Phoenix Copper Limited
ABN 67 127 446 271

ASX Code: PNX

Issued Capital as at 29/01/13: 179,707,749

ORD

Board & Management:

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

Top Shareholders as at 29/01/2013:

Long Fortune Limited	15.07%
Asia Image Limited	13.67%
Talis SA	11.77%

Share Registry:
Computershare Investor Services Pty Limited
Level 5 115 Grenfell Street
Adelaide South Australia 5000
Phone: 1300 305 232 (within Australia)
+61 3 9415 4657 (outside Australia)

PHOENIX COPPER LIMITED

ABN 67 127 446 271

REPORT FOR QUARTER END

31st December 2012

HIGHLIGHTS

Exploration - Burra North

- **A second phase of drilling** was completed on the Eagle Prospect to better define the high levels of mineralisation intercepted earlier in the year
- Recent copper results from PCD0051 at Eagle include:
  - 6.0m at 0.41% from 107.2m, including
  - 1.4m at 0.74% from 110.8m (see **Figure 1**)
- Additional drilling is planned at Eagle next quarter to further test the depth extent of the mineralised zone
- Re-processing and subsequent re-interpretation of historical Induced Polarisation (IP) data identified new drill targets and provides strong geophysical support for the ongoing exploration program at Burra North
- **The excellent copper assay results reported to date combined with the reprocessed IP data continue to highlight the potential of the area to host a significant copper deposit.**

Figure 1: *Quartz-Carbonate ±Chalcopyrite ± Bornite veins in brecciated dolomite from 106.6- 113.2m in PCD051*

Exploration - Yorke Peninsula

- Three priority IOCG targets have been outlined for drill testing in February 2013
- All planning, landholder and regulatory government approvals are in place for aircore and reverse circulation (RC) drilling
- The Company's tenements in this highly prospective region still remain largely unexplored and field studies have commenced on newly acquired and existing tenements

Operations

- Mini pilot plant (MPP) Ion Exchange (IX) testwork by InnovEco on Phoenix Copper's Paltridge North ore from MoL was completed

Corporate/Finance

- Graham Ascough was appointed Chairman on 7 December 2012

1 EXPLORATION

1.1 BURRA PROJECT

Burra North – Eagle Prospect

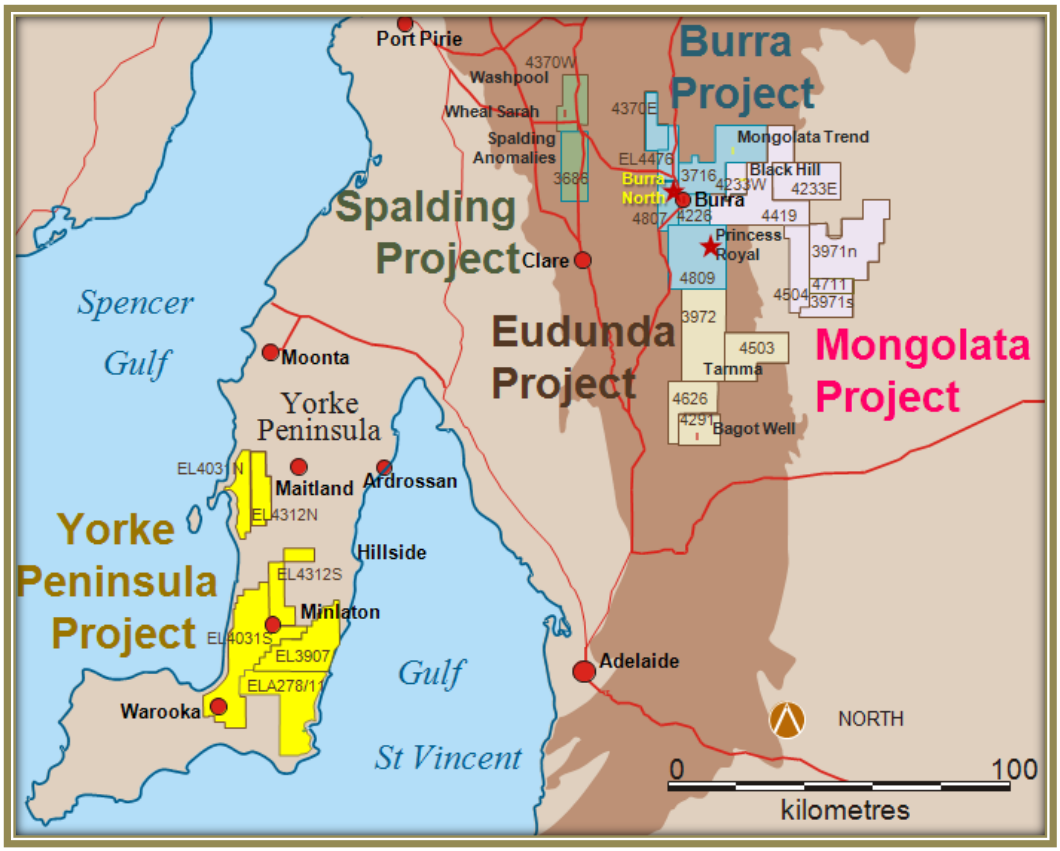

***Figure 2**: Burra North and Yorke Peninsula tenement and prospect location plan.*

Diamond Drilling

Phase 2 exploration drilling continued at the Eagle Prospect at Burra North (see **Figure 2**) on the Company's wholly-owned Burra tenement EL4226, with the aim of better defining the zone of high grade copper mineralisation intercepted earlier in 2012.

Two holes, PCD0050 and PCD0051, were completed during the quarter and results returned are as follows (refer **Table 1** for complete drill collar data and results):

- **PCD0050** drilled under a strong copper in soil geochemical anomaly to the north west of Eagle was completed with diamond core to a depth of 109.5m, assay results and lithology as follows:
  - No Significant Intersection (NSI), the surface anomaly is interpreted to have been caused by road building materials transported from the Burra Mine waste dump.
- **PCD0051** was completed at the Eagle prospect to a depth of 132.5m, assays results include:
  - 6.0m at 0.41% from 107.2m, including
  - 1.4m at 0.74% from 110.8m (see **Figure 1**)

Further drilling is planned during the March 2013 Quarter to follow-up the mineralisation outlined to date at the Eagle Prospect as the zone remains open to the SSE and at depth.

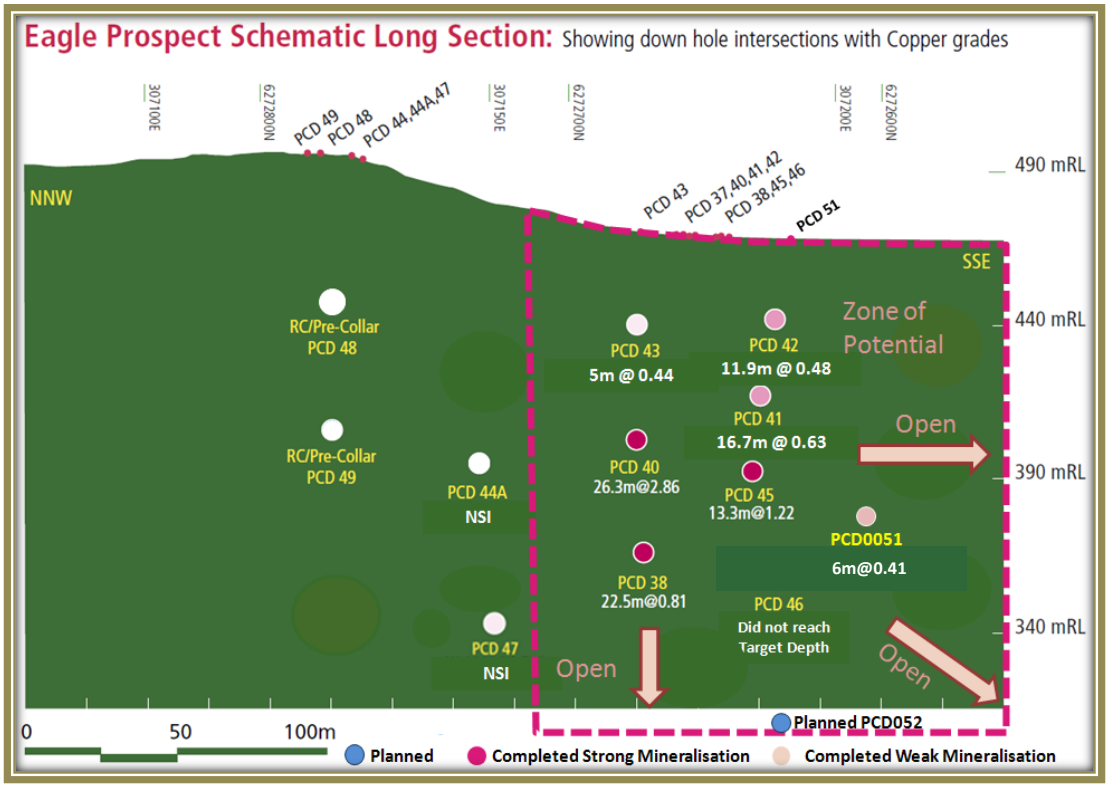

Figure 3: *Schematic long section at the Eagle Prospect showing downhole intercepts with copper grades*

Hole ID	Northing	Easting	Azimuth	Dip	Downhole depth m	RL	From m	To m	Width m	Grade %
PCD0035	6272610	306832	276	-60	205.3	466	-	-	-	NSI
PCD0036	6272623	307106	61	-50	177.5	468	-	-	-	did not reach target depth
PCD0037	6272682	307204	0	-90	46.0	469	-	-	-	NSI
PCD0038	6272680	307234	280	-60	121.0	468	94.9	117.4	22.5	0.81% Cu
including							102.6	110.7	8.1	1.46% Cu
PCD0039	6272500	306700	266	-60	144.7	467	-	-	-	missed target
PCD0040	6272682	307203	281	-60	77.0	469	50.7	77	26.3	2.86% Cu
including							61.1	74.8	13.7	5.23% Cu
PCD0041	6272682	307204	200	-60	87.0	469	54.1	70.8	16.7	0.63% Cu
including							64.7	70.8	6.1	0.95% Cu
PCD0042	6272682	307204	200	-47	73.0	469	47	58.9	11.9	0.48% Cu
PCD0043	6272687	307184	201	-60	52.9	469	31	36	5.0	0.44% Cu
PCD0044A	6272787	307193	215	-60	144.0	496	-	-	-	NSI
PCD0045	6272683	307203	202	-74	98.7	469	69.2	82.5	13.3	1.22% Cu
including							69.3	75.3	6.0	1.61% Cu
PCD0046	6272677	307243	236	-62	108.0	468	-	-	-	did not reach target depth
PCD0047	6272804	307184	206	-75	199.0	498	-	-	-	NSI
PCD0048	6272800	307156	215	-74	39.0	497	-	-	-	RC pre-collar
PCD0049	6272805	307162	257	-60	47.0	497	-	-	-	RC pre-collar
PCD0050	6272820	307162	220	-52	109.5	470	-	-	-	NSI
PCD0051	6272678	307426	205	-55	132.5	465	107.2	113.2	6.0	0.41% Cu

Table 1*: Drill collar locations and copper results. Copper assays determined by 4A and 4AHBR/OE, QA/QC samples indicated acceptable analytical quality Intersections are down hole lengths, true widths will be determined by further drilling. Grade intercepts calculated as a weighted average grade above 0.4% copper. No significant intersection (NSI).*

Induced Polarisation

In the 1960s an Induced Polarisation (IP) survey was conducted by the Department of Mines South Australia (DMSA) in the vicinity of the Monster Mine. Induced polarisation is a particularly useful tool for detecting disseminated sulphide minerals, and can provide an indication of the mineralisation potential of an area at depth.

Phoenix Copper has had this data reprocessed by an independent consultant utilising modern day modelling software. The detailed IP images are consistent with the recent drilling results and highlight several new prospective target areas (see **Figure 4**).

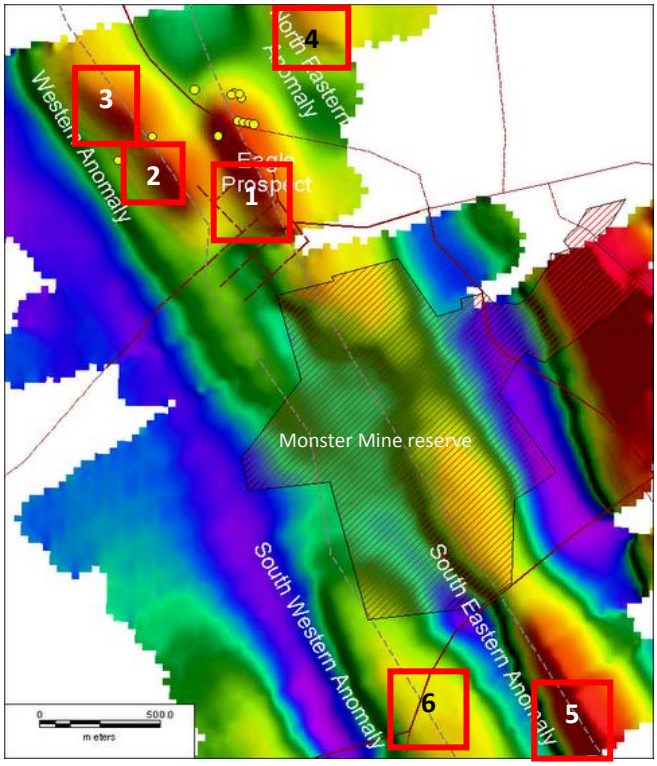

Figure 4: *Reprocessed IP data, targets (highs) are highlighted by the red boxes*

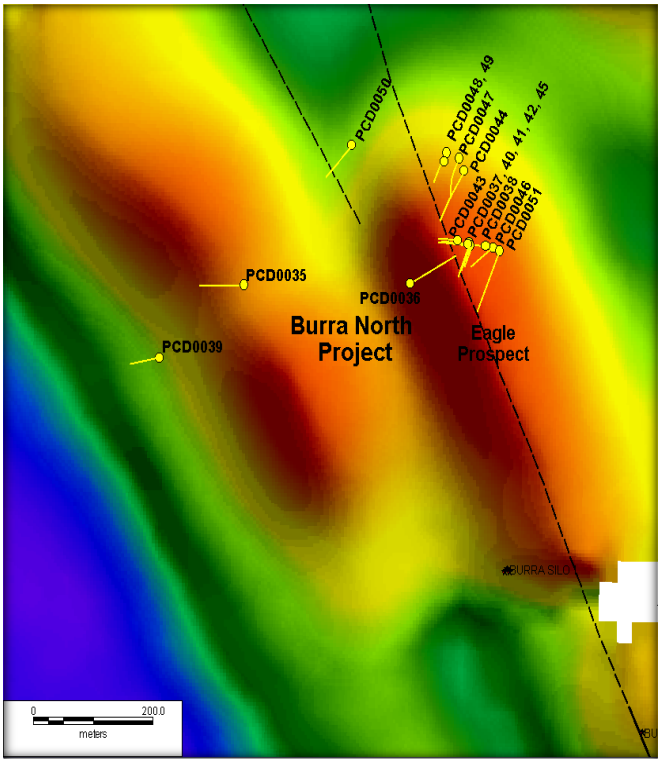

Figure 5: *Reprocessed IP data over the Eagle Prospect and drill hole traces from the current program*

It is evident from the drilling to date and the reprocessed IP data that the high grade copper drill intercepts at the Eagle prospect are all located close to the surface and in the northern portion of a **north-west trending IP high approximately 600m in length** (see **Target 1** in **Figures 4** and **5**).

A number of new similar sized untested targets have been identified (see **Targets 2-6** in **Figure 4**) from the IP data, all of which warrant follow up drill testing, and all having potential for mineralisation similar to that intercepted at the Eagle Prospect.

Planned Activities

- Drill test the southern extent of the Eagle Prospect mineralised zone at depth
- Test the six anomalies highlighted by the reprocessed IP data
- Undertake further geophysical surveys over the Eagle Prospect and along strike to the north to determine whether the mineralisation and IP anomalies identified extend into the Grove Prospect (see PNX September 2012 Quarterly report)

1.2 YORKE PENINSULA PROJECT

***Figure 6**: Phoenix Copper Limited's tenement locations in South Australia*

Phoenix Copper's 100% owned highly prospective Yorke Peninsula tenure consists of four Exploration Licenses and covers a significant land area of 1,419km² (see **Figure 7**). The tenements are adjacent to Rex Minerals' Hillside deposit and within the Olympic Domain which hosts a number of large scale copper-gold deposits (see **Figure 6**). Two priority targets have been outlined that will be drill tested in February 2013. These are the Balgowan and Cross prospects both of which are

characterised by coincident magnetic and gravity anomalies consistent with the signature of Iron Oxide Copper Gold (IOCG) mineralisation.

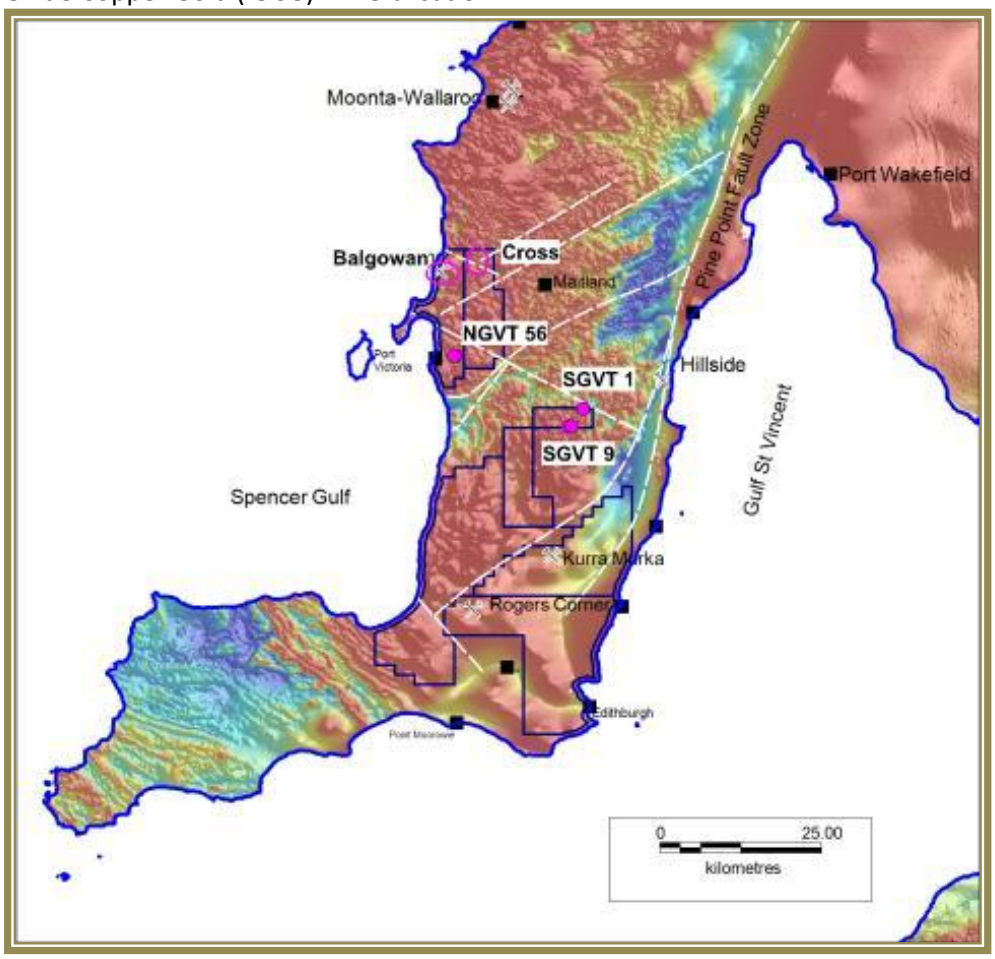

Figure 7: *Yorke Peninsula Project tenure on magnetic image showing significant structures, Phoenix Copper drill hole locations, and exploration targets at Balgowan and Cross.*

The **Balgowan Prospect** (see **Figures 7, 8** and **9**) will be the primary exploration target for an RC (reverse circulation) and aircore drilling program scheduled to commence early February 2013. The drilling will focus on the IOCG style mineralisation intercepted in historic drill holes DDH1 and DDH2 drilled by the State government in 1955, and overlying near coincident gravity and magnetic anomalies. Elevated levels of iron, copper, nickel, zinc and cobalt were all identified through historical analysis. DDH2 intersected 79.2m of magnetite mineralisation with anomalous values of copper grading up to 0.3% and nickel up to 0.31% from 105.5m. The program aims to further define the extent of the mineralised zone and gain a greater understanding of the geochemistry in this environment.

Five kilometres to the east of Balgowan is the **Cross Prospect** where Phoenix Copper has identified coincidental magnetic and gravity anomalies adjacent to deep crustal structures, within favourable lithologies – Oorlano metasomatite and Hiltaba granites (**see Figures 7, 10** and **11**). Drill testing of these anomalies is scheduled to follow from the Balgowan drill program.

Aircore drilling is also planned over the SGVT1 and SGVT 9 prospects (**see Figures 7** and **12**), located approximately 10km to the south-west of Rex's Hillside deposit. Two diamond drillholes were drilled into each of these targets in May 2012, intersecting significant alteration and elevated copper values (ASX Announcement 30/07/12). These 2 areas were initially VTEM targets; however 'open file' regional scale geochemical data is also anomalous over these prospects.

Field studies are to continue on newly acquired southern tenements (EL3907 and EL4983). The **Roger Corner prospect** is located in the far west of EL4983 (see **Figure 7**). Analysis of water in bores in the area by the State government in 1982 indicated anomalous heavy metal geochemistry – copper, silver, lead, gold and barium. The anomaly is also associated with a deep circular magnetic high which sits on the flanks of a regional gravity high zone. The elevated geophysical and ground water geochemistry are possibly sourced from a copper gold prospective Mesoproterozic basement intrusive as per the historic Moonta Wallaroo deposits.

The Company's tenements on the highly prospective Yorke Peninsula still remain largely unexplored. The 6 holes drilled as part of Phoenix Copper's maiden diamond drilling program (completed in May 2012) covered a small area, and tested only 3 of the 29 versatile time domain electromagnetic survey (VTEM) targets and 1 of the 13 "3D" magnetic and gravity targets previously identified by the Company.

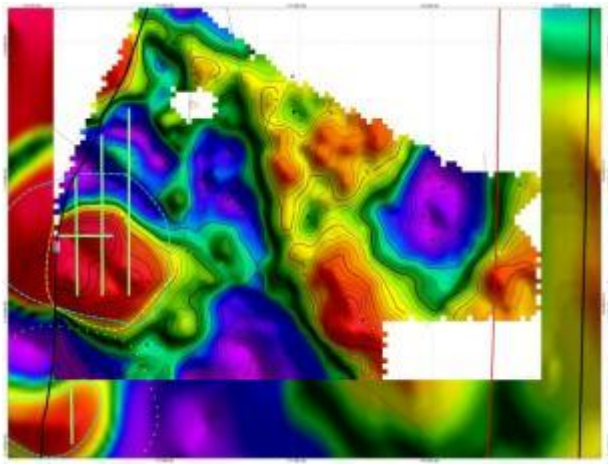

***Figure 8**: Balgowan Prospect detailed gravity image with contours over total magnetic intensity image (TMI); proposed drill traverse in green*

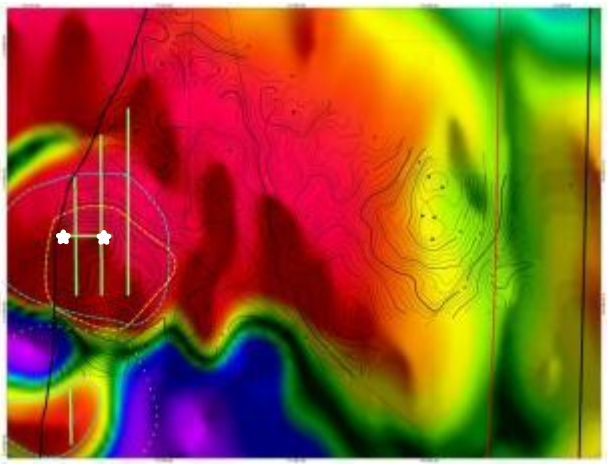

***Figure 9**: Balgowan Prospect regional TMI image with gravity contours showing coincident geophysical anomalies and proposed drill traverses in green, historical drillholes DDH1&DDH2 shown as white stars*

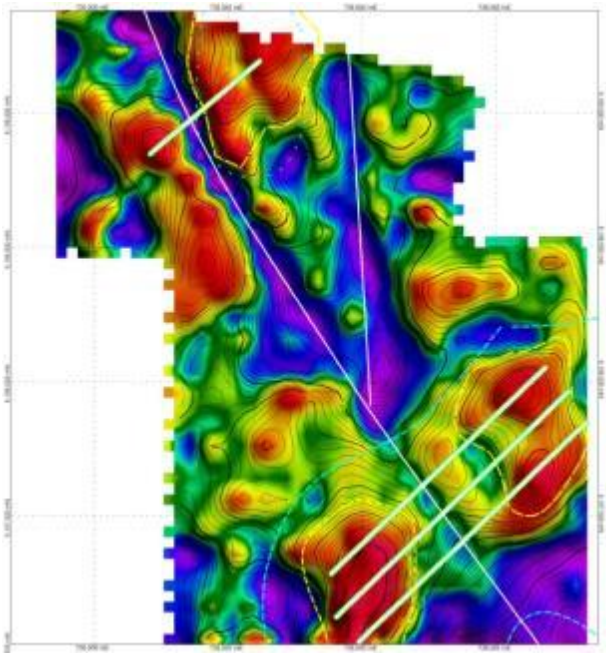

***Figure 10:** Cross Prospect detailed gravity image with contours showing **coincident anomalies** and proposed drill traverses in green*

***Figure 11:** Cross Prospect regional TMI with gravity contours showing **coincident anomalies** and proposed drill traverses in green*

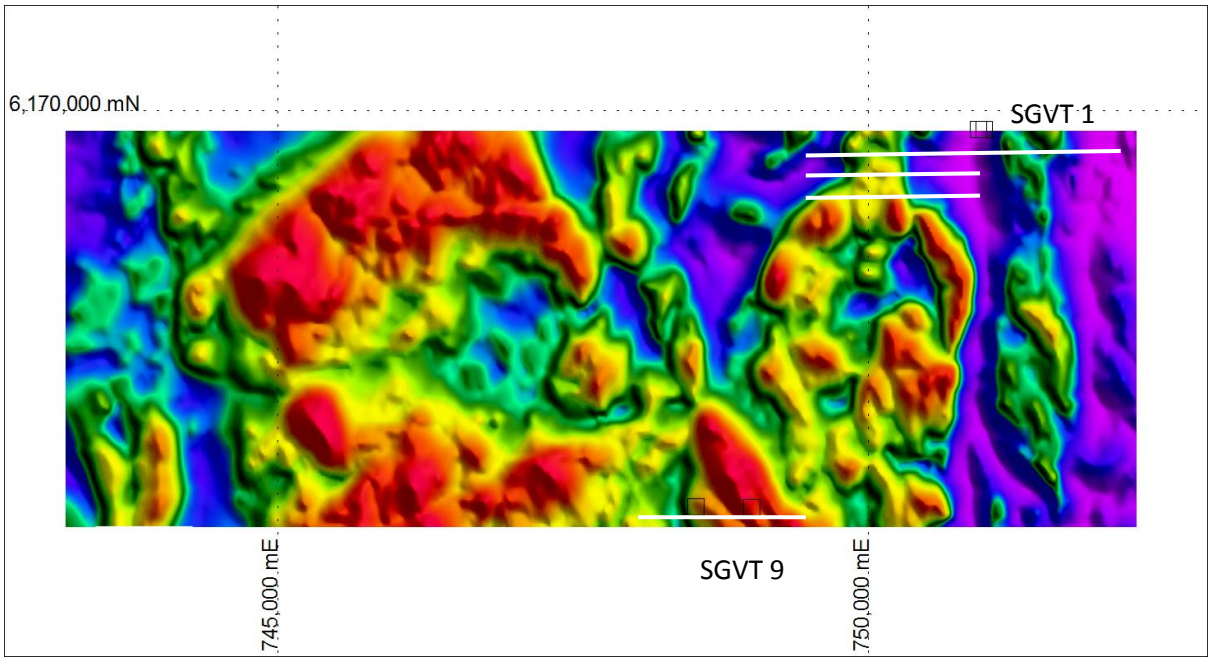

Figure 12: *EL 4312S showing proposed AC drill traverses over SGVT 1 and SGVT9 (white lines) overlaying TMI image.*

1.3 LEIGH CREEK PROJECT

No significant exploration activity has been conducted during the quarter however Field Portable X-Ray Fluorescence (FPXRF) geochemical analysis is planned to be undertaken on the Exploration License Applications once granted (see **Figure 13**).

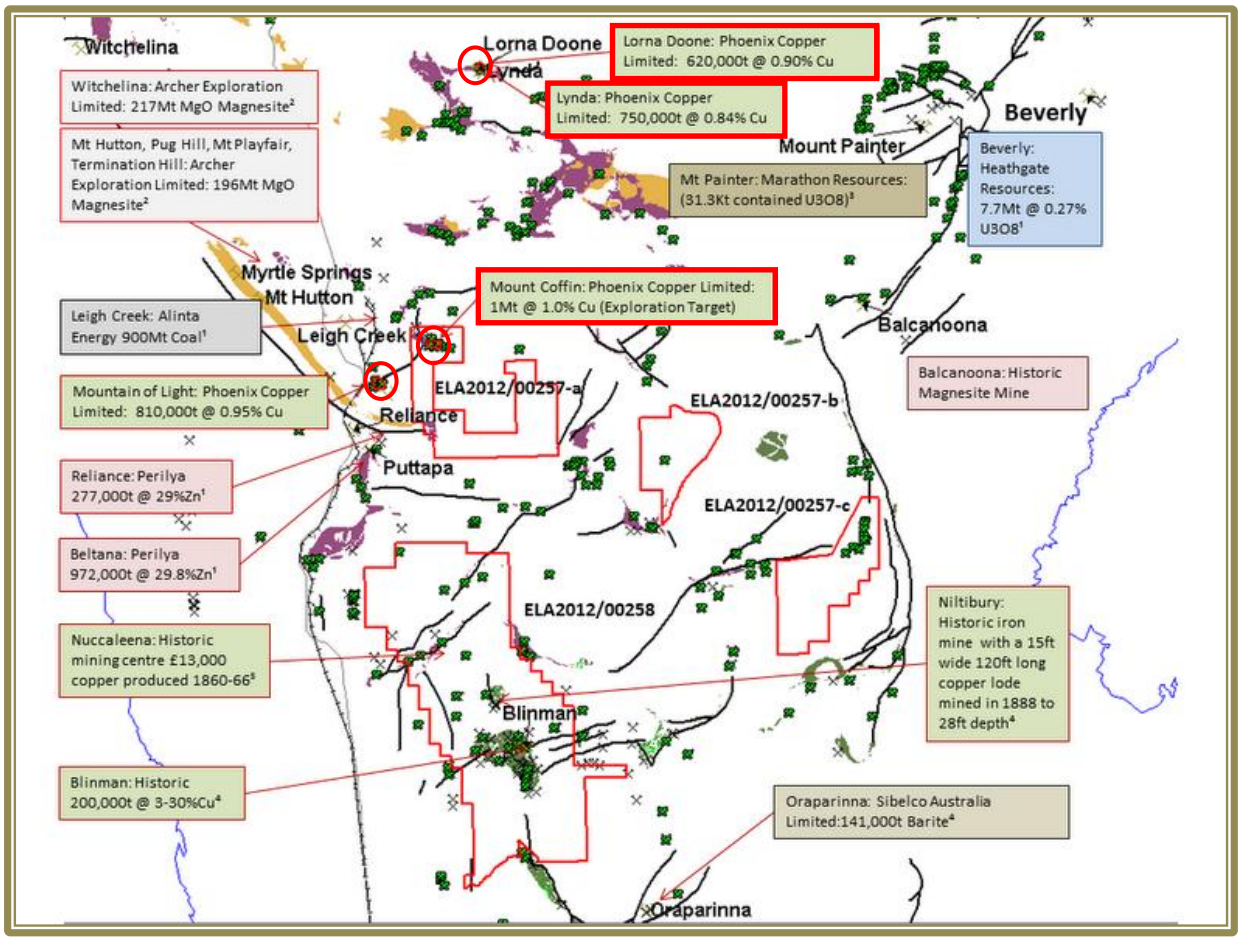

Figure 13: *New Exploration License Applications and nearby projects. Data from DMITRE South Australia's Major Operating Mines and Mineral Development Project, Resource Estimates and Production Statistics; and DMITRE SARIG database. Phoenix Copper areas highlighted in red.*

2 OPERATIONS – LEIGH CREEK

Mining and processing operations at Mountain of Light (MoL) remain under care and maintenance.

Mini pilot plant (MPP) Ion Exchange (IX) test work (see **Figure 14**) by InnovEco Australia was completed on Phoenix Copper's Paltridge North ore from its Mountain of Light operation (MoL).

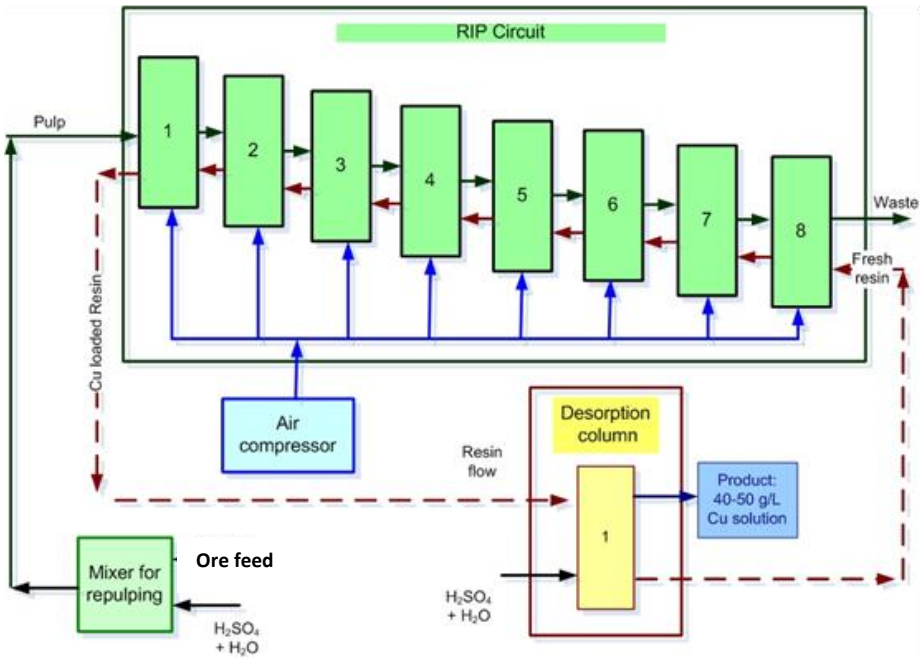

***Figure 14**: MPP configuration*

Ion Exchange is the preferred processing method due to its high overall copper recovery, low residence time, and the ability to process fine high clay ore.

Most of the analysis of the MPP has been completed and the results are consistent with initial test work and indicate the following:

- Optimum feed solids - 30-40%
- Optimum feed sizing – 90µm-250µm
- Sulphuric acid consumption – between 1.5-5.2kg acid per kg copper
- Copper in PLS liquor – 40-50gpl
- Total impurities in PLS – less than 1gpl
- Total copper recovery - 85-95%
- Total residence time – less than 12hrs

The above information is to be used for a more detailed analysis of the feasibility of an IX plant, and will include:

- Generating a metallurgical model and mass balance for full scale and 'demonstration' sized processing plants
- Capex cost estimate including equipment list
- Opex cost estimate

3 FINANCIAL & CORPORATE

On 7 December 2012, the Company was pleased to announce the appointment of Graham Ascough as Chairman of the Board of Phoenix Copper. Mr Ascough replaces Graham Spurling, who stepped down as Chairman and director at the Company's Annual General Meeting on 21 November 2012.

As at 31st December 2012, Phoenix Copper had cash of $1.18 million. During the quarter, exploration expenditure was $0.6 million and administrative expenditure was $0.2 million. Exploration costs related primarily to the second phase drilling program at Burra North described earlier.

Corporate administration costs (mainly head office salaries, overheads, insurance, and legal/professional fees), were on budget and lower than previous quarters due to the Company's ongoing cost containment efforts.

Forecast exploration costs for the March 2013 quarter of $400k relate to the drilling scheduled on the Yorke Peninsula, and a further diamond drilling at the Eagle Prospect at Burra North.

Equity

At 31st December 2012, the Company had on issue a total of 179,707,749 fully paid ordinary shares, up 1,000,000 from the previous quarter end due to the issue of shares as consideration for a tenement acquisition on the Yorke Peninsula (announced 7 August 2012).

During the quarter, 250,000 performance rights were issued to incoming Chairman Graham Ascough, and 1,500,000 performance shares lapsed as vesting conditions were not met.

At 31 December 2012, the Company had 27.4 million unquoted options on issue, of which 9.4 million (with majority at 24.5 cent exercise price) expire in the March 2013 quarter, and 15.3 million (with 15 cent exercise price) expire on 30th June 2013.

Competent Person's Statement

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Ms Nicole Galloway Warland (BSc (Hons)), a Competent Person who is a Member of the Australian Institute of Geoscientists and a full-time employee of Phoenix Copper Limited. Ms Galloway Warland 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". Ms Galloway Warland consents to the inclusion in this report of the matters based on her information in the form and context in which it appears.

James Fox, CEO
Telephone: +61 (0)8 8364 3188
Email: info@phoenixcopper.com.au
Website: www.phoenixcopper.com.au