# ASX/MEDIA ANNOUNCEMENT

## **13 DECEMBER 2012**

⊐ASX Code:

HOR

Management

Mr Jeremy Shervington Non-Executive Chairman

Mr Neil Marston Managing Director

Mr Michael Fotios Non-Executive Director

Mr Stuart Hall
Non-Executive Director

Mr Damian Delaney Company Secretary

Issued Capital

Shares: 75.9 Million

Options: 22.0 Million

Share Price: \$0.185

Market Capitalisation: \$14 Million

Cash at Bank (31 October 2012)

\$2.3 Million



# LATEST DRILLING EXTENDS COPPER MINERALISATION AT KUMARINA

## HIGHLIGHTS

#### KUMARINA PROJECT

• Latest RC drilling programme at Rinaldi Prospect completed (27 holes for 2,704 metres). Assay results received for first eleven holes.

Best results obtained to date:

- o 6m @ 3.5% Cu (42-48m); including 2m @ 9.1% Cu
- o 6m @ 2.5% Cu (25-31m); including 3m @ 4.8% Cu
- o 5m @ 1.9% Cu (30-35m); including <u>2m @ 4.1% Cu</u>
- o 4m @ 2.2% Cu (106-110m); including 1m @ 4.0% Cu
- Copper mineralisation confirmed to continue to the south within the fault zone at Rinaldi Prospect
- More assay results to follow shortly.

#### HORSESHOE LIGHTS PROJECT

- Gravity survey expanded following promising early results.
- Expanded gravity survey of 2,500 readings now completed.
- Gravity survey appears to have mapped known, as well as previously unknown, geological structures.
- JORC Mineral Resource Estimation work to start in early 2013.



Horseshoe Metals Limited (ASX:HOR) ("Horseshoe" or "the Company") is pleased to provide an update on its exploration activities at its 100% owned Kumarina Copper Project ("Kumarina Project") and Horseshoe Lights Copper/Gold Project ("Horseshoe Lights Project"), located in the Peak Hill Mineral Field of Western Australia (see Figure 1).

#### Kumarina Project

#### RC Drilling Programme

The latest phase of Reverse Circulation percussion ("RC") drilling at the Kumarina Project was completed on 2 December 2012. The drilling programme focused on in-fill and step-out holes at the Rinaldi Prospect with 27 holes (extension of KRC051 and KRC116 – KRC141) for 2,704 metres drilled (see Figure 2). All samples have been lodged for laboratory analysis with the first batch of results for 11 holes now complete.

KRC120 was drilled as an in-fill hole to test for copper mineralisation near the historic Rinaldi shaft. The hole intersected a 3 metre wide void at 22-25m down hole depth from the historical mining with significant copper mineralisation either side of the void including **1m @ 5.9% Cu (21-22m)** and **6m @ 2.5% Cu (25-31m)**; including **<u>3m @ 4.8% Cu</u>**.

Further south KRC118 was drilled through the fault zone intersecting a 23 metre zone of intermittent copper mineralisation. The best interval in this hole was **5m @ 1.9% Cu (30-35m)**; including **2m @ 4.1% Cu** and **6m @ 3.5% Cu (42-48m)**; including **2m @ 9.1% Cu**.

Approximately 120 metres to the south of the Rinaldi shaft, hole KRC051 - which was drilled in 2011 - was extended from 71 metres to 137 metres depth, testing for a southerly extension of copper mineralisation. The KRC051 extension intersected some low grade copper mineralisation, including 1m @ 0.5% Cu (113-114m). Subsequently KRC116 was drilled below KRC051 with success, intersecting **4m @ 2.2% Cu (106-110m)**; including **1m @ 4.0% Cu**. The intersecting of copper mineralisation in KRC116 is significant in demonstrating that copper mineralisation continues to the south within the fault zone. The ground below KRC116 remains untested for further copper mineralisation.

Intervals of copper were recorded in three of the seven remaining holes drilled in the immediate Rinaldi Prospect area (see Table 1). The samples from the remaining sixteen holes (KRC126 – KRC141) should be available for release shortly.

A JORC compliant mineral resource estimation of the Rinaldi Prospect will be completed once all laboratory analysis work is completed.

#### Soil Geochemical Survey

A soil geochemical survey over a large part of the project area has been completed with samples collected on a 40m x 800m grid, with selective infill sampling on a 40m x 200m grid. The aim of the survey is to generate new exploration targets away from the areas of historical copper workings. The soil samples have been processed through a laboratory and data validation and analysis is to be completed this month.



#### Multi-Spectral Survey

In October 2012 HyVista Corporation Pty Ltd completed a programme to acquire airborne multispectral imagery over the Kumarina Project. Processing of that imagery has been completed and the results will be used in conjunction with the soil geochemical survey, regional geological mapping and the airborne aeromagnetic survey to generate targets for further field work and drilling in 2013.

#### Horseshoe Lights Project

#### <u>Gravity Survey</u>

A gravity survey of the Horseshoe Lights Mine and surrounding area was completed on 1 December 2012.

The survey was initially undertaken on a 200m x 200m grid with approximately 1,000 station readings acquire. However, preliminary data was sufficiently encouraging that the Company elected to complete in-fill survey work over a significant part of the area on a 100m x 100m grid, with an additional 1,500 station readings being acquired.

Initial indications from the gravity survey are that it has successfully identified the geological structures within the survey area, some of which appear to be previously unknown.

Processing and analysis of the gravity survey data is underway.

#### <u> Multi-Spectral Survey</u>

In October 2012 HyVista Corporation Pty Ltd completed a programme to acquire airborne multispectral imagery over the entire area of the Horseshoe Lights Project. Processing of the acquired data has been completed and the results will be used in conjunction with the gravity survey, structural mapping, airborne aeromagnetic, VTEM, FLTEM and DDIP surveys to refine targets for drilling in 2013.

#### Planned Activities

#### <u>Kumarina Project</u>

No further drilling at Kumarina is planned until Q2 2013 due to seasonal conditions. Accordingly the focus in the coming weeks will be on:

- 1. Geological review of the results of drilling;
- 2. Completion of a JORC compliant mineral resource estimation for the Rinaldi prospect; and
- 3. Analysis of multi-spectral survey imagery, a soil geochemical survey, regional geological mapping and the airborne aeromagnetic survey to generate regional targets for further field work and drilling in 2013.



#### Horseshoe Lights Project

The short drilling programme planned for December 2012 at Horseshoe Lights has been postponed due to weather and in order to allow time for the full evaluation of the gravity survey and other geophysical information.

The focus in the coming weeks will be on:

- 1. Completing the down-hole survey of 2012 RC drill holes;
- 2. Database QA/QC;
- 3. Commencing a JORC compliant mineral resource estimation for the Horseshoe Lights deposit in early 2013;
- 4. Analysing all the geophysical data to refine targets for drilling in 2013; and
- 5. Planning for drilling in early 2013.

#### ENDS

#### For further information please contact:

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Horseshoe Metals Limited (ASX: HOR) is a copper and gold focused company with a package of tenements covering approximately 300km<sup>2</sup> in the highly prospective Peak Hill Mineral Field, Jocated north of Meekatharra in Western Australia. The Company's projects are the Horseshoe Lights Project and the Kumarina Project.

#### About the Horseshoe Lights Project

The Horseshoe Lights Project includes the old open pit of the Horseshoe Lights copper-gold mine which operated intermittently between 1946 and 1994, producing over 300,000 ounces of gold and 54,000 tonnes of copper. The Horseshoe Lights ore body is interpreted as a deformed volcanic-hosted massive sulphide (VHMS) 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 Volcanics, which also host Sandfire Resources' recent DeGrussa Cu-Au discovery.

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. Previous operators of the mine drilled 829 RC and approximately 70 diamond drill-holes, many of which do not exceed 100m in depth and, in the case of some of the sterilisation holes drilled in the 1980's, did not assay for copper.

Prior to the commencement of drilling by Horseshoe in 2010, the project had no exploration since the 1990's and Horseshoe believes that systematic drilling, combined with the application of modern geophysical methods, can upgrade the known resources and may lead to new discoveries in the mine area.

At a cut-off grade of 0.5% Cu, the current estimate is a total Measured, Indicated and Inferred Mineral Resource of **8.6 million tonnes @ 1.06% Cu and 0.13 g/t Au** for 91,000 tonnes Cu and 37,400 oz Au (see Table 2). Indications are that recent drilling and other exploration activities will lead to a significant increase on that figure.

#### 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 3km 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.



Exploration activities completed over the Kumarina area between 1992 and 1998 by St Barbara Limited focused on the Kumarina and Rinaldi workings and included geological mapping, gridding, rock sampling and 51 air core holes for 2,062m. Six metre composite drill samples were assayed for Cu, Au, Ag, Co, As, Pb and Mg. Four holes intersected multiple lodes that returned assays between 1.15% Cu to 3.5% Cu.

Two reverse circulation percussion drilling programmes were completed by Horseshoe during the December 2011 quarter. Results of the drilling programmes identified significant shallow copper mineralisation at the Rinaldi Prospect along a north – south oriented intrusive. The Company's 2012 diamond drilling programme of seven holes intersected visible copper with some high grade zones returning one metre assays of up to 15.2% copper.

#### **Competent Persons Statement**

The information in the report to which this statement is attached that relates to Exploration Results is based on information compiled by Mr Geoff Willetts, BSc. (Hons) MSc. who is a Member of the Australian Institute of Geoscientists. Geoff Willetts is employed full-time by Horseshoe Metals Limited.

Geoff Willetts has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Geoff Willetts consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Resources is based on information compiled by Dr Bielin Shi, who is a member of the Australasian Institute of Mining and Metallurgy (AusIMM) and Australian Institute of Geoscientists (AIG). Dr Shi is a full-time employee of CSA Global Pty Ltd.

Dr Bielin Shi has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Dr Shi consents to the inclusion of such information in this report in the form and context in which it appears.





Figure 1 – Projects Location Plan





Figure 2 – Rinaldi Drill Hole Location Plan



		Table 1										
		Kumarina Project										
		RC Drilling Programme										
$\square$		Significant Copper Intersections										
		(0.20% Cu cut-off)										
$\square$	Hole	Easting (m)	Northing (m)	Azimuth (degrees)	Dip (degrees)	Depth (m)	From (m)	10 (m)	Interval (m)	% (average)	Prospect/ Zone	
	KRC120	758370	7268011	90 <sup>°</sup>	-60°	78	21	22	1	5.9	Rinaldi	
$( \square$	<u> </u>						25	21	6	2.5		
$\subseteq$	including						25	28	3	4.8		
	KRC118	758350	7267980	90 <sup>°</sup>	-60 <sup>°</sup>	102	25	27	2	0.8	Rinaldi	
615	<u> </u>						30	35	5⁺	1.9		
QD	including						30	32	2	4.1		
RA	<u> </u>						42	48	6⁺	3.5		
W2	including						45	47	2	9.1		
	KRC116	758324	7267903	90°	-60°	162	106	110	4	2.2	Rinaldi	
	including						106	107	1	4.0		
	KRC051	758338	7267904	90°	-60°	137	113	114	1	0.5	Rinaldi	
	KRC119	758330	7267977	90°	-60°	138	73	75	2	0.2	Rinaldi	
ad							94	97	3	0.8		
GG	KRC121	758328	7268018	90°	-60°	132	97	98	1	0.4	Rinaldi	
$\square$				0	0		119	120	1	1.0		
2	KRC125	758391	7268257	90°	-60°	102	65	67	2	0.3	Rinaldi	
$\square$				<b>a</b> a 0	<b>50</b>		73	77	4	0.4		
$\square$	KRC117	/583/3	/26/9/8	90°	-60°	/8		NO Sig	nificant Re	sult	Rinaldi	
RA	KRC122	758287 7267992 90° -60° 138 No Sig		nificant Re	sult	Rinaldi						
W2	KRC123	758425	7268253	90°	-60°	28	ноге	0 onsue 0	ff in hole	Rinaldi		
	KRC124	758411	7268259	90°	-60°	78	No Significant Result			Rinaldi		

Notes: Coordinates GDA94 Zone 50. All holes located by GPS with accuracy  $\pm$  5 metre.

All holes down-hole surveyed at ~30-50m intervals.

Assays for Cu are determined by a four acid digest with an ICP-OES finish

Insufficient geological information is available to determine the true widths of mineralisation reported.

+ includes 1 x 1m interval grading <0.20% Cu



### Table 2 Horseshoe Lights Project Mineral Resource Estimation As at 31 December 2011

T	_	Measured					Indicated				Inferred					TOTAL					
	Cut-off (Cu %)	Tonnes (Mt)	Grade (Cu %)	Grade (Au g/t)	Copper Metal (T)	Gold Metal (Oz)	Tonnes (Mt)	Grade (Cu %)	Grade (Au g/t)	Copper Metal (T)	Gold Metal (Oz)	Tonnes (Mt)	Grade (Cu %)	Grade (Au g/t)	Copper Metal (T)	Gold Metal (Oz)	Tonnes (Mt)	Grade (Cu %)	Grade (Au g/t)	Copper Metal (T)	Gold Metal (Oz)
9	0.25	0.54	0.674	0.014	3,607	241	0.76	0.569	0.028	4,322	684	17.09	0.689	0.107	117,743	58,788	18.38	0.683	0.101	125,560	59 <i>,</i> 696
Į	0.50	0.29	0.939	0.017	2,705	157	0.32	0.880	0.027	2,787	275	8.02	1.067	0.143	85,534	36,856	8.62	1.056	0.135	91,040	37,400
	0.70	0.18	1.152	0.019	2,051	109	0.16	1.146	0.024	1,871	126	4.96	1.363	0.173	67,612	27,591	5.30	1.349	0.163	71,522	27,785
ſ	1.00	0.10	1.414	0.023	1,347	70	0.08	1.432	0.020	1,213	54	2.71	1.803	0.226	48,932	19,720	2.89	1.780	0.213	51,511	19,818
1	1.50	0.03	2.013	0.021	564	19	0.02	2.056	0.031	438	21	1.27	2.473	0.343	31,484	14,040	1.32	2.457	0.331	32,492	14,073
	2.00	0.01	2.509	0.009	285	3	0.01	2.845	0.001	205	0	0.71	3.066	0.399	21,782	9,114	0.73	3.055	0.389	22,271	9,117

The 3D block models were estimated using the geostatistical method of Ordinary Kriging (OK) Multiple Indicator Kriging (MIK) with block support adjustment based on the Kriging parameters. The block model estimate is based on 58 diamond drill holes and 789 RC drill holes using a 2m composite data set for 3 individual domains. 28 historic RC holes have been used for wireframe interpretation, but the assay data with low geological confidence have been excluded from the estimation. The same 3D block models were also estimated using the geostatistical method of Multiple Indicator Kriging (MIK). The MIK estimate produced very similar results with the OK estimate being the slightly more conservative of the two. Density values assigned to the block model are shown in Table 3.

# Table 3Block Model Density Values

Weathering Zone	Density (g/cm <sup>3</sup> )
Oxidised	2.00
Transitional	2.20
Fresh	2.50