

#### **BOARD OF DIRECTORS**

Ms Kate Stoney Non-Executive Director, CFO & Company Secretary

Mr Craig Hall
Non-Executive Director

Mr Alan Still
Non-Executive Director

# Outstanding Copper Results – Main Zone and Motters at Horseshoe Lights

 RC drilling confirms wide zones of mineralisation at Main Zone and Motters with significant copper and gold results including:

> 72m @ 1.11% Cu from 32m incl. (RC1180 - NW Zone)

29m @ 1.65 % Cu from 32m and

12m @ 1.52% Cu from 182m

> 16m @ 1.10% Cu from 50m (RC1161 - Motters)

> 37m @ 0.68% Cu from 54m incl. (RC1164 - Mothers)

o 12m @ 1.02% Cu from 75m

21m @ 0.61% Cu from 63m incl. (RC1165 - Motters)

o 5m @ 1.45% Cu from 63m

36m @ 0.62% Cu from 50m incl. (RC1166 - Motters)

o 13m @ 0.91% Cu from 73m

 Drilling highlights significant mineralised potential outside existing in situ resource 128,000 t Cu metal @ 1.0% (0.5% cut-off)

- Review of historic drilling results at 0.3% Cu cut off underway results expected imminently
- Drilling to recommence in September with a priority focus on:
  - Main zone down plunge and along strike to the north
  - Motters along strike to the south
  - North dump infill
  - Oxide zone (surface to ~30m depth) Main Zone and Motters
- Review of historic scoping study results progressing Oxide heap leach followed by SXEW being included as part of the review

Horseshoe Metals Limited (ASX: HOR) (the 'Company') is pleased to provide the results

of Phase 2 Reverse Circulation ("RC") drilling completed at the Company's Horseshoe Lights Copper-Gold Project in Western Australia.

#### Commenting on these latest results, Director & CFO Kate Stoney said:

"We are delighted with these latest results which continue to demonstrate the high-grade nature and potential scale of the Horseshoe Lights project. Encouragingly, several of the wide zones of copper mineralisation intersected at Motters are outside of the existing resource base, which presents a clear opportunity to quickly grow the current resource with further drilling. Drilling is expected to recommence shortly to complete the assessment of these zones and the significant surface material potential in the North Dump and South low-grade stockpiles."

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#### **Phase 2 Drilling Summary**

The Horseshoe Lights Copper-Gold Project is the original Cu/Au VMS discovery in the Bryah Basin and is located approx. 60 km west of DeGrussa Copper Mine operated by Sandfire Resources (ASX: SFR). 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 4).

Phase 2 drilling completed in May consisted of 21 holes totalling 2966m targeting Motters (RC1160 to RC1179 located Northeast of the pit) and a single hole (RC1180) into the north west extension of the Main Zone (refer Figures 1 and 2). The objective was to confirm and extend mineralisation and confidence levels in drilling previously completed by the Company.

An additional 70 holes for 778m targeting selected stockpiles and dumps was also completed (refer ASX release dated 15 August 2022 for results).

Results from the programme are summarised below and in Table 1 at a 0.3% Cu cut-off, which is considered appropriate given the significant rise in copper price over the last two years. Assays have confirmed the continuity of the Motters structure with typically two coherent lodes (refer Figures 2, 3 and 4) and will improve the confidence level for resource classification in future resource modelling.

#### **Main Zone**

RC1180 was designed to test a gap in the detailed information on this section (Figure 3) and to confirm continuity of mineralisation immediately north of the open pit. An outstanding result (0.3% Cu cut-off) was achieved:

72m @ 1.11% Cu from 32m incl. 29m @ 1.65 % Cu from 32m and 12m @ 1.52% Cu from 182m

Planning is underway to test the northern strike extension of the Main Zone including an interpreted northern plunge to the mineralisation. Previous geological interpretation and magnetic data suggests the dolerite that cuts the northern end of the Motters structure does not extend far enough west to intersect the Main Zone. Future drilling will test this interpretation (Figure 5). There remains potential for extensions of mineralisation north of the dolerite (which intruded post mineralisation) and at depth.

#### **Motters Zone**

Results confirm significant widths of mineralisation in the northern half of the Motters structure (Figures 2 and 4) including significant results (0.3% Cu cut-off) of:

•	16m @ 1.10% Cu from 50m	(RC1161)
•	37m @ 0.68% Cu from 54m incl. 12m @ 1.02% Cu from 75m	(RC1164)
•	21m @ 0.61% Cu from 63m incl. 5m @1.45% Cu from 63m	(RC1165)
•	36m @ 0.62% Cu from 50m incl. 13m @ 0.91% Cu from 73m	(RC1166)

Future drill targeting will focus on the sparsely drilled mineralisation south along strike from the completed drilling (refer Figure 1). Results from previous drilling (0.5% Cu cut-off, refer Table 3) include highlights of:

- 31m @ 1.81 % Cu from 197m in Hole RC1101 (downhole intersect only, not true width "dhio, ntw")
- 20m @ 2.11 % Cu from 0m (in pit) and 12m @ 1.96 from 86m in Hole RC524 (dhio, ntw)
- 9m @ 2.66 % Cu from 49m (in pit); considered true width

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

The following activities at Horseshoe are planned over the coming months:

- RC drill testing Main Zone northern extensions
- RC drill testing of Motters southern extension
- RC and/or auger infill drilling of surface materials in stockpiles and northern waste dump
- Planning for a 'Below the Dolerite' Diamond drill hole
- Additional metallurgical test work on oxide copper stockpiles and targets
- Gravity recovery test work on Copper Flotation and CIP tailings
- Ongoing review of scoping study results to incorporate potential oxide heap leach SXEW treatment

#### **Horseshoe Lights Copper-Gold Project Existing Resource Base**

- o Current in situ resource 128,000 t Cu metal @ 1.0% (0.5% cut-off)
- Current M15 stockpile resource 2650 t Cu metal @ 1.1%
- o Current Flotation tailings resource 6,800 t Cu metal @ 0.48% and 15,300oz Au at 0.34 g/t

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

12/00/2010	"Final antique Handata Hayasahaa Lighta Duaisat"
12/09/2018	"Exploration Update- Horseshoe Lights Project"
06/08/2021	"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"

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

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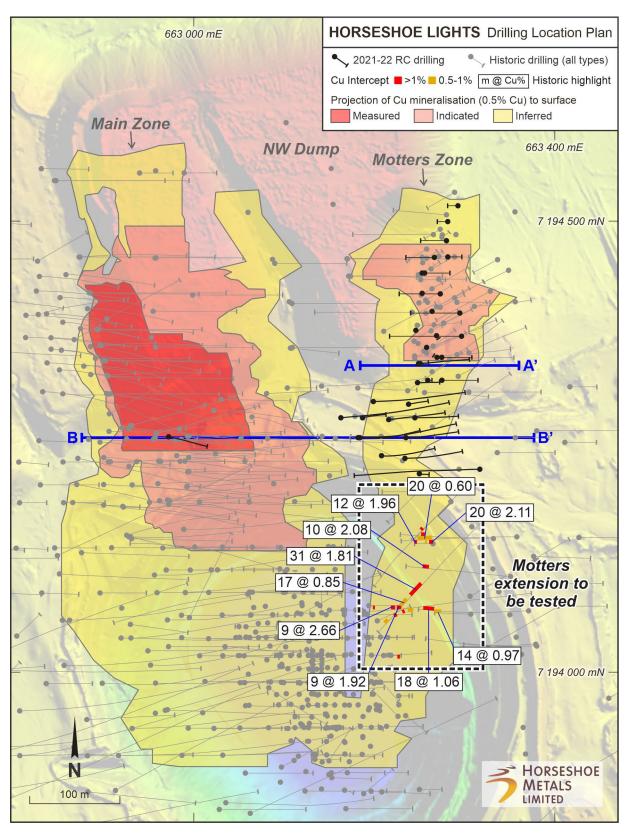


Figure 1: Drill Location Plan showing Phase 2 holes into Motters Zone, highlighting sparse drilling and historical drilling highlights (0.5% Cu cut-off) in the Motters extension south along strike

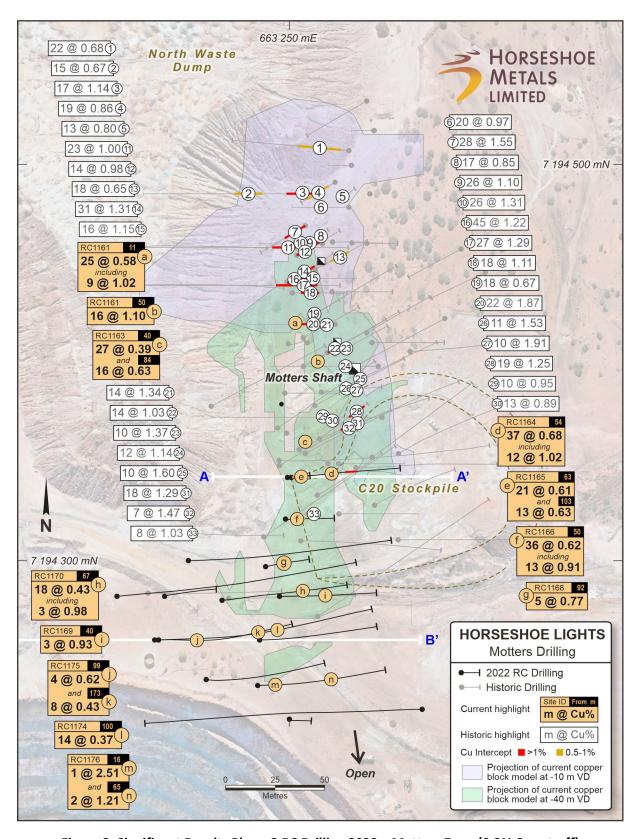


Figure 2: Significant Results Phase 2 RC Drilling 2022 – Motters Zone (0.3% Cu cut-off)

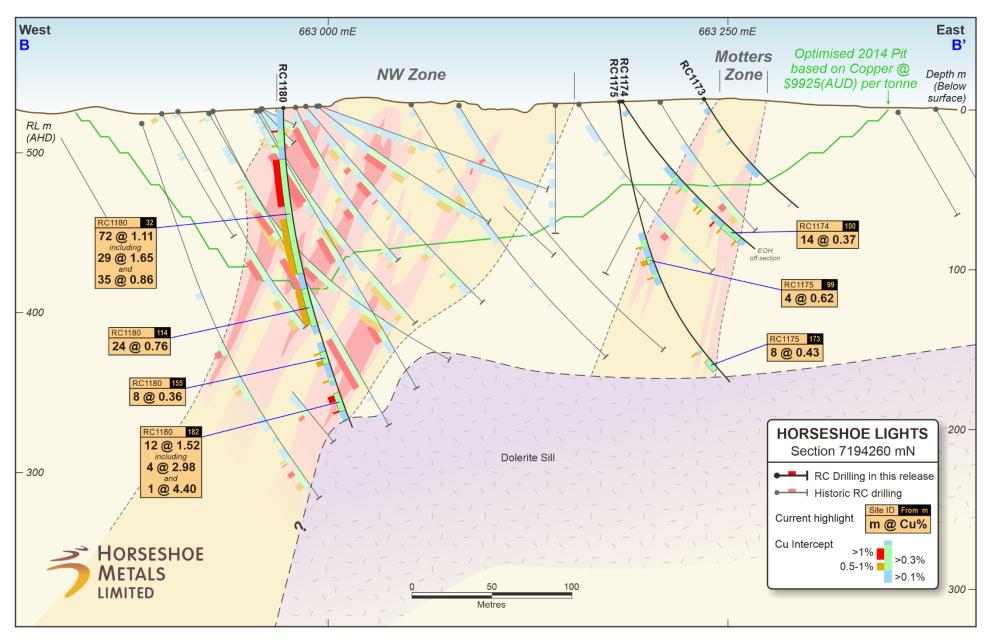


Figure 3: Cross Section 7194260mN (B-B' on Figures 1 and 2) – Significant Results Phase 2 RC Drilling (0.3% Cu cut-off)

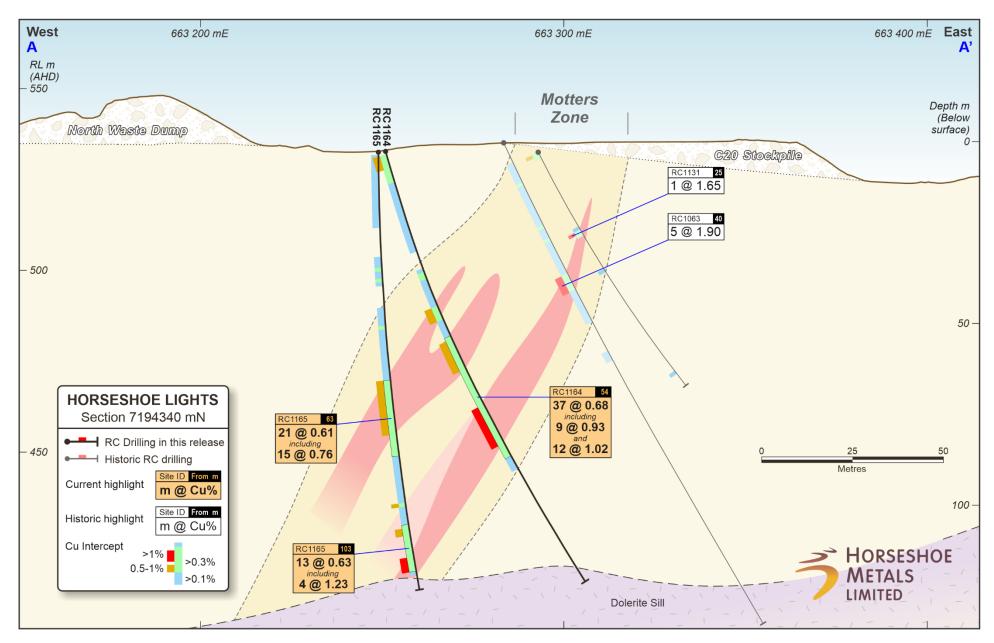


Figure 4: Cross Section 7194340mN (A-A' on Figures 1 and 2) – Significant Results Motters Phase 2 RC Drilling (0.3% Cu cut-off)

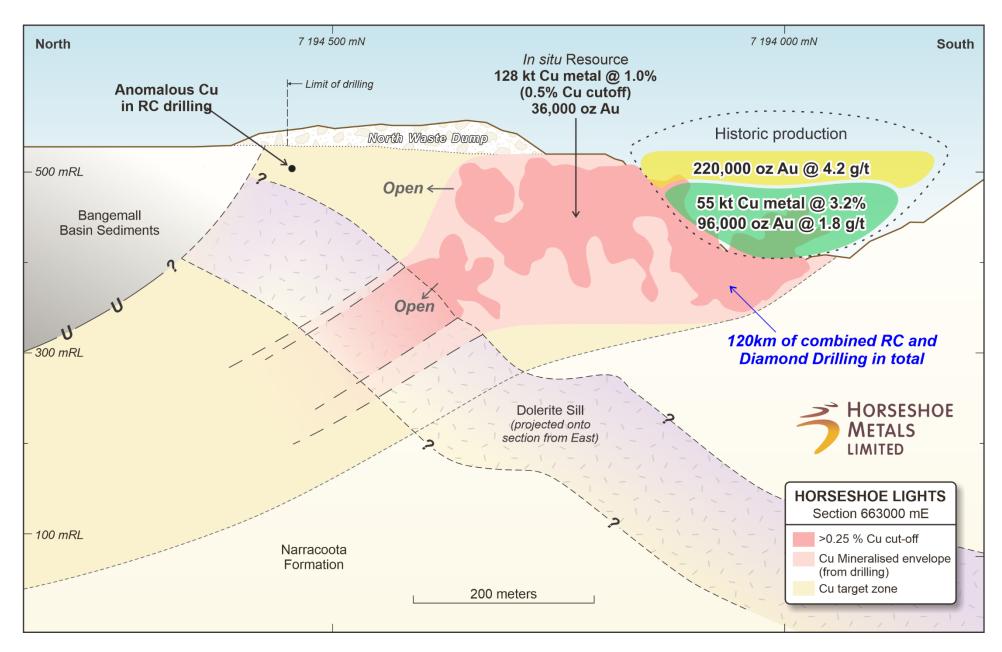


Figure 5: Interpreted Long Section in the plane of Main Zone looking East – showing potential Main Zone Northern Strike and Down Plunge Extensions

Table 1: Summary of Results Motters and Main Zone Phase 2 RC Drilling

						e Phase 2 R		F	<b>T</b> .		<b>O</b> 0/
Zone	Hole ID	North	East	RL	Dip	Azimuth	Depth	From	То	Length	Cu_%
Motters	RC1160	7194420	663253	525	-90	0	77	11	36	25	0.58
							including	12	21	9	1.02
							including	29 52	31 53	2	0.61 0.31
								62	63	1	0.31
Motters	RC1161	7194400	663264	528	-90	0	89	23	42	19	0.34
Wiottoro	1101101	7 10 1 100	000201	020	- 00		including	33	36	3	0.73
								50	66	16	1.10
Motters	RC1162	7194379	663246	531	-90	0	109	11	12	1	0.52
			1					14	15	1	0.33
								30	31	1	0.37
								54	58	4	0.32
								87	88	1	0.30
								94	95	1	1.07
Motters	RC1163	7194360	663258	533	-90	0	119	26	28	2	0.73
								40	67	27	0.39
							including including	40 47	41 51	1	0.59 0.73
							including	58	62	4 4	0.73 0.59
							including	66	67	1	0.55
								73	74	1	0.68
								84	100	16	0.63
								107	108	1	0.72
Motters	RC1164	7194342	663251	533	-75	90	131	1	9	8	0.51
								35	37	2	0.41
								45	49	4	0.54
								54	91	37	0.68
							including	55	64	9	0.93
NA - 44	DOMAGE	7404040	000040	500	00		including	75	87	12	1.02
Motters	RC1165	7194342	663249	533	-90	0	121	32 35	33 36	1 1	0.36 0.37
								48	49	1	0.31
								63	84	21	0.61
							including	63	68	5	1.45
								97	98	1	0.65
								103	116	13	0.63
							including	112	116	4	1.23
Motters	RC1166	7194321	663248	532	-90	0	139	50	86	36	0.62
							including	50	60	10	0.52
							including	65	67	2	1.27
NA 11	D04407	7404000	000400	500	00	00	including	73	86	13	0.91
Motters	RC1167	7194300	663199	532	-60	90	161	72	74 85	2 2	0.48 0.43
								83 93	95	2	0.43
Motters	RC1168	7194297	663238	533	-90	0	151	57	58	1	0.34
111011010	7.0.100	7 10 1201	000200	000	30			64	69	5	0.36
							including	66	67	1	0.59
								92	97	5	0.77
Motters	RC1169	7194282	663245	533	-60	90	81	40	43	3	0.93
Motters	RC1170	7194280	663216	533	-65	90	121	67	85	18	0.43
							including	67	70	3	0.98
							including	82	84	2	0.91
Motters	RC1171	7194282	663163	530	-65	90	199	90 71	91	1	0.33 0.43
MOULEIS	NOTI/T	1134202	003103	JJU	-00	<u> </u> 90	199	88	72 89	1	0.43
								93	94	1	0.73
								102	107	5	0.30
							including	102	103	1	0.54
								157	158	1	0.30
Motters	RC1172	7194282	663187	530	-90	0	181	79	80	1	0.42
								92	93	1	0.37
								94	95	1	0.37
								96	97	1	0.32

Zone	Hole ID	North	East	RL	Dip	Azimuth	Depth	From	То	Length	Cu_%
Motters	RC1173	7194260	663235	534	-60	90	91	22	23	1	0.31
Motters	RC1174	7194260	663184	532	-60	90	157	57	59	2	0.32
					•			65	69	4	0.35
							including	65	66	1	0.53
								80	84	4	0.45
							including	80	81	1	0.56
							including	83	84	1	0.77
								94	95	1	1.03
								100	114	14	0.37
							including	100	101	1	0.94
							including	112	113	1	0.70
Motters	RC1175	7194260	663182	532	-85	90	193	88	92	4	0.32
							including	91	92	1	0.61
								99	103	4	0.62
								110	112	2	0.53
								165	166	1	0.63
								173	181	8	0.43
Motters	RC1176	7194237	663234	535	-60	90	101	16	17	1	2.51
								61	63	2	1.21
Motters	RC1177	7194240	663208	535	-90	0	205	64	70	6	0.38
								102	103	1	0.39
Motters	RC1178	7194220	663250	536	-90	0	141	36	38	2	0.72
Motters	RC1179	7194225	663317	530	-50	270	193	57	61	4	0.38
								80	84	4	0.43
							including	80	81	1	0.89
								99	100	1	0.32
			,					124	126	2	0.52
Main	RC1180	7194261	662972	528	-90	0	206	14	24	10	0.37
							including	14	15	1	1.17
							including	23	24	1	0.87
								32	104	72	1.11
							including	32	61	29	1.65
							including	69	104	35	0.86
								114	138	24	0.76
								155	163	8	0.36
							including	155	156	1	0.53
							including	160	163	3	0.58
								172	174	2	0.56
								182	194	12	1.52
							including	183	187	4	2.98
							including	193	194	1	4.40

Intervals of  $\geq$  1m and  $\geq$  0.3% Cu, allowing for 4m downhole of internal dilution \* 4m composite, awaiting re-assay of single metre intervals

Table 2: Details for mineralisation within Motters Southern Extension (0.5% Cu cut-off, refer Figure 1)

Historic Drilling Summary for Cu % x m >= 5.00

Zone	D Type	Hole ID	North	East	RL	Dip	Azimuth	Depth	From	То	Length	Cu %
Motters	RC (1)	RC-522	7194064	663307	503	-60	272	80	66	80	14	0.97
Motters	RC (1)	RC-524	7194142	663265	512	-78	270	98	0	20	20	2.11
									34	42	8	0.67
									86	98	12 <sup>1</sup>	1.96
Motters	RC (1)	RC-823	7194057	663203	384	-60	66	80	39	45	6	1.17
									59	64	5	1.68
Motters	RC (1)	RC-825	7194019	663219	385	-60	86	90	14	19	5	1.40
Motters	RC (1)	RC-826	7194074	663194	386	-60	90	72	9	13	4	1.93
									49	58	9	2.66
									62	71	9	1.92
Motters	RC	RC1100	7194201	663296	530	-65	223	337	136	142	6	1.18
Motters	RC	RC1101	7194171	663323	532	-60	225	319	197	228	31	1.81
									239	256	17	0.85
									291	299	8	0.65
Motters	RC	RC1107	7194148	663332	530	-35	270	129	95	100	5	1.72
Motters	RC	RC1108	7194106	663351	530	-40	270	164	126	136	10	2.08
Motters	RC	RC1124	7194068	663371	530	-35	270	168	142	160	18	1.06
Motters	RC	RC1141	7194150	663358	529	-40	270	165	122	142	20	0.60
Motters	DD (1)	DDH-70	7194068	663188	385	-30	90	219	57	64	7	0.81

RC (1) or DD (1) denotes hole collared in pit <sup>1</sup> Ended in mineralisation

#### **About Horseshoe Metals Limited**

Horseshoe Metals Limited (ASX:HOR) is a copper and gold-focused Company with a package of tenements covering approximately  $500 km^2$  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. The tenements immediately surrounding the Horseshoe Lights Copper-Gold Project are part of a Farm In/Joint Venture with ENRG Elements Ltd (ASX:EEL) – formerly Kopore Metals Limited (ASX:KMT) – where EEL recently completed minimum expenditure requirements for the first year of Farm-In.

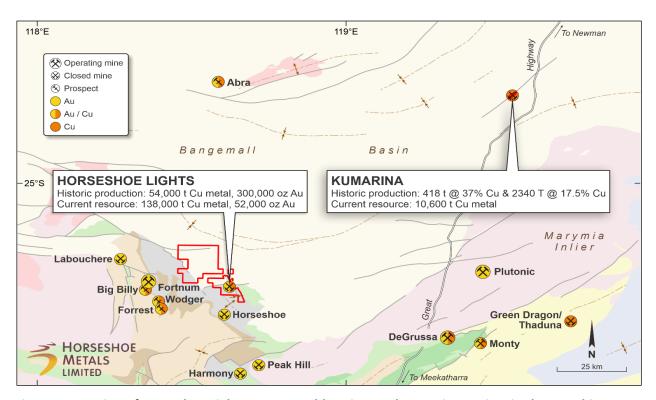


Figure 5: Location of Horseshoe Lights Copper-Gold Project and Kumarina Project in the Murchison, WA

#### 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 4 summarises the total Mineral Resources for the Horseshoe Lights Project as at 30 June 2022.

# TABLE 4 HORSESHOE LIGHTS PROJECT SUMMARY OF MINERAL RESOURCES As at 30 June 2022

Location	Category	Tonnes (Mt)	Cu (%)	Au (g/t)	Ag (g/t)	Cu metal (tonnes)	Au metal (oz)	Ag metal (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	6.5	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% otherwise s	6 Cu cut-off g tated	rade unless	5	TOTAL	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 2022 is shown in Table 5 below.

TABLE 5  KUMARINA PROJECT  SUMMARY OF MINERAL RESOURCES  As at 30 June 2022						
Location	Category	Tonnes (t)	Cu (%)	Cu metal (tonnes)		
	Measured	415,000	1.46	6,100		
Rinaldi Prospect	Indicated	307,000	1.16	3,500		
(0.5% Cu cut-off)	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 a consultant 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 Fotios consents to the inclusion of the data in the form and context in which it appears.

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 Fotios. 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 Horseshoe Lights Project surface stockpile Mineral Resources is based on information compiled by a previous employee of Horseshoe Metals Limited and reviewed by Mr Fotios. 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 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 Fotios. 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>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 AAu, 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 pre-screened at hole for Cu for subsequent assay by portable XRF.</li> <li>HOR 2021 Auger drilling- samples were collected by spiral auger bit and shafts with flights 3 ½ "in diameter. Samples were collected every metre from a collared liner base of around 50cm x 40cm, into a large labelled plastic bag, and the base swept clean before proceeding with the next metre. Sub-sampling into numbered calico bag was via an aluminium scoop collecting around 500-750gm of sample from the plastic bag, which was retained at the hole over the collar. The historical 1985 RC Vat sampling programme was undertaken by a truck mounted Mole Pioneer drilling rig owned and operated by Sanfead Drilling Contractors in Perth, using a modified rotary drill with blade bit. Samples were collected ever 2m within holes up to 6m deep, except 3 holes in Vat 3 which were sampled every 1m.</li> <li>HOR 2021/22 RC Drilling - Portable Niton XRF used to select sample intervals, internal checks utilised</li> <li>HOR 2021/22 RC Drilling Depth control was at the decimetre level, with depth checked against a metre stick</li> <li>HOR 2021 Auger drilling bepth control was at the decimetre level, with depth checked against a metre stick</li> <li>HOR 2021 Auger drilling was undertaken by experienced contractors Gyro Australia and is considered industry standard with a geochemical auger rig</li></ul>
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>HOR 2021/22 RC Drilling - was undertaken as industry standard reverse circulation drilling, with iDrilling completing work with a UDR450 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". 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> </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> </ul>	<ul> <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</li> </ul>

JORC Code explanation	Commentary
<ul> <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>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</li> </ul>
<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> </ul>	<ul> <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,</li> </ul>
The total length and percentage of the relevant intersections logged.	mining studies, and metallurgical studies.  • HOR 2021 Auger drilling -NA.
<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 sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ.</li> </ul>	<ul> <li>No diamond core drilled during this program.</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</li> </ul>
<ul> <li>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</li> </ul>	<ul> <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> </ul>
The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <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</li> </ul>
	<ul> <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> <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> <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 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> <li>The nature, quality and appropriateness of the assaying and laboratory</li> </ul>

Criteria	JORC Code explanation	Commentary
	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.	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  • HOR 2021/22 RC Drilling- Standards and Blanks submitted at minimum once each per hole; acceptable levels of accuracy established. C20 and Dump Stockpile drilling- Standards submitted every 50 samples, acceptable standards of accuracy established  • 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
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>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> </ul>
		<ul> <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>N/A</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>No adjustments undertaken.</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> </ul>	<ul> <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</li> </ul>
	<ul> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>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</li> </ul>
Data spacing and distribution	Data spacing for reporting of Exploration Results.	<ul> <li>HOR 2021/22 RC Drilling-Sectional E-W drilling, typically 20m spacing, otherwise various.</li> <li>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> </ul>
	<ul> <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>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.</li> </ul>
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	<ul> <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> </ul>
	If the relationship between the drilling orientation and the orientation of key	RC and Auger sampling- No knowledge of sampling bias

Criteria	JORC Code explanation	Commentary
	mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	
Sample security	The measures taken to ensure sample security.	<ul> <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 in Kalamunda.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	RC and Auger sampling-No audits or reviews have been performed to date.

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	• The Horseshoe Lights Project comprises one Mining Lease (M52/743), one Exploration Licence (E52/3759) and 9 Prospecting Licenses. Current registered holder of the tenements is Murchison Copper Mines Pty Ltd (MCM) a wholly owned subsidiary of Horseshoe Metals Limited. Tenements E52/3759, P52/1442-50, and part of M52/743 are subject to a farm-in agreement with Kopore Metals Limited (refer ASX release 28th January 2021 – "Horseshoe West Copper/Gold Farm-in and JV Agreement"). The Kumarina project consists of two tenements, M52/27; and a mine lease application, M52/1078. MCM has 100% interest in the tenements. 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
	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.	<ul> <li>Mining Lease 52/743 containing the exploration results and current resources is in good standing and has been recently renewed for an additional 21 years. Prospecting Licences P52/1442-50 recently received an Extension of Term for an additional 4 years. The Company is unaware of any additional impediment to it obtaining a licence to operate in the area.</li> </ul>
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> <li>A summary of resource drilling undertaken within the Project Area is summarised in an Addendum table following the JORC table documentation.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>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.</li> </ul>

Criteria	JORC Code explanation	Commentary
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> </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> </ul>
	<ul> <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>	No exclusions of information have occurred.
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> </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>N/A</li> </ul>
	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>HOR 2021/22 RC Drilling - N/A- significant copper and gold intersects reported</li> <li>HOR 2021 Auger drilling N/A, gold assay only</li> </ul>
Relationship between mineralisation widths and intercept	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.	<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</li> </ul>
lengths	<ul> <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 known').</li> </ul>	considered true width  HOR 2021 Auger drilling- downhole lengths considered true widths
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	<ul> <li>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.</li> </ul>	Reported results considered representative, no isolation of high-grade results.
Other substantive exploration data	<ul> <li>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.</li> </ul>	<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>

# Addendum: Resource Drilling History-Horseshoe Lights Copper-Gold Project

HolePrefix	Hole ID From	Hole ID To	Drill Type	Sample Type	Company	Date
EZ	1	8	Diamond Drilling	Unknown	Electrolytic Zinc	1966
HLRC-	1	30	Reverse Circulation	RC Cuttings	Barrack Mines Ltd	1983-1984
RC-	31	703	Reverse Circulation	RC Cuttings	Barrack Mines Ltd	1985-1988
DDH-	11	63	Diamond Drilling	Half Core	Barrack Mines Ltd	1985-1989
SH-	1	26	Pit Seep Hole	RC Cuttings	Sabminco NL	1992-1994
В	445A	565D	Pit Bench Sample	Channel Cuttings	Sabminco NL	1992-1994
RC-	704	899	Reverse Circulation	RC Cuttings	Sabminco NL	1993
DDH-	64	74	Diamond Drilling	Half Core	Sabminco NL	1993-1994
HDD	1	9	Diamond Drilling	Half Core	Horseshoe Metals Ltd	2012-2013
HDD	1013	1037	Diamond Tail	Half Core	Horseshoe Metals Ltd	2012
WRL	1	12	Reverse Circulation	RC Cuttings	Horseshoe Metals Ltd	2017
RC	1000	1144	Reverse Circulation	RC Cuttings	Horseshoe Metals Ltd	2010-2017
RC	1145	1159	Reverse Circulation	RC Cuttings	Horseshoe Metals Ltd	2021
RC	1160	1180	Reverse Circulation	RC Cuttings	Horseshoe Metals Ltd	2022