

## ASX/MEDIA ANNOUNCEMENT

31 OCTOBER 2014

ASX Code: HOR

### Management

**Mr Neil Marston**  
*Managing Director/Company  
Secretary*

**Mr Michael Fotios**  
*Non-Executive Director*

**Mr Alan Still**  
*Non-Executive Director*

### Issued Capital

Shares: 169.0 Million

Options:  
5.4 Million (60c, exp 5/15)  
Performance Rights: 2.8 M

Share Price: \$0.02

Market Capitalisation:  
\$3.38 Million

Cash at Bank  
(30 September 2014)

\$0.62 Million



## HORSESHOE METALS LIMITED

### QUARTERLY REPORT PERIOD ENDED 30 SEPTEMBER 2014

#### SUMMARY

##### Horseshoe Lights Copper-Gold Project

- Strategic review of Horseshoe Lights Project underway and is considering the following:
  - Identifying additional high priority copper-gold targets for deeper drilling within the Bryah Basin;
  - Identifying simple, low capex-opex cost processing options for mine tailings and other surface stockpiles
  - Identifying mining options for in-situ Resources at Horseshoe Lights and the Rinaldi Prospect at the Kumarina Project.
- Horseshoe entered into an option-to-purchase a VMS-prospective Exploration Licence adjacent to the Horseshoe Lights Project.

##### Kumarina Copper Project

- 14 hole drill programme completed at Snell North, Kumarina Deeps and Kumarina Copper Mine targets
- Copper mineralisation identified with the best intervals received:
  - KRC151 - 11m (61-72m) @ 1.59% Cu including 1m (64-65m) @ 4.52% Cu and 2m (67-69m) @ 3.21% Cu, and
  - KRC150 - 2m (67-69m) @ 2.36% Cu
  - KRC142 - 4m (19-23m) @ 1.32% Cu, and
  - KRC143 - 7m (80-87m) @ 0.36% Cu.

##### Corporate

- \$576,500 raised via placement of Rights Issue shortfall in July.
- Additional funds raised brought total amount raised in Company's recent capital raising activities to \$1.34m.
- New funding facility to provide up to \$1m in additional equity capital for follow-up exploration.

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

### OVERVIEW

Horseshoe Metals Limited (ASX: HOR) (“Horseshoe” or “the Company”), through its wholly owned subsidiary, Murchison Copper Mines Pty Ltd, holds a 100% interest in the Horseshoe Lights and Kumarina Projects located in the Peak Hill Mineral Field, north of Meekatharra in Western Australia (see Figure 1). Refer to Appendix 1 for full tenement details.

### EXPLORATION AND EVALUATION

#### **Horseshoe Lights Copper/Gold Project (HOR: 100%) (GRR: 3% NSR Royalty)**

The Horseshoe Lights Project covers an area of approximately 80 km<sup>2</sup> including the closed Horseshoe Lights copper-gold mine, which is located 75km west of Sandfire Resources NL’s (ASX:SFR) DeGrussa copper-gold mine and 25km east of RNI NL’s (ASX:RNI) recent Forrest copper-gold discovery (see Figure 1).

#### **Strategic Review**

During the quarter the Company commenced a strategic review of the Horseshoe Lights Project. The strategic review is ongoing and is considering the following:

- (a) Identifying additional high priority copper-gold targets for deeper drilling within the Bryah Basin;
- (b) Identifying simple, low capex/opex cost processing options for the mine tailings and other surface stockpiles located around the mine, and
- (c) Identifying mining options for the in-situ Mineral Resources at both Horseshoe Lights and the Company’s Rinaldi Prospect at the nearby Kumarina Project.

#### **Target Generation**

Horseshoe is encouraged by RNI NL’s (ASX: RNI) significant recent discovery of copper mineralisation at the nearby Forrest Prospect (RNI ASX announcement, 26 May 2014) which came about as a result of deeper drilling of a known historic gold prospect.

The Company is undertaking an extensive review of its regional database and public file reports to identify similar copper-gold targets within the Bryah Basin for deeper drilling to supplement exploration targets already generated close to the Horseshoe Lights Mine.

As a result of the Company’s target generation activities, subsequent to the quarter (ASX announcement, 29 October 2014), it entered into an option-to-purchase agreement with Elysium Resources Limited (ASX: EYM) to acquire a new VMS-prospective Exploration Licence (E52/2569) adjacent to the Horseshoe Lights Project. The licence area hosts a copper-gold exploration target and, subject to successful completion of due diligence, Horseshoe plans to drill two priority targets; the M1 and Western geophysical anomalies, as well as any other potentially prospective identified from field work.

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

Details of the option-to-purchase agreement are provided in the ASX announcement dated 29th October 2014.

### Tailings Study

In 2010 the Company drilled 100 auger holes on a 40m x 40m grid into the flotation tailings dam and a further 10 holes into the CIP tailings dam as part of a study into a potential acid leaching project.

Bulk sample residues from these holes have been retrieved from storage and are being assessed for a new round of testwork.

### Mining Studies

A preliminary pit optimisation using the 2013 mineral resource block model has been undertaken internally by the Company. The results of this internal review were sufficiently encouraging to warrant a formal Preliminary Economic Assessment ("PEA"). An external consultant is yet to be commissioned to undertake this study.

### Future Activities

In early November the Company's geological staff will commence a programme of detailed field mapping and sampling at high priority target areas identified from the strategic review. This programme is aimed at generating and/or confirming specific drilling targets.

A programme of RC drilling for scrip by Whitestone Minerals Pty Limited via the Drilling Fund Contract (ASX announcement 31 March 2014) is expected to commence later in November. Drilling services to the value of \$235,000 are to be provided under the Contract. A preliminary RC drilling schedule of approximately 4,000 metres for the Horseshoe Lights Mine area has been prepared however this may be modified/expanded once geological field work results are known.

The previously announced (ASX announcement, 10 June 2014) co-funded deep diamond drilling programme at Horseshoe Lights have been delayed as a result of the strategic review. The Company intends to undertake the diamond drilling programme as a follow-up activity to the RC drilling programme. Therefore the timing of the diamond drilling programme has not yet been confirmed.

The Company expects to appoint an external consultant to undertake the PEA in November 2014.

### **Kumarina Copper Project (HOR: 100%)**

The Kumarina Project consists of two exploration licences and one mining lease covering approximately 432km<sup>2</sup>. The project is located 95km north of Sandfire Resources NL's DeGrussa copper-gold mine, in the Gascoyne region of Western Australia (see Figure 1).

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

The project has a total Measured, Indicated and Inferred Mineral Resource Estimate of **835,000 tonnes @ 1.3% Cu** for **10,600 tonnes Cu** (using a cut-off grade of 0.5% Cu).

### Drilling Programme

During the quarter the Company completed 14 Reverse Circulation (RC) drill holes (2,110 metres) at the Snell North, Kumarina Deeps and Kumarina Copper Mine targets (see Figure 2).

#### Kumarina Copper Mine Prospect

The Kumarina copper mine is the deepest historical mine working within the project area with underground mining recorded as occurring as deep as 49 metres from surface. The mineralisation mined reportedly consisted of chrysocolla, malachite, cuprite and chalcocite in a kaolinized fault breccia cemented by milky quartz.

Four holes (KRC150 – 152, KRC155) were drilled to test for extensions of copper mineralisation, primarily along strike to the north of the abandoned Kumarina copper mine. The collar locations are shown in Figure 3 and details of copper mineralisation intervals recorded in these holes are set out in Appendix 2, with Figure 4 showing a section through KRC151.

Best results, from the Kumarina Copper Mine Prospect were:

- **KRC151** - 11m (61-72m) @ 1.59% Cu including 1m (64-65m) @ 4.52% Cu and 2m (67-69m) @ 3.21% Cu, and
- **KRC150** - 2m (67-69m) @ 2.36% Cu.

The intervals recorded in KRC150 and KRC151 occur predominantly as chalcopyrite hosted in quartz veins within a quartz diorite sill. It is interpreted that the mineralisation is structurally controlled as has been observed elsewhere within the project area.

KRC152 was drilled to test for a down dip extension of the mineralisation intersected in KRC151. Only low order copper anomalism (200ppm - 900ppm) was observed in KRC152 from 93-100m depth using the field portable X-Ray Florescence ("fpXRF") analyser.

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

### Snell North Prospect

Eight holes (KRC142 – KRC149) were completed at the Snell North Prospect with the location of the drill holes shown in Figure 5 and details of copper mineralisation intervals recorded set out in Appendix 2.

The best copper intervals recorded were:

- **KRC142** – 4 metres (19-23m) @ 1.32% Cu including 1m (20-21m) @ 2.67% Cu;
- **KRC143** – 7m (80-87m) @ 0.36% Cu;
- **KRC146** – 4m (26-30m) @ 0.14% Cu, and
- **KRC148** – 1m (104-105m) @ 0.36% Cu and 1m (112-113m) @ 0.23% Cu.

At the intersection of the diorite sill and the interpreted fault zone in KRC145 (see Figure 6) only low order copper anomalism was recorded in wet samples however the presence of significant ground water in this zone possibly has some effect on the copper mineralisation. Approximately 200m further to the south-west KRC148 recorded copper mineralisation at a similar depth to KRC145.

KRC146 which was drilled beneath the southern shaft and intersected a void at approximately 25 metres down hole depth recorded low order copper mineralisation from 26-30 metres.

### Kumarina Deeps Prospect

572 metres of RC drilling was completed in two holes (KRC153 – 154) as part of the Western Australian State Government's co-funded drilling programme. The drilling targeted an untested magnetic anomaly, known as the Kumarina Deeps Prospect (see Figure 7).

Both holes intersected a quartz diorite sill which is highly magnetic based on field observations. The diorite sill was intersected between 138 – 223 metres (85 metres thickness) in KRC153 and 146 – 179 metres (33 metres thickness) in KRC 154. KRC 153 was drilled to a final depth of 370 metres and KRC154 was drilled to a final depth of 202 metres. Both drill holes ended in siltstone below the quartz diorite. There was little evidence of copper mineralisation from visual examination or fpXRF analysis of both drill holes.

The results of this drilling at the Kumarina Deeps Prospect has confirmed the general geological model, however further evaluation to identify structures which could be potentially mineralised is required before additional drilling is warranted.

### Future Activities

No field activities at Kumarina are planned for the December quarter.

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

### CORPORATE

During the Quarter the Company issued 28,825,000 new shares at \$0.02 pursuant to the shortfall provisions of the Rights Issue, raising \$576,500.

The additional funds raised brought the total amount raised in the Company's recent capital raising activities to \$1.34 million (ASX announcement, 29 July 2014).

In July the Company entered into a Controlled Placement Agreement ("CPA") with Acuity Capital Investment Management Pty Ltd ("Acuity Capital") to provide the Company with up to \$1.0 million in additional funding for follow-up exploration.

The CPA provides Horseshoe with up to \$1 million of standby equity capital. Importantly, the Company retains full control of the placement process, including having sole discretion as to whether or not to utilise the CPA. Furthermore, there are no restrictions or conditions on other capital raising activities the Company may wish to undertake.

As at 30 September 2014, the Company had cash at bank of \$619,531.

### ENDS

#### For further information please contact:

Neil Marston  
Managing Director

Horseshoe Metals Limited

Ph: +61 8 9481 5866

E: [nam@horseshoemetals.com.au](mailto:nam@horseshoemetals.com.au)

James Moses

Media and Investor Relations

Mandate Corporate

M: +61 420 991 574 T: +61 2 8211 0612

E: [james@mandatecorporate.com.au](mailto:james@mandatecorporate.com.au)

#### About Horseshoe Metals Limited

Horseshoe Metals Limited (ASX:HOR) is a copper and gold focused company with a package of tenements covering approximately 500km<sup>2</sup> in the highly prospective Peak Hill Mineral Field, located north of Meekatharra in Western Australia. The Company's projects are the Horseshoe Lights Project and the Kumarina Project (see Figure 1).

#### About the Horseshoe Lights Project

The Horseshoe Lights Project includes the old 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 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-

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

sericite and quartz-chlorite schists of the Lower Proterozoic Narracoota Formation, which also host Sandfire Resources' DeGrussa copper/gold mine.

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.

A Mineral Resource Estimate for the Horseshoe Lights deposit was completed by the Company in June 2013 (*see 30 June 2013 Quarterly Report announced on 31 July 2013*). 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"

The total Measured, Indicated and Inferred Mineral Resource Estimate is **12.85 million tonnes @ 1.00% Cu and 0.1 g/t Au for 128,600 tonnes Cu and 36,000 oz Au** (using a cut-off grade of 0.5% Cu).

### 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.

A Mineral Resource Estimate for the Rinaldi deposit was completed by the Company in June 2013 (*see 30 June 2013 Quarterly Report announced on 31 July 2013*). 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"

The total Measured, Indicated and Inferred Mineral Resource Estimate is **835,000 tonnes @ 1.3% Cu for 10,600 tonnes Cu** (using a cut-off grade of 0.5% Cu).





QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

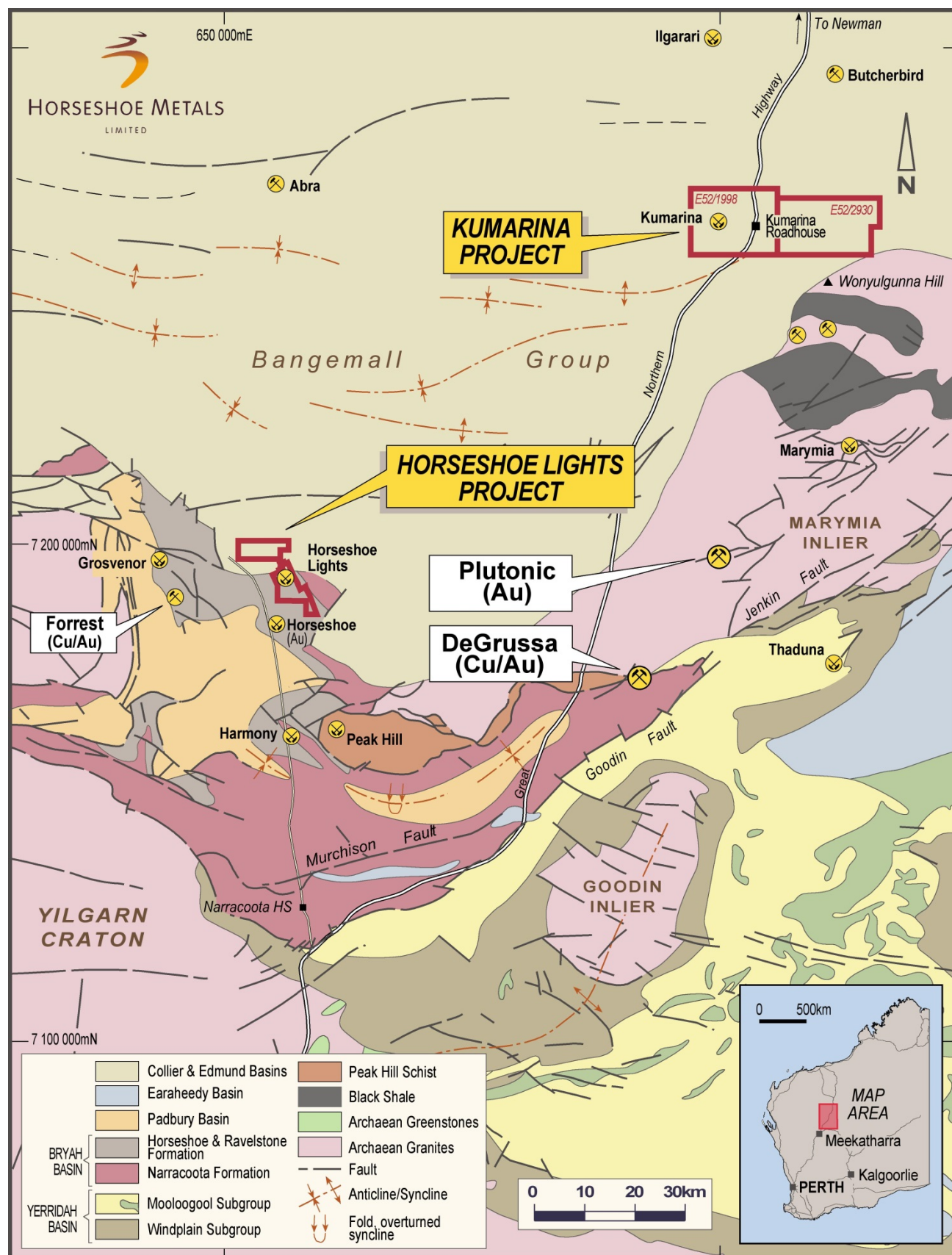


Figure 1 - Projects Location Plan





QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

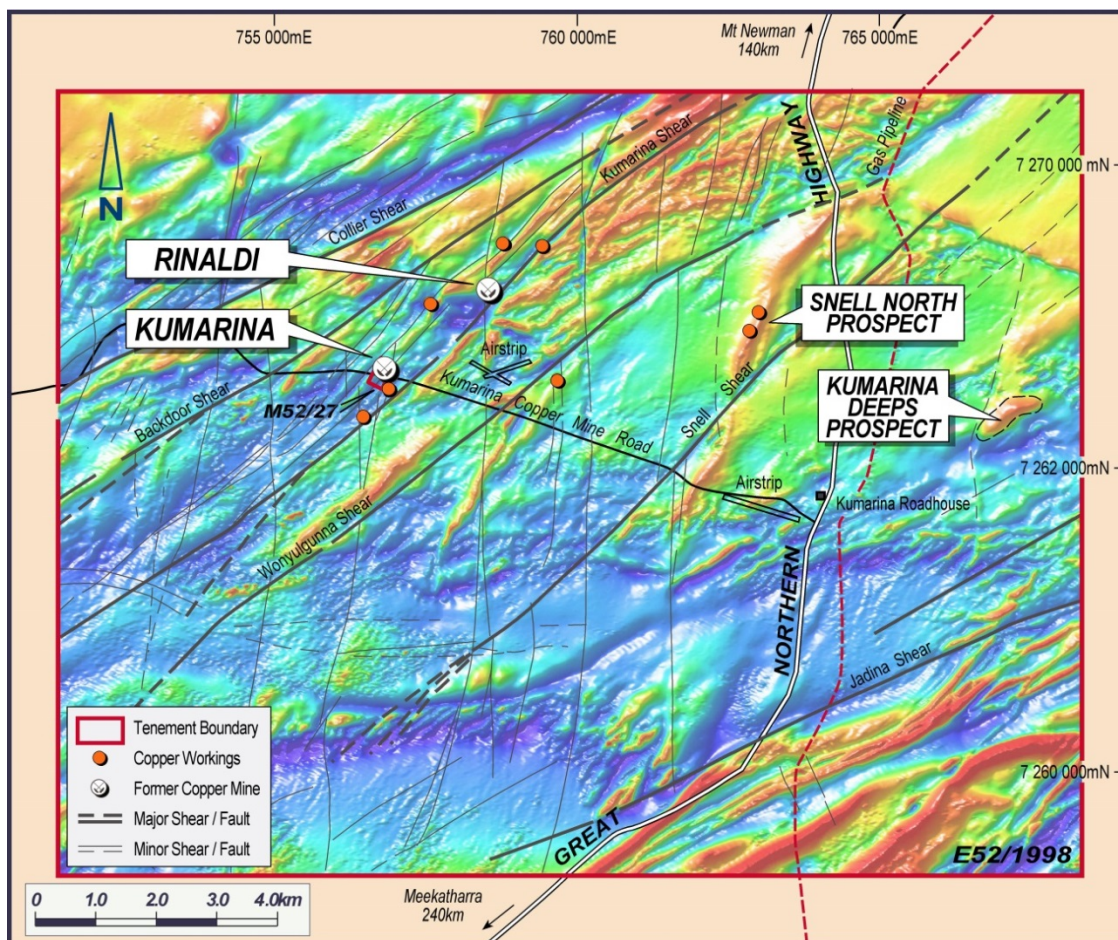


Figure 2 – Kumarina Project – E52/1998 Location Plan (overlay on Aeromagnetics)

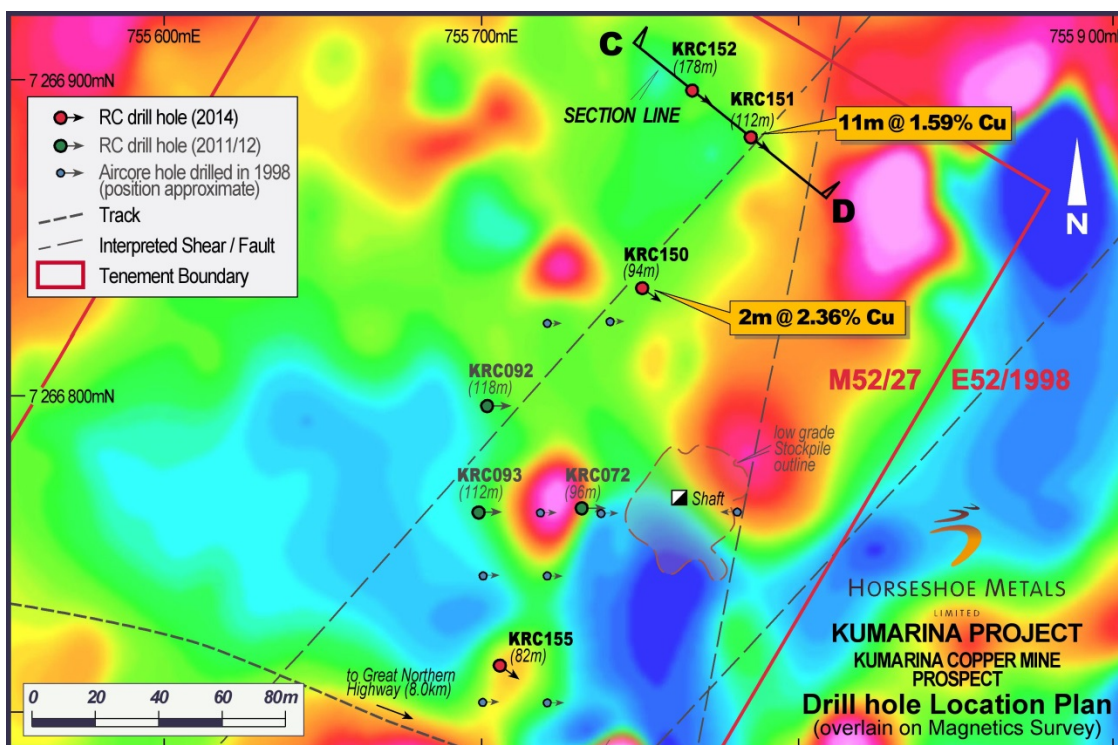


Figure 3 – Kumarina Copper Mine Prospect - Drill Hole Location Plan

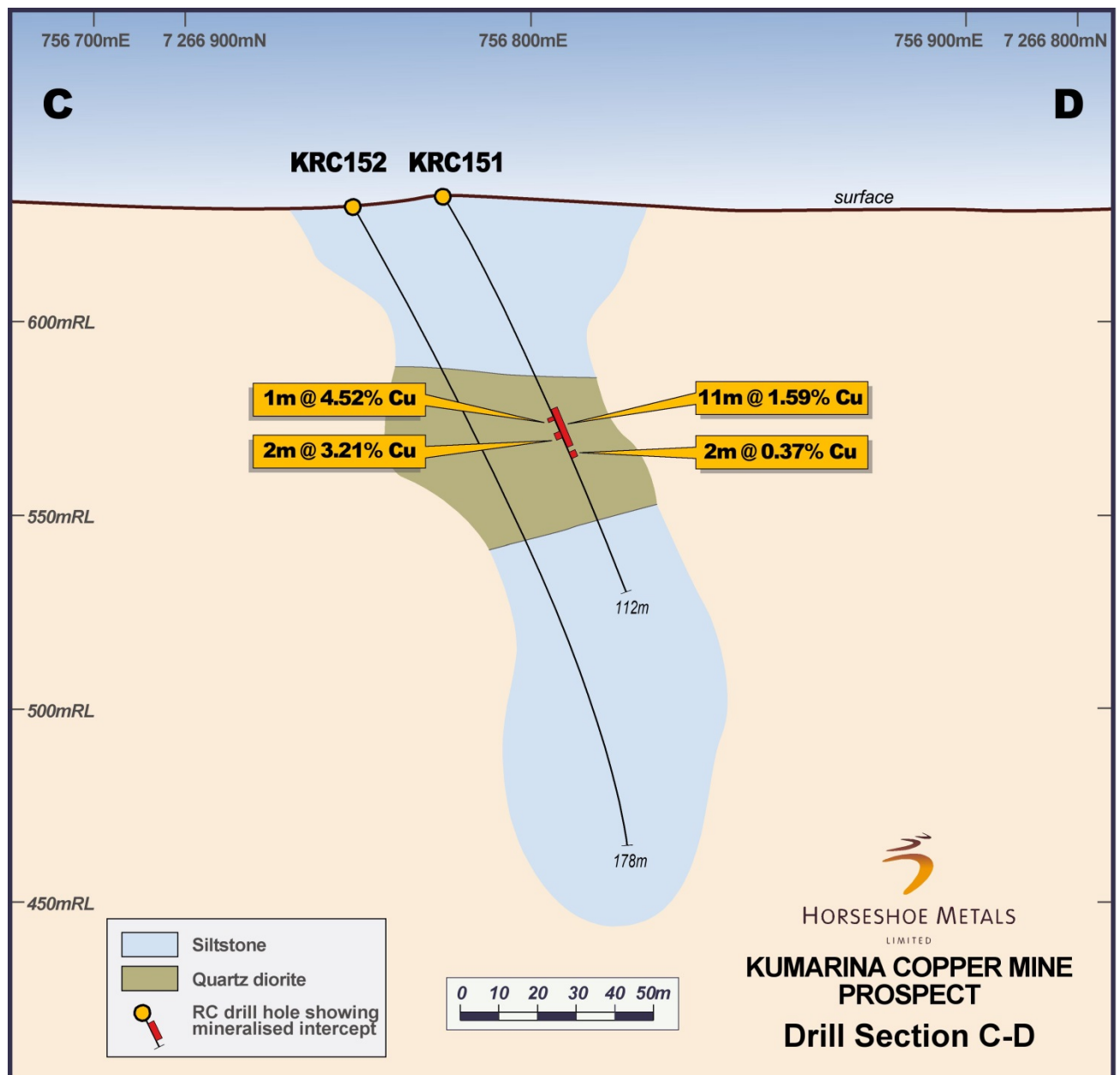


Figure 4 – Kumarina Copper Mine Prospect - Drill Section through Section 'C-D'





QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

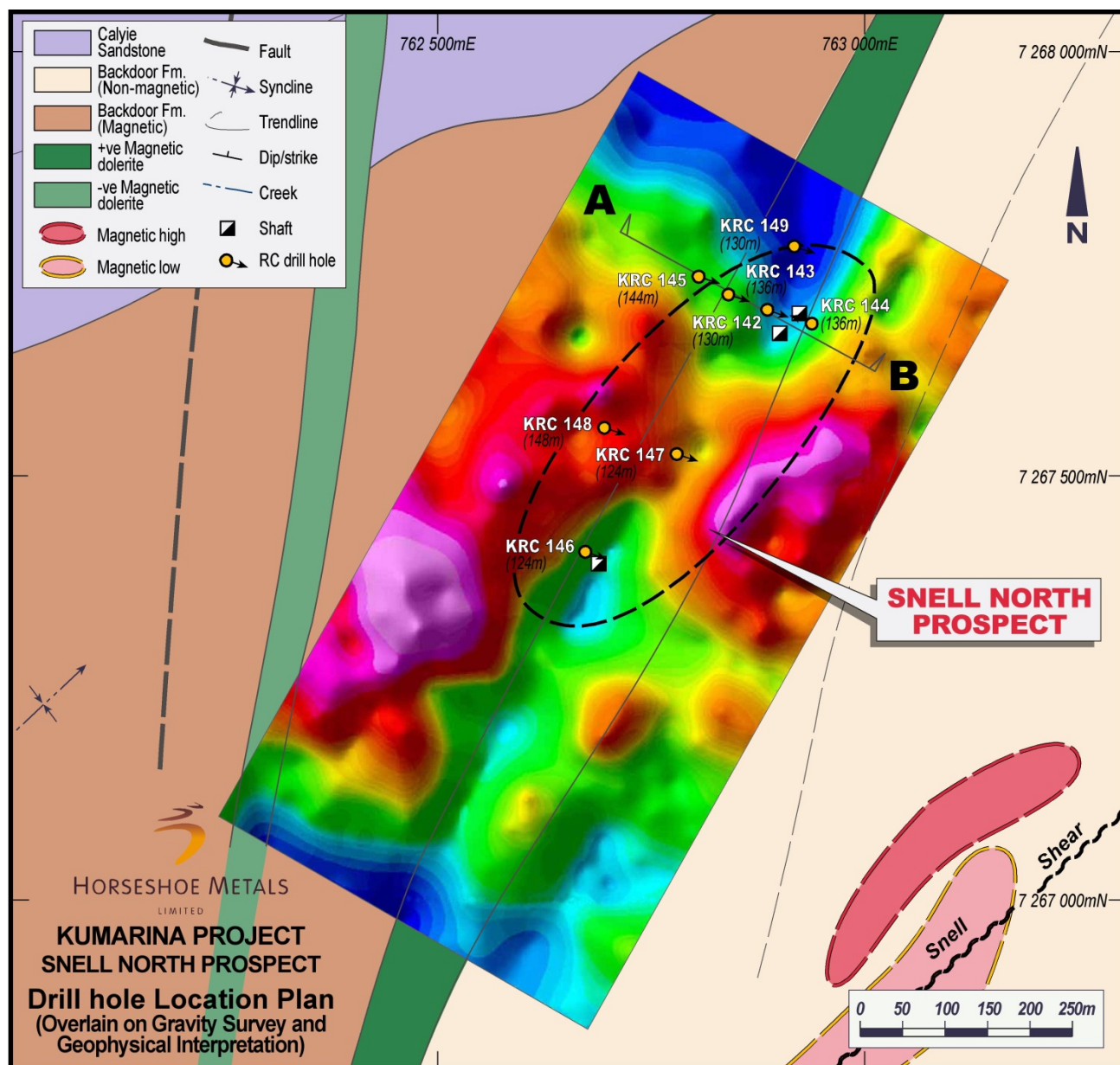


Figure 5 – Snell North Prospect - Drill Hole Location Plan

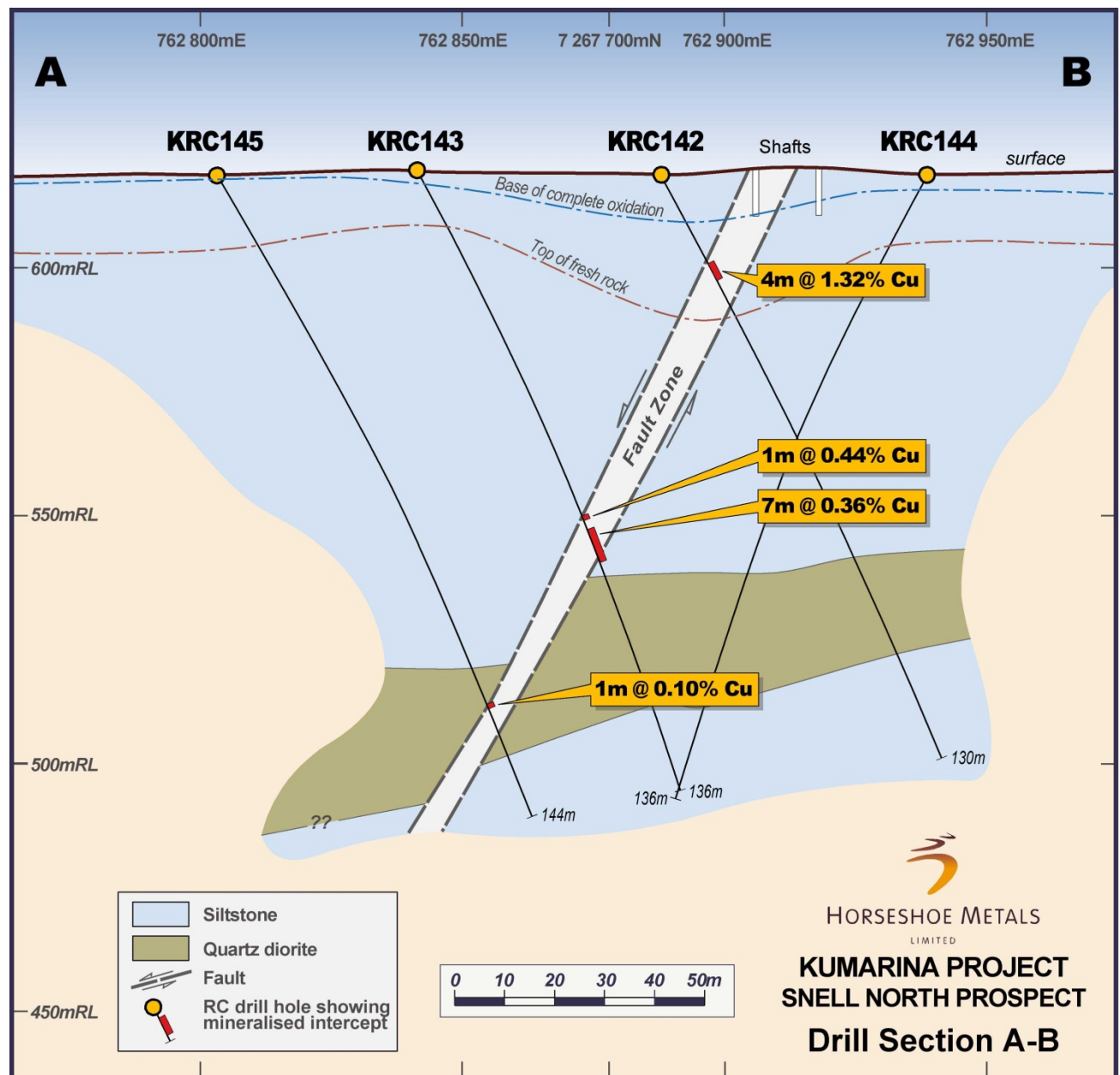


Figure 6 – Snell North Prospect - Drill Section through Section 'A-B'

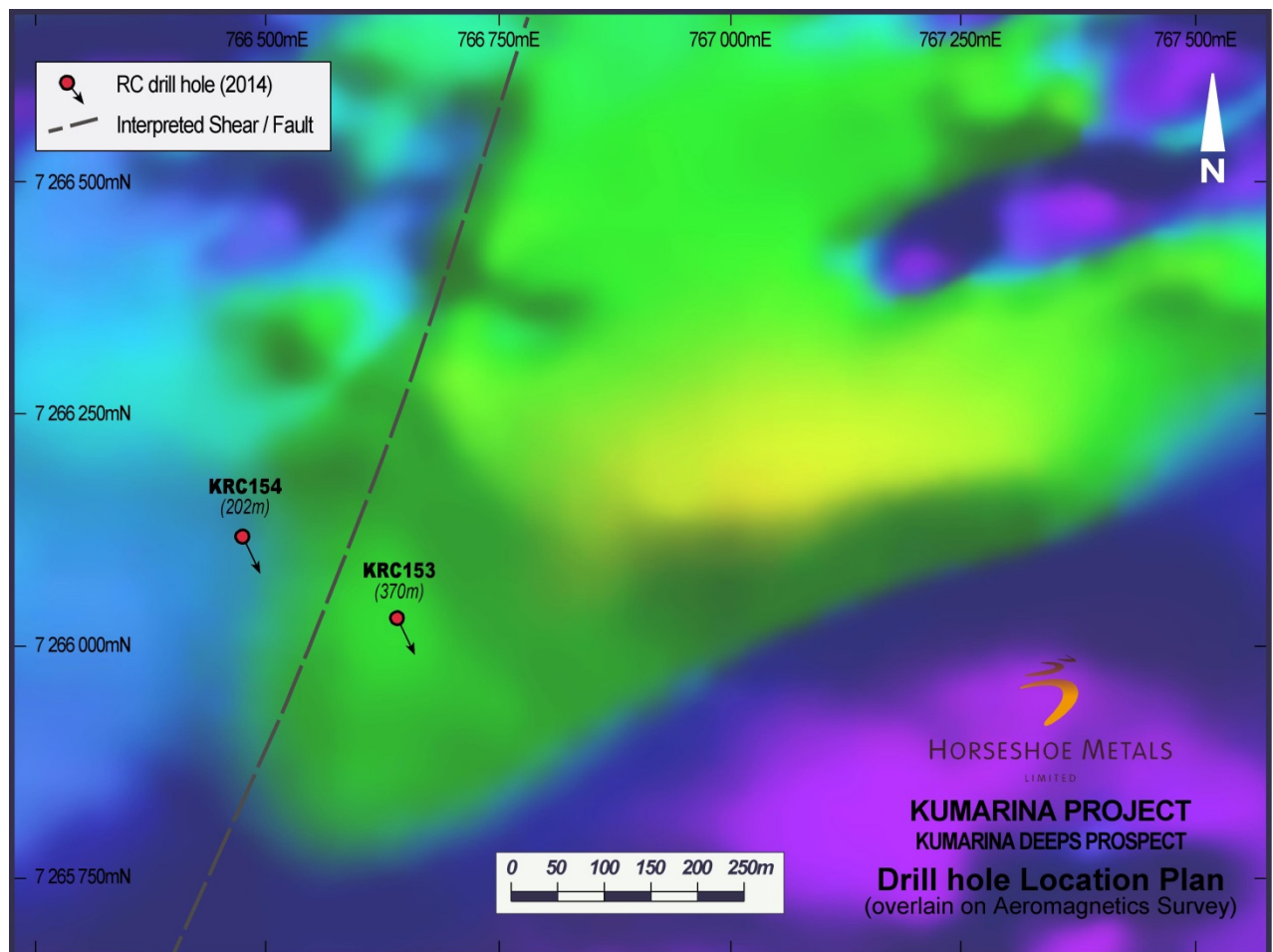


Figure 7 – Kumarina Deeps Prospect - Drill Hole Location Plan

<b>APPENDIX 1</b> <b>Summary of Mining Tenement Interests</b> <b>as at 30 September 2014</b>					
<b>Location</b>	<b>Tenement</b>	<b>Interest At Beginning Of Quarter (%)</b>	<b>Interests relinquished, reduced or lapsed (%)</b>	<b>Interests acquired or increased (%)</b>	<b>Interest At End Of Quarter (%)</b>
Horseshoe Lights	M52/743	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	P52/1203	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	P52/1204	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	P52/1205	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	P52/1206	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	P52/1207	100%	-	-	100%
Horseshoe Lights	P52/1208	100%	-	-	100%
Horseshoe Lights	P52/1209	100%	-	-	100%
Horseshoe Lights	P52/1210	100%	-	-	100%
Horseshoe Lights	P52/1211	100%	-	-	100%
Horseshoe Lights	E52/2042	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	L52/42	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	L52/43	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	L52/44	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	L52/45	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Horseshoe Lights	L52/66	100% <sup>1</sup>	-	-	100% <sup>1</sup>
Kumarina	M52/27	100%	-	-	100%
Kumarina	E52/1998	100%	-	-	100%
Kumarina	E52/2930	100%	-	-	100%

Notes:

1. Horseshoe Gold Mine Pty Ltd (a wholly owned subsidiary of Grange Resources Limited) retains a 3% net smelter return royalty in respect to all production derived from some of the Horseshoe Lights tenements being M52/743, P52/1203 – 1206, E52/2042 (portion only) L52/42 – 45 and L52/66.



**QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014**

APPENDIX 2 Kumarina Project RC Drilling Programme Copper Intersections									
Hole	Easting (m)	Northing (m)	Planned Azimuth (degrees)	Planned Dip (degrees)	Hole Depth (m)	From (m)	To (m)	Interval (m)	Cu % (average)
Kumarina Copper Mine Prospect									
KRC150	756751	7266832	120°	-60°	94	53	55	2	0.41
						67	69	2	2.36
						72	74	2	0.55
KRC151	756785	7266882	120°	-60°	112	54	55	1	0.27
						61	72	11	1.59
Including						64	65	1	4.52
and						67	69	2	3.21
						73	75	2	0.37
KRC152	752767	7266897	120°	-60°	178	No Significant Results			
KRC155	756710	7266708	120°	-60°	82	No Significant Results			
Snell North Prospect									
KRC142	762886	7267695	110°	-60°	130	19	23	4	1.32
Including						20	21	1	2.67
KRC143	762841	7267713	110°	-60°	136	77	78	1	0.44
						80	87	7 <sup>+</sup>	0.36
KRC144	762937	7267678	290°	-60°	136	No Significant Results			
KRC145	762807	7267736	110°	-60°	144	118	119	1	0.10
KRC146	762673	7267410	110°	-60°	124	26	30	4	0.14
KRC147	762780	7267526	110°	-60°	124	No Significant Results			
KRC148	762798	7267557	110°	-60°	148	104	105	1	0.36
						112	113	1	0.23
KRC149	762919	7267770	110°	-60°	130	No Significant Results			

Notes: + includes 1 x 1m interval grading <0.25% Cu

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

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

### Table 1 - JORC Code Reporting Criteria (Kumarina Drilling)

#### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC-Code Explanation	Commentary
Sampling techniques	<i>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.</i>	Exploration results are collected using standard industry practices for sampling, assay methods and QAQC. Reverse circulation (RC) samples weighing approx. 3kg are collected as individual 1m samples through a cyclone which are riffle split for analysis. Each sample is analysed with a handheld Delta Premium XRF.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	RC samples within zones of visual oxide or sulphide mineralisation or in elevated readings of copper, as determined by handheld XRF are sent for laboratory assaying as 1m cyclone split samples. The remaining intervals of the drill hole may be submitted as 3-5m speared composite samples. Any anomalous composite samples are to be re-submitted as original 1m split samples.  The handheld XRF was regularly calibrated as per manufacturer's specifications. In addition QAQC measures included the use of duplicates and certified reference materials on a 1:25 ratio for all XRF readings.
	<i>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.</i>	Industry standard practice was used for copper analysis whereby a 3kg RC drill sample representing a 1m sample interval was used to obtain a 150g pulp for analysis. Similarly for gold analysis the same sample was used to obtain a 10g charge for aqua regia analysis.
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).</i>	The drill program was completed using the Reverse Circulation (RC) technique generally with a 5¼ face sampling bit.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Visual inspection of the sample volume indicates sample recovery is excellent. Any poor sample recovery or condition is noted in the drill hole database.
	<i>Measures taken to maximise sample recovery and ensure representative nature</i>	RC samples are visually checked for recovery, moisture and contamination. A cyclone splitter is

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

Criteria	JORC-Code Explanation	Commentary
	<i>of the samples.</i>	used to provide a uniform sample and these are routinely cleaned. The drill contractor blew out the hole at the beginning of each drill rod to remove excess water and maintain dry samples where possible.
	<i>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.</i>	Ground conditions for RC drilling are good and drilling returned consistent size samples. RC recoveries are high enough to preclude the potential for sample bias.
	<i>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.</i>	Logging of RC drilling identifies all aspects of lithology, colour, weathering texture, alteration and mineralisation including percentage estimates of oxide/sulphide content. All primary recorded on site data was directly imported into a drill hole database and checked against the original data. During logging part of the RC sample was sieved, logged and placed in RC chip trays. The logging also includes references to wet samples in the comments.
Logging	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i>	The lithology data is qualitative but magnetic susceptibility was also recorded. All reverse circulation samples have been photographed in wet form and the chip trays are retained for physical inspection on-site and in the Perth office.
	<i>The total length and percentage of the relevant intersections logged.</i>	All RC holes are logged from start to end of hole.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No core
	<i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i>	All RC samples are initially cyclone split on a 1:7 ratio and only dry samples are assayed.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	RC sample procedure follows industry best practice whereby samples are sorted, reconciled, placed onto trolleys and dried in a gas oven at 110°C for minimum of 8 hours or until dry. Samples ranging from 300g - ≤3kg are crushed to nominal ~10mm using a jaw crusher and then pulverised using LM2, LM5 or Mixer Mill pulverisers. Samples >3kg are Boyd crushed to a nominal ~3mm and split in half using Boyd rotary split divider, one half is then pulverised the other retain, bagged and stored. After pulverising a 150g craft geochemical (pulp) packet is taken directly from the pulveriser bowl and submitted to the laboratory for analysis.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise</i>	Laboratory QAQC methods include insertion of blanks and undertaking check samples for

# QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

Criteria	JORC-Code Explanation	Commentary
	<i>representivity of samples.</i>	significant assay results.
	<i>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.</i>	Field duplicates are collected and submitted on a 1:50 ratio. The assay result is then compared to the original samples and is expected to fall within 2 standard deviations.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample size is considered industry standard for base metal mineralisation.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<p>All samples were submitted to Nagrom laboratories. The Copper assay is derived using a mixed acid digest of nitric, hydrofluoric, perchloric and hydrochloric acids on 0.2g of sample and analysed using ICP Optical Emission Spectrophotometry.</p> <p>The gold assay was derived using an aqua regia technique where 10g of prepared sample is digested using nitric and hydrochloric acid. The sample is then solvent extracted using Methyl isobutyl ketone and read on a Graphite Furnace Atomic Absorption Spectrometer.</p> <p>These methods are considered adequate and effective for this style of mineralisation.</p>
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	The Handheld XRF used to determine sample type i.e. 1m split or composite sample is a Delta Premium. All data is collected using 30 second reading time for all 3 beams on soil mode. The instrument is calibrated according to manufacturer's specification and tested regularly using duplicates and certified reference materials every 25 <sup>th</sup> sample.
	<i>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.</i>	In addition to internal laboratory checks the company submits field duplicates and standards on a 1:25 ratio. External laboratory checks are planned for significant assay results but have yet to be completed.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	None undertaken in this programme
	<i>The use of twinned holes.</i>	None undertaken in this programme
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	All drilling and sample data is captured in the field electronically using established data templates and verified in Perth office before upload into database.
	<i>Discuss any adjustment to assay data.</i>	No adjustments undertaken.

# QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

Criteria	JORC-Code Explanation	Commentary
Location of data points	<i>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.</i>	Initial collar locations are determined by handheld Garmin GPS but will be surveyed using DGPS by licensed surveyors before resource estimates are undertaken.  Downhole surveys consisted of single shot digital camera readings obtained at collar and generally every 50m interval thereafter.
	<i>Specification of the grid system used.</i>	Grid system coordinates are GDA94 MGA Zone 50.
	<i>Quality and adequacy of topographic control.</i>	Topographic control was created from known survey stations and air photography in strict accordance with Mines Regulation Act 1946 by the authorised mine surveyor.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	Exploration drill spacing in this program range from 20m to 80m along drill sections with sections lines spaced at 40m intervals, or multiples thereof. Drill spacing is not applicable in some instances as collar locations are isolated.
	<i>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.</i>	The drilling spacing and results employed in this program are consistent with previous drill spacing and results that are part of a JORC compliant mineral resource.
	<i>Whether sample compositing has been applied.</i>	Composite sampling over 3-5m has been employed for non- mineralised intervals.
Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Exploration drilling in this program orientated perpendicular to interpreted mineralisation trend.
	<i>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.</i>	As stated above.
Sample security	<i>The measures taken to ensure sample security.</i>	Prior to submission all samples are stored on-site under supervision of the site geologist. Samples were transported to the laboratories by Horseshoe Metals personnel.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or reviews have been performed to date.

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

### Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC-Code Explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>	<p>The Kumarina Project comprises one Mining Lease (M52/27) and two exploration licences (E52/1998 &amp; E52/2930) covering an area of approximately 433 km<sup>2</sup> (43,300 hectares). Current registered holder of the tenements is Murchison Copper Mines Pty Ltd which is a wholly owned subsidiary of Horseshoe Metals Limited.</p> <p>Murchison Copper Mines Pty Ltd has 100% interest in the tenements</p> <p>There are no known historical or environmentally significant sites on the Kumarina project tenements</p>
	<i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	The Kumarina project tenements are in good standing and the Company is unaware of any impediments to it obtaining a licence to operate in the area.



QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

Criteria	JORC-Code Explanation	Commentary
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<p><b>Carpentaria Exploration Ltd (1962)</b> There is only passing reference to exploration carried out by Carpentaria Exploration Ltd in 1962. Two diamond drillholes were drilled at the Rinaldi Deposit. One of these drillholes intersected 6.7m @ 5.59% Cu at 30m vertical depth under the main Kumarina workings.</p> <p><b>Westfield Minerals (WA) NL (1965)</b> This phase of exploration is also poorly documented but Westfield reportedly drilled a 150m drillhole beneath the deepest workings at the Kumarina copper mine but no mineralisation was intersected.</p> <p><b>St Barbara Mines Ltd (1992-1998)</b> Exploration activities completed over the Kumarina area in 1994 by St Barbara Mines Limited focused on the Kumarina and Rinaldi workings and included geological mapping, gridding and rock sampling. In 1998, 51 aircore holes for 2,062m were completed at the Kumarina and Rinaldi workings and sample composites were assayed for Cu, Au, Ag, Co, As, Pb and Mg. Four holes intersected multiple lodes that returned assays from composited samples (6m) between 1.15 and 3.50% Cu</p> <p><b>Murchison Copper Mines Pty Ltd (2007-2010)</b> Murchison Copper Mines Pty Ltd completed remote sensing and geophysical desktop studies over the project area. acquired and reprocessed the 1996 GSWA Bangemall 400m-500m aeromagnetic and radiometric data to provide a regional structural and lithological setting. Quickbird satellite imagery was also captured over a similar area and assessed.</p> <p>Earthscan Pty Ltd assessed multi band ratio data sets for the classification of mineral alteration targets associated with hydrothermal alteration within the Bangemall Formation and peripheral to intrusive bodies. This provided critical landscape and regolith information showing areas of outcrop with interpreted mineral alteration packages of smectite clays, silica, Fe rich clays, goethite and haematite with minor carbonate.</p> <p>Target areas were identified within the Backdoor Formation sediments and mafic intrusive contact zones within NE fault structures, at major NW fault intersects and within minor NW, NE and north trending shear zones.</p>

QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

Criteria	JORC-Code Explanation	Commentary
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	<p>The geologic setting of the project area is one of a relatively undeformed sequence of gently north-dipping Backdoor Formation sediments capped by quartz arenite of the Calyie Formation, and intruded by mafic to intermediate sills and dykes.</p> <p>The Backdoor formation consists of mudstones, siltstones and very fine to fine grained sandstones. This formation is approximately 2600m thick within the project area with an average dip of 15° to the north.</p> <p>The mafic to intermediate intrusions vary visually between pyroxenitic gabbro, dolerite, leucodolerite, quartz dolerite, granophyric dolerite and quartz diorite. Mapping shows E-W trending sills, between 75-150m in true thickness, are relatively common and intrude at major changes in sedimentation from sandstone-dominated to siltstone-dominated sequences. The sills are interconnected by a network of “dykes” that strike NE-SW and N-S resulting in a lattice-like arrangement of intrusions over the whole project area.</p> <p>Several NE-SE striking faults showing weak brittle deformation marginal to mafic dykes have been identified and mapped. These are informally named, from north to south: Collier Fault, Backdoor Fault, Kumarina Fault, Wonyulgunna Fault, Snell Fault and Jadina Fault. The Collier, Kumarina, Wonyulgunna and Snell Faults show evidence of hydrothermal activity such as silica-kaolinite alteration, quartz veining, and hydraulic breccias. These faults have subsidiary parallel structures and are also cut by N-S cross faults</p> <p>Mineralisation discovered to date is structurally controlled and quartz hosted with slight variations for different prospects. Historic workings along the Kumarina fault extend NE-SW over nearly 3km as a series of pits, shafts and shallow open-cuts. At the Kumarina Copper Mine (M52/27) and Rinaldi, the workings are entirely underground, mostly above the water table at 17m and are hosted in approx. N-S cross fault structures proximal to junctions with the Kumarina Fault</p> <p>At the Kumarina Copper Mine, the main copper minerals are chrysocolla and malachite in the upper levels and cuprite and chalcocite with depth. In contrasts the Rinaldi deposit copper minerals occur as malachite close to surface but quickly change into copper sulphide i.e. chalcopyrite relatively close to surface.</p>

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

Criteria	JORC-Code Explanation	Commentary
<i>Drill hole Information</i>	<p>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:</p> <ul style="list-style-type: none"> <li>• easting and northing of the drill hole collar</li> <li>• elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>• dip and azimuth of the hole</li> <li>• down hole length and interception depth</li> <li>• hole length.</li> </ul> <p>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.</p>	<p>Refer to the body of text of this report and Appendix 1 for all information material to the understanding of the exploration results.</p> <p>No exclusions of information have occurred.</p>
<i>Data aggregation methods</i>	<i>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.</i>	Only 1m split samples are reported and simply averaged over the mineralised interval. A 0.25% cut-off grade has been used unless otherwise noted in Appendix 1
	<i>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.</i>	Intercepts that consist of high grade results within a longer lower grade zone are detailed separately to avoid confusion (refer to Appendix 1)
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	Not applicable.
<i>Relationship between mineralisation widths and intercept lengths</i>	<p><i>These relationships are particularly important in the reporting of Exploration Results.</i></p> <p><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></p> <p><i>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').</i></p>	Exploration drilling in this program orientated perpendicular to interpreted mineralisation trend.

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

Criteria	JORC-Code Explanation	Commentary
<i>Diagrams</i>	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Refer to diagrams in body of text.
<i>Balanced reporting</i>	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	See Appendix 1 for all exploration results
<i>Other substantive exploration data</i>	<i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	In the company's opinion this material has been adequately reported in previous announcements and the detail is not relevant for reporting of these exploration results.
<i>Further work</i>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	Down Hole EM surveys and, if warranted, follow-up drilling is planned to test for further mineralisation at a number of prospect areas with the Kumarina Project tenements.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	Refer to diagrams in body of text.

## QUARTERLY REPORT FOR THE PERIOD ENDED 30 SEPTEMBER 2014

### 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 a consultant to 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 2012 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 the Horseshoe Lights Project Mineral Resources is based on information compiled by Mr. Dmitry Pertel, who is a member of the Australian Institute of Geoscientists. Mr. Pertel is an employee of CSA Global Pty Ltd. The information was previously issued with the written consent of Mr Dmitry Pertel in the Company's 30 June 2013 Quarterly Report released to the ASX on 31 July 2013. The Company confirms that:*

- (a) the form and context in which Mr. Dmitry Pertel's findings are presented have not been materially modified.*
- (b) it is not aware of any new information or data that materially affects the information included in the 31 July 2013 ASX announcement and that all the material assumptions and technical parameters underpinning the estimate in the 31 July 2013 ASX announcement continue to apply and have not materially changed.*
- (c) it is uncertain that following evaluation and/or further exploration work that the historical estimates will be able to be reported as mineral resources in accordance with the JORC Code.*

*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, who is a member of the Australian Institute of Geoscientists. Mr Robert Spiers is an independent consultant to Horseshoe Metals Limited and a full time employee and Director of H&S Consultants Pty Ltd (formerly Hellman & Schofield Pty Ltd). The information was previously issued with the written consent of Mr Robert Spiers in the Company's 30 June 2013 Quarterly Report released to the ASX on 31 July 2013. The Company confirms that:*

- (a) the form and context in which Mr Robert Spiers' findings are presented have not been materially modified.*
- (b) it is not aware of any new information or data that materially affects the information included in the 31 July 2013 ASX announcement and that all the material assumptions and technical parameters underpinning the estimate in the 31 July 2013 ASX announcement continue to apply and have not materially changed.*
- (c) it is uncertain that following evaluation and/or further exploration work that the historical estimates will be able to be reported as mineral resources in accordance with the JORC Code.*