
										103	105	2	0.76	0.13	59			
										110	111	1	0.43	0.07	225			
										125	126	1	0.30	0.01	154			
										141	142	1	0.38	0.01	186			
										152	153	1	0.47	0.02	251			
										163	164	1	0.20	0.01	249			
										168	173	5	0.79	0.22	138			
										180	183	3	0.49	0.59	70			
									incl.	182	183	1	0.96	1.39	53			
										189	190	1	0.51	0.10	134			
									194	197	3	0.80	0.07	207				
									207	209.4	2.4	0.16	0.09	64				
Note																		
1 - Datum GDA94 Zone54																		
2 - RL derived from a 50m line-spaced airborne magnetics																		
3 - Diamond Drilling (DD), Reverse Circulation (RC)																		
Data sourced from vendor database and reviewed by two Hammer Metals personnel																		

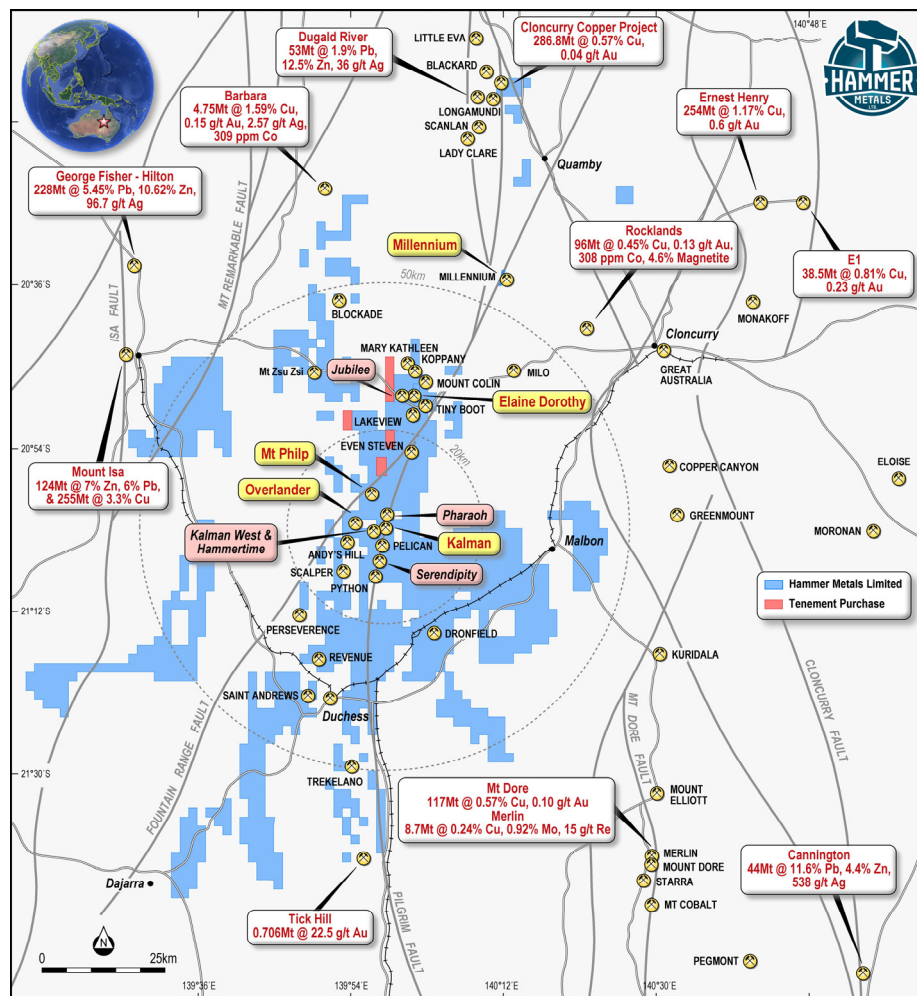
Note

1 - Datum GDA94 Zone54

2 - RL derived from a 50m line-spaced airborne magnetics

3 - Diamond Drilling (DD), Reverse Circulation (RC)

Data sourced from vendor database and reviewed by two Hammer Metals personnel



Hammer Metals Mount Isa Project area showing the location of the acquired tenements

JORC Code, 2012 Edition

Table 1 report – Exploration Update

- This table is to accompany an ASX release updating the market on the acquisition of EPM11919 and EPM25165.
- The release exclusively comments on results from multiple drilling programs undertaken by a private vendor in 2007 and 2011 and Mines Exploration Pty Ltd in the late 1970's.
- The reader should note that the Mines Exploration drilling was conducted in the late 1970's and as a result the standard of drilling and assaying is not considered current best practice. Therefore, care should be taken with information presented in relation to holes prefixed PDH and DDH. More recent drilling conducted by the vendor effectively tests the same areas as the Mines Exploration drilling.
- Work pertaining to these companies is split out below utilising the headings Vendor and ME.

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	• <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). These examples should not be taken as limiting the broad meaning of sampling.</i> • <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> • <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> • <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>	<u>Vendor</u> • CAMD (NQ diamond). • CAMC, and CR prefixed holes (5.25" diameter reverse circulation). <u>ME</u> • DDH prefixed holes (diamond). • PDH-PN (Rotary Percussion – unknown diameter). <u>Vendor</u> • NQ diamond drilling was utilised to obtain half cut core samples over nominal 1m sample lengths. • Reverse Circulation drilling utilising a 5.25" bit was used to collect nominal 1m samples which were subject to a riffle split to collect a 3-5kg sample which was submitted for assay. • 3-5kg samples were analysed for multielements by ICP OES after a 4-acid digest. Gold was analysed via flame AAS. The charge weight for the gold analyses was not recorded in the data received from the vendor. <u>ME</u> • HQ Pre-collar to 2.6m, NQ to 42m and BQ to 332m. Half cut core

Criteria	JORC Code explanation	Commentary
		was assayed over one metre intervals where mineralisation was observed. - Rotary Percussion drilling was conducted however the hole diameter is not specified 1kg samples were sent to Amdel in Adelaide and assayed for Cu and Co by AAS.
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).	<u>Vendor</u> - CAMD (NQ diamond). - CAMC, and CR prefixed holes (5.25" diameter reverse circulation). <u>ME</u> - DDH prefixed holes (HQ-NQ-BQ). - PDH-PN (Rotary Percussion – unknown diameter).
Drill sample recovery	- Method of recording and assessing core and chip sample recoveries and results assessed. - Measures taken to maximise sample recovery and ensure representative nature of the samples. - 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.	<u>Both Vendor and ME</u> Drill sample recovery was not recorded in data received from the vendor nor in open file reports examined by Mines Exploration
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.	<u>Both Vendor and ME</u> Drill holes were logged by the vendor and Mines Exploration personnel.
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.	<u>Both Vendor and ME</u> - Samples from diamond drilling consisted of half-cut core. - Samples from RC and rotary percussion drilling consisted of nominal 1m samples which were

Criteria	JORC Code explanation	Commentary
	• <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>	subject to a riffle split.
Quality of assay data and laboratory tests	• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <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> • <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>	<u>Vendor</u> • Samples were analysed by ICP OES for a range of elements after a 4-acid digest. • Gold was analysed via flame AAS. • Duplicate samples were taken every 45m and a lab check samples was conducted every 18m. • 34 blanks were utilised in the reported drilling. • The analytical methods and QA QC sampling density is appropriate for resource delineation drilling. <u>ME</u> • Samples were analysed by AAS for Cu and Co. • Gold was not analysed. • No duplicate samples, standards or blanks were noted in the open file documentation. • The analytical methods and element mix are not considered appropriate for current exploration best practice. However, as this work was conducted in 1978 they would be considered appropriate at that time.
Verification of sampling and assaying	• <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <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>	<u>Vendor</u> • The assays received as part of the acquisition dataset have been verified by alternate Hammer Metals personnel. • It is not known whether assay files were received electronically from the laboratory. <u>ME</u>

Criteria	JORC Code explanation	Commentary
		- No primary assay files were noted in the open file reports submitted to the government by ME. - Assays were transcribed into geological logs. - As this work was conducted in the late 70's no assay files would have been received electronically from the laboratory.
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 UTM GDA 94 Zone 54. <u>Vendor</u> - Reverse Circulation hole collars were surveyed by GPS. Downhole surveys were conducted by a reflex camera. - Diamond hole collars were surveyed by GPS. Downhole surveys were conducted by gyro. <u>ME</u> - Collars were located by the explorer using a local grid. Hammer Metals has since located the collars using GPS. Downhole surveys were documented as being conducted using acid tube and a Pajari Tropari survey instrument. - At the time these downhole survey methods were best practice but would now be considered inadequate.
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.	- No sample variography has been conducted to establish the degree of grade continuity. However, <u>utilising the vendor drilling in isolation</u>, the sample spacing is sufficient to determine the envelope of mineralisation. - The vendor drill hole spacing is sufficient to enable geological continuity to be established. - Sample compositing has been conducted in order to quote intercepts used Tables 1, 2 and 3.
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	<u>Vendor</u> - It is not known at this time whether drill hole spacing has introduced a sampling bias. <u>ME</u> - Open file reports noted strong water influx occurred during drilling. As the drill method was rotary percussion the

Criteria	JORC Code explanation	Commentary
	<i>should be assessed and reported if material.</i>	water inflow would be enough to possibly introduce a sampling bias.
Sample security	<i>The measures taken to ensure sample security.</i>	<u>Both Vendor and ME</u> It is not known whether pre-numbered bags were utilised.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	<u>Vendor</u> - The dataset associated with this sampling has been subject to data import validation by both the vendor and Hammer Metals. - All assay data as received from the vendor has been reviewed by two Hammer Metals personnel. <u>ME</u> - The dataset associated with this sampling has been subject to data import validation by Hammer Metals. - The drill hole locations have been verified on site. - It should be noted that the data generated from the ME drilling is of insufficient quality to be included in any future ore resource estimations

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	<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> <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>	The Sunset, Black Rock, Pinnacle, Junction and Mountain View Prospects are located on EPM 11919. The tenement is subject to a sale agreement and ownership will be transferred to Mt Dockerell Mining Pty Ltd - a 100% owned subsidiary of Hammer Metals Limited.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	The prospects have not been appraised by any other parties connected with Hammer Metals Limited.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Mineralisation at Sunset is located on a shear zone within a carbonate unit of the Corella Formation. Alteration

Criteria	JORC Code explanation	Commentary
		consists of ferroan carbonate. Mineralisation at the Black Rock and Pinnacle Prospects is located within the Ballara Quartzite close to its contact with the Corella Formation. The Quartzite has been hematite and magnetite altered, ferruginised and fractured.
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.	See Tables 1, 2 and 3 which summarise aspects of the previous drilling on the prospects.
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.	Intercepts have been calculated at variable cut-offs (0.2, 0.5 and 1% Cu) primarily to illustrate the mineralised envelope and higher-grade zones within the envelope.
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').	- The hole angles at Sunset vary therefore the true width of mineralised intercepts cannot be stated as a simple proportion. - At Black Rock and Pinnacle true widths are approximately 70% of intersected widths.

Criteria	JORC Code explanation	Commentary
<i>Diagrams</i>	<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>	See attached figures
<i>Balanced reporting</i>	<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 to avoid misleading reporting of Exploration Results.</i>	- The intersections in Tables 1, 2 and 3 illustrate grades at differing cut-offs – the minimum being 0.2% Copper. - The reader can therefore assume that any zones not represented in these tables will have an both individual and aggregated grades of less than 0.2% Copper.
<i>Other substantive exploration data</i>	<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>	The overview figure shows a background aeromagnetic image which has been derived from 200m and 50m line-spaced publicly available datasets.
<i>Further work</i>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <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>	- It is the intention of Hammer Metals Limited to delineate JORC resources at both Sunset and Black Rock Prospects. - This will involve further confirmatory and resource delineation drilling.