

Phoenix Copper Limited is an ASX listed minerals exploration company, with a vision of being successful explorer and sustainable and profitable gold and base metals producer. Phoenix Copper has a significant base and precious metals tenement portfolio in the Northern Territory and South Australia.

**ASX: PNX**

Issued Capital as at 31/07/15:  
357,256,457

**Board & Management:**

Chairman: Graham Ascough  
Non Exec Director: Paul J Dowd  
Non Exec Director: Peter J Watson  
Non Exec Director: David Hillier  
MD/CEO: James Fox  
CFO/Co Secretary: Tim Moran

**Top Shareholders as at 31/07/15:**

HSBC Custody Nominees	14.8%
Cartet Group Limited	8.6%
Talis SA	8.5%

**Share Registry:**

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Level 5 115 Grenfell Street  
Adelaide South Australia 5000  
Phone: 1300 305 232 (within Australia)  
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## June 2015 Quarterly Activities Report

### Exploration Highlights:

- Drill program completed at Mt Bonnie delineating near-surface massive sulphide mineralisation containing high grades of Zn-Au-Ag, results included:
  - **8m @ 12.3% Zn, 2.41g/t Au, 321g/t Ag, 0.5% Cu, and 2.5% Pb** from 89m in MBRC014
  - **12m @ 8.4% Zn, 2.57g/t Au, 228g/t Ag, 0.7% Cu, and 2.0% Pb** from 48m in MBRC015
  - **14m @ 6.55% Zn, 0.87g/t Au, 245g/t Ag, 0.43% Cu, and 1.84% Pb** from 57m in MBRC024
- Ground EM surveys were completed at Iron Blow, Mt Bonnie and the Joplin prospect identifying new targets:
  - a lower untested conductive zone was identified at Mt Bonnie
  - a coincident EM, Mag and geochemical anomaly was defined at the Joplin prospect
- Diagnostic flotation, QEMSCAN and optical metallurgical test work was completed on Iron Blow composite samples with highly encouraging results

### Planned Activities – September Quarter:

- Drill test the coincident geophysical and geochemical target at Joplin, located within 3km of the Iron Blow and Mt Bonnie deposits
- Completion of metallurgical optimisation test work on Iron Blow composite to demonstrate recoveries to saleable products
- Test the depth extent of the conductive zone at Mt Bonnie to increase the size and scale of mineralisation defined to date
- Continue regional exploration campaign with the primary aim of testing exploration targets with VMS and gold potential in close proximity to Iron Blow and Mt Bonnie
- The above planned activities are designed to complete data requirements for a Project Scoping Study and are dependent upon further capital raising

### Corporate

- Cash on hand at 30 June 2015 was \$0.87 million

## Northern Territory Exploration Hayes Creek Project

The Iron Blow and Mt Bonnie Zn-Au-Ag deposits and the Joplin prospect form part of Phoenix Copper's Hayes Creek Project within the Pine Creek region of the Northern Territory, 180km south of Darwin (Figure 1). The Iron Blow and Mt Bonnie deposits are situated on granted Mining Leases. The Joplin prospect is situated on EL25430, one of 20 Exploration Licenses and 4 Mining Leases covering 1,700km<sup>2</sup> where Phoenix Copper is earning-in up to a 90% interest from Crocodile Gold Australia (see ASX release 18 August 2014 for full details). The Joplin prospect and Iron Blow and Mt Bonnie deposits are located close to infrastructure that includes rail, road, high voltage power lines and water.

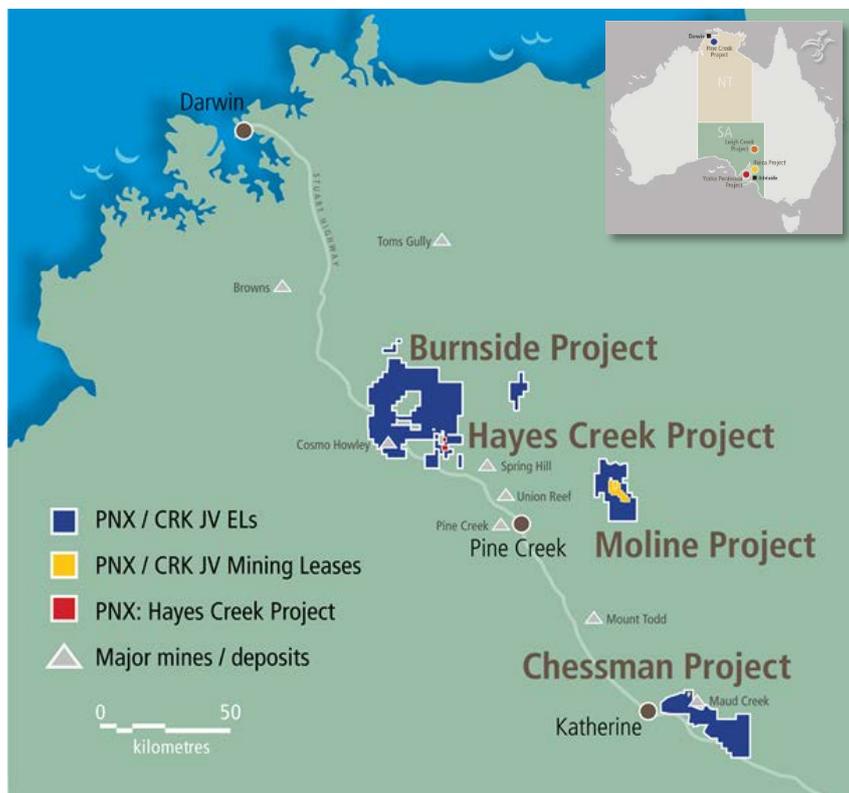


Figure 1: Project Location Plan

Activity for June Quarter reporting are as follows:

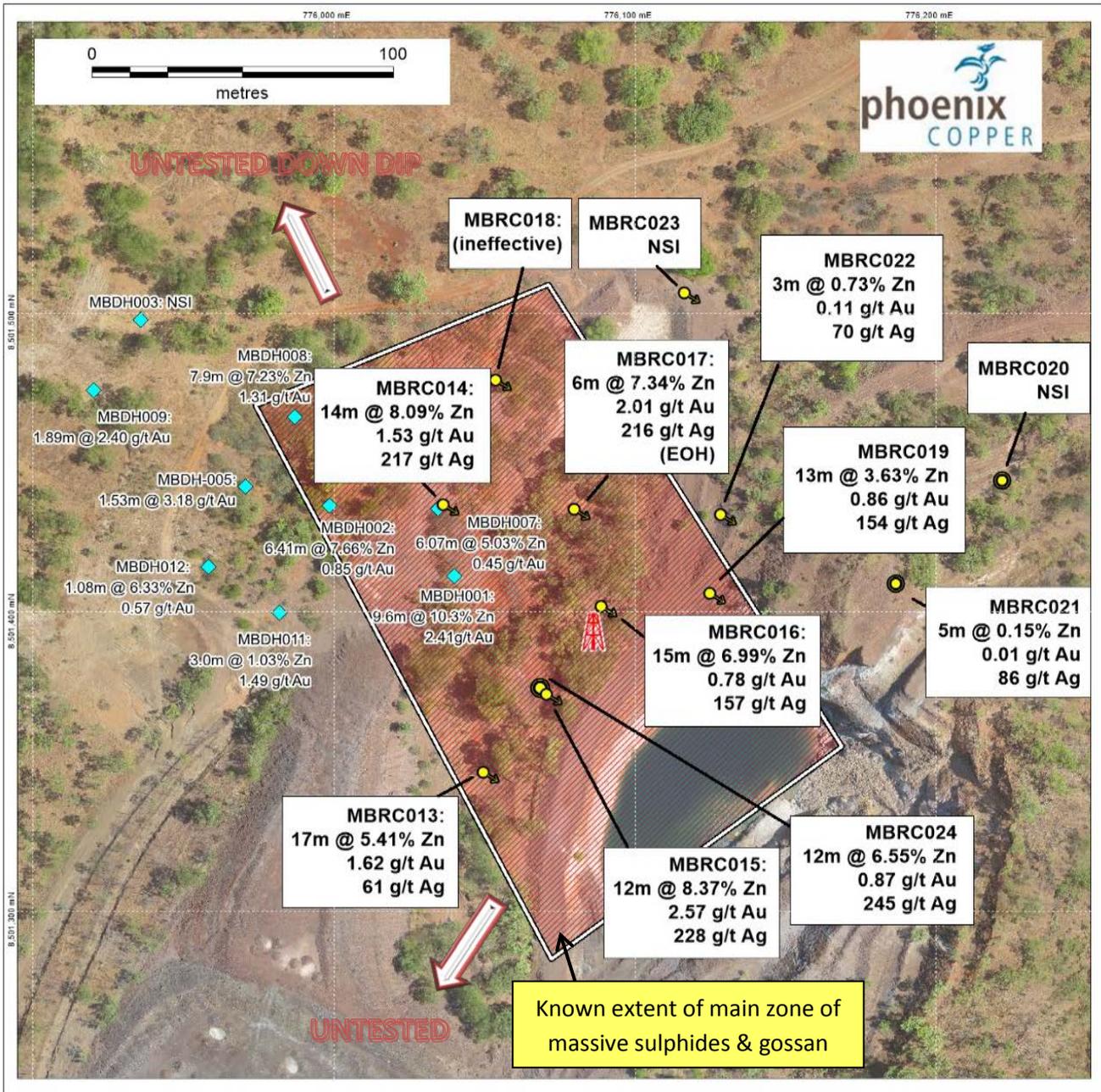
- **Drilling:**
  - 15 RC holes for 1,534m at Hayes Creek
- **Geophysics:**
  - 17.25 line km fixed loop surface electromagnetic surveys at Hayes Creek
  - 2 x downhole electromagnetic survey tests at Hayes Creek
- **Geochemistry:**
  - 1,258 drill samples at Hayes Creek
  - 19 rock chip samples at Hayes Creek and Burnside (Joplin and Thunderball)
  - 57 field-portable XRF (fpXRF) samples at Hayes Creek and Burnside (Joplin and Thunderball)

*During 2015 the Company aims to define sufficient resources at the Hayes Creek project and complete metallurgical optimisation work to provide inputs to complete a Scoping Study. The Study, which would be completed by the beginning of 2016, will be used to demonstrate the potential viability of the project and guide further drilling and other testing to allow the commencement of a full feasibility study.*

### **Mt Bonnie**

An initial drill program was completed at Mt Bonnie and was successful in delineating near-surface massive sulphide mineralisation containing high grades of Zn-Au-Ag.

The results of the Mt Bonnie drill program show excellent continuity and consistency of mineralisation, and indicate a simple tabular north-west dipping zone of massive sulphides. In addition, a halo of brecciated and altered rocks containing primarily gold-rich mineralisation was intersected directly below the massive sulphide zone, with a zone of silver-rich mineralisation above and to the north-east (Figure 2). The lateral and vertical extents of this gold and silver mineralisation is currently undefined, and due to it being outside of the massive sulphide envelope it was likely not identified by previous ground and downhole EM surveys and therefore provides considerable potential upside.



**Figure 2:** Mount Bonnie drilling—showing only zinc, gold and silver assays (see ASX release 6 July 2015 for full details). Yellow holes drilled by Phoenix Copper, blue holes are historic. ‘Red’ area represents currently defined boundary of massive sulphides.

Phoenix Copper is particularly encouraged by the potential to expand the massive sulphide zone down-dip, where it is untested to the north-west at depths below the limit of drilling (Figure 3). Geophysical EM surveying and modelling completed earlier in the year support the interpretation that the massive sulphide zone may extend considerably further at depth. The massive sulphide zone is also open along strike to the south, where gossan is still exposed in the wall of the oxide open pit.

The Company will aim to undertake further drilling later in the year subject to additional capital raising, to test extensions of the massive sulphide zone and test the lower, deeper conductive zone which potentially represents new and untested mineralisation. It is likely that a resource will be estimated soon after.

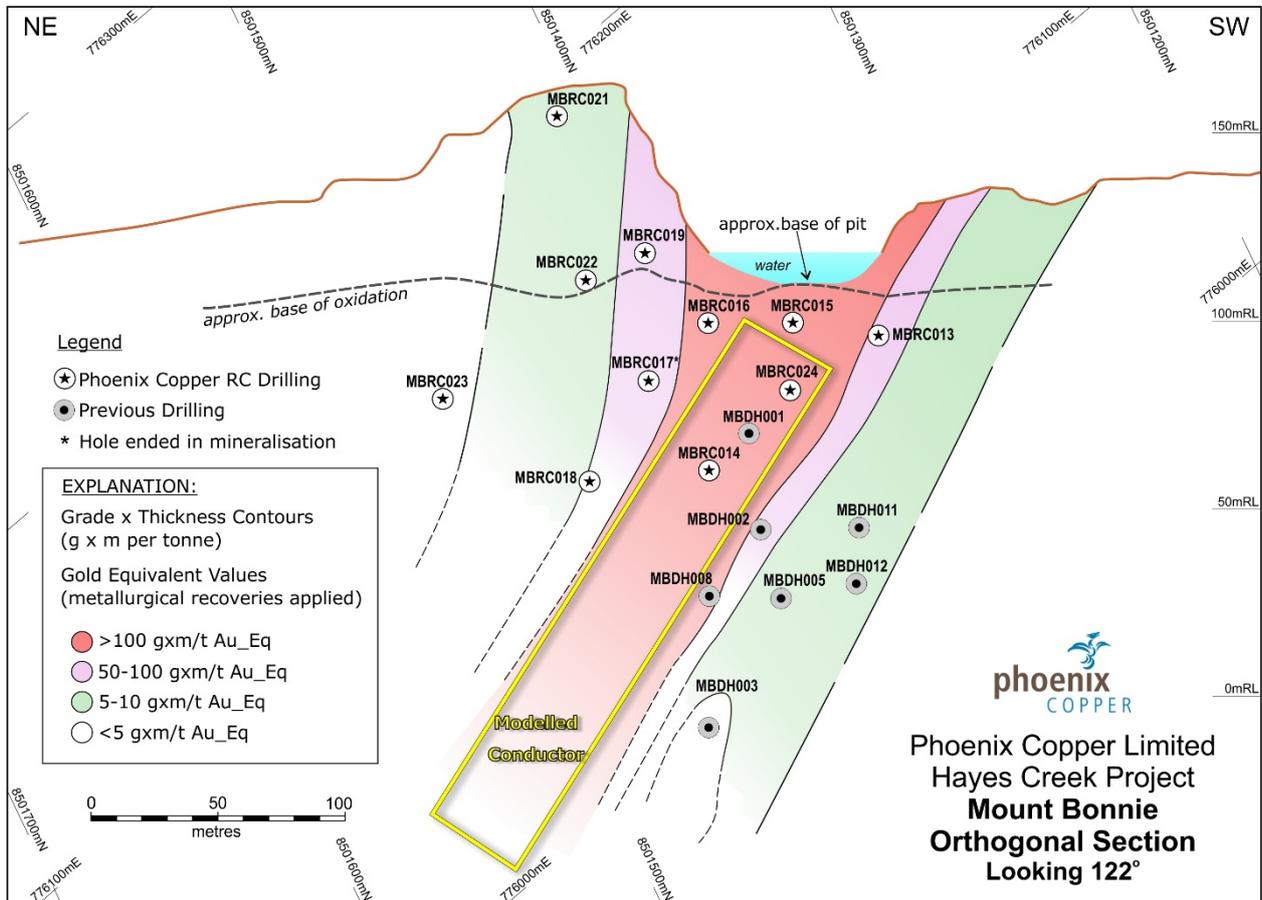


Figure 3: Mount Bonnie Orthogonal Section

## Iron Blow

Three RC holes for 240m were drilled at the north of the Iron Blow deposit to test the up-dip extension of the east and west massive sulphide lenses. None of the three holes reached their target depth due to loss of air circulation and excess water flows, as a result the near-surface northern portion of the deposit remains open and diamond drilling will be required to evaluate this area.

The Iron Blow deposit was upgraded to a JORC (2012) compliant inferred mineral resource estimate in late 2014 (Table 1), and contains approximately 200,000oz of gold, 10.7Moz of silver and 125,000t of zinc at potentially mineable grades (ASX release 3 November 2014).

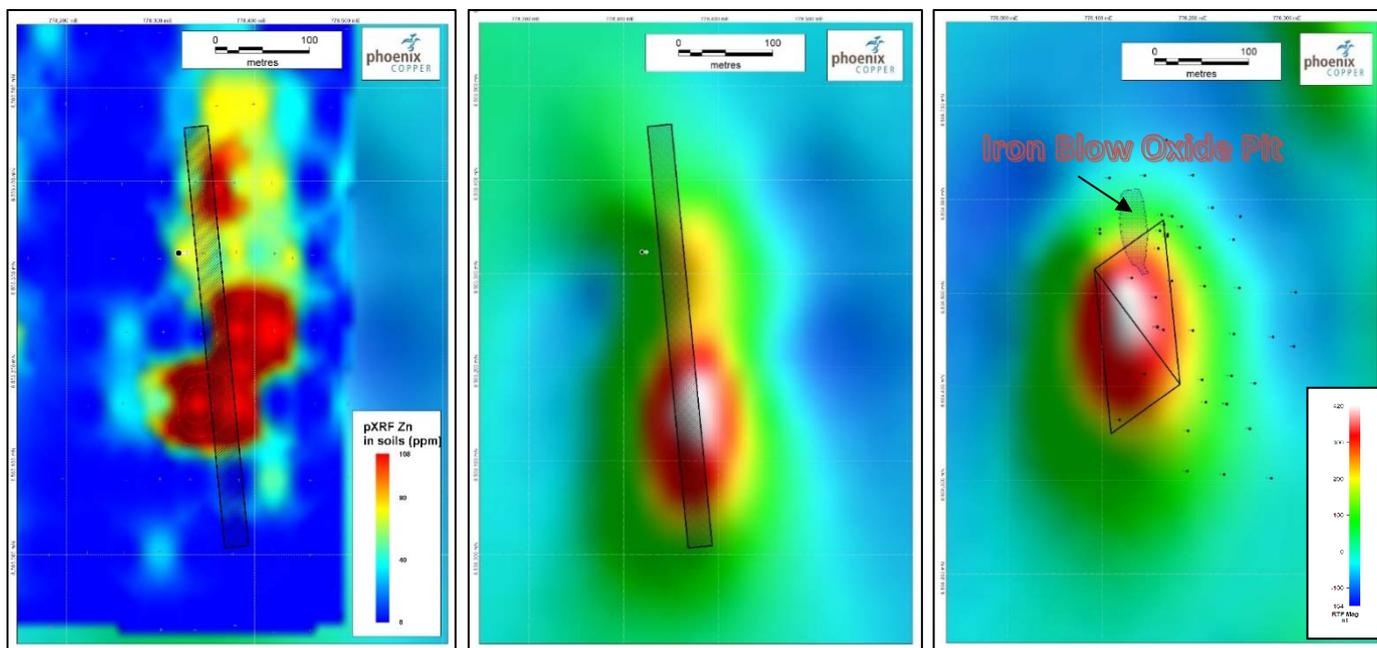
## Joplin Prospect

The Joplin prospect is located less than 3km to the south-east of Iron Blow and less than 3km to the north-east of Mt Bonnie. A recent review and re-modelling of 2011 geophysical data has identified a coincident conductive and magnetic body at the Joplin prospect with a similar geophysical signature and dimensions to the Iron Blow and Mt Bonnie deposits. The priority to drill test Joplin has been elevated due to recent geological mapping and a fpXRF soil survey over the prospect that defined a coincident discrete zone of base metal anomalism, with a strong Zn-Cu-As metal association.

A gossanous quartz vein has been mapped at Joplin, which may represent the weathered surface expression of mineralisation. In 2011, Crocodile Gold drilled one hole (MBEXD001) into the northern part of the conductive body below the gossanous quartz vein and intersected disseminated sulphides over a 63.8 metre interval from 29.3 metres, consistent with what is observed on the periphery of the Iron Blow and Mt Bonnie deposits.

The coincidence of geochemical and geophysical anomalism combined with gossanous quartz veining at surface and the close proximity to existing VMS deposits at Iron Blow and Mt Bonnie provides excellent evidence for a new mineralised system (Figure 4). The Joplin target is considered highly prospective and will be drill tested once statutory approvals have been received, these are expected shortly.

**Figure 4: Joplin and Iron Blow geophysics**



Joplin - LHS image shows Zinc in soils contour, RHS image shows magnetics with Zinc in soils contours, black rectangle is modelled conductor from the EM data, white dashed line represents mapped gossanous quartz vein

Iron Blow at identical scale and background magnetic image showing modelled EM conductor outlines and drilling overage

## Hayes Creek Metallurgy

There are many factors both physical and chemical that need to be understood to design a flotation system to maximise the potential of the resource. The first phase of the diagnostic metallurgical investigation used a standard production chemical regime and investigated the recoveries achievable from a lead/zinc differential roughing system.

The results from this first stage diagnostic program are highly encouraging. The program was designed to generate baseline data and explore the mineralogy, and interactions of the target mineral and gangue species. The separations and recoveries observed from using entirely non-specific chemical regimes across two tests are viewed by Phoenix Copper as being potentially economic and warrant the completion of optimisation test work.

The results achieved are summarised below:

- Zinc is the best performing base metal with respect to concentrate recovery and grade, it is well liberated with excellent recoveries (greater than 95%).
- Excellent early stage results were achieved for silver and gold, with silver concentrate grades up to 400ppm and recoveries of up to 75%, and gold concentrate grades of over 7g/t using non-specific collectors (non-optimised) with up to 65% recovery.
- Greater than 77% of the mass rejected to tails including a substantial amount of deleterious elements, which if replicated in a production cycle would likely result in a “clean concentrate”.

Optimisation test work has commenced with the aim of optimising recoveries to saleable concentrates with the focus being on zinc, gold and silver where approximately 90% of the in situ value lies. The following will be tested:

- Improving gold recovery by using more specific precious metal collectors over the ones utilised in the diagnostic program.
- Conducting mineralogy on the tails samples generated to identify and target species types that were rejected to the tails stream in the previous round of testing, to identify opportunities for improved recoveries.
- Improving the zinc depression in the primary stage of the sequential flotation in order to improve grade and recovery to the correct concentrate destination.
- Investigating concentrate cleaning stages to upgrade concentrates to the correctly segregated concentrates.
- Investigating doré production onsite for gold, silver and potentially copper to improve project economics.
- Investigating the potential for gravity recoverable gold prior to flotation.

## Regional Exploration - Burnside, Chessman and Moline Projects

Given the consistent and outstanding results from the Hayes Creek Project, the Burnside, Moline and Chessman Projects all have exciting opportunities for brownfields discoveries as well as promising new conceptual targets to test. The Company recognises these as longer term propositions, but considers that they represent excellent growth potential beyond the Hayes Creek Project.

The regional exploration projects at Burnside, Chessman and Moline (Figure 1) are under joint venture with Crocodile Gold, with Phoenix Copper earning up to a 90% interest in two stages through expenditure of a total of \$4 million over four years. This includes up to \$500,000 spent on the Iron Blow and Mt Bonnie prospects in the first 2 years of the earn-in and a further \$500,000 of expenditure in the second stage of the earn in.

The Company's overall objective and highest priority is to establish sufficient mineral resources at Hayes Creek to justify an early development. Notwithstanding, regional exploration prospects will gradually be tested for future development extensions.

During the quarter, numerous structural, geochemical and geophysical targets were evaluated in the field within all projects. This work has focussed initially on the Burnside Project, including the Joplin Target.

Efforts are currently directed at a new gold target north of Rocklands' Thunderball uranium deposit, where an RC hole drilled, and reported by Thundelarra Exploration Limited in September 2010 intersected 12m @ 4.7 g/t gold in hole TPCTC066 on EL23431 (a tenement where Phoenix Copper is earning-in up to 90% from Crocodile Gold), in the western limb of an anticlinal structure - typical of many deposits in the region. Mapping, soil sampling and rock chip sampling is underway and results are expected next quarter.

Further work is scheduled next quarter on the exploration leases surrounding Iron Blow and Mt Bonnie. Target stratigraphy can be traced on the surface for at least 10km with numerous additional areas identified within the broader Burnside project to be followed up.

By the end of the June 2015 quarter, total expenditure for the purpose of the farm-in was approximately \$900,000 (including 15% overheads). A further \$1.1 million is required to be spent by December 2016 to achieve the 51% stage one earn-in.

## Summary of Upcoming Activities

### (Dependent on further capital raising)

- Diamond drill test the coincident geophysical and geochemical target at Joplin, within 3km of the Iron Blow and Mt Bonnie deposits. The relevant applications have been made, a drill contractor has been identified, and the drilling will commence once statutory approvals have been received. These approvals are expected in the current quarter.
- Completion of metallurgical optimisation test work on Iron Blow composite to demonstrate recoveries to saleable products. A comprehensive test work program is underway and is expected to take approximately

3 months to complete, the results will be used in the Scoping Study in the first quarter of calendar year 2016.

- Commence drilling at Mt Bonnie to test the depth extent of the conductive zone, aiming to increase the size and scale of the mineralisation defined to date. The drill program will commence upon completion of drill testing at Joplin and is likely to take at least two months to complete, further details will be provided closer to the commencement of the program.
- Continue ongoing regional exploration, with the primary aim of discovering new VMS and gold deposits in close proximity to Iron Blow and Mt Bonnie. The geological team will continue to geologically map, and collect fpXRF soil and rock chip data over numerous structural and geophysical targets within the Burnside leases.

## South Australia Exploration

### Yorke Peninsula & Adelaide Geosyncline Projects



**Figure 5:** South Australia Tenure

No exploration activities were undertaken during the quarter on the Company's Yorke Peninsula, Adelaide Geosyncline or Leigh Creek exploration tenements (Figure 5). The tenements are in good standing with new Amalgamated Expenditure Requirements being negotiated.

### LEIGH CREEK COPPER MINE

Hillgold Resources Pty Ltd continues to hold an option to acquire Leigh Creek Copper Mine Pty Ltd (**LCCM**) as well as two exploration licences held by Phoenix Copper in the vicinity of Leigh Creek. The option was granted to Hillgold in return for preparing and submitting to the State government updated environmental plans (PEPRs) for the three mining leases, and also preparing certain feasibility studies on the leases, within 9 months of the date of the Agreement (mid-January 2016). The PEPRs have been submitted and are awaiting approval.

The option can be exercised at any time during the 9 month period. Should Hillsgold exercise the option, it will acquire LCCM, and the two exploration licences mentioned, from the Company for nil up-front consideration (other than the assumption of the rehabilitation obligations at Mountain of Light) and a contingent payment to the Company of \$100,000 if and when 3,000 tonnes of copper are produced from future operations at any of the three mining leases

## Resources Table and Tenement Schedule

**Table 1: Iron Blow Inferred Mineral Resource Estimate as at 8th October 2014\***

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>

\* See ASX release 3 November 2014 for details, 'High Grade Mineral Resource Estimate for Iron Blow Deposit', where further details are provided. All material assumptions and technical parameters underpinning the resource estimate announced on 3 November 2014 continue to apply and have not materially changed. Results of drilling by Phoenix Copper since October 2014 have not been included in the estimate but if they were, they would not likely have a material change on the October 2014 resource estimate.

### Northern Territory

Tenement	Name	Holder	Area Hectare
ML30512	Mt Bonnie	Phoenix Copper Ltd 100%	6.4
ML30589	Mt Bonnie	Phoenix Copper Ltd 100%	31.6
MLN1033	Mt Bonnie	Phoenix Copper Ltd 100%	4.8
MLN1039	Mt Bonnie	Phoenix Copper Ltd 100%	1.2
MLN214	Iron Blow	Phoenix Copper Ltd 100%	6.3
MLN341	Iron Blow	Phoenix Copper Ltd 100%	14.9
MLN342	Mt Bonnie	Phoenix Copper Ltd 100%	13.7
MLN343	Iron Blow	Phoenix Copper Ltd 100%	14.9
MLN346	Mt Bonnie	Phoenix Copper Ltd 100%	16.0
MLN349	Iron Blow	Phoenix Copper Ltd 100%	15.0
MLN405	Mt Bonnie	Phoenix Copper Ltd 100%	12.0
MLN459	Mt Bonnie	Phoenix Copper Ltd 100%	15.0
MLN811	Mt Bonnie	Phoenix Copper Ltd 100%	8.1
MLN816	Mt Bonnie	Phoenix Copper Ltd 100%	8.1
			<b>168.0</b>

### Northern Territory - Farm-in Tenements\*

Tenement	Name	Holder	(Area sq km)
<b>Burnside Project</b>			
EL10012	Mt Ringwood	Crocodile Gold 100%	14.9
EL10347	Golden Dyke	Crocodile Gold 100%	10.0
EL23431	Thunderball	Crocodile Gold 100%	13.4
EL23536	Brocks Creek	Crocodile Gold 100%	70.4

EL23540	Jenkins	Crocodile Gold 100%	16.7
EL23541	Cosmo North	Crocodile Gold 100%	3.3
EL24018	Hayes Creek	Crocodile Gold 100%	23.4
EL24051	Margaret River	Crocodile Gold 100%	86.9
EL24058	Yam Creek	Crocodile Gold 100%	3.3
EL24351	McCallum Creek	Crocodile Gold 100%	30.1
EL24405	Yam Creek	Crocodile Gold 100%	4.1
EL24409	Brocks Creek South	Crocodile Gold 100%	22.1
EL24715	Mt Masson	Crocodile Gold 100%	56.8
EL25295	Margaret Diggings	Crocodile Gold 100%	10.0
EL25748	Burnside	Crocodile Gold 100%	643.1
EL9608	Mt Bonnie	Crocodile Gold 100%	10.0
ELR97	Western Arm	Crocodile Gold 100%	6.5
<b>Chessman Project</b>			
<b>Tenement</b>	<b>Name</b>		
EL25054	Maud	Crocodile Gold 100%	64.0
EL28902	Maud	Crocodile Gold 100%	288.2
ML30293	Chessman	Crocodile Gold 100%	1.1
<b>Moline Project</b>			
<b>Tenement</b>	<b>Name</b>		
EL28616	Moline	Crocodile Gold 100%	262.5
ML24173	Moline	Crocodile Gold 100%	31.3
MLN1059	Moline	Crocodile Gold 100%	4.2
MLN41	Mt Evelyn	Crocodile Gold 100%	0.1
			<b>1676.4</b>

\*Phoenix Copper's beneficial interest in all farm-in tenements as of the date of this report is zero

## South Australia

Exploration Licences	Name	Holder	(Area sq. km)
<b>Adelaide Geosyncline</b>			
EL5382	Burra Central	Phoenix Copper Ltd 100%	84
EL4807	Burra West	Phoenix Copper Ltd 100%	69
EL4970	Burra North	Phoenix Copper Ltd 100%	300
EL5411	Mongolata	Phoenix Copper Ltd 100%	60
EL4809	Princess Royal	Phoenix Copper Ltd 100%	314
EL5601	Red Banks	Phoenix Copper Ltd 100%	396
EL4711	Burra Creek Plain	Phoenix Copper Ltd 100%	68
EL5473	Bagot Well	Phoenix Copper Ltd 100%	71
EL4626	Bagot Well North	Phoenix Copper Ltd 100%	99
EL5169	Tarnma	Phoenix Copper Ltd 100%	128
EL4886	Spalding	Phoenix Copper Ltd 100%	157
EL5557	Washpool	Phoenix Copper Ltd 100%	135
			<b>1,881</b>

<b>Yorke Peninsula</b>			
ELA281/12	Minlaton	Wellington Exploration Pty Ltd 100%	547
EL5491	Koolywurtie	Phoenix Copper Ltd 100%	255
EL4983	Weaver Hill	Phoenix Copper Ltd 100%	100
EL5196	Coonarie	Phoenix Copper Ltd 100%	254
			<b>1,156</b>
<b>Leigh Creek</b>			
EL5264	Nantawarrinna	Phoenix Copper Ltd 100%	555
EL5300	Mt Elkington	Phoenix Copper Ltd 100%	997
			<b>1,552</b>
		<b>TOTAL ELs - South Australia</b>	<b>4,589</b>
<b>Mineral Leases</b>	<b>Name</b>	<b>Holder</b>	<b>(Area Hectare)</b>
ML5467	Mountain of Light	LCCM 100%	250
ML5741	Mount Coffin	LCCM 100%	200
ML5498	Lorna Doone	LCCM 100%	122

## Financial & Corporate

Cash on hand at 30 June 2015 was \$0.87 million. Phoenix Copper is continuing to evaluate a number of options for funding through to completion of the Scoping Study and will keep the market informed of progress.

Phoenix Copper continues to hold a stake in Avalon Minerals Ltd (ASX:AVI) of 12.9 million shares (5.4%). Avalon's flagship asset is the Viscaria Copper-Iron Project located in northern Sweden.

### Capital Structure

At 30 June 2015, the Company had on issue 357,256,457 fully paid ordinary shares, 1,875,000 performance rights, and 1,250,000 unquoted options which expired in July 2015. During the quarter 3.5 million shares were issued at the Company's 30 day volume weighted-average share price of 1.7 cents to settle interest owing on a loan (\$45,000) and convertible notes (\$15,000).

### 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.*

### For further information, please contact:

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