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ASX Announcement

22 January 2015

## EXCEPTIONALLY HIGH GRADE RESULTS AT IRON BLOW

### Highlights:

- **Diamond drill hole IBDH023 intersected:**
  - **50.39m @ 10.12% Zn, 2.66 g/t Au, 283 g/t Ag, 0.57% Cu, 1.39% Pb** from 155.72m
  - **Including 19.45m @ 15.48% Zn, 2.65 g/t Au, 492 g/t Ag, 0.56% Cu, 2.52% Pb** from 156.5m
- **Additional gold-rich zones identified outside boundaries of existing resource estimate**
- **Drilling confirms continuity of mineralisation within the resource**
- **The relatively shallow resource remains open at depth and to the south**

Phoenix Copper Limited (**ASX:PNX**) is pleased to report that its first diamond hole (IBDH023) drilled at the Iron Blow deposit has been completed and the results are exceptional.

The Iron Blow polymetallic deposit is located on granted Mining Leases within the Hayes Creek Project in the Pine Creek region of the Northern Territory and is 100% owned by Phoenix Copper.

### Very High Grade Results

IBDH023 was drilled to a depth of 365.8m with the aim of targeting the central zone of massive sulphide mineralisation within the Iron Blow resource. Drilling intersected an overall mineralised multi-element envelope of 119.5m between 155.0m and 274.5m, which includes the Eastern and Western Massive Sulphide Lodes (Table 1 and Figure 1). A gold breccia lode also lies immediately beneath the Western Lode in the drill hole, which is interpreted as being the upper part of the hydrothermal vent sourcing the massive sulphide deposits. The breccia zone is outside current resource model constraints.

The thick upper zone of massive sulphides (Eastern Lode) in IBDH023 is approximately 50.39 metres downhole from 155.72m to 206.11m (Figure 1) with all true widths interpreted to be approximately 60% of the downhole thickness. The assay results from this zone are high grade, returning:-

**50.39m @ 10.12% Zn, 2.66 g/t Au, 283 g/t Ag, 0.57% Cu, 1.39% Pb from 155.72m including a higher grade core of:-**

**19.45m @ 15.48% Zn, 2.65 g/t Au, 492 g/t Ag, 0.56% Cu, 2.52% Pb from 156.5m.**

In addition, a second lower zone of massive sulphides (Western Lode) of 19 metres was intersected between 229.0m and 248.0m downhole and returned:-

**19.0m @ 3.45% Zn, 1.33 g/t Au, 18.2 g/t Ag, 0.38% Cu, 0.1% Pb from 229m, including**

3m @ 11.53% Zn, 1.60 g/t Au, 22.4 g/t Ag, 0.30% Cu and 0.1% Pb from 240m.

This western lode intercept is followed by a further 26.5m grading 1.5 g/t Au from 248m.

These results are very significant, primarily due to their exceptionally high grades but also shows that the overall mineralised envelope also extends outside the massive sulphide boundaries.

The larger interval, including deeper disseminated material, returned:-

119.5m @ 4.91% Zn, 1.89 g/t Au, 131 g/t Ag, 0.37% Cu and 0.62% Pb from 155.0m.

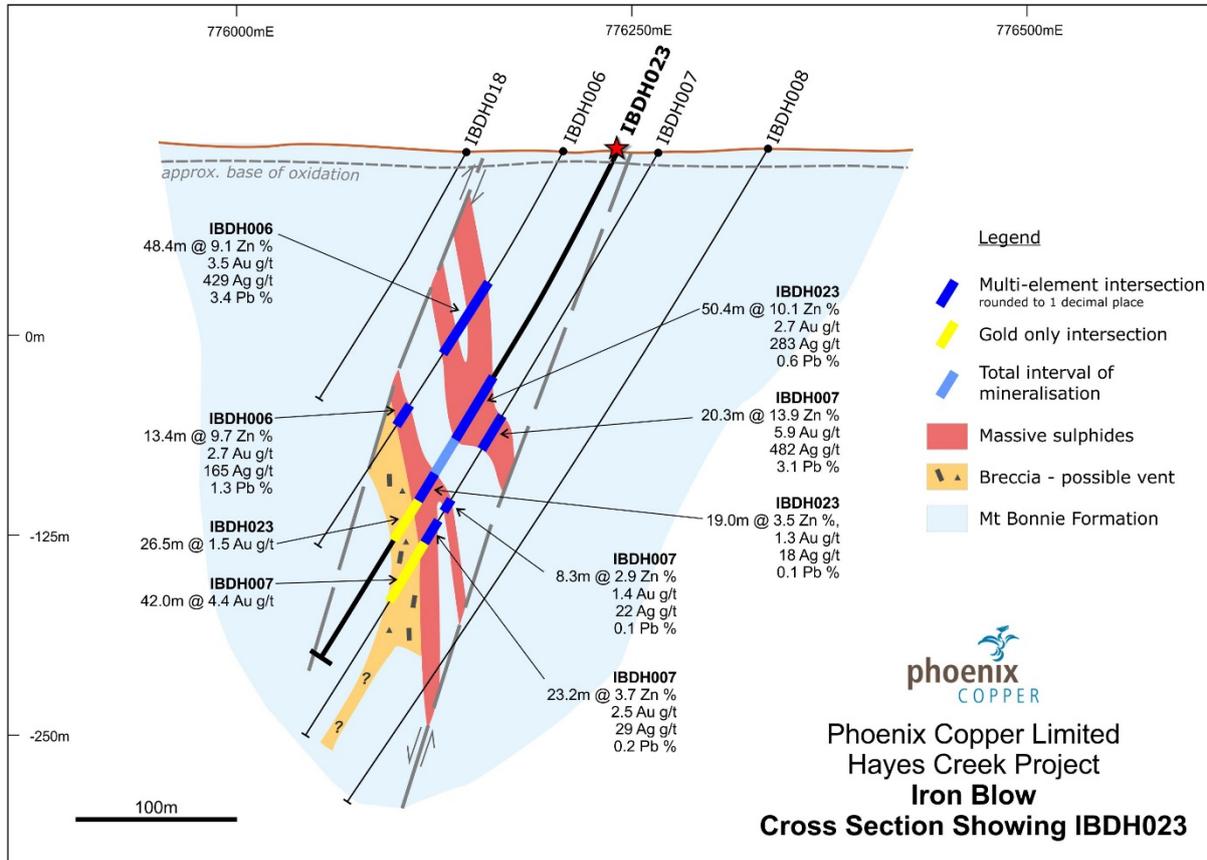


Figure 1: Cross section of Iron Blow deposit showing drill hole IBDH023.

The results from the drill hole are summarised in the table below:

IBDH023		776238mE, 8504403mN, 119RL, Dip -60°, Azi 276 (GN)						
	Depth	Interval m	Zn %	Au g/t	Ag g/t	Cu %	Pb %	Comments
	155.00-274.50m	119.50	4.9	1.89	131.1	0.37	0.62	Total Interval of Mineralisation
INCL.	155.72-206.11m	50.39	10.1	2.66	283.3	0.57	1.39	Eastern Lode
AND	156.50-176.00m	19.45	15.5	2.65	492.0	0.56	2.52	Eastern Lode
AND	229.00-248.00m	19.00	3.5	1.33	18.2	0.38	0.09	Western Lode
AND	248.00-274.50m	26.50	0.2	1.53	20.6	0.27	0.05	Au-Breccia Lode

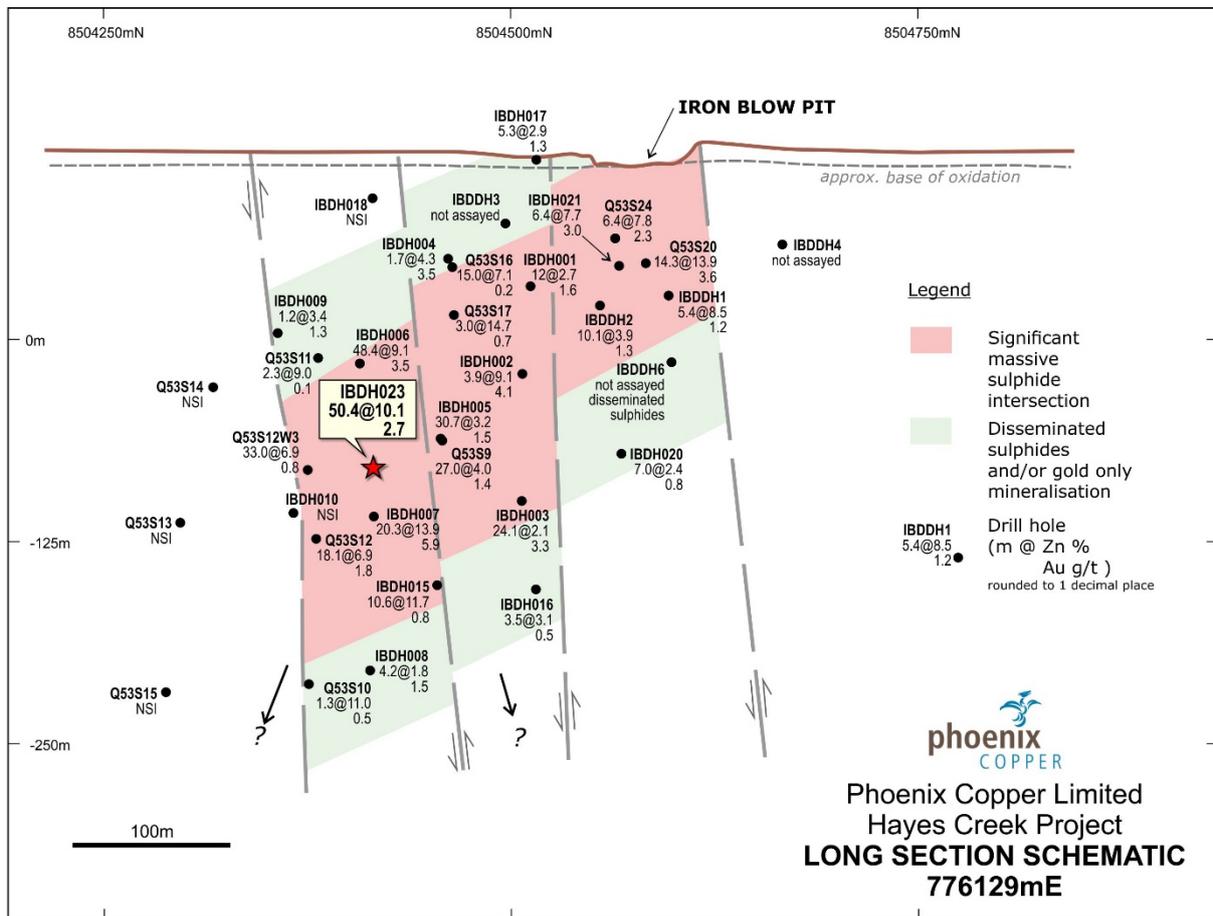
Table 1: Significant intersections from hole IBDH023

## Second Hole Completed

A second hole, IBDH024, was completed at Iron Blow in late December 2014 with the aim of testing the section 50m to the north of IBDH023 and was drilled to a depth of 340.0m (Table 2). This hole intersected a zone of disseminated sulphides from 243m to 270m, which is consistent with the lower margin of the deposit. IBDH024 was also drilled to a sufficient depth to enable a downhole Electromagnetic Survey to probe for possible extensions beyond the known depths of mineralisation. Assay results are due by the end of February 2015.



**Figure 2:** IBDH023 high grade massive sulphide core – the interval between 162m-165m as marked assayed 19.4% Zinc, 2.7g/t Gold, 630g/t Silver, 0.85% Copper, and 3.2% Lead



**Figure 3:** Schematic long section of Iron Blow deposit with initial structural interpretation, (Note: Drill hole IBDH024 is off section).

Prospect	Hole ID	MGA East	MGA North	Dip	MGA Azimuth	Depth
Iron Blow	IBDH023	776238	8504403	-60	276	365.8m
Iron Blow	IBDH024	776335	8504441	-60	276	340.0m

**Table 2:** Drill hole details for Iron Blow

## Managing Director Comment

Managing Director of Phoenix Copper, James Fox said, *“It is very pleasing to see in our first hole at Iron Blow a thick zone of massive sulphide mineralisation, and in particular high and consistent zinc and gold grades. Outside of the massive sulphide zones there are also broad intercepts of gold mineralisation which will add to the overall economic value of the resource. Based on the existing data we anticipate that a significant amount of the resource may be amenable to open pit mining. Structural interpretation, re-logging of the existing core and surface and downhole EM surveys will all assist in targeting new areas of mineralisation at Iron Blow.”*

## Planned and Ongoing Work

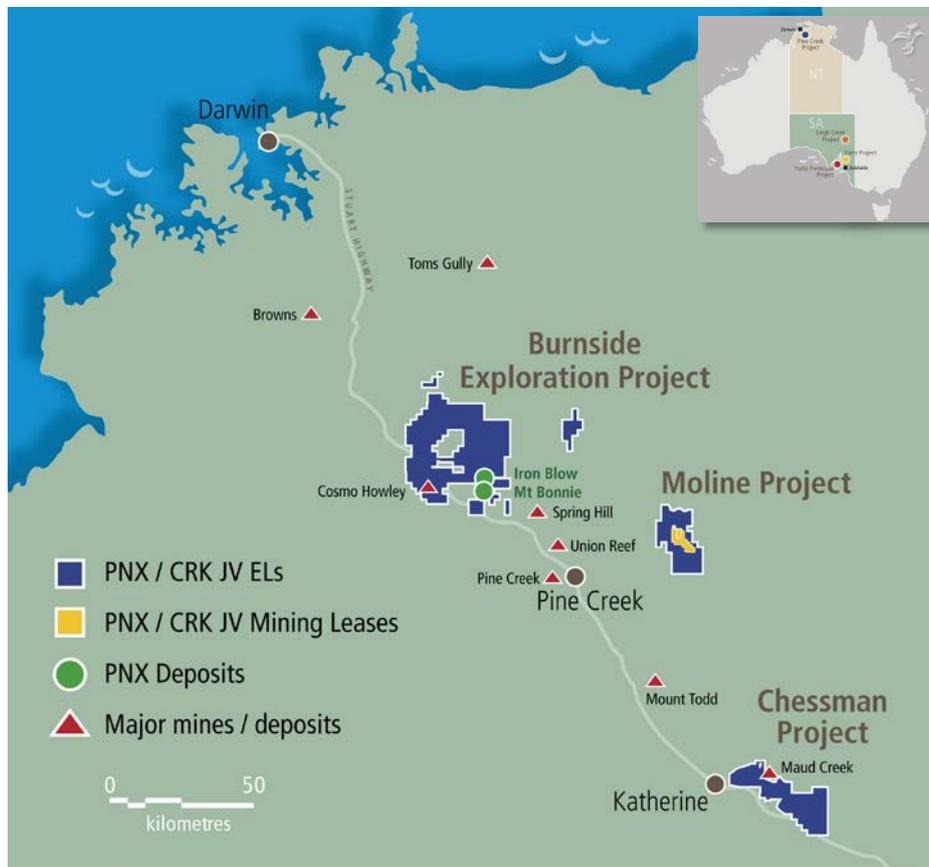
QEMSCAN metallurgical test work has also commenced on Iron Blow core with results expected in 4-6 weeks, this will assist with designing a comprehensive flotation program and provide further information on the mineralogy, liberation and association characteristics of the ore.

Downhole (IBDH023 and IBDH024) and surface EM surveys are also planned at Iron Blow to delineate potential extensions of the deposit for further drill testing.

Recent analysis of 2012 airborne Electromagnetic (EM) survey data has highlighted numerous prospects within the wider Hayes Creek Project. Phoenix Copper plans to systematically follow these up with mapping, sampling and ground EM surveys during the dry season. Drill testing at a second deposit, Mount Bonnie, less than 3km from Iron Blow will commence immediately after the wet season and will target extensions to the already significant sulphide mineralisation identified below the oxide pit mined during the 1980’s.

## About the Iron Blow and Mount Bonnie deposits:

Iron Blow and Mount Bonnie are polymetallic base-metal deposits, (less than 3km separation distance and in the same geological setting, Figure 5), forming part of Phoenix Copper’s Hayes Creek Project within the Pine Creek region of the Northern Territory, 180km south of Darwin. They are on granted Mining Leases and are located close to infrastructure, including rail, road, power and water.



**Figure 4:** Hayes Creek Project and the Burnside, Moline and Chessman Exploration Projects

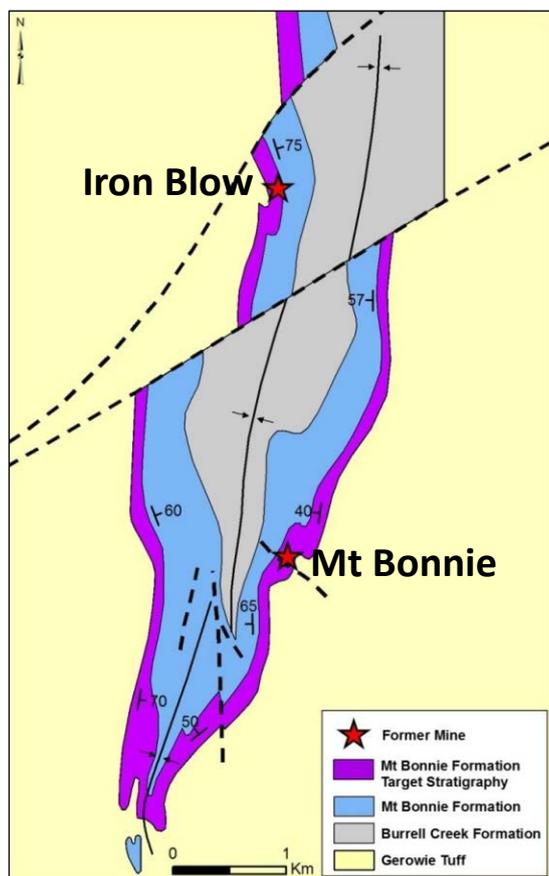
The two deposits were first discovered in the late 1800's with limited open pit and underground mining occurring in the early 1900's. During the mid-1980's most of the oxidised ore was mined by open pit for their gold and silver content, but the primary sulphide orebodies remain which are now the focus of exploration by Phoenix Copper.

Phoenix Copper acquired 100% of the Iron Blow and Mount Bonnie leases from Crocodile Gold Australia in late 2014, and the Company is currently earning up to a 90% interest in the nearby Burnside, Moline and Chessman base metals and gold exploration projects (excluding uranium).

The Iron Blow deposit was upgraded to a JORC (2012) compliant mineral resource estimate by Phoenix Copper in late 2014 (Table 3). The Mount Bonnie deposit does not have a JORC-compliant resource estimate, however it is Phoenix Coppers intention to complete this in 2015.

Depth	AuEq cut-off (g/t)	Tonnes	AuEq (g/t)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	ZnEq %
> -90 mRL	0.7	2.2Mt	6.7	2.4	140	0.3	1.0	4.9	11.8
< -90 mRL	3.0	0.4Mt	5.6	2.7	71	0.4	0.4	4.1	10.0
Total Inferred Mineral Resource		2.6Mt	6.5	2.4	130	0.3	0.9	4.8	11.5
Total Contained Metal			<b>543,000 oz</b>	203,000 oz	10,700,000 oz	7,000 t	23,000 t	125,000 t	<b>300,000 t</b>

**Table 3:** Iron Blow Inferred Mineral Resource Estimate as at 8th October 2014. See ASX release 3 November 2014, 'High Grade Mineral Resource Estimate for Iron Blow Deposit', where further details are provided. Note there has been no material change in the Mineral Resource Estimate since it was first reported. The results from IBD023 have not been incorporated into the Mineral Resource Estimate.



**Figure 5:** Iron Blow and Mount Bonnie deposits at the Hayes Creek Project

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

*The information in this report that relates to Exploration Results is based on information compiled by Mr Andrew Bennett, a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM). Mr Bennett has sufficient experience relevant to the style of mineralisation and the type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Bennett consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

**James Fox**

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# JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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 downhole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>HQ3 diamond core samples.</li> <li>All core has been geologically logged by the onsite geologist.</li> <li>Magnetic susceptibility measurements taken using a Fugro GSM-2 instrument.</li> <li>Field portable XRF measurements taken for 32 elements (Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Rb, Sr, Zr, Mo, Ag, Cd, Sn, Sb, W, Hg, Pb, Bi, Th, U, P, S, Cl, K, Se, Y and Au) using an Olympus-InnovX "DELTA Premium DP4000C" with a Ta/Au anode. The instrument conducts a self-calibration prior to each use and is also checked against standard reference samples</li> <li>Mineralised intercepts have been verified using the field portable XRF instrument which gives a qualitative measure of the relevant elemental abundances.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Diamond drilling from surface with HQ3 (61.1 mm) coring utilising a triple tube. Drilling was carried out by May Drilling of Humpty Doo, Northern Territory using a track-mounted HD900 drilling rig.</li> <li>All holes will be inclined diamond drill holes.</li> <li>Core orientations were measured by May Drilling personnel using a Reflex Digital Ori tool. Orientation measurements allowed most core to be successfully oriented. Some broken core resulted in minor sections of core not being oriented but this is insufficient to cause any uncertainty in the overall structural interpretation.</li> <li>A Reflex Easy Track survey tool was used by May Drilling at regular intervals (on average approximately every 20m downhole) as instructed by Phoenix's on-site geologist to monitor the location of the bottom of hole.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul style="list-style-type: none"> <li>Core recovery was measured for each core run (typically 3 to 6 m), significant core loss was recorded for the first 32 metres (within the</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<p>oxidized and weathered material), with little or no core loss noted within fresh rock.</p> <ul style="list-style-type: none"> <li>No relationship established between core recovery and grade – recovery was close to &gt;98% in fresh rock, which includes the mineralisation reported herein</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>All core has been geologically logged by the onsite geologist,</li> <li>RQD was measured for each metre.</li> <li>All core has been photographed prior to cutting for assay.</li> <li>Intervals with like geological characteristics are logged in detail, with sample boundaries corresponding to changes in geology.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>All core was cleaned and metre intervals marked up prior to cutting and sampling.</li> <li>All samples to be submitted for assay comprised sawn quarter core samples.</li> <li>After cutting the half or three quarter core remaining in the trays contains the orientation and metre marks.</li> <li>Samples of all mineralised intercepts and their surrounding ~10m are submitted for assay. Intervals submitted for assay are based on visual and portable XRF readings</li> <li>Individual samples are placed in individual sample bags and clearly identified prior to submission to the laboratory for assay.</li> <li>The sample sizes are appropriate for the grain size of the material being sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were submitted to Northern Australian Laboratories (NAL) in Pine Creek, Northern Territory.</li> <li>After crushing and pulverizing to – 100 microns, each sample is roll mixed on a rubber mat after pulverizing, a barren flush is pulverized between each sample, the samples are subjected to a four acid digest (considered a total digest for the elements of interest) and read using ICP-MS and OES for a suite of elements (lab methods G400 and G340 for ore grade samples). A sub-sample of the pulverized sample is also submitted for conventional fire assay for gold (FA50).</li> <li>Selected density determinations were carried out by the laboratory. Measurements are made using the Archimedes method (weight in air versus weight in water). Each sample is dried at 140 degrees C for 2</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>hours and weighed in air. Then each sample is coated with lacquer (that does not interfere with assay processes) and weighed in water.</p> <ul style="list-style-type: none"> <li>• NAL's internal standards and blanks results will be reviewed to verify the accuracy of the assays.</li> <li>• In addition to the laboratory standards, Phoenix Copper will inserted duplicate samples at appropriately spaced intervals. These were collected by submitting a second quarter of the core, leaving half core remaining in the tray for that interval.</li> <li>• Commercially obtained standard reference samples will be submitted with the assay samples as part of the sample number sequence.</li> <li>• Blank samples are also included to check against contamination between samples in the laboratory.</li> <li>• Approximately 1 QA/QC sample (duplicate, blank, or standard) is included every 16th sample on average.</li> <li>• Assessment of the standards, blanks and duplicates shows that a reasonable degree of confidence can be placed in the accuracy and precision of the assay data. Umpire lab testing is planned</li> </ul>
<p><i>Verification of sampling and assaying</i></p>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No twinned holes have been carried out. Drill hole IDBH023 is drilled between previous drill holes and IDBH006 and IDBH007. While assay results are yet to be received, the massive sulphide zones intersected are consistent with previous drill results.</li> <li>• External laboratory assays have yet to be carried out but are planned</li> <li>• All logging has been carried out using standardised logging codes to professional standards. All geological, geotechnical and sampling information has been entered into a digital database which has been validated for sample overlaps and missing data</li> <li>• All hard copies of information are stored on site. Digital copies are held on site and at Phoenix's Adelaide office on a backed-up server.</li> <li>• No adjustments to assays have been made. Where gold assay data has been repeated by the lab, the average value has been reported</li> </ul>
<p><i>Location of data points</i></p>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Downhole surveys have been collected by a gyroscope at intervals of 10m to avoid any effect of magnetic interference.</li> <li>• The drill collars were located using a Garmin GPS Map 60 hand-held GPS unit and verified using a second unit. The drill hole locations are considered accurate to within 7 m and this is sufficient for the nature of the drilling. All coordinates are quoted using the GDA94 datum and projected to MGA zone 52.</li> <li>• Topographic variation at Iron Blow is minimal and not considered</li> </ul>

Criteria	JORC Code explanation	Commentary
		significant.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <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></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The sample spacing is sufficient to establish the grade continuity. Intervals are determined from geological contacts and then at metre intervals within a particular unit. Where isolated samples are less than one metre in width they have been cut to geological boundaries.</li> <li>• No sample compositing has been carried out.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• The mineralisation appears to be folded and some parts of the drill hole have intersected the mineralisation at low angle. Further geological interpretation and structural analysis is required to determine the exact relationship.</li> <li>• Any biasing effect is yet to be determined.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Logging and sampling has been carried out by Phoenix Copper personnel on site and samples submitted to the laboratory by the same people.</li> <li>• No third parties have been allowed access to the cores or samples.</li> <li>• The logging and sampling area is within a locked compound when Phoenix Copper personnel are not on site.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits have been carried out at this point</li> <li>• A visual comparison of the assay results with the field portable XRF shows an acceptable correlation between the two</li> </ul>

## 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>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• The Iron Blow deposit is located within MLN214 which covers an area of some 6.27 hectares, and the Mount Bonnie drilling is within MLN1033 which covers an area of 4.75 hectares and MLN1039 which covers an area of 1.23 hectares and forms part of the Burnside Project.</li> <li>• The deposit and drilling is situated within Pastoral Lease No. 903, Douglas, held by Tovehead Pty Ltd.</li> <li>• The Mineral Leases are in good standing and no known impediments exist.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>A Sale and Purchase Agreement and Heads between Phoenix Copper Ltd and Crocodile Gold Australia Pty Ltd was signed on 15 August 2014, the Agreement includes the 100% acquisition of 15 (now 14 with conversion of two MCNs to a single ML) mining leases containing the Iron Blow and Mount Bonnie deposits. Formal completion occurred on 20 November 2014.</li> <li>Previous exploration at Iron Blow and Mount Bonnie has consisted of oxide mining, geological mapping, surface geochemical sampling and diamond drilling.</li> <li>Crocodile Gold Limited carried out an extensive drilling program at both deposits. Cores for these and other holes are being inspected and are being relogged (thereby verified) by Phoenix Copper Ltd personnel for consistency</li> <li>Extensive exploration on the broader tenement package by previous explorers has focused on gold exploration. Numerous base metal prospects have been identified in surface geochemical sampling by these explorers that have not been adequately followed up due to the lower gold values.</li> <li>The previous focus on gold has likewise meant that little or no ground geophysical prospecting has been carried out. Several airborne EM (VTEM) surveys have previously been flown over parts of the tenement package. Numerous conductors prospective for base metals have been identified by Phoenix Copper Ltd for further ground trothing and follow-up work.</li> </ul>
<p><i>Geology</i></p>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>Iron Blow and Mount Bonnie are stratabound base metal, silver and gold massive sulphide deposits. They are located within the Mount Bonnie Formation of the South Alligator Group, within the Pine Creek Orogen of the Northern Territory. Both deposits appear to be located at similar stratigraphic positions on opposite limbs of the roughly north-south trending Margaret Syncline.</li> <li>Mineralisaton is hosted within carbonaceous siltstones and mudstones within the lower portion of the Mount Bonnie Formation. It appears to have formed early in the basin development and has associated footwall alteration consisting of variable proportions of chlorite, amphibole, calcite, silica, and talc with associated vein and disseminated sulphides. The mineralisation appears to be consistent with a volcanic hosted massive sulphide deposit (VHMS) characteristics, or could possibly be related to carbonate replacement</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>style. Further work is required to determine the exact association.</p> <ul style="list-style-type: none"> <li>The massive sulphide mineralisation is dominantly massive pyrrhotite with zones of coarse-grained, high-grade sphalerite, arsenopyrite, chalcopyrite, with lesser galena. Significant silver and gold grades are also present in previous drillholes within the massive sulphide and within adjacent quartz-veined and brecciated sediments containing significant disseminated and stringer sulphides, which is possibly the vent zone typical of VHMS deposits</li> <li>Mineralisation at both Iron Blow and Mount Bonnie is structurally complex and appears to be deformed by the regional deformation events. Structural mapping and logging is in progress to determine the precise nature, timing, and geometry of the mineralized bodies.</li> </ul>
<p><i>Drill hole Information</i></p>	<ul style="list-style-type: none"> <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: <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> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Table 1 of main announcement for drill summary details.</li> </ul>
<p><i>Data aggregation methods</i></p>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Reported results are interval length weighted</li> <li>No cut-off grades have been applied</li> <li>Reported intersections are based on sharp grade boundaries and may include narrow intervals of sub-ore grade mineralisation which would be considered as internal dilution if mined by open pit methods</li> <li>Higher grade mineralised zones have been reported if coherent downhole intervals &gt;10% Zn are observed (eg. 156.55-176.00m)</li> <li>Metal equivalent grades are not reported, however assumptions on metal equivalence used in the resource estimation have been reproduced in the text</li> </ul>
<p><i>Relationship between mineralisation</i></p>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole</li> </ul>	<ul style="list-style-type: none"> <li>The core to bedding relationships suggest that the true widths of the sulphides are estimated to be approximately 60% of the downhole widths quoted, however further structural analysis and wireframe</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>widths and intercept lengths</i>	<p><i>angle is known, its nature should be reported.</i></p> <ul style="list-style-type: none"> <li><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></li> </ul>	<p>modelling will be required to confirm this.</p> <ul style="list-style-type: none"> <li>The structural geometry is still uncertain and further structural analysis and interpretation is required to better understand the true mineralisation widths.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Refer to main announcement.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>All matters of importance have been included.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>All relevant information has been included.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><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></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Surface and downhole EM is planned to refine the geometry of the massive sulphides and to search for extensions at depth and along strike.</li> <li>Further mapping, rock chip and soil sampling is planned for next field season over selected targets followed by diamond drill or RC drill testing.</li> <li>Detailed structural mapping and logging at Mount Bonnie and Iron Blow is in progress.</li> <li>Detailed geological interpretations will be done following modelling of the geophysical data and integration with drilling and mapping results.</li> </ul>