## ASX Announcement (ASX: HMX)



September 14th 2016

## Millennium and Scalper Cobalt-Copper Drilling Results

Hammer Metals Limited (ASX: HMX) wishes to update shareholders on progress with its 100% owned Millennium and Scalper Projects.

Hammer drilled a total of 23 RC holes and extended two previous holes at Millennium. The results build on previous drilling conducted in the area and 38 drill-holes can now be used in the first JORC-compliant mineral resource estimate for the project.

Significant results from Millennium are listed below with peak cobalt results including 8 metres at 0.35% Co in MIRC023 and 4 metres at 0.51% Co in MIRC013.

Also of interest was a new zone of highly anomalous silver from MIRC019 with 10 metres at 40g/t Ag including 1 metre at 337g/t Ag.

Results for holes MIRC001 to MIRC 016 were reported by Hammer on the 13<sup>th</sup> of September. Significant results from this release reported at a nominal 0.3% CuEq\* cutoff include:

- 24 metres from 73 metres at 0.15% Co, 0.23% Cu and 0.09g/t Au (1.17%CuEq) including
  - 4 metres from 73 metres at 0.51% Co, 0.46% Cu and 0.16g/t Au (3.64% CuEq) in MIRC013
- 13 metres from 98 metres at 0.10% Co, 0.41% Cu and 0.10g/t Au (1.12% CuEq) in MIRC007
- 12 metres from 149 metres at 0.19% Co, 0.57% Cu and 0.19g/t Au (1.85% CuEq) including
  - 4 metres from 157 metres at 0.30% Co, 0.44% Cu and 0.14g/t Au (2.33% CuEq) in MIRC014
- 18 metres from 62 metres at 0.11% Co, 0.40% Cu, and 0.17g/t Au (1.23% CuEq) in MIRC015

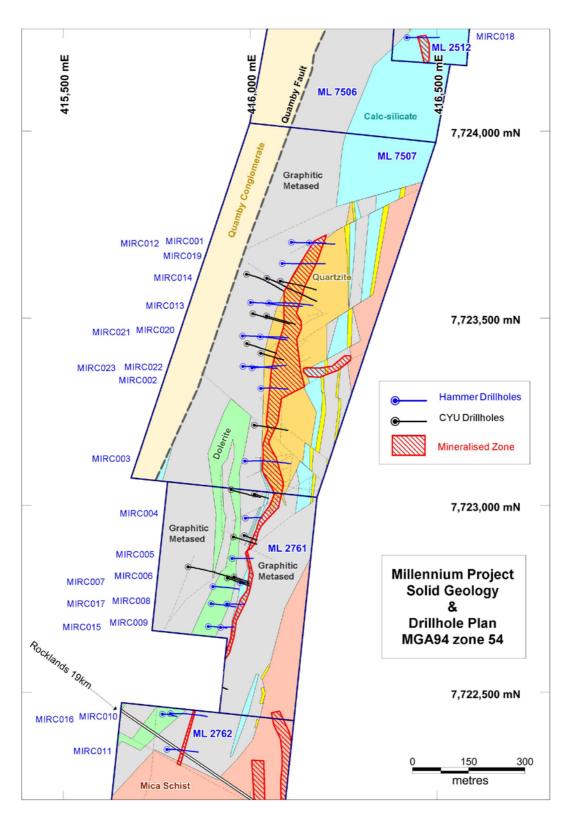
Significant intercepts from the balance of the drill holes (MIRC017-MIRC023) at a nominal 0.3% CuEq\* cutoff include:

- 40 metres from 56 metres at 0.07% Co, 0.32% Cu and 0.13g/t Au (0.82% CuEq) in MIRC017 including
  - 5 metres from 60 metres 0.15% Co, 0.82% Cu, 0.21g/t Au and 0.32g/t Ag (1.90% CuEq) and
  - 8 metres from 84 metres at 0.11% Co, 0.79% Cu, 0.24g/t Au and 0.44g/t Ag (1.64% CuEq)
- 6 metres from 50 metres at 39g/t Ag and 1.63% Pb and 2 metres at 1.02g/t Au and 180g/t Ag from 101 metres in MIRC019
- 5 metres from 173 metres at 0.17% Co, 0.21% Cu, 0.03g/t Au and 0.55g/t Ag (1.24% CuEq) in MIRC021
- 33 metres from 115 metres at 0.16% Co, 0.22% Cu, 0.1g/t Au (1.29% CuEq) in MIRC023 including
  - 5 metres from 116 metres at 0.19% Co, 0.66% Cu, 0.34g/t Au and 3.84g/t Ag (2.11% CuEq) and
  - o 8 metres from 128 metres at 0.35% Co, 0.08% Cu (2.19% CuEq)

At Scalper 4 RC holes were drilled and one hole extended. Significant results include:

12 metres from 20 metres at 1.2% Cu and 0.38g/t Au in SCRC005





**Millennium Drilling Summary** 



#### **Millennium**

Hammer Metals Limited acquired the Millennium leases in May 2016. Since that time, Hammer has conducted geological mapping and has recently completed a 23 hole, 3857 metre RC drilling program. Assaying of umpire samples, preliminary metallurgical studies and three-dimensional geological modelling is currently in progress prior to undertaking a maiden mineral resource estimate for the project.

Millennium is located close to the regional-scale Pilgrim Fault Zone which also hosts Hammer's Kalman Copper-Gold-Molybdenum-Rhenium Deposit, 50 kilometres to the south.

Geological mapping has identified two settings for mineralisation. The southern portion of the deposit is hosted by carbonaceous shales whilst the northern portion of the deposit is hosted by a fractured and ferruginous quartzite unit. Mineralisation is expressed differently within these two host lithologies. In the south, two separate zones of strongly mineralised material are present, whilst in the northern portion of the mineralised zone, which is hosted by quartzite, the true width of mineralised envelope can be up to 80 metres in thickness.

The mapping has also identified that potential lies at the northern end of the leases in a very similar structural and geological situation with strongly anomalous copper and cobalt soil geochemistry that has not yet been drill tested – the "Northern Target". In addition, there is potential along strike from the old Federal Mine with reported historical production of approximately 10,000 tonnes at 26% Cu. These targets will be pursued in subsequent drilling programs.

Significantly the recent drilling in MIRC019 has identified a high grade silver-lead zone which requires further follow-up. Grades of 39g/t Ag and 1.63% Pb from 50 to 56 metres and 180g/t Ag from 101 to 103 metres were intersected in MIRC019 within altered quartzite.

#### Scalper

Hammer Metals has also recently completed a 5-hole (506 metre) reverse circulation drilling program at its Scalper prospect within EPM25486. The aim of the program was to test a combined gravity and magnetic anomaly which exhibited alteration consistent with IOCG mineralisation, and a nearby copper-bearing gossanous zone.

Significant intersections from this program include:

- 8 metres from 34 metres at 0.95% Cu in SCRC003
- 12 metres from 20 metres at 1.2% Cu and 0.38g/t Au in SCRC005

This drilling has not yet fully tested the geophysical anomaly or the extents of the gossanous zone to the north. It is anticipated that this area will be investigated further in 2017.

Hammer is currently drilling at the Overlander IOCG target (ASX release dated 10<sup>th</sup> August 2016) within the Hammer - Newmont Farm-in and Joint Venture area. The purpose of this program is to test for a large, bulk-tonnage copper-gold (IOCG) system in the vicinity of the gravity and magnetic anomaly immediately to the west of the current Overlander copper resource. It is anticipated that the first phase of drilling at Overlander will be complete by the end of November.

(\*Copper Equivalent Calculation -  $CuEq_\% = Cu_\% + (Co_\%*5.9) + (Au_ppm*0.9) + (Ag_ppm*0.01)$ )



- ENDS -

For further information, please contact:

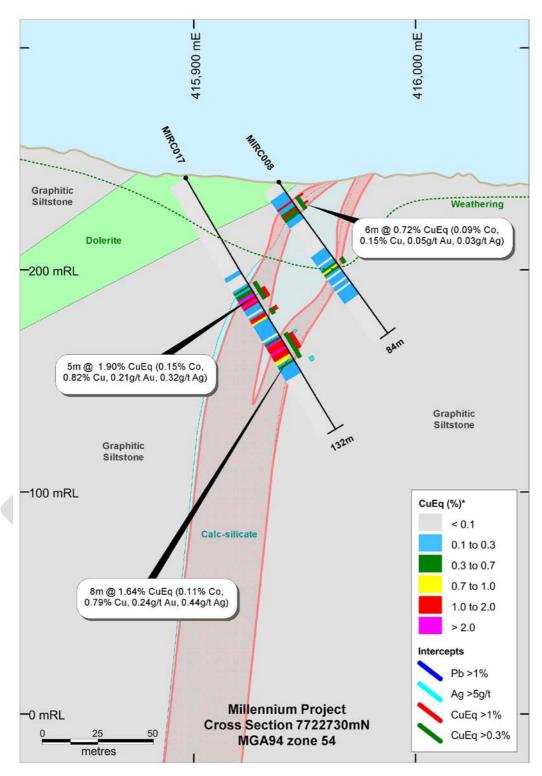
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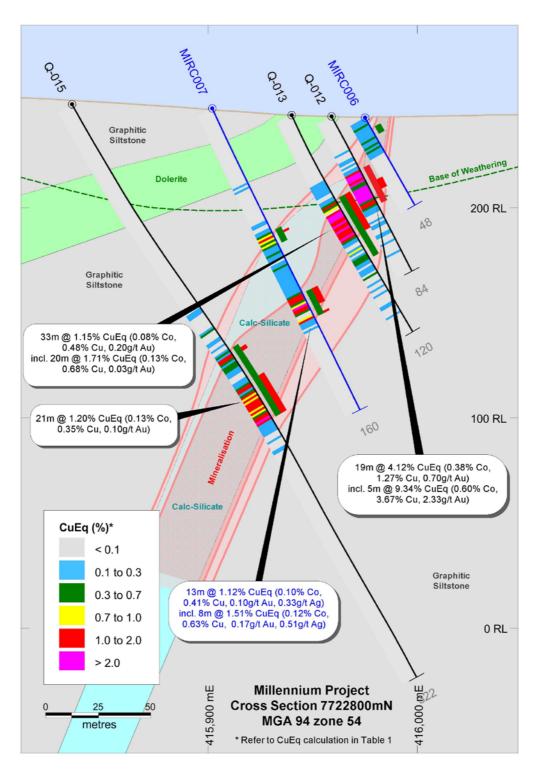
Hammer Metals Limited (ASX:HMX), is an advanced exploration company with a major land position (2600km²) in the Mount Isa Mineral Province in NW Queensland. The tenement package is sandwiched between several large resource houses including Glencore, BHP and Chinova. Hammer is focused on developing base and precious metal resources in the district through well-targeted exploration and project acquisition activities.





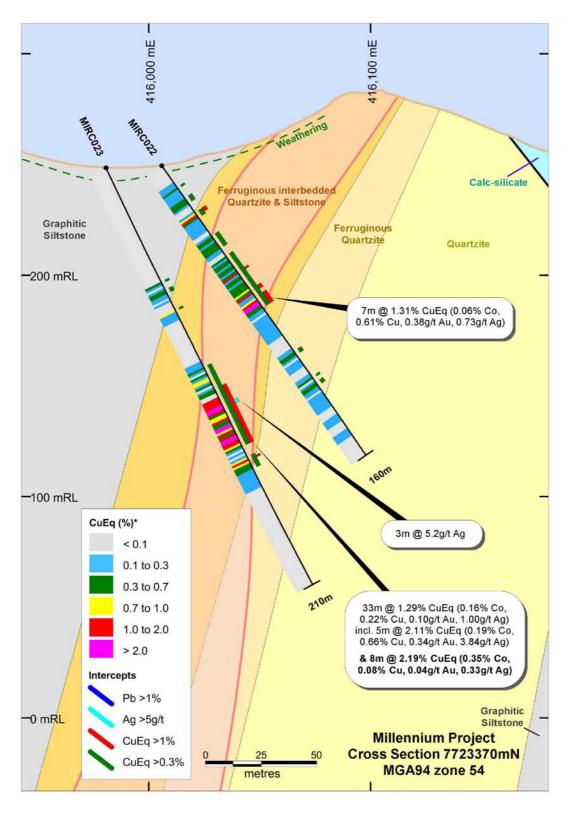
Millennium Cross Section 7722730mN





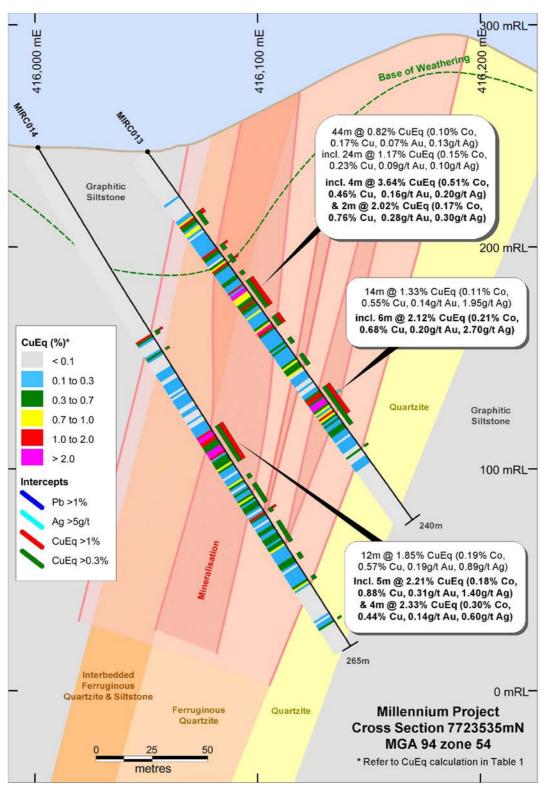
Millennium Cross Section 7722800mN





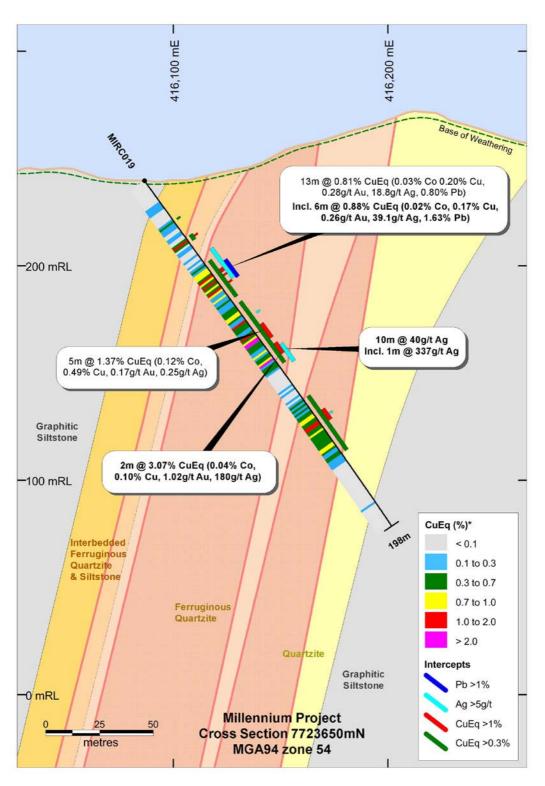
Millennium Cross Section 7723370mN





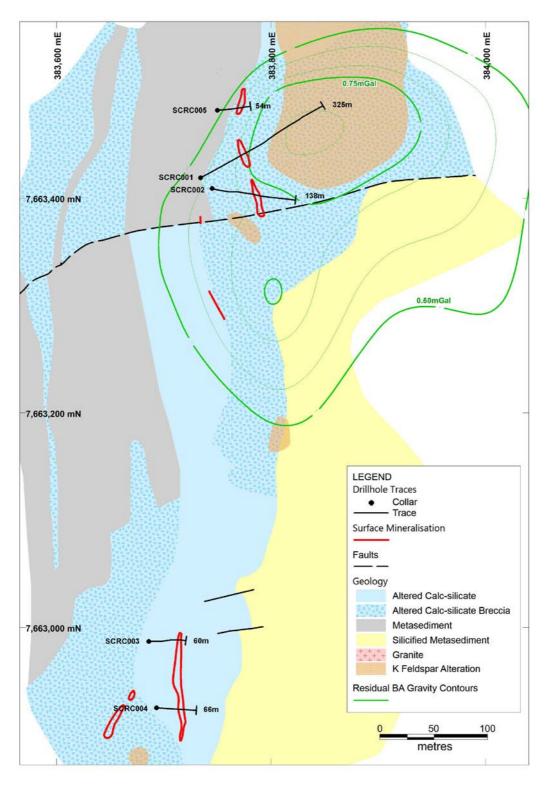
Millennium Cross Section 7723535mN





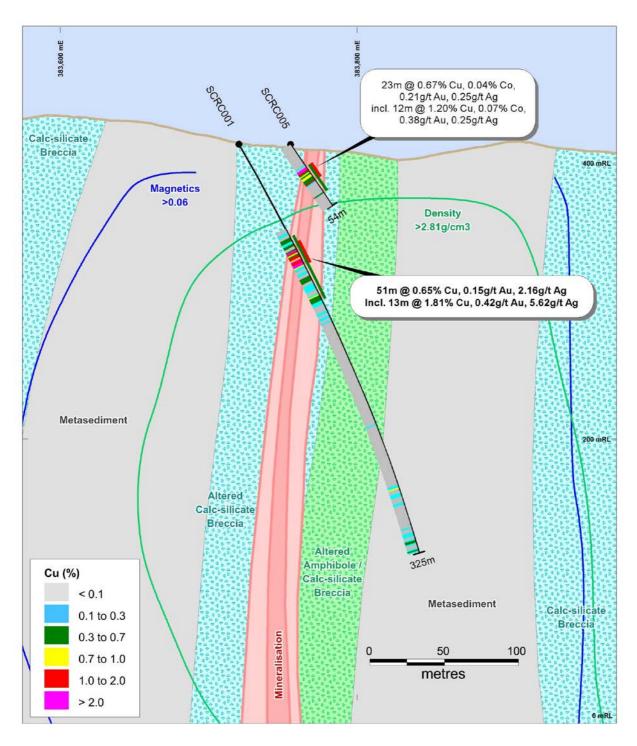
Millennium Cross Section 7723650mN





**Scalper Drillhole Location Plan** 





**Scalper SCRC001 Cross Section** 



Millennium Hole Locations						
Hole ID	E (GDA94)	N (GDA94)	RL	Dip	Azi (GDA94)	Depth (m)
Q-010 (1)	416088	7723597	252	-60	112	192
Q-011 (2)	416042	7723604	247	-60	106	240
MIRC001	416163	7723702	235	-55	90	120
MIRC002	416031	7723315	269	-55	89	138
MIRC003	415988	7723120	267	-55	88	228
MIRC004	415990	7722967	258	-55	88	78
MIRC005	415953	7722861	251	-55	89	100
MIRC006	415975	7722791	249	-60	89	48
MIRC007	415902	7722782	257	-60	89	160
MIRC008	415940	7722734	253	-55	89	84
MIRC009	415921	7722671	253	-55	87	66
MIRC010	415790	7722440	258	-55	88	168
MIRC011	415779	7722347	264	-55	88	144
MIRC012	416114	7723704	246	-55	88	186
MIRC013	416051	7723528	247	-55	88	204
MIRC014	416003	7723542	250	-60	88	265
MIRC015	415890	7722676	250	-65	88	120
MIRC016	415767	7722442	247	-70	88	120
MIRC017	415897	7722736	249	-60	90	132
MIRC018	416420	7724251	239	-55	90	160
MIRC019	416089	7723646	247	-55	90	198
MIRC020	416030	7723452	252	-55	90	132
MIRC021	415980	7723451	253	-55	90	204
MIRC022	416008	7723368	257	-55	85	160
MIRC023	415983	7723371	255	-67	90	210
23 holes + 2 extensions 3857 m						
Note						
Location data to GPS accuracy						
Datum GDA94 Zone54						
1. Q-010 Exte	nded from 144m	to 192m				
2. Q-011 Exte	nded from 180m	to 240m				

	Scalper Hole Locations						
Hole ID	E (GDA94)	N (GDA94)	RL	Dip	Azi (GDA94)	Depth (m)	
SCRC001	383735	7663420	419.8	-64.9	53.4	324	
SCRC002	383740	7663410	418.9	-55	106	138	
SCRC003	383686	7662987	412.0	-55	90	60	
SCRC004	383693	7662925	413.7	-55	90	66	
SCRC005	383750	7663482	416.4	-55	87	54	
		506 m					
Note							
Location data to GPS accuracy							
Datum GDA94 Zone54							

1. SCRC001 Extended from 136m to 324m



Millennium - Significant Intercepts (cont).									
Hole ID		From (m)	To (m)	Interval (m)	Cu Eqv (%)	Cu (%)	Co (%)	Au (g/t)	Ag (g/t)
		2	12	10	0.36	0.10	0.04	0.02	0.03
		18	30	12	0.63	0.23	0.05	0.08	0.33
	incl.	19	20	1	1.09	0.66	0.03	0.26	0.80
		46	63	17	0.58	0.17	0.05	0.14	0.03
	incl.	53	54	1	1.34	0.09	0.05	1.08	0.20
	and	62	63	1	1.77	0.13	0.27	0.05	0.20
Q-010 (1)		80	86	6	0.59	0.25	0.05	0.07	0.42
	incl.	81	82	1	1.03	0.58	0.04	0.19	1.40
		117	118	1	0.52	0.04	0.06	0.08	2.50
		124	163	39	1.12	0.34	0.11	0.09	1.12
	incl.	124	144	20	1.75	0.51	0.019	0.14	2.08
	incl.	125	139	14	2.17	0.65	0.23	0.17	2.76
	and	142	143	1	1.28	0.19	0.17	0.09	0.40
		25	26	1	0.71	0.00	0.11	0.09	0.00
		66	69	3	1.14	0.33	0.11	0.15	0.03
		81	82	1	0.60	0.22	0.05	0.05	3.90
		90	91	1	0.50	0.33	0.02	0.04	1.20
		100	134	34	0.74	0.29	0.04	0.24	0.65
Q-011 (2)	incl.	102	104	2	1.51	1.02	0.03	0.31	2.50
	and	108	113	5	1.02	0.30	0.10	0.13	0.32
		129	134	5	1.35	0.54	0.03	0.67	1.78
		160	192	32	0.87	0.45	0.05	0.16	0.64
	incl.	160	174	14	1.03	0.64	0.03	0.21	1.30
	and	184	188	4	1.67	0.58	0.14	0.28	0.25
MIRC001		47	64	17	0.62	0.25	0.05	0.04	0.50
WIIKCOUT	incl.	47	50	3	1.20	0.05	0.11	0.06	0.40
MIRC002		25	45	20	0.39	0.17	0.03	0.05	1.12
		90	93	3	0.99	0.03	0.16	0.00	0.07
MIRC003	incl.	90	91	1	2.34	0.02	0.39	0.00	0.03
WIRCOUS		203	209	6	0.67	0.02	0.11	0.00	0.04
	incl.	204	205	1	1.86	0.02	0.31	0.01	0.03
MIRC004		15	30	15	0.41	0.20	0.03	0.02	1.12
WIRC004	incl.	17	18	1	1.11	0.86	0.03	0.01	9.31
MIRC005		36	37	1	0.32	0.21	0.02	0.00	0.07
MIRC006		6	10	4	0.38	0.13	0.03	0.04	0.05
		65	72	7	0.78	0.30	0.06	0.12	0.10
	incl.	67	68	1	1.21	0.28	0.13	0.18	0.10
MIRC007		98	111	13	1.12	0.41	0.10	0.10	0.33
	incl.	98	106	8	1.51	0.63	0.12	0.17	0.51
		110	111	1	1.16	0.08	0.18	0.00	0.10
		10	16	6	0.72	0.15	0.09	0.05	0.03
	incl.	10	11	1	1.77	0.03	0.29	0.02	0.02
MIRC008	and	14	15	1	1.12	0.33	0.11	0.19	0.05
		44	47	3	0.48	0.20	0.04	0.03	0.10
	incl.	45	46	1	0.76	0.35	0.06	0.05	0.16
		20	38	18	0.95	0.23	0.10	0.17	0.41
MIRC009	incl.	28	34	6	1.77	0.29	0.19	0.38	0.70
	incl.	28	30	2	3.73	0.51	0.38	1.10	1.46



MIRCO10  incl. 39 42 3 1.13 0.15  and 45 47 2 1.14 0.32  and 59 61 2 1.70 0.25  MIRCO11 115 116 1 0.50 0.25  MIRCO12 incl. 45 49 4 0.73 0.55  incl. 45 46 1 1.26 1.00  137 140 3 0.77 0.37  35 42 7 0.72 0.08  incl. 36 37 1 1.37 0.05  incl. 36 37 1 1.37 0.05  53 97 44 0.82 0.17  incl. 53 56 3 0.75 0.14	%) 0.08 0.16 0.13 0.24 0.04 0.16 0.03 0.06 0.10 0.22 0.10	Au (g/t) 0.02 0.02 0.03 0.05 0.01 0.08 0.09	Ag (g/t) 0.62 1.01 1.64 0.56 0.78 1.30 1.90
MIRCO10    Incl.   39   42   3   1.13   0.15	0.16   0.13   0.24   0.04   0.16   0.03   0.06   0.10   0.22   0.22   0.21   0.22   0.21   0.22   0.21   0.22   0.21   0.22   0.21   0.22   0.22   0.21   0.22   0.22   0.22   0.22   0.23   0.23   0.23   0.24   0.	0.02 0.02 0.03 0.05 0.01 0.08 0.09	0.62 1.01 1.64 0.56 0.78 1.30
MIRC010         and	0.13   0.24   0.04   0.16   0.03   0.06   0.10   0.22   0.24   0.13   0.24   0.14   0.15   0.25   0.	0.03 0.05 0.01 0.08 0.09	1.64 0.56 0.78 1.30 1.90
And 45 47 2 1.14 0.32 and 59 61 2 1.70 0.25 and 59 61 2 1.70 0.25 and 59 61 1 0.50 0.25 and 59 61 1 0.50 0.25 and 50 0.25 and	0.24 0.04 0.16 0.03 0.06 0.10 0.22	0.05 0.01 0.08 0.09 0.03	0.56 0.78 1.30 1.90
MIRC011 115 116 1 0.50 0.25  MIRC012 incl. 45 49 4 0.73 0.55  137 140 3 0.77 0.37  138 42 7 0.72 0.08  incl. 36 37 1 1.37 0.05  incl. 53 97 44 0.82 0.17  incl. 53 56 3 0.75 0.14	0.04 0.16 0.03 0.06 0.10 0.22	0.01 0.08 0.09 0.03	0.78 1.30 1.90
MIRC011 115 116 1 0.50 0.25  MIRC012 incl. 45 49 4 0.73 0.55  137 140 3 0.77 0.37  138 42 7 0.72 0.08  incl. 36 37 1 1.37 0.05  incl. 53 97 44 0.82 0.17  incl. 53 56 3 0.75 0.14	0.04 0.16 0.03 0.06 0.10 0.22	0.01 0.08 0.09 0.03	0.78 1.30 1.90
MIRCO12	0.16 0.03 0.06 0.10 0.22	0.08 0.09 0.03	1.30 1.90
MIRCO12 incl. 45 46 1 1.26 1.00  137 140 3 0.77 0.37  35 42 7 0.72 0.08  incl. 36 37 1 1.37 0.05  53 97 44 0.82 0.17  incl. 53 56 3 0.75 0.14	0.03 0.06 0.10 0.22	0.09 0.03	1.90
137 140 3 0.77 0.37   35 42 7 0.72 0.08   incl. 36 37 1 1.37 0.05   53 97 44 0.82 0.17   incl. 53 56 3 0.75 0.14	0.06 0.10 0.22	0.03	
incl.     35     42     7     0.72     0.08       incl.     36     37     1     1.37     0.05       53     97     44     0.82     0.17       incl.     53     56     3     0.75     0.14	0.10 0.22		1.10
incl.     36     37     1     1.37     0.05       53     97     44     0.82     0.17       incl.     53     56     3     0.75     0.14	0.22		
53     97     44     0.82     0.17       incl.     53     56     3     0.75     0.14		0.03	0.03
incl. 53 56 3 0.75 0.14	0.10		0.02
	0.40	0.07	0.13
INCI.     60   62   2   0.93   0.26	0.10	0.04	0.20
	0.09	0.11	0.30
	0.04	0.12	0.30
	0.15	0.09	0.10
	0.51	0.16	0.20
	0.17	0.28	0.30
	0.04	0.12	0.30
	0.11	0.14	1.95
	0.21	0.20	2.70
	0.03	0.24	3.10
	0.14	0.05	0.30
	0.07	0.09	0.40
MIRCO14	0.19	0.19	0.89
incl. 149 154 5 2.21 0.88	0.18	0.31	1.40
and 157 161 4 2.33 0.44	0.30	0.14	0.60
193 194 1 1.10 0.11	0.16	0.06	0.25
	0.06	0.08	0.45
MIRCO15	0.11	0.17	0.72
incl. 63 65 2 2.66 0.88	0.14	0.11	0.25
and 70 80 10 1.42 0.47	0.15	0.04	1.10
MIRC016 69 86 17 0.34 0.15	0.03	0.00	1.57
incl. 78 79 1 1.49 0.12	0.23	0.01	2.90
	0.07	0.13	0.3
MIRCO17	0.15	0.21	0.32
and 70 73 3 1.15 0.18	0.08	0.57	0.25
and 84 92 8 1.64 0.79	0.11	0.24	0.44
MIRC018 No intercepts of significance			
33 36 3 0.66 0.21	0.03	0.3	0.52
50 107 57 0.67 0.15	0.04	0.19	11.56
incl. 50 63 13 0.81 0.2	0.03	0.28	18.81
incl. 50 56 6 0.88 0.17	0.02	0.26	39.12
MIRC019 and 80 81 1 1.08 0.01	0.01	1.08	5.60
and 87 92 5 1.37 0.49	0.12	0.17	0.25
and 101 103 2 3.07 0.1	0.04	1.02	179.90
126 157 31 0.56 0.26	0.04	0.07	1.36
incl. 138 140 2 1.71 1.09	0.04	0.35	5.00
40 43 3 0.48 0.06	0.04	0.05	10.18
46 47 1 0.69 0.39	0.03	0.11	0.80
51 64 13 0.42 0.06	0.02	0.27	0.33
75 83 8 0.67 0.28	0.05	0.11	0.28
MIRC020 incl. 81 83 2 1.32 0.46	0.12	0.17	0.38
87 89 2 0.52 0.15	0.06	0.04	0.25
111 112 1 0.43 0.07	0.06	0.02	0.25
117 118 1 0.62 0.29	0.05	0.03	0.25



Millennium - Significant Intercepts (cont).									
Hole ID		From (m)	To (m)	Interval (m)	Cu Eqv (%)	Cu (%)	Co (%)	Au (g/t)	Ag (g/t)
		87	92	5	0.40	0.1	0.03	0.07	6.57
	incl.	90	91	1	1.04	0.23	0.06	0.26	21.9
		108	188	80	0.42	0.14	0.04	0.04	0.40
MIRC021	and	108	109	1	1.18	0.81	0.01	0.31	0.8
MIRCUZI	and	126	129	3	1.00	0.44	0.06	0.20	0.63
	and	144	145	1	1.02	0.48	0.07	0.12	0.60
	and	173	178	5	1.24	0.21	0.17	0.03	0.55
	and	186	188	2	0.96	0.45	0.07	0.09	1.65
		13	14	1	0.32	0.12	0.03	0.01	0.25
		18	21	3	0.61	0.06	0.07	0.17	0.25
MIRC022		26	29	3	0.89	0.38	0.05	0.23	0.25
	incl.	27	28	1	1.46	0.67	0.07	0.44	0.25
		39	79	40	0.59	0.26	0.04	0.12	0.83
	incl.	70	77	7	1.31	0.61	0.06	0.38	0.73
		61	63	2	0.46	0.14	0.05	0.04	0.25
		71	72	1	0.92	0.36	0.05	0.27	0.25
MIRC023		115	148	33	1.29	0.22	0.16	0.1	1
	incl.	116	121	5	2.11	0.66	0.19	0.34	3.84
	and	128	136	8	2.19	0.08	0.35	0.04	0.33
				23 holes, 2	2 extensions				
Note									
1. Q-010 Extended from 144m to 192m									
2. Q-011 Exte	2. Q-011 Extended from 180m to 240m								
Intercepts sel	ected ba	ised on visual esti	mation at ap	proximately 0.3% Cul	qv with included inte	rcepts at 1%	CuEqv Cut-Off	s	
Copper Equiva	alent Ca	lculation - CuEq_9		o_%*5.9)+(Au_ppm*0	0.9)+(Ag_ppm*0.01)				

Scalper - Significant Intercepts									
Hole ID		From (m)	To (m)	Interval (m)	Cu Eqv (%)	Cu (%)	Co (%)	Au (g/t)	Ag (g/t)
SCRC001		77	128	51		0.65		0.15	2.16
SCRCOOL		87	100	13		1.81		0.42	5.62
SCRC002				N	o intercepts of signifi	cance			
SCRC003		29	42	13		0.73	0.04	0.08	0.25
	incl.	34	42	8		0.95	0.05	0.08	0.25
SCRC004		24	26	2		1.8	0.02	0.06	0.25
SCRC005		20	43	23		0.67	0.04	0.21	0.25
3CKC003	incl.	20	32	12		1.2	0.07	0.38	0.25
	A holes 1 extension								

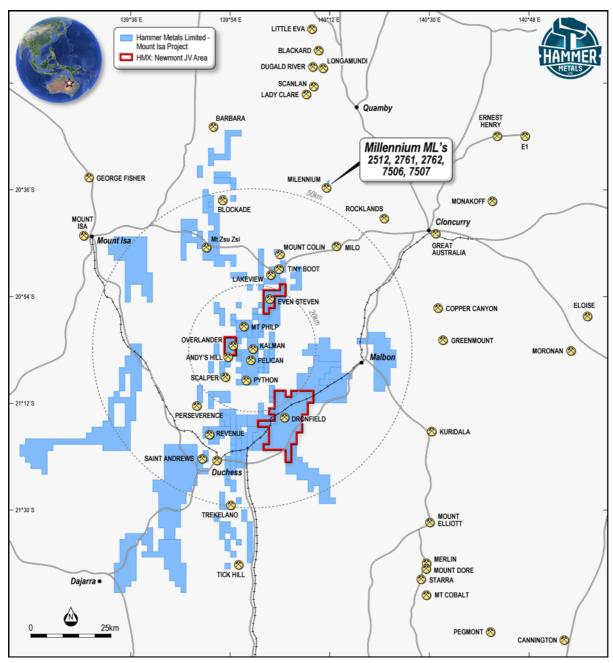
Price assumptions used for Equivalence calculation in \$US - Au (\$1330/oz, Ag (\$20/oz), Co (\$27000/t), Cu (\$4600/t)

4 holes, 1 extension

1. SCRC001 Extended from 136m to 324m

Intercepts selected based on visual estimation at approximately 0.3% CuEqv with included intercepts at 1% CuEqv Cut-Offs





**Project Locations** 



#### **Competent Person's Statement**

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, a consultant to the Company and a shareholder and option holder. Mr. Mark Whittle 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.

# JORC Code, 2012 Edition Table 1 report - Millennium Project

- This release outlines final results of reverse circulation drilling conducted at Hammer's Millennium Project – located approximately 19km to the west of the Rocklands Cu-Co deposit in the Cloncurry District of Northwest Queensland.
- The release also outlines the results from a reverse circulation drilling program at Hammers'
  Scalper Prospect Located approximately 60km southeast of the city of Mount Isa in northwest
  Queensland. Unless specifically stated the type of drilling, analytical and sampling methods are
  the same as those utilized in the Millennium drilling.

### 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	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1</li> </ul>	<ul> <li>Samples were selected using geological criteria (visual inspection) and portable XRF analysis.</li> <li>The entire length of each hole was submitted for assay either as a 1 metre sample or a 4 metre composite. The decision on the sample length was based on the Copper-Cobalt response and visual appraisal.</li> <li>All samples submitted for assay underwent a fine crush with 1kg riffled off for pulverising to 75 micron. Drilling samples were submitted for 4 acid digest followed by fire assay for gold (50-gram charge) and ICP analysis for a range of elements including copper, silver, cobalt</li> </ul>



Criteria	JORC Code explanation	Commentary
	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.	and molybdenum. The samples were also analysed for rare earth elements.
Drilling techniques	<ul> <li>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).</li> </ul>	<ul> <li>Reverse Circulation Drilling (nominal 5.5" diameter holes).</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample</li> </ul>	<ul> <li>Recovery of RC samples were visually estimated. Average recovery of the samples was estimated to be in the range of 80-90%.</li> </ul>
	<ul> <li>recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and</li> </ul>	The RC was drilled dry using a booster and auxiliary compressor. Care was taken to avoid sample contamination
	whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	<ul> <li>No sample recovery bias was observed through mineralised zones.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or</li> </ul>	<ul> <li>All drill chips were geologically logged in detail by Hammer Metals geologists recording lithology, alteration and mineralisation, weathering, colour, structure, and any other features of the sample to a level of detail to support appropriate studies.</li> </ul>
	costean, channel, etc) photography.  The total length and percentage of the relevant intersections logged.	Small washed samples from each one metre RC interval were collected and stored in a chip tray.  The hale was legged in full.
		The hole was logged in full.
Sub- sampling techniques and	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether</li> </ul>	<ul> <li>Sample collection and size is considered appropriate to the target- style and laboratory analytical methods employed.</li> </ul>
sample preparation	<ul> <li>sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul> <li>RC field duplicates were collected by splitting 1 metre sample returns on- site.</li> </ul>
	Quality control procedures adopted for	Standard reference samples and



Criteria	JORC Code explanation	Commentary
	<ul> <li>all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>blanks were each inserted into the laboratory submissions at 25 sample intervals. ALS applied industry-standard QAQC procedures throughout the sample stream.</li> <li>The 1 metre 3kg riffle split samples, 3kg four metre composites and the sample preparation procedures used by ALS are appropriate for the material being sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>All reverse circulation samples were analysed by ALS for a range of elements by ME-ICP61 or ME-MS62r after a 4-acid digest. Gold was analysed by Au-AA26. Cu values greater than 1% were re-analysed by ME-OG62. Any other elements which exceeded their maximum analytical limits were re-analysed by the relevant over-grade methods tailored for the element.</li> <li>Standard reference samples and blanks were inserted at 25 sample intervals. ALS Laboratories also maintained a regime of check samples, duplicates, standard reference samples, blanks and</li> </ul>
Verification of	The verification of significant     interpretations by sither include a death or	<ul><li> All results were checked by alternative</li></ul>
sampling	intersections by either independent or alternative company personnel.	<ul><li>company personnel.</li><li>These holes have not been twinned.</li></ul>
and assaying	<ul> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	All field logging is done into laptops on site and later checked and entered into the company database.
		<ul> <li>Assay files are received electronically from the laboratory. Repeat results are kept independent and are not averaged. Below-detection limit (BDL) results are saved in the database as - BDL values. BDL results are converted to half the detection limit value on export from the database.</li> </ul>



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Criteria	JORC Code explanation	Commentary
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	Drill hole collars were measured using a hand-held GPS unit with an estimated positional accuracy of approximately 5 metres.
	<ul><li>Resource estimation.</li><li>Specification of the grid system used.</li></ul>	Datum used is UTM MGA 94 Zone 54.
	Quality and adequacy of topographic control.	<ul> <li>RL's for the drill hole collars are initially captured by GPS and subsequently adjusted using local digital elevation models (created using the most accurate RL information available).</li> </ul>
		<ul> <li>Hole positions will be re-surveyed with DGPS. At this time higher quality elevation data will be generated.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>The drilling along the Millennium mineralised zone averages at approximately 50 metre spacing. This spacing is sufficient to establish geological and grade continuity however further drilling will be required to define high grade shoots within the mineralised zone.</li> <li>In the situation where visual inspection and portable XRF suggested an interval was not mineralised then a four metre composite was created using a riffle splitter.</li> <li>The drilling at Scalper was drilling multiple targets and the drill-hole spacing was not sufficient to establish geological and grade continuity.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Holes are oriented as close to perpendicular as possible to the interpreted orientation of mineralisation.</li> <li>At Scalper drill-holes were designed to test both linear targets (expressing as gossan zones at surface) and one hole was designed to test a geophysical target. The holes drilling the gossan target (SCRC002-005) were oriented perpendicular to the strike direction of the target horizon. SCRC001 - which was designed to test the geophysical target was oriented to test perpendicular to the geophysical target orientation.</li> </ul>



Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sa security.	<ul> <li>Pre-numbered bags are used and transported by company personnel to the ALS Laboratory in Mount Isa. ALS transports samples to its laboratories in Townsville or Brisbane as required.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or review sampling techniques and data.</li> </ul>	<ul> <li>No audits or reviews have been undertaken, however an audit will be conducted as part of an upcoming resource estimation processes</li> </ul>

### 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	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The Millennium mineralisation is located on ML's 2512, 2761, 2762, 7506 and 7507, all held by Element Minerals Australia Pty Ltd, a 100% owned subsidiary of HMX.</li> <li>In the event of production, a royalty is required to be paid to the Queensland State Government (Mineral Resources regulation 2013)</li> <li>Scalper is located within EPM25486 – an Exploration Licence 100% owned by Hammer Metals Australia Pty Ltd.</li> <li>EPM25486 and the Millennium Mining Leases are located within the Kalkadoon Native Title claim area.</li> <li>These Mining Leases are in good standing with the Queensland Department of Mines.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Between 1964 and 1990, a number of companies completed exploration activities over the mining leases (including Carpentaria Exploration Company, Tasman Minerals NL, Strategic Resources and Diversified Mineral Resources NL).</li> <li>Diversified Mineral Resources NL conducted extensive trenching across</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>the mineralised zone.</li> <li>Limited Metallurgical testing was done by these parties, however float testwork in 1980 indicated that concentrates could be produced.</li> <li>In 2009, Elementos Limited conducted geological mapping and rock chip sampling.</li> <li>In 2013, Chinalco Yunnan Copper Resources Limited (ASX:CYU). CYU drilled 16 reverse circulation drill-holes (Q-001 to Q-016) and conducted portable xrf soil sampling over the area.</li> <li>Three historic holes have been drilled at Scalper however records for this drilling have not been found.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Mineralisation is hosted by the Corella Formation on a structure related contact between metasediments (variably graphitic) and quartzite. This structure is likely to be associated with the Pilgrim Fault – a large regional structure which hosts the Kalman Cu-Mo-Re-Au deposit.</li> <li>Mineralisation is controlled by the regional scale fault, a fractured limonitic quartzite to the east and cross-cutting northeast and northwest trending faults.</li> <li>The mineralisation presents as disseminated bornite, chalcopyrite with cobaltiferous pyrite and cobaltite. These sulphide minerals are associated with elevated gold and silver. The metals are associated with zones of increased carbonate veining and fracture related limonite alteration.</li> <li>Scalper is hosted by altered calcsilicates of the Corella Formation, located close to the eastern margin of the Overlander Granite.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a</li> </ul>	See the attached tables. The reader should note that the location data is subject to change as a result of a



Criteria	JORC Code explanation	Commentary
Data aggregation methods	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.  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 aggregations 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.	<ul> <li>higher accuracy survey planned to be conducted prior to any resource estimates being conducted.</li> <li>Intervals quoted in this release are reported primarily on their copper equivalent grades.</li> <li>Lower grade intervals are based on a 0.3% CuEqv cut-off whilst higher grade intervals are based on a 1% CuEqv cut-off.</li> </ul>
		<ul> <li>The copper equivalent calculation is as follows: CuEq_% = Cu_%+ (Co_%*5.9) +(Au_ppm*0.9) + (Ag_ppm*0.01)</li> <li>Price assumptions are in \$US - Au (\$1330/oz, Ag (\$20/oz), Co (\$27000/t), Cu (\$4600/t)</li> <li>Scalper grades are not quoted in Coper Equivalent grades but they are also based on 0.3% CuEqv cutoff whilst higher grade intervals are based on a 1% CuEqv cut-off.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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</li> </ul>	<ul> <li>In both plan and section drill-holes are oriented between 10-20 degrees off an ideal perpendicular intersection.</li> <li>This deviation indicates that true widths should be between 85% to 95% of quoted downhole widths.</li> <li>At Scalper orientations of the Gossan target holes are within 20 degrees of an ideal perpendicular intersection</li> </ul>



Criteria	JORC Code explanation	Commentary
	width not known').	approach.
Diagrams	<ul> <li>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.</li> </ul>	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 to avoid misleading reporting of Exploration Results.	<ul> <li>Intersections have been quoted at 2 cut-off grades (0.3% and 1% Copper equivalent) to illustrate the distribution of mineralisation.</li> <li>Where a hole does not have a tabulated intersection then the reader must assume that all grades in that hole are below the 0.3% cut-off mentioned above.</li> </ul>
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.	Refer to the release.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>At Millennium, it is envisioned that the area will be subject to a resource estimation in the near future. Also further drilling is planned to test targets along strike and also to further define higher grade shoots within the mineralised envelope.</li> <li>At Scalper there is along strike potential for the mineralisation outlined in holes SCRC002-005. SCRC001 tested a geophysical target. This target requires further testing to determine its prospectivity.</li> </ul>