

#### **BOARD OF DIRECTORS**

Ms Kate Stoney Non-Executive Director, Chief Financial Officer & Joint Company Secretary

Mr Seldon Mart Non-Executive Director

Mr Peter Walker
Non-Executive Director

Mr Josh Merriman

Joint Company Secretary

## HORSESHOE METALS LIMITED

ABN 20 123 133 166 Level 2, 50 Kings Park Rd West Perth WA 6005

T: +61 8 6241 1844 F: +61 8 6241 1811 E: info@horseshoemetals.com.au

## Horseshoe Lights Project Area Expanded New High-Grade Cu and Au Targets Confirmed

- Horseshoe project area expanded with grant of E52/4372
- Initial review of historic regional exploration data has been completed
- Historic RAB assisted geochemical sampling east and southeast of HSL identified bedrock <u>anomalies up to 2588ppm Cu</u> requiring infill and extension
- Rock chip values up to <u>1480 ppm Cu</u> also require follow up
- Appears to be a later gold mineralisation overprint associated with quartz veining hosted by siltstone and mafic tuff
- High-grade rock chip assay values up to 1.42g/t Au and 7.10 g/t Au (Fiddlers South)
- Significant historic gold only intercepts include:
  - o 2m @ 8.00 g/t Au from 47m
  - o 2m @ 19.8 g/t Au from 110m
  - o 2m@ 22.6 g/t Au from 68m
- Site evaluation of gold targets to be undertaken during December
- Review underway of regional copper and gold targets within 200km radius of Horseshoe Lights – further regional consolidation to be pursued

Horseshoe Metals Limited (ASX: HOR) (the 'Company') is pleased to provide an update regarding exploration activities at the Company's Horseshoe Lights Copper-Gold Project (HSL) in Western Australia.

The Horseshoe Lights Copper-Gold Project is the original Cu/Au VMS discovery in the Bryah Basin (Figure 5). HSL is located approx. 60 km west of the DeGrussa Copper Mine owned by Sandfire Resources (ASX: SFR) and approx. 35 km east of the Fortnum Gold Mine operated by Westgold Resources (ASX: WGX). Past production from Horseshoe Lights includes around 316,000 oz Au & 55 kt Cu metal in two phases of mining, and the deposit contains a current *in situ* resource 128 kt Cu metal @ 1.0% (0.5% cut-off) and 36,000 oz Au (refer Table 6).

## **Ground Acquisition Expands Copper-Gold Exploration Footprint**

Horseshoe is pleased to report the project area at HSL has recently been expanded with the grant of E52/4372 (57 km²) to a total of **340 km²**. Prospects added by the tenement grant include *Fiddlers* (Cu), *Fiddlers East* and *Fiddlers South* (Au). Existing regional copper prospects include *Tritan* and *Tethys* (Figure 1).

## **New Copper and Gold Exploration Targets Confirmed**

Previous operators have completed exploration in the HSL project area that included detailed geological mapping, rock chip sampling, Rotary Air Blast (RAB) assisted bedrock geochemical drilling and Reverse Circulation (RC) drilling (Figures 2 to 4).

#### Historic Geological Mapping

Detailed geological mapping was completed in 1984 by Homestake Australia Limited (HAL) around the operating Horseshoe Lights gold mine (Barrack Mines) and to the southeast along the interpreted extension of the prospective Narracoota Volcanic sequence extending about 8km to the southeast (Figure 2). The target of the mapping was gold mineralisation adjacent to jasperoids and/or hosted in quartz veins like the Fortnum gold mineralisation that had been discovered by Homestake around the same time.

## Historic Rock Chip Sampling

Several phases of rock chip sampling have been completed for Cu and Au since the early 80's and have identified several significant copper and gold prospects (Table 2 and Figures 2 to 4) including:

Copper Titan, Tethys and Fiddlers - results up to 1480 ppm Cu

Gold Fiddlers East and Fiddlers South – results up to 7.10 g/t Au

A large proportion of the mapped jasperoids and quartz veins remain unsampled and require detailed evaluation.

## Historic RAB Geochemistry

RAB assisted bedrock geochemical sampling was completed by HAL at 160m by 20m spacing immediately east of the mine and along the southeastern extension of the Narracoota Volcanic stratigraphy for about 8km (Figure 3). The geochemistry **identified several copper anomalies up to 2588ppm Cu** that require follow up.

Significantly the RAB drilling immediately east of mine partly identified a copper anomaly at its eastern extremity where it was restricted by a tenement boundary. This anomaly is open with a high of 649ppm Cu and is adjacent to a fault structure interpreted to be parallel to the fault structure that hosts the Motters mineralisation on the east side of the HSL open pit.

## <u>Historic Gold Only Intercepts and Targets</u>

Previous RC drilling (some being waste dump sterilisation) has intersected significant gold mineralisation adjacent to the existing open pit and in the southeastern Narracoota stratigraphic extension to the southeast (Figure 4 and Table 1) including:

## **West of Open Pit**

A structure indicated by outcropping quartz veins extending from the south ramp of the open pit to the northwest beneath the NW waste dump indicated by RC holes 3 to 8 in Figure 4 with intercepts up to:

- o 2m @ 8.00 g/t Au from 47m
- o 2m @ 19.8 g/t Au from 110m

This quartz vein structure is interpreted to be hosted adjacent to a siltstone/mafic tuff contact in a similar orientation to the Starlight mineralisation at Fortnum (refer figure 2 WGX release dated 13 November 2024)

## **East of Open Pit**

A structure indicated in non-systematic sterilisation drilling completed east of the mine and subsequently obscured by mine infrastructure development indicated by RC holes 9 to 12 in Figure 4 with intercepts up to:

- o 2m @ 22.6 g/t Au from 68m o 4m @ 2.67 g/t Au from 52m

#### **Fiddler East**

Significant intercepts in holes 13 to 17 in figure 4 that require infill and follow up including:

4m @ 2.37 g/t Au from 30m 0

## **Proposed Work Programmes and Next Steps**

The following activities are planned to further investigate the regional copper and gold targets:

- Site assessment of the auriferous quartz veins hosed in siltstone immediately west of the HSL copper deposit will be completed in December.
- Rock chip sampling of outcropping quartz veins and jasperoids
- Auger assisted soil geochemical sampling (Cu and Au) in areas of historic RAB drilling and extending into previously untested adjacent areas
- RC drill testing of targets
- Acquisition of open file magnetic data to aid delineation of additional targets in the project area
- Further detailed review of historic drill data to assist in building a copper and gold mineralisation model

Updates on the above activities will be provided as they progress in the coming weeks.

For additional background on the Horseshoe Lights Project please refer to ASX releases:

12/09/2018 06/08/2021	"Exploration Update- Horseshoe Lights Project" "Horseshoe Lights Exploration Activities Update"
10/09/2021	"Horseshoe Lights Phase 1 Auger Programme Completed"
13/09/2021	"Horseshoe Lights Phase 1 RC Drilling Programme Completed"
29/10/2021	"Horseshoe Lights RC Drilling Results"
26/11/2021	"Horseshoe Lights Phase 1 Stockpile Results Received"
21/02/2022	"Horseshoe Metals Successful Relisting"
03/03/2022	"Horseshoe Lights Activities Update"
11/03/2022	"Horseshoe Lights Copper-Gold Resource Grade-Tonnage Review"
21/04/2022	"RC Drilling Underway at Horseshoe Lights Project"
19/05/2022	"RC Drilling Campaign Complete at HSL Project"
11/08/2022	"Significant Drilling Results in Copper-Gold Surface Material at Horseshoe Lights"
31/08/2022	"Outstanding Copper Results at Horseshoe Lights"
11/10/2022	"Review Confirms Broad Zones of Copper Mineralisation"
27/10/2022	"Broad Zones of Copper up to 8.3%"
17/11/2022	"RC Drilling Commences at Main Zone, Motters and North Dump"
09/03/2023	"Outstanding Copper Results – Main Zone and Motters at Horseshoe Lights"
31/10/2023	"High-Grade Surface Material Underpins DSO Strategy
23/04/2024	DSO Strategy to Accelerate at Horseshoe Lights Copper Project

The Board of Directors of HOR has authorised this announcement to be given to the ASX.

## - ENDS -

## **Enquiries**

## **Kate Stoney**

Non-Executive Director T+61 (0) 8 6241 1844 E: info@horseshoemetals.com.au

## Sam Burns

Six Degrees Investor Relations T +61 (0) 400 164 067

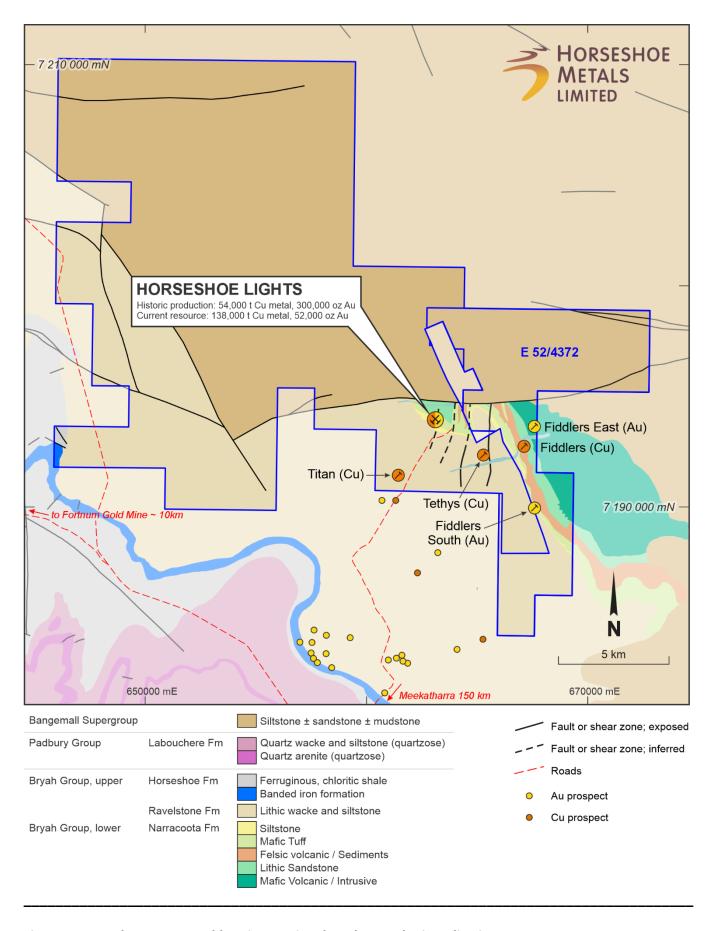


Figure 1: Horseshoe Copper Gold Project Regional Geology and Mineralisation

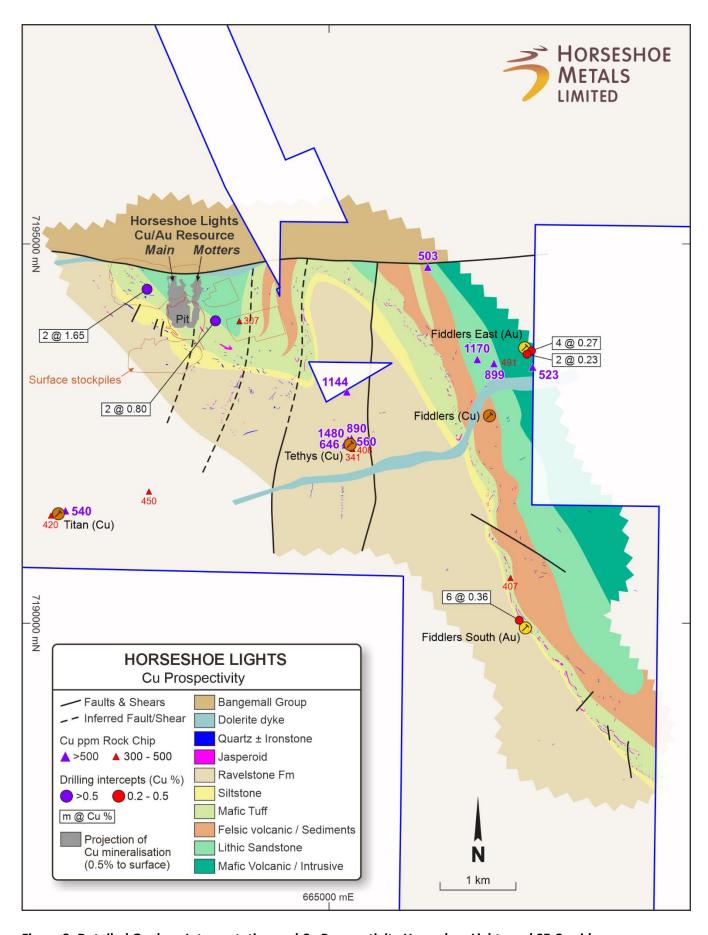


Figure 2: Detailed Geology Interpretation and Cu Prospectivity Horseshoe Lights and SE Corridor

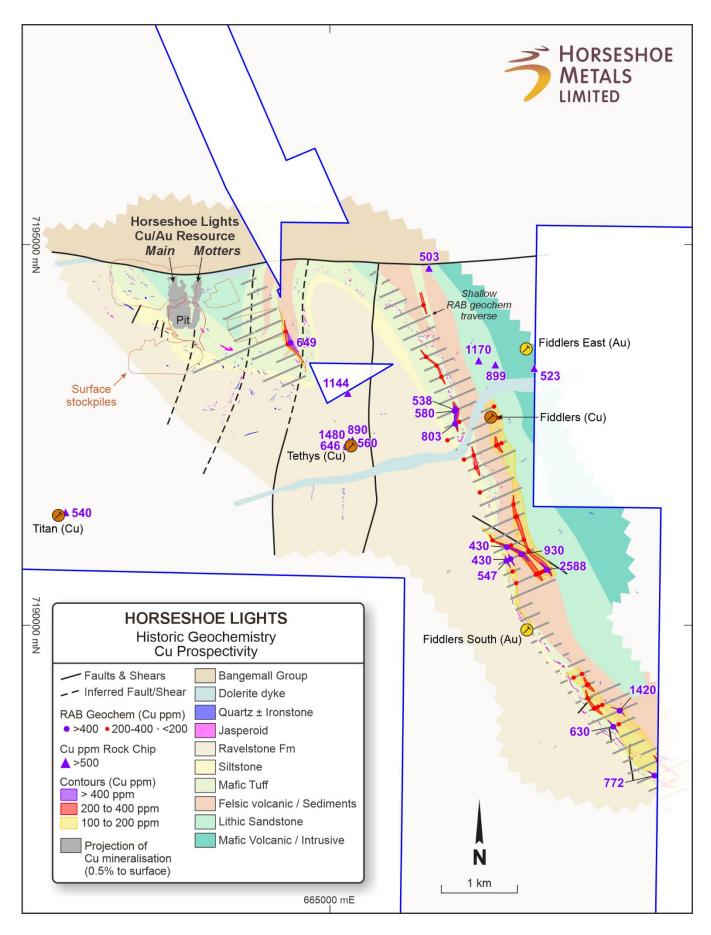


Figure 3: Detailed Geology Interpretation and Cu RAB Geochemistry Horseshoe Lights and SE Corridor

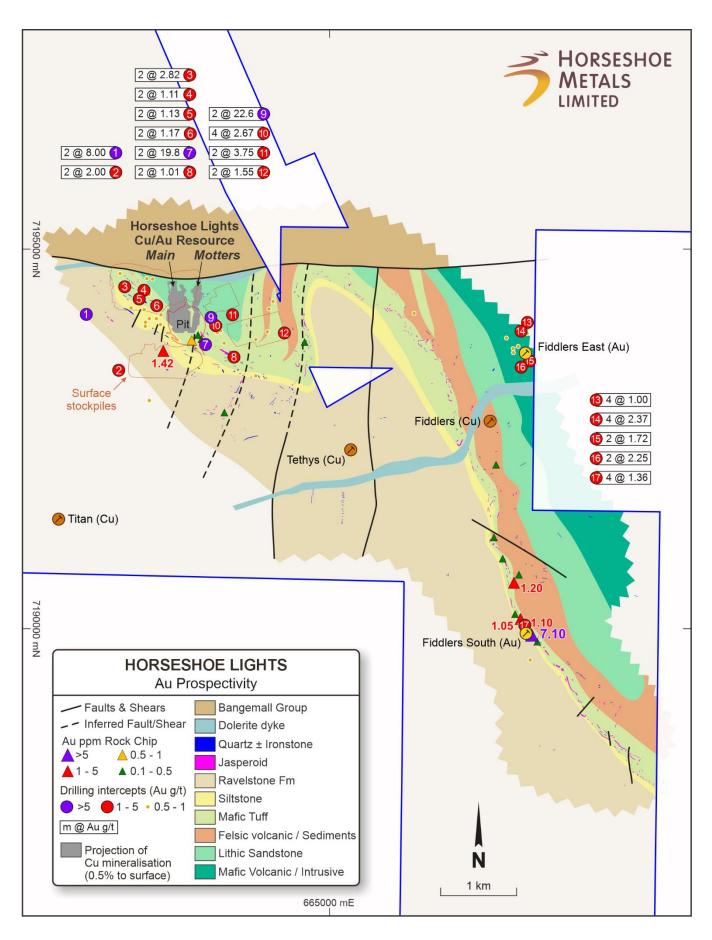


Figure 4: Detailed Geology Interpretation and Cu Au Prospectivity Horseshoe Lights and SE Corridor

**Table 1:** Drilling Intercepts Au >= 0.50 g/t (outside resource)

Hole ID	MGA N	MGA E	RL	Dip	Azi	Depth	From	То	m@	Au g/t	Drill Type	Company	Year
FB72	7193941	667615	500	-60	67	4	20	22	2	0.57	.,,,,		
							34	36	2	0.50			
FB73	7193933	667597	500	-60	67	40	32	38	6	0.80			
FB75	7193830	667358	500	-60	67	40	6	8	2	0.82			
FB78	7193713	667498	500	-60	67	40	38	40	2	0.59			
FB81	7193689	667443	500	-60	67	40	10	18	8	0.62			
FB84	7193589	667617	500	-60	67	40	20	22	2	1.72	RAB		
FB108	7193011	668113	500	-60	67	40	12	14	2	0.68	NAD		
FB120	7193994	667614	500	-60	67	40	16	20	4	1.00		Horseshoe Gold	1989
FB121	7193986	667595	500	-60	67	40	30	32	2	0.87		Mine	1303
FB122	7193977	667576	500	-60	67	40	30	34	4	2.37			
FB124	7193894	667636	500	-60	67	40	2	4	2	0.56			
FB125	7193886	667619	500	-60	67	40	28	30	2	0.81			
FB132	7193634	667444	500	-60	67	40	20	22	2	0.50			
FP1	7189583	667660	500	-60	67	120	24	26	2	0.60			
FD2.4	7404452	666427	500	60	67		30	32	2	0.79	RC		
FP24	7194152	666137	500	-60	67	60	18	20	2	0.57			
FP45	7193572	667581	500	-60	67	100	62	64	2	2.25			
HAP20	7190049	667528	500	-60	65	60	25	30	5	0.58	RC	Homestake	1985
HAP23	7189891	667569	500	-60	65	60	45	50	5	0.55			
HSRAB57	7193004	662659	500	-60	0	38	8	10	2	0.52			
HSRAB88	7193307	664060	500	-60	0	50	46	48	2	0.57	RAB	Barrack	1987
HSRAB91	7193406	662250	500	-60	90	26	10	12	2	2.00			
RC165	7189986	667584	500	-60	67	75	35	39	4	1.36		Horseshoe Gold	
RC166	7189898	667585	500	-60	67	100	38	40	2	0.51	RC	Mine	1989
RC209	7190022	667565	500	-60	67	70	22	24	2	0.71			
RC-81	7194090	663387	521	-60	90	74	68	70	2	22.6			
RC-84	7194090	663537	518	-60	90	74	0	2	2	0.71			1985
RC-88	7194040	663568	517	-60	90	74	0	2	2	0.65			
DC 150	7104612	662622	F4F	60	0.2	60	16	18	2	0.55			
RC-159	7194612	662622	515	-60	92	69	9	11	2	0.63		ļ.	1986
RC-170	7194143	661805	519	-60	92	63	47	49	2	8.00			
RC-309	7194608	662684	514	-60	90	90	38	40	2	0.62			
RC-339	7194507	662333	518	-60	90	75	4	6	2	2.82			
RC-350	7194657	662253	516	-60	40	75	64	66	2	0.60			
RC-356	7194304	662479	521	-60	40	150	10	12	2	0.54			
DC 202	7104214	664200	F12	60	00	70	144	146	2	1.13			
RC-382 RC-385	7194214 7193914	664209 664210	512 515	-60 -60	90	70 70	54 4	56 6	2	0.72 0.56			
RC-385	7193914	664060	516	-60	90	100	2	4	2	0.56			
RC-404				-60	90		12						
RC-404 RC-413	7193910 7194312	664439 664285	514	-60	90	70 62	4	14 6	<b>2</b>	<b>1.55</b> 0.54			1987
RC-413 RC-424	7194312	662557	511 520	-60	92	70	68	70	2	0.54			1307
RC-424 RC-427	7194205	662400	522	-60	40	70	56	58	2	0.74			
RC-427	7194203	662803	518	-60	92	70	16	18	2	0.87	RC	Barrack	
RC-457	7193708	663358	521	-60	47	194	110	112	2	19.8	NC.	DaildCK	
RC-469	7194088	662732	519	-60	92	68	40	42	2	0.51			
RC-471	7194088	662631	520	-60	90	70	58	60	2	0.75			
RC-485	7194037	662606	521	-60	47	70	6	8	2	0.57			
RC-495	7193987	662782	520	-60	47	70	64	66	2	0.69			
RC-499	7193987	662582	522	-60	94	70	46	48	2	0.70			
RC-644	7194137	663755	515	-60	90	100	0	2	2	3.75			
RC-650	7193747	663428	523	-60	62	100	0	4	4	0.76			
RC-682	7194407	662550	518	-60	90	150	50	52	2	1.11			1988
RC-684	7194407	662629	519	-60	90	150	58	60	2	0.61			
RC-686	7194258	662755	517	-60	90	84	2	4	2	1.17			
RC-689	7193723	663574	525	-60	60	206	162	164	2	0.93			
RC-691	7193723	663650	531	-60	60	174	158	160	2	0.53			
RC-694	7193570	663757	525	-60	60	200	38	40	2	1.01			
RC-696	7193902	663555	519	-60	60	191	0	2	2	0.85			1989
050	, 155502		313	1 30			100	102	2	0.84			1 2000
RC-697	7193992	663510	519	-60	60	200	0	2	2	0.69			
							52	56	4	2.67			
<u> </u>							1			,	l	<u> </u>	l

**Table 2**: Rock Chips Au >= 0.1 g/t

Sample ID	MGA North	MGA East	Au g/t	Company	Year	Note
21561	7191210	667175	0.18	Samantha	unknown	Unknown
21556	7190615	667437	1.20	Samantha	unknown	Unknown
F23030	7193878	663279	0.15		1984	Jasperoid
F23029	7193824	663322	0.23		1984	Jasperoid
F23027	7193806	663195	0.66		1984	Jasperoid
F23026	7194194	663191	0.17		1984	Jasperoid
F23022	7193668	662820	1.42		1984	Jasperoid
F22803	7189837	667744	0.10		1984	Jasperoid
F22802	7189925	667672	7.10		1984	Jasperoid
F22801	7189940	667660	0.15		1984	Jasperoid
F22800	7189956	667646	0.90	Hana astalia	1984	Jasperoid
F22799	7189971	667633	0.15	Homestake	1984	Jasperoid
F22797	7190003	667611	1.10		1984	Jasperoid
F22792	7190137	667525	1.05		1984	Jasperoid
F22791	7190076	667578	0.17		1984	Jasperoid
F22788	7190203	667452	0.41		1984	Jasperoid
F22783	7190720	667502	0.11		1984	Jasperoid
F22777	7190933	667288	0.18		1984	Jasperoid
F22772	7192169	667203	0.12		1984	Jasperoid
F22294	7192857	663625	0.15		1984	Jasperoid
FR87	7189981	667622	0.30	Horseshoe Gold Mine	1989	Chert
FR125	7190055	667566	0.11	HOUSESHOE GOID WITHE	1989	Chert
HSQV128	7193786	664681	0.18	Horseshoe Metals	2015	Chert

**Table 3**: Drilling Intercepts Cu >= 0.20 % (outside resource)

Hole ID	MGA N	MGA E	RL	Dip	Azimuth	Depth	From	То	m@	Cu %	Drill Type	Company	Year
FB83	7193597	667635	500	-60	67	32	2	6	4	0.27	RAB	Horseshoe	1000
FP37	7190023	667467	500	-60	67	134	90	96	6	0.36	RC	Gold Mine	line 1989
RC-682	7194407	662550	518	-60	90	150	54	56	2	1.65	RC	Darrael	1988
RC-689	7193723	663574	525	-60	60	206	188	190	2	0.23	RC	Barrack	1989
RC-709	7193982	663491	518	-60	61	110	32	34	2	0.80	RC	Sabminco	1993

Table 4: Rock Chips Cu >= 300 ppm

Sample ID	MGA North	MGA East	Cu ppm	Company	Year
F22405	7190599	667394	407	Homestake	1984
F23007	7193984	663821	307	пошезтаке	1984
G417	7193481	666958	1170		
G419A	7193427	667177	491		
G419B	7193427	667177	899	Alchemy	
G421	7193380	667713	523		
G449	7194698	666304	503		
HSGR001	7192386	665248	890		
HSGR002	7192385	665247	1480		
HSGR003	7192411	665299	560		2015
HSNGR005	7191424	661339	420		
HSNGR013	7191738	662629	450	Horseshoe	
HSNGR015	7191486	661529	540	Metals	
HSQV145	7192370	665255	408		
HSQV146	7192344	665251	341		
HSQV148	7192383	665248	646		
HSQV151	7193054	665238	1144		

**Table 5**: RAB Bottom of Hole Geochemistry Cu >= 100ppm (average depth 4m)

Sample	MGA	MGA	Sample	Cu ppm
ID	North	East	Depth	cu ppiii
HA055	7193943	663819	6	181
HA077	7193802	663903	6	112
HA078	7193794	663882	5	148
HA096	7193844	664389	5	132
HA097	7193851	664405	5	144
HA098	7193859	664422	6	397
HA111	7193908	664139	6	192
HA141	7194260	664141	5 4	118 <b>649</b>
HA196 HA197	7193712 7193704	664487 664469	4	301
HA198	7193704	664450	3	215
HA199	7193689	664432	3	181
HA224	7193565	664551	3	103
HA227	7193541	664498	3	103
HA234	7193483	664367	4	153
HA396	7193496	666194	2	165
HA400	7193527	666268	2	294
HA407	7193584	666397	3	195
HA427	7193414	666407	2	293
HA428	7193405	666387	2	122
HA430	7193389	666349	3	196
HA444	7193266	666470	2	303
HA508	7193109	666908	2	117
HA521	7192818	666642	4	538
HA522	7192827	666660	3	580
HA523	7192835	666678	3	205
HA532	7192907	666845	2	143
HA538	7192602	666540	2	149
HA544	7192650	666651	3	803
HA545	7192657	666669	3	149
HA547	7192674	666705	3	203
HA554	7192730	666834	2	119
HA556	7192875	667163	3	208
HA567	7192432	666550	3	205
HA568	7192439	666568	3	171
HA573	7192520 7192527	666750	3 4	148
HA574 HA575	7192327	666769 667246	4	126 151
HA576	7192737	667225	4	203
HA577	7192728	667209	3	195
HA578	7192711	667189	3	132
HA579	7192711	667173	4	106
HA581	7192688	667135	3	155
HA582	7192680	667118	4	119
HA595	7192576	666879	2	173
HA596	7192565	667254	4	170
HA597	7192557	667236	5	148
HA598	7192549	667218	4	189
HA599	7192541	667200	4	143
HA601	7192524	667161	4	127
HA603	7192508	667125	4	125
HA621	7192309	666668	3	138
HA622	7192179	666768	3	214
HA629	7192233	666896	3	331
HA642	7192338	667135	3	104
HA643	7192346	667153	5	120
HA644	7192355	667171	5	130
HA645	7192363	667189	3	322
HA646	7192371	667209	3	204
HA649	7192394	667262	4	266
HA651	7192410	667299	5	157
HA654	7192288	667418	4	156
HA655	7192280	667400	3	157

Sample	MGA	MGA	Sample	Cu ppm
ID	North	East	Depth	
HA656	7192271	667380	3	196
HA659	7192248	667326	4	117
HA660	7192239	667308	3	143
HA661	7192231	667289	4	108
HA680	7192079	666942	3	149
HA681	7192072	666924	4	262
HA697	7191964	667078	3	190
HA710	7192068	667316	3	132
HA713	7191939	667415	4	120
HA729	7191810	667123	2	190
HA736	7191755	666994	4	136
HA737	7191747	666977	3	256
HA762	7191760	667408	2	122
HA763	7191766	667424	5	196
HA765	7191782	667460	3	118
HA766	7191791	667480	3	114
HA773	7191588	667416	3	309
HA774	7191580	667398	2	114
HA801	7191296	667149	3	105
HA816	7191416	667423	4	179
HA817	7191424	667442	3	342
HA818	7191433	667462	3	307
HA822	7191465	667535	3	145
HA823	7191473	667552	4	167
HA826	7191244	667434	6	122
HA840	7191133	667178	4	107
HA842	7191116	667141	4	288
HA853	7191027	667333	3	430
HA854	7191035	667350	3	200
HA856	7191051	667387	4	397
HA859	7191076	667443	4	143
HA862	7191099	667497	5	158
HA865	7191124	667553	4	254
HA866	7191000	667672	4	123
HA867	7190990	667653	4	117
HA869	7190976	667617	4	228
HA870	7190967	667598	4	106
HA873	7190944	667544	4	225
HA874	7190936	667526	4	930
HA875	7190928	667506	4	361
HA876	7190919	667489	3	160
HA882	7190871	667378	2	430
HA883	7190863	667361	3	132
HA885	7190848	667324	3	547
HA896	7190700	667389	3	136
HA897	7190707	667406	3	352
HA898	7190716	667425	2	138
HA903	7190753	667910	4	132
HA905	7190737	667874	4	326
HA906	7190730	667855	4	2588
HA907	7190721	667835	4	148
HA908	7190714	667820	4	284
HA909	7190706	667802	4	181
HA910	7190698	667783	4	233
HA911	7190689	667763	4	129
HA912	7190682	667747	4	245
HA913	7190673	667727	4	207
HA914	7190666	667711	4	205
HA928	7190554	667453	4	234
HA939	7190568	667883	4	110
HA946	7190511	667755	4	106
HA955	7190439	667590	4	154
HA958	7190414	667534	3	103

Sample	MGA	MGA	Sample	Cu ppm
ID	North	East	Depth	
HA959	7190407	667517	2	132
HA962	7190384	667463	4	108
HA988	7190096	667587	2	107
HA1050	7189362	668318	5	294
HA1051	7189354	668300	12	143
HA1052	7189346	668283	6	173
HA1053	7189338	668263	6	156
HA1054	7189329	668244	4	105
HA1055	7189323	668227	4	160
HA1056	7189314	668208	4	281
HA1057	7189306	668190	3	124
HA1058	7189300	668175	5	164
HA1063	7189224	668400	4	201
HA1064	7189215	668381	5	202
HA1069	7189222	668794	5	146
HA1082	7189118	668557	4	160
HA1084	7189101	668519	3	150
HA1085	7189093	668500	3	117
HA1087	7189077	668462	6	123
HA1088	7189069	668446	4	155
HA1089	7189061	668427	3	199
HA1090	7189053	668410	3	183
HA1091	7189045	668391	4	310
HA1092	7189036	668372	3	106
HA1099	7189066	668840	4	141
HA1100	7189058	668821	5	100
HA1108	7188994	668674	4	104
HA1111	7188970	668621	3	171
HA1112	7188962	668601	3	100
HA1113	7188954	668583	4	318
HA1114	7188946	668564	3	151
HA1115	7188939	668547	3	100
HA1116	7188930	668529	4	380
HA1117	7188922	668510	3	174
HA1118	7188914	668491	3	346
HA1119	7188906	668473	2	227
HA1121	7188890	668438	3	175
HA1133	7188895	668850	5 4	181 234
HA1134	7188886	668830 668812	· ·	_
HA1135	7188878		4	1420
HA1136	7188870	668794	4	178
HA1138	7188854	668757	5 4	179
HA1140	7188839	668721		183
HA1141	7188830	668702	5	130
HA1142	7188822	668684	5	165
HA1143 HA1144	7188814 7188807	668666	4	146 159
HA1144		668649	4	113
HA1145	7188798 7188791	668628 668611	4	113
HA1150	7188751	668537	2	118
HA1180	7188757	668929	3	120
HA1182	7188741	668893	3	106
HA1184	7188725	668857	4	107
HA1185	7188717	668839	4	115
HA1186	7188709	668820	4	127
HA1187	7188703		4	214
HA1188	7188694	668802 668783	5	158
			6	630
HA1191 HA1194	7188669 7188641	668728 669068	4	105
HA1194	7188633	669050	6	123
HA1197	7188617		5	119
HA1197 HA1201	7188517	669012 668938	4	119
HA1201	7188577	668921	4	100
HA1202	7188561	668883	5	140
HA1204	7188553		5	
HATZUD	1100000	668866	<u>)</u>	171

6	1401	1404	C I .	
Sample	MGA	MGA	Sample	Cu ppm
HA1207	North 7188537	East	Depth	104
		668830	6	104
HA1212	7188461	669061	4	101
HA1222	7188369	669251	5	101
HA1223	7188362	669233	5	124
HA1224	7188354	669217	5	126
HA1225	7188345	669197	4	198
HA1226	7188339	669180	5	160
HA1227	7188330	669161	4	120
HA1228	7188322	669143	5	122
HA1229	7188314	669124	5	126
HA1231	7188262	669407	4	173
HA1232	7188254	669388	3	521
HA1233	7188246	669370	3	108
HA1236	7188223	669316	4	204
HA1237	7188214	669298	4	152
HA1240	7188190	669243	4	115
HA1241	7188182	669224	4	170
HA1243	7188166	669186	4	160
HA1244	7188159	669169	4	147
HA1247	7188133	669114	4	118
HA1290	7188210	669690	4	178
HA1291	7188203	669674	5	183
HA1292	7188195	669653	4	143
HA1296	7188162	669581	5	179
HA1297	7188154	669561	5	117
HA1298	7188147	669543	4	179
HA1299	7188139	669526	5	148
HA1300	7188130	669507	3	150
HA1301	7188122	669489	5	161
HA1303	7188107	669452	5	218
HA1304	7188099	669435	6	246
HA1305	7188090	669415	5	165
HA1306	7188083	669398	6	120
HA1310	7188051	669324	5	128
HA1311	7188043	669307	5	114
HA1313	7188027	669269	4	772
HA1326	7187985	669571	6	141
HA1327	7187976	669554	6	104
HA1328	7187969	669536	6	129
HA1330	7187953	669499	6	308
HA1332	7187937	669462	6	123
HA1333	7187929	669443	6	113
HA1335	7187912	669407	4	266
HA1336	7187904	669388	4	233
HA1351	7187828	669616	6	135
HA1384	7193690	666241	2	113
HA1388	7193658	666168	3	185
HA1441	7194209	666234	5	201
HA1444	7194185	666178	5	154
HA1493	7194538	665785	3	137
HA1495	7194522	665749	3	168
HA1496	7194514	665731	3	142
HA1504	7194638	665589	3	118
HA1505	7194645	665608	4	107
HA1506	7194644	665629	4	114

## **About Horseshoe Metals Limited**

Horseshoe Metals Limited (ASX:HOR) is a copper and gold-focused Company with a package of tenements covering approximately 500km² in the highly prospective Peak Hill Mineral Field, located north of Meekatharra in Western Australian and mineral interests in South Australia. The Company manages the Horseshoe Lights Project and the Kumarina Project in Western Australia, and the Glenloth Gold Project in South Australia.

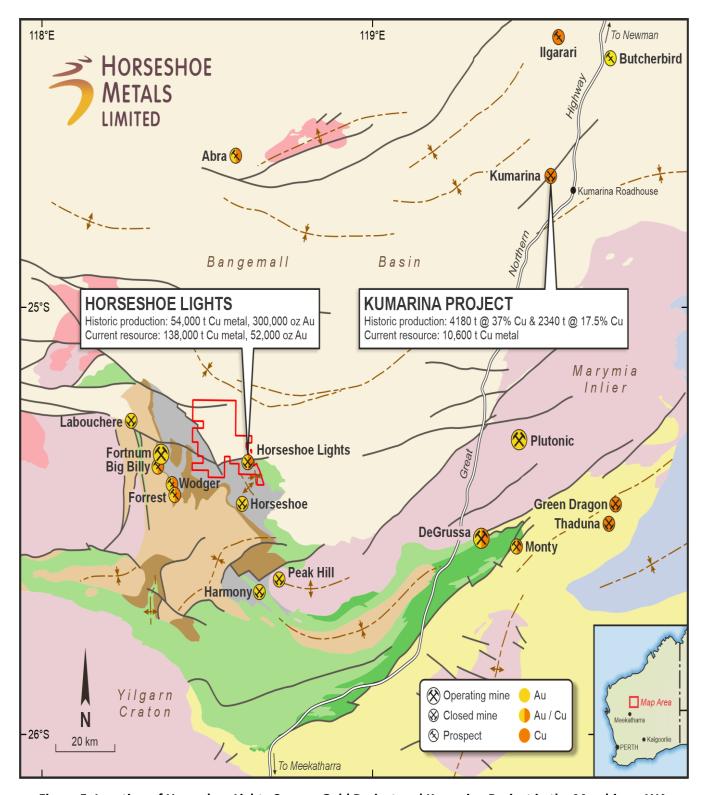


Figure 5: Location of Horseshoe Lights Copper-Gold Project and Kumarina Project in the Murchison, WA

## About the Horseshoe Lights Project

The Horseshoe Lights Project includes the historic open pit of the Horseshoe Lights copper-gold mine which operated up until 1994, producing over 300,000 ounces of gold and 54,000 tonnes of contained copper, including over 110,000 tonnes of Direct Shipping Ore (DSO) which graded between 20-30% copper.

The Horseshoe Lights ore body is interpreted as a deformed Volcanogenic Hosted Massive Sulphide (VMS) deposit that has undergone supergene alteration to generate the gold-enriched and copper-depleted cap that was the target of initial mining. The deposit is hosted by quartz-sericite and quartz-chlorite schists of the Lower Proterozoic Narracoota Formation.

Past mining was focused on the Main Zone, a series of lensoid ore zones, which passed with depth from a gold-rich oxide zone through zones of high-grade chalcocite mineralisation into massive pyrite-chalcopyrite. To the west and east of the Main Zone, copper mineralisation in the Northwest Stringer Zone and Motters Zone consists of veins and disseminations of chalcopyrite and pyrite and their upper oxide copper extensions. Table 2 summarises the total Mineral Resources for the Horseshoe Lights Project as at 30 June 2023.

	TABLE 6 HORSESHOE LIGHTS PROJECT SUMMARY OF MINERAL RESOURCES AS AT 30 June 2023								
Location	cation Category Tonnes Cu Au Ag Cu metal Au metal Ag metal (Mt) (%) (g/t) (g/t) (tonnes) (oz) (k oz)								
In-situ	Measured	1.73	1.04	0.0	0.5	18,000	1,900	28.8	
Deposit	Indicated	2.43	0.95	0.0	0.7	23,200	3,400	52.2	
(0.5% Cu	Inferred	8.69	1.01	0.1	2.6	87,400	30,700	712.4	
cut-off grade)	Total	12.85	1.00	0.1	1.9	128,600	36,000	793.4	
Flotation Tailings	Inferred   1.421   0.48   0.34					6,800	15,300	294.8	
M15 Stockpiles	Inferred   0.243   1.10   0.17   4.7   2.650   1.300   36.7								
	Note: At 0% Cu cut-off grade unless otherwise stated					138,050	52,600	1,124.9	

The above Mineral Resource Estimates all meet the reporting requirements of the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves".

#### About the Kumarina Project

The copper deposits at the Kumarina Project were discovered in 1913 and worked intermittently until 1973. The workings extend over nearly 5km as a series of pits, shafts and shallow open cuts. At the main Kumarina Copper Mine, the workings are entirely underground with drives from the main shaft extending for some 200m in the upper levels and for about 100m in the lower levels at a depth of 49m below surface.

Incomplete records post-1960s make it difficult to estimate the total copper production from the workings. However, indications are that the Kumarina Copper Mine was the second largest producer in the Bangemall Basin group of copper mines. Recorded production to the late 1960s is 481t of copper ore at a high-grade of 37.0% Cu and 2,340t at a grade of 17.51% Cu. An initial Mineral Resource Estimate for the Rinaldi deposit was completed by the Company in 2013 (see 30 June 2013 Quarterly Report announced on 31 July 2013). The total Measured, Indicated and Inferred Mineral Resource Estimate as at 30 June 2023 is shown in Table 3 below.

# TABLE 7 KUMARINA PROJECT SUMMARY OF MINERAL RESOURCES AS AT 30 June 2023

Location	Category	Category Tonnes (t)		Cu metal (tonnes)	
Rinaldi Prospect (0.5% Cu cut-off)	Measured	415,000	1.46	6,100	
	Indicated	307,000	1.16	3,500	
	Inferred	114,000	0.9	1,000	
	Total	835,000	1.3	10,600	

The Mineral Resource Estimate meets the reporting requirements of the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves"

#### **Forward Looking Statements**

Horseshoe Metals Limited has prepared this announcement based on information available to it. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this announcement. To the maximum extent permitted by law, none of Horseshoe Metals Limited, its directors, employees or agents, advisers, nor any other person accepts any liability, including, without limitation, any liability arising from fault or negligence on the part of any of them or any other person, for any loss arising from the use of this announcement or its contents or otherwise arising in connection with it. This announcement is not an offer, invitation, solicitation or other recommendation with respect to the subscription for, purchase or sale of any security, and neither this announcement nor anything in it shall form the basis of any contract or commitment whatsoever. This announcement may contain forward-looking statements that are subject to risk factors associated with gold exploration, mining and production businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to price fluctuations, actual demand, currency fluctuations, drilling and production results, reserve estimations, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory changes, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimates.

#### **Competent Persons Statement**

The information in this report that relates to the Exploration Results and Mineral Resources at the Horseshoe Lights and Kumarina Projects is based on information reviewed by Mr Michael Fotios, who is a member of the Australian Institute of Mining and Metallurgy. Mr Fotios is contractor of Horseshoe Metals Limited and has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity he is undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012)'. Mr Fotios consents to the inclusion of the information in the form and context in which it appears.

The information in this report that relates to the Horseshoe Lights Project surface stockpile Mineral Resources is based on information compiled by a previous employee of Horseshoe Metals Limited and reviewed by Mr Craig Hall, who is a member of the Australian Institute of Geoscientists. Mr Hall is a director and former contractor to Horseshoe Metals Limited and has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity he is undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012)'. Mr Hall consents to the inclusion of the data in the form and context in which it appears. The information was previously issued in announcements released to the ASX on 26 February 2015 and 9 March 2015. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the findings are presented have not materially modified from the original market announcements.

The information in this report that relates to the Horseshoe Lights Project In-situ Mineral Resources is based on information originally compiled by Mr Dmitry Pertel, an employee of CSA Global Pty Ltd, and reviewed by Mr Hall. This information was originally issued in the Company's ASX announcement "40% increase in Copper Resource at Horseshoe Lights Copper/Gold Project", released to the ASX on 5 June 2013, and first disclosed under the JORC Code 2004. This information was subsequently disclosed under the JORC Code 2012 in the Company's ASX release "Quarterly Report Period Ended 30 June 2013", released on 31 July 2013. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the findings are presented have not materially modified from the original market announcements.

The information in this report that relates to the Kumarina Project (Rinaldi Prospect) Mineral Resources is based on information compiled by or under the supervision of Mr Robert Spiers, an independent consultant to Horseshoe Metals Limited and a then full-time employee and Director of H&S Consultants Pty Ltd (formerly Hellman & Schofield Pty Ltd), and reviewed by Mr Hall. The information was originally issued in the Company's ASX announcement "Horseshoe releases Maiden Mineral Resource Estimate for Kumarina", released to the ASX on 4 March 2013, and first disclosed under the JORC Code 2004. This information was subsequently disclosed under the JORC Code 2012 in the Company's ASX release "Quarterly Report Period Ended 30 June 2013", released on 31 July 2013. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the findings are presented have not materially modified from the original market announcements.

## JORC CODE, 2012 EDITION

## **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. 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. In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>2021/22</li> <li>HOR 2021 RC Drilling- samples were collected to best represent the source material. Samples were sent to Nagrom Perth for Au analysis by ICP-OES (Method ICP-008), 50g charge with a lower detection limit of 0.001 ppm NAGROM method – ICP008; 40gm Aqua Regia Digest-suite included Au, Ag, Ca, Cu, Fe, Hg, Mg, Pb, S, Se and Zn. Samples were pre-screened at hole for Cu for subsequent assay by portable XRF.</li> <li>HOR 2022 RC Drilling- samples were collected to best represent the source material. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were sent to Bureau Veritas Perth for Au, Cu, Ag and S analysis and S and S and S and S analysis Again Aga</li></ul>
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc)	2021/22  • HOR 2021/22 RC Drilling - was undertaken as industry standard reverse circulation drilling, with iDrilling completing work with a UDR450

Criteria	JORC Code explanation	Commentary
	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).	<ul> <li>track mounted rig and separate 900/1150 booster. Face-sampling drill bit size was 140mm</li> <li>HOR 2021 Auger drilling was completed using a Landcruiser mounted post-hole style auger, capable of at least 10m drill depths. Hole diameters were 3.5".</li> <li>Historic</li> <li>The historical 1985 RC Vat sampling programme was undertaken by a truck mounted Mole Pioneer drilling rig, using a modified rotary drill with blade bit. Size of bit not stated.</li> <li>Historical data: With reference to the historical database Barrack Mines Ltd and Sabminco NL used 16 rotary air blast (RAB) holes, 756 reverse circulation (RC) and 57 diamond holes for resource definition and exploration.</li> <li>No formal drilling reports are available outlining details of RC drill programs during the mining period 1983 - 1994 but conversations with original mine personnel suggest that industry standard practices were employed during the mining period 1983-1994.</li> <li>Diamond drilling is HQ, NQ and BQ core with the majority using Reverse Circulation pre-collars to various depths. Only alpha angles were recorded in geological logs.</li> <li>Horseshoe Metals; A total of 94 Reverse Circulation holes for 16,059m and 7 diamond drill holes, including 3 diamond tails for 1111.6m were used in the resource calculation. The four diamond holes from surface totalled 1111.6m of HQ diameter core and 5.8m of NQ core. The diamond tails totalled 196.3m of which 39.5m was HQ diameter core and 156.8m of NQ diameter core. Diamond rigs use hydraulic power wireless drilling methods with three and six metre runs.</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 recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>RAB drilling sampled and composited on intervals from 2 to 4m, unknown contractors.</li> <li>2021/22</li> <li>HOR 2021/22 in situ RC Drilling- Visual inspection of the RC sample volume indicates sample recovery is excellent</li> <li>HOR 2021/22 stockpile RC Drilling- Visual inspection of the RC sample volume indicates sample recovery is moderate, but considered representative of the volume being tested</li> <li>HOR 2021 Auger drilling -Visual inspection of the auger sample volume indicates sample recovery is excellent</li> <li>HOR 2021 RC Drilling -all samples drilled dry with minimal clayey component. All RC sampless samples are visually checked for recovery, moisture and contamination</li> <li>HOR 2021 Auger drilling -Visual inspection of the auger sample volume indicates sample recovery is excellent. 1985 RC Vat sampling programme- stated as 'satisfactory'. Auger samples are visually checked for recovery, moisture and contamination. Hole sides were conditioned where possible, and sample bases cleaned before proceeding. 1985 RC Vat sampling programme- not known.</li> <li>HOR 2021 RC Drilling - No potential for sample bias was observed, with no fine/coarse separation</li> <li>HOR 2021 Auger drilling -Ground conditions for auger drilling are good and drilling returned consistent size samples. No potential for sample bias was observed, with no fine/coarse separation. 1985 RC Vat sampling programme- not known Historic</li> <li>No formal recovery technique is recorded for RC or RAB drilling by either Barrack Mines Ltd or Sabminco NL.</li> <li>Diamond core recovery statistics are recorded in hard copy for the majority of historical diamond holes. No formal assessment of core recovery has been made to date.</li> <li>No formal report or information is available but conversations with original mine personnel suggest that industry standard practices were employed during the mining period 1984-1995.</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 costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>employed during the mining period 1984-1995.</li> <li>2021/22</li> <li>HOR 2021/22 RC Drilling - logged to a level to support appropriate Mineral Resource estimation, mining studies, and metallurgical studies. C20 stockpiles and dumps not logged</li> <li>HOR 2021 Auger drilling Not logged as leached Vat material is relatively homogenous. All material and sampling viewed and overseen by senior geologist. 1985 RC Vat sampling programme- not known</li> <li>HOR 2021/22 RC Drilling logged to a level to support appropriate Mineral Resource estimation, mining studies, and metallurgical studies.</li> <li>HOR 2021 Auger drilling - N/A</li> <li>HOR 2021/22 RC Drilling All drilling logged to a level to support appropriate Mineral Resource estimation, mining studies, and metallurgical studies.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul> <li>HOR 2021 Auger drilling -NA.</li> <li>Historic</li> <li>All reverse circulation, diamond drilling and RAB drilling was logged to a level of detail considered sufficient at the time. However, the nature of deposit that has been subject to strong weathering and alteration makes identification of stratigraphical units very difficult. The lack of an early stratigraphical interpretation model and limited understanding of the deposit style has also caused inconsistency in the logging by various geologists. As a consequence, only the overlying sediments and underlying shale and dolerite have been logged according to their primary rock type. Barrack Mines Ltd and Sabminco NL used similar mine-specific geological codes to describe the geological units. A metamorphic and alteration methodology was used to describe the volcanic stratigraphy but interpretation of the various descriptions is very difficult.</li> <li>Original logging of historical diamond core described lithology, colour and mineralisation content as well as some geotechnical data including core recovery, RQD data and alpha angle measurements. Approximately 10% of the original diamond holes in areas outside the existing pit have been re-logged and photographed so far. Diamond core for Horseshoe Metals holes was logged for recovery and RQD. Information on structure, lithology and alteration zones was recorded. Diamond core trays are stored on site for future reference.</li> <li>Original logging of reverse circulation, diamond core and RAB drilling describes lithology, colour and mineralisation content only in handwritten form on hard copies.</li> </ul>
Sub- sampling techniques and sample preparation	<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 sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling 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>2021/22</li> <li>HOR 2021/22 RC DrillingNon-core drilling, generally sampled dry, wet samples noted; Sample preparation technique considered appropriate to sample type; Cyclone cleaning routinely carried out during drilling; No field duplication undertaken to date, further work planned; sample sizes considered appropriate to the grain size of the material being sampled.</li> <li>HOR 2021 Auger drilling- Whole samples collected and swept off rubber lined collar pad; Auger drilling All auger samples drilled dry for the purposes of sampling. Sample sizes considered appropriate to the grain size of the material being sampled. 1985 RC Vat sampling programme- not known</li> <li>RC and Auger sample analysis follows industry best practice whereby samples are sorted, reconciled, placed onto trolleys and dried at 105°C in an oven, then crushed to ~2mm and a 500-700g subsample taken by rotary division for pulverisation. The subsample was pulverised &gt;90% passing 75µm using bowl-and-disc type mills, and ~200g of pulverised sample was taken for analysis. The technique is considered appropriate for the process of sub-sampling. 1985 RC Vat sampling programme- not known</li> <li>Sub sampling stages are considered appropriate for the representivity of samples.</li> <li>In situ RC and Auger sample analysis -Residuals and original samples sources retained for checks. C20 and dump stockpiles original metre samples not retained</li> <li>RC and Auger sample analysis-The sample size is considered industry standard for base and precious metal mineralisation.</li> <li>Historic</li> <li>All diamond core sampled intervals were half core cut for HQ, NQ and BQ diameter.</li> <li>No formal report or information is available but conversations with original mine personnel suggest that industry standard practices were employed during the mining period 1984-1995.</li> </ul>
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.  Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>2021/22</li> <li>HOR 2021 RC Drilling RC samples were submitted to Nagrom Laboratory, an ISO_9001:2015 assay laboratory and mineral processor for analysis by Method ICP008; 40gm Aqua Regia Digest- suite included Au, Ag, Ca, Cu, Fe, Hg, Mg, Pb, S, Se and Zn. Aqua Regia digest is considered an effective but partial digestion technique. C20 stockpiles analysed by ICP008 for Copper, Gold only</li> <li>HOR 2022 RC Drilling- samples were collected to best represent the source material. Samples were transported to Bureau Veritas (BV) Kalgoorlie for preparation then BV Perth for Au, Cu, Ag and S analysis by BV method AR101 with either ICP-MS or ICP-AES/MS finish. Samples were pre-screened at hole for Cu for subsequent assay by portable XRF.</li> <li>HOR 2021 Auger drilling -Auger samples were submitted to Nagrom Laboratory, an ISO_9001:2015 assay laboratory and mineral processor for analysis by Method FA50. 1985 RC Vat sampling programme- Fire assay analysis conducted by Classic Laboratories Pty Ltd, a NATA registered laboratory. Fire assay for gold is considered a total digestion technique. Vat 2 samples assayed by ICP008 for Copper, Gold only</li> <li>HOR 2021/22 RC Drilling- Standards and Blanks submitted at minimum once each per hole; acceptable levels of accuracy established. C20</li> </ul>

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative Company personnel.</li> <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>	<ul> <li>and Dump Stockpile drilling- Standards submitted every 50 samples, acceptable standards of accuracy established</li> <li>HOR 2021 Auger drilling- Auger sampling was submitted with two standards per 100 samples, and 1 blank per 100, and acceptable levels of accuracy and precision have been established. 1985 RC Vat sampling programme- not known Historic</li> <li>Historical procedures: Barrack Mines Ltd and Sabminco NL predominantly used two laboratories to assay diamond drill core and RC drill cuttings. The majority of samples were processed and assayed at the on-site Horseshoe Gold Pty Ltd mine laboratory</li> <li>No geophysical, spectral or XRF data is available for the historical database.</li> <li>No formal report or information is available but conversations with original mine personnel suggest that industry standard practices were employed during the mining period 1984-1995.</li> <li>2021/22</li> <li>HOR 2021/22 RC DrillingSignificant intersections verified by multiple Company personnel</li> <li>Some holes approximately twinning historic drilling</li> <li>Paper logs of primary data transferred to digital storage and stored, verified by alternate Company personnel; electronic records managed by Company personnel at Perth office.</li> <li>No adjustments have been made to the data as received from the laboratory</li> <li>HOR 2021 Auger drilling- Auger significant intersections and tabulations were confirmed by alternative Company personnel from first principals. 1985 RC Vat sampling programme- not known</li> <li>All auger drilling and sample data is captured in the field, then entered using established templates and verified in Perth office before upload into database. 1985 RC Vat sampling programme- not known</li> <li>Historic</li> <li>No formal report or procedure is available for the historical data but verification of significant intersections is considered to have been the duty of the senior mine geologist at the time.</li> <li>There is no information or formal report detailing how this process</li></ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>2021/22</li> <li>HOR 2021/22 RC Drilling-Initial collar locations are determined by handheld Garmin GPS but will be surveyed using DGPS before resource estimates are undertaken. Holes subsequently located by high definition photography, with estimated accuracy +/- 1m. Gyroscopic down hole surveys completed on holes RC1164-1180</li> <li>HOR 2021 Auger drilling- Initial collar locations determined by handheld Garmin GPS but will be surveyed using DGPS before resource estimates are undertaken. 1985 RC Vat sampling programme- not known</li> <li>RC and Auger sampling- Grid system coordinates are GDA94 MGA Zone 50.</li> <li>RC and Auger sampling- Topographic control is available from known survey stations and Hyvista detailed aerial photography acquired in 2017. Topographic control is at the decimetre level on site. 1985 RC Vat sampling programme- not known Historic</li> <li>The Mine surveyors used standard industry practices at the time to mark out and pick up collar coordinates in mine grid format. The mine grid coordinates have subsequently been transformed into MGA_GDA94 format. All available historic collar locations still visible at surface have recently been surveyed using RTK DGPS system by MHR Surveyors Pty Ltd.</li> <li>Downhole surveys were taken from Eastman camera discs employed by the various drilling companies at that time. Several available historic collar locations still visible at surface have recently been surveyed down hole either by re-entering the drill hole with a drill rig then downhole surveying using single shot digital camera readings or by DHS (Aust) Pty Ltd using an Electronic Multishot tool with readings in and out of the hole every 5m. Stated accuracies are +/- 0.2° for dip and 0.3° for azimuth.</li> <li>Barrack Mine Ltd created a NW mine grid orientated over the pit area with an east-west azimuth equivalent to 89°. The mine grid RL was offset from real RL by 62.2m. These coordinates have subsequently been transformed to MGA_GDA94 zone 50 using the historic grid transformation.</li></ul>

Criteria	JORC Code explanation	Commentary
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>2021/22</li> <li>HOR 2021/22 RC Drilling-Sectional E-W drilling, typically 20m spacing, otherwise various. C20 stockpile drilling now 10m x 10m upon completion of 2022 infill lines</li> <li>HOR 2021 Auger drilling- auger drilling used approx. 20m spacing in a diamond pattern.</li> <li>RC and Auger sampling- drilling spacing and results employed in this program are considered 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>No sample compositing has been applied. Historic</li> <li>The historical data spacing and distribution was not considered sufficient for the purpose of a modern resource estimation. Follow up drilling has been completed to infill obvious gaps in order to provide sufficient geological and grade continuity. When the drilling was complete, the mineralised domains display sufficient geological and grade continuity for the mineral resource procedures and classifications applied to support the definition of Measured Indicated and Inferred Mineral Resources under the 2012 JORC code.</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>2021/22</li> <li>HOR 2021/22 RC Drilling-Orientation of sampling has not necessarily achieved unbiased sampling of some structures, discussed in text.</li> <li>HOR 2021 Auger drilling-Drilling in this program is vertical and considered to represent an unbiased section of the material being sampled.</li> <li>RC and Auger sampling- No knowledge of sampling bias         Historic     </li> <li>The majority of drilling was orientated mine grid east which is slightly oblique to the mineralised trends but intersection angles are closer to perpendicular in most cases.</li> <li>A consistent sampling bias is not considered to be an issue for the purpose of this resource estimation. Diamond drilling confirmed that drilling orientation did not introduce any bias regarding the orientation of key mineralised structures.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>2021/22</li> <li>RC and Auger sampling-Prior to submission all samples were stored on-site under supervision of the Company personnel. Samples are transported to Perth by Horseshoe Metals personnel and then onto the assay laboratory.         Historic     </li> <li>All drill samples were assayed onsite at the Horseshoe Gold Mine Pty Ltd laboratory or at Laboratories in Perth or Meekatharra</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>2021/22</li> <li>RC and Auger sampling-No audits or reviews have been performed to date.         Historic</li> <li>Sampling techniques are consistent with industry standards. Consistency of data was validated by CSA Global Pty Ltd while loading into the database (Depth from &lt; Depth to; interval is within hole depth, check for overlapping samples or intervals, etc.). Any data which fails the database constraints and cannot be loaded is returned to Horseshoe Metals for validation and correction. Global consistency was also checked later on by plotting sections using the database and reconciling assays.</li> </ul>

## **Section 2 Reporting of Exploration Results**

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 Horseshoe Lights Project comprises one Mining Lease (M52/743), eight Exploration Licence (E52/3906, E52/3759, E52/3908, E52/3909, E52/3939, E52/4229, E52/4230 and E52/4372) and nine Prospecting Licenses (P52/1542 to P52/1550). Current registered holders of the tenements are Murchison Copper Mines Pty Ltd (MCM) a wholly owned subsidiary of Horseshoe Metals Limited, and Horseshoe Metals Limited</li> <li>The Kumarina project consists of two tenements, M52/27; and a mine lease application, M52/1078. MCM has 100% interest in the tenements.</li> <li>Unrelated party Horseshoe Gold Mine Pty Ltd (a subsidiary of Granges Resources Limited) retains a 3% net smelter return royalty in respect to all production derived from M52/743</li> <li>Tenements are in good standing and the Company is unaware of any additional impediment to it obtaining a licence to operate in the</li> </ul>

Criteria	JORC Code explanation	Commentary
		area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The Horseshoe Lights deposit surface gossan was discovered in 1946 and worked at a prospect level until 1949. Open pit and underground workings were operated by Asarco from 1949 to 1954. Asarco explored the deposit by sampling surface trenches, drilling one surface diamond drill hole, underground drilling and cross-cutting underground on two levels.</li> <li>In 1964, Electrolytic Zinc Company conducted widespread exploration including eight diamond drill holes in a search for copper. During 1969 and 1970 Planet Metals Ltd drilled seven holes. In the period 1975 to 1977, Amax Corporation and its partner Samantha Mines investigated the Horseshoe Lights area for base metals. This investigation included drilling a further three diamond drill holes including one beneath the southern end of the main ore zone. Placer Austex Pty Ltd and Homestake Mining Company Ltd also investigated the property.</li> <li>Previous exploration activities during the main phase of open pit mining were completed by Horseshoe Gold Mine Pty Ltd which was a wholly owned subsidiary of Barrack Mines Ltd between 1983-89. Barrack Mines Ltd drilled 43 diamond holes for 15,353m, 638 Reverse Circulation holes for 55,343m. The area was subsequently mined as a copper mine by Sabminco until 1992/3, when production ceased. The Project was re-established by current owners Horseshoe Metals in 2010 after a long period of inactivity.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	VMS mineralisation at Horseshoe Lights occurs in the core of a NNW trending and SE plunging anticline. The mineralised envelope of the deposit itself is also SW dipping and plunging to the SSE, and was likely folded. It sits within altered basalt and mafic volcanoclastic units along the contact with overlying felsic volcanic schist. The VMS mineralisation in the mine area is constrained by the tightly folded and sheared stratigraphy, and appears to be affected by offsets along N-S and NE trending brittle faults.
Drill hole Information	<ul> <li>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:</li> <li>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.</li> </ul>	<ul> <li>Refer to the body of text of this report and relevant Tables for information material to the understanding of the exploration results.</li> <li>No exclusions of information have occurred.</li> </ul>
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>HOR 2021/22 RC Drilling- no high-grade cutting, copper results reported above 0.3% Cu C20 stockpile reported above 0.3% Cu, 0.3 g/t Au. Stockpile drilling reported above 0.2% Cu, 0.2 g/t Au</li> <li>HOR 2021 Auger drilling- Only 1m split samples are reported and simply length weighted and averaged over the length of the hole above the vat liner; no top cut, no minimum interval, no internal dilution considered. Results are gold only unless stated</li> <li>HOR 2021/22 RC Drilling - significant copper and gold intersects reported</li> <li>HOR 2021 Auger drilling, gold assay only</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>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.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not</li> </ul>	<ul> <li>HOR 2021/22 RC Drilling- mineralisation dips around 70° to the west, east dipping holes intersect approximately perpendicular to mineralisation, vertical and west dipping holes are non-perpendicular to mineralisation</li> <li>HOR 2021 Auger drilling All intercept widths reported are downhole lengths, and equivalent to true widths for remnant vat stockpiles.</li> <li>HOR 2021/22 RC Drilling- typically reported as down hole length, true width not known, C20 stockpile drilling considered true width</li> <li>HOR 2021 Auger drilling- downhole lengths considered true widths</li> </ul>

Criteria	JORC Code explanation	Commentary
	known').	
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 plans and sections
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.	Reported results considered representative, no isolation of high-grade results.
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.	<ul> <li>RC Drilling-Various, substantially covered by 2013 CSA report Horseshoe Lights Project In-situ Mineral Resources</li> <li>Auger drilling -1985 Vat Sampling programme detail taken from in-house memo "Horseshoe Lights Vat Sampling Programme March 1985", authored by Rosalind Wright, checked and verified by V.J. Novak, M.Sc.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. 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>Planned activities discussed in text.</li> <li>Refer to diagrams in body of text.</li> </ul>