



**Phoenix Copper Limited**

ABN 67 127 446 271

ASX Code: PNX

Issued Capital as at 28/4/11: 92,949,512 ORD

**Board & Management:**

Chairman:	Graham G Spurling
Managing Director:	Paul J Dowd
Non Exec Director:	Peter J Watson
Non Exec Director:	David Hillier
Company Secretary:	Peta Marshman

**Top Shareholders as at 28/4/11:**

Asia Image Limited	16.52%
Long Fortune Limited	12.78%
PJ & J Watson Super Fund	4.30%
William Douglas Goodfellow	3.95%
Forty Traders Limited	3.71%

**Share Registry:**

Computershare Investor Services Pty Limited  
Level 5 115 Grenfell Street  
Adelaide South Australia 5000  
Phone: 1300 305 232 (within Australia)  
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**PHOENIX COPPER LIMITED**

ABN 67 127 446 271

**REPORT FOR QUARTER END**

**31 March 2011**

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## 1 HIGHLIGHTS

### Leigh Creek Production

- "New Generation" of leach cell pad commissioned successfully
- New General Manager, experienced in heap leach operations, appointed
- Production rates exceeding 3TPD have been intermittently achieved
- Steady state production of 3TPD expected to be achieved in the near term
- Leigh Creek estimated to deliver cash surplus of \$1m during the next 4 months
- Mining of High Grade Paltridge South Pit producing more tonnage than estimated from ore block modelling

### Exploration

- Results of exploration undertaken by Zurich Resources Pty Ltd (co-funded by Phoenix Copper), over Phoenix Copper's ML5498 (host to the **Lynda** and **Lorna Doone prospects**), returned encouraging results and support a model for intrusion of copper rich mafic-intermediate magmas.
- A Rotary Air Blast (**RAB**) drilling program commenced on the 4th of April 2011 around the old Wheal Sarah copper mine 10km north west of **Spalding** which produced 6,500kg of copper metal from 24 tons of ore at 27% between 1858 and 1918.
- FPXRF analysis continued on a broad grid of approximately 3km by 20m on roadside verges on the five tenements east of the range at **Mongolata**. 5,351 analyses were taken during the quarter, taking the total to 24,200. The zones of high copper anomalism seen around the rim of the strong magnetic high in central EL3971 near Florieton, 40km south east of the historic Mongolata gold mine are of particular interest.
- The "VTEM" and "Falcon Gravity" air-borne geophysical surveys planned for the **Yorke Peninsula** in March 2011 have been postponed until later in the year when hopefully weather conditions will be more conducive for flying a detailed survey.
- FPXRF analysis continued on a broad grid of approximately 3km by 20m on roadside verges from Kapunda to Princess Royal over the four tenements in the **Eudunda Project**. 6027 analyses have been taken to date with the zones of most interest found in sampling to date being at Tarnma in the south west of EL3972 and in the north west of EL4626, and at Bagot Well in the centre of EL4291 5km north of Kapunda.



## 2 OPERATIONS – LEIGH CREEK

### 2.1 Copper Cement Production

The first of a "new generation" of leach pads at the Mountain of Light (MoL) Project has been commissioned. This has been achieved despite prolonged record rain events not experienced in the region since the early 1970's, which caused several significant delays.

#### Production for the quarter

	Copper Cement Product						Tonnes Per Day of Copper	
	Wet Weight	Dry Weight	Contained Cu t	% H <sub>2</sub> O	Cu % Dry	Cu% Wet	Qtr	21DayAve to 6 April
Mar Qtr	169.10	132.21	108.25	21.8%	81.9%	64.0%	1.22	1.79
PrevQtr	111.21	77.73	58.30	30.1%	75.0%	52.4%	0.60	

Special conditioning of the new cell with high strength dosing of acid was completed and after the initial grade of the leachate liquor, exceeding 8g of copper per litre of liquor (g/l), a liquor grade of 2-2.5g/l was established.

Liquor flow to several of the older cells, constructed by previous owners, has now ceased, as these cells were not sufficiently contributing to current production levels. The area they occupy is required to prepare additional "new generation" cells at a capital cost lower than the cost of construction of a new cell. Ore from two of these cells has been reclaimed and restacked on a previous pad that has been prepared as a second tier, with better stacking geometry and irrigation. This cell is now under irrigation. Over the next 6-7 weeks, (weather permitting) additional available ore will be crushed, screened and stacked to support current production levels and enable production at a steady 3 tonnes per day to be achieved.

#### Mining

During the quarter, mining of ore and waste continued in Rosmann East and Paltridge Southpits.

Paltridge South stripping commenced in late-February and first ore was mined in early March. Ore block grades for Paltridge South indicated significantly higher grades of ore than previously experienced from Rosmann East, (1.4%Cu c.f. 0.87%Cu), but visual inspection of one high grade lens indicated that the original drill resource spacing failed to intersect this lens and potentially other more narrow lenses. A positive reconciliation of both grade and tonnes is expected and in the 2.5m first flitch of mining 3,500 tonnes of high grade ore and 800 tonnes of low grade ore were mined, compared with an ore block model estimate of 1,080 tonnes of total ore.

Crushing, screening and stacking of high grade ore occurred in April and significant visual beneficiation was achieved. Assay results are pending.

In the process of optimising the design of the original Paltridge North pit, the subject of the feasibility study prior to purchasing the assets, several factors have emerged that will require test work to verify assumptions before a final commitment can be made to develop Paltridge North.

Several pit designs are being evaluated, some of which differ significantly to that used in the previous feasibility study. Even though financial and other mining variables differ from the original study, it would appear that to optimise the total tonnage of available ore, the amount of waste material is likely to be double that previously considered. Additionally, the presence of clay materials, including kaolonite could have a far more deleterious impact upon metallurgical

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recoveries, based upon the experience from the more favourable ores encountered in Rosmann East. The gangue materials in the host rocks at Rosmann East have noticeably degraded in short periods, causing adverse percolation in the heap leach cells. The initial very favourable performance of the “new generation” of leach cell pads reflects the screening and rejection of the fines material from Rosmann East. It is anticipated that rejection of screened material from Paltridge North will also be a viable solution for ore from that area.

Previous studies had estimated that the waste material at Paltridge North would be predominantly “free-dig” – not requiring drill and blast. Pre-stripping work had commenced at Paltridge North and before this work ceased, there was sufficient exposure to suggest that more of the waste material would require drill and blast, than previously considered.

In order to resolve these issues Phoenix Copper will undertake the necessary test work to seek solutions that will confirm the viability of Paltridge North. In this interim period, whilst Phoenix Copper is considering future mining activities, costs will be minimised, revenues will be maintained through the “new generation” of leach cell pads, and re-stacking of existing cells using all available ore from Rosmann and Paltridge South until those ore bodies have been exhausted.

Whilst the test work is being undertaken Phoenix Copper currently estimates that, at current copper prices, the copper that will be recovered from the heap leach pads, augmented with the ore derived from Rosmann East and Paltridge South, is estimated to produce total surplus cash flow exceeding \$1M within the next 4 months. This would result in Phoenix Copper's cash position at the end of July 2011, disregarding exploration expenditure and administration costs, exceeding \$3 million.

#### **Personnel**

Phoenix Copper has appointed James Fox as General Manager for the MoL operation. James brings a wealth of heap leach experience, including copper heap leach, and will be vital in the optimisation of current operations and the determination and optimisation of the Paltridge North deposit. James will commence duties at the end of April but has already provided planning and research, particularly in relation to the management of the influence of clays and percolation rates. James is currently responsible for the Murrin Murrin laterite nickel heap leach project in WA.

With James' involvement, Phoenix Copper will thoroughly investigate and review all of its options in order to continue ramping up production at the MoL operation with an objective of generating substantial cash flow which will fund aggressive exploration programmes. This will involve investigating and evaluating all of the remaining Leigh Creek assets, including Paltridge North, the Lynda and Lorna Doone deposits and the prospects at Mt Coffin and elsewhere within Leigh Creek Copper Mine Pty Ltd's three granted mining leases. Drilling at Paltridge North (to better understand the ore body and assist in refining a mine plan) and at Mt Coffin is likely to be undertaken. Phoenix Copper has commenced discussions with its mining contractor to develop more favourable mining methods at lower costs for a long-term operation at Paltridge North. Once the investigations and evaluations are completed Phoenix Copper believes it will be in a position to finalise, and announce, an updated operations plan at Leigh Creek.

### **3 DEVELOPMENT**

#### **3.1 Leigh Creek Project**

##### Paltridge North (ML5467)

To test the beneficiation properties of Paltridge North and compare to assumptions previously made in the original feasibility, a 100 tonne bulk sample of near-surface ore was crushed and screened with very favourable results.



Over 60% of the ore reported to the “fines” fraction which can either be rejected as waste or available for specific agglomeration and separate heap leaching, (cut-off grade is currently 0.4%Cu for resource determination). If this material was rejected in a regular mining sequence, the fine material could be returned to the pit and cartage costs greatly reduced as a consequence, thus lowering the operating costs.

	% Distribution	Tonnes	Grade	Cu Contained
Run of Mine Ore	100.00%	99.90	1.93%	1.928
Coarse Heap Leach Product	4.80%	4.80	10.53%	0.505
Middling Heap Leach Product	35.14%	35.10	2.23%	0.782
<b>Subtotal</b>	<b>39.94%</b>	<b>39.90</b>	<b>3.225%</b>	<b>1.287</b>
Fines	60.06%	60.00	0.542%	0.325
<b>Beneficiation Grade Multiple</b>			<b>167%</b>	

The effect of a 167% beneficiation upgrade is significant, as both the greatly increased grade and removal of much of the fines material will have a positive effect on leach kinetics and rates of copper production.

Additional work will be undertaken to optimise the “split” of sizes and therefore the appropriate screens apertures to maximise copper content in the “coarse” product for leaching.

The availability of extremely high grade product, as a minor percentage of total ore, provides opportunity for consideration of other complementary and additional treatment options, other than heap leach. Such options, for modest tonnages, may provide higher recoveries, much reduced treatment periods and therefore better cash flow and cash management.

The experience of higher grade (relative to the ore block model) and beneficiation grade multiplier with this bulk sample is similar to current experiences with mining, crushing and screening of Paltridge South ore.

#### Sample Preparation and Wet Laboratory at MoL

A wet analytical laboratory has been operating at MoL since late-2010 and provides pH, “free acid”, copper and other analyses for the heap leach operations.

Analyses of ore and drill samples are conducted off-site by a commercial laboratory at high cost and lengthy delays.

A Sample Preparation laboratory to prepare all samples, including drill cuttings, ore blast holes, and rock samples is under construction and expected to be commissioned in late-May, early-June.

This will provide lower cost and readily available analytical data for efficiently operating the mining and processing operations.

Once commissioned, the on-site facility will provide an analytical service for MoL and most of Phoenix Copper’s future exploration sampling.

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### Burra Resource & Beneficiation Update

Samples of all styles of mineralisation at Princess Royal have been collected and will be sent to the Mountain of Light mine to undergo relevant metallurgical test work that will simulate a range of colour and size beneficiation and leaching processes the ores could be subjected to if mined.

The aim of this work is to devise a process that optimises the recovery of copper from this ore body, and that can be used in resource estimation modelling.

## 4 EXPLORATION

### 4.1 LEIGH CREEK PROJECT (Figure 1)

#### 4.1.1 ML5498 – Lorna Doone

Phoenix Copper co-funded an exploration program undertaken by Zurich Resources Pty Ltd in September through December 2010, over Phoenix Copper’s ML5498 (which hosts the Lynda and Lorna Doone prospects), and the surrounding tenement EL3522 owned by Syrah Resources Ltd (where Zurich Resources are earning an interest). Both tenements contain numerous small secondary copper oxide occurrences which were worked in the early 1900’s and both areas are considered prospective for intrusive related copper and gold mineralisation.

Zurich Resources undertook geophysical surveys to explore for copper sulphide mineralisation at depth and surface geochemical sampling to explore the oxide copper occurrences. Most of the work undertaken focused on 2 main target areas, the White Lead Mine area (EL3522) and Lorna Doone Mine area (ML5498). The exploration program consisted of:

- Detailed geological mapping focusing on hydrothermal alteration
- Gridded broad spaced (100m x 300m) Field Portable X-Ray Fluorescence (FPXRF) soil analyses
- Detailed (50m line spacing) ground magnetics for approximately 320 line km
- 3D IP/Resistivity - initially 12 double offset dipole-dipole arrays focused over LLD

The geological mapping completed at 1:5000 scale, has delineated broad zones of similar lithology and alteration. Copper, arsenic, antimony and silver results from the FPXRF program mapped strong trends paralleling and extending the known zones of copper mineralisation. 3D inversions of the



Figure 1: Leigh Creek Project Prospect Location plan.



dipole-dipole chargeability and resistivity data have mapped IP anomalies at depth beneath the known Lynda and Lorna Doone secondary copper mineralisation.

The results of this exploration program are encouraging and support a model for intrusion of copper rich mafic-intermediate magmas into the sedimentary package causing localised brecciation, silicification, creation of quartz - sulphide stock work veins and widespread sericite alteration.

Drilling to test the deep anomalies generated is planned for early 2012 following shallow copper oxide resource drilling around the Lynda and Lorna Doone indicated resources.

## 4.2 BURRA PROJECT

### 4.2.1 Princess Royal

Metallurgical leach test work that was to undertaken at AMMTEC in Perth to confirm whether the deposit is amenable to low cost heap leach will now be conducted at the MoL mine site at Leigh Creek. The material will undergo relevant metallurgical test work that will simulate a range of colour and size beneficiation and leaching processes the ores could be subjected to, if mined. The aim of this work is to devise a process that optimises the recovery of copper from this copper carbonate ore body, and that can be used in resource estimation modelling. This work is expected to be completed after June 2011.

## 4.3 MONGOLATA PROJECT

### 4.3.1 Redbanks EL4419, Anabama EL3971 and The Gums EL4504

5351 FPXRF analyses were taken on the Mongolata tenements Mongolata EL4233, Burra North EL3716, Redbanks EL4419, Anabama EL3971 and The Gums EL4504 during the period, taking the

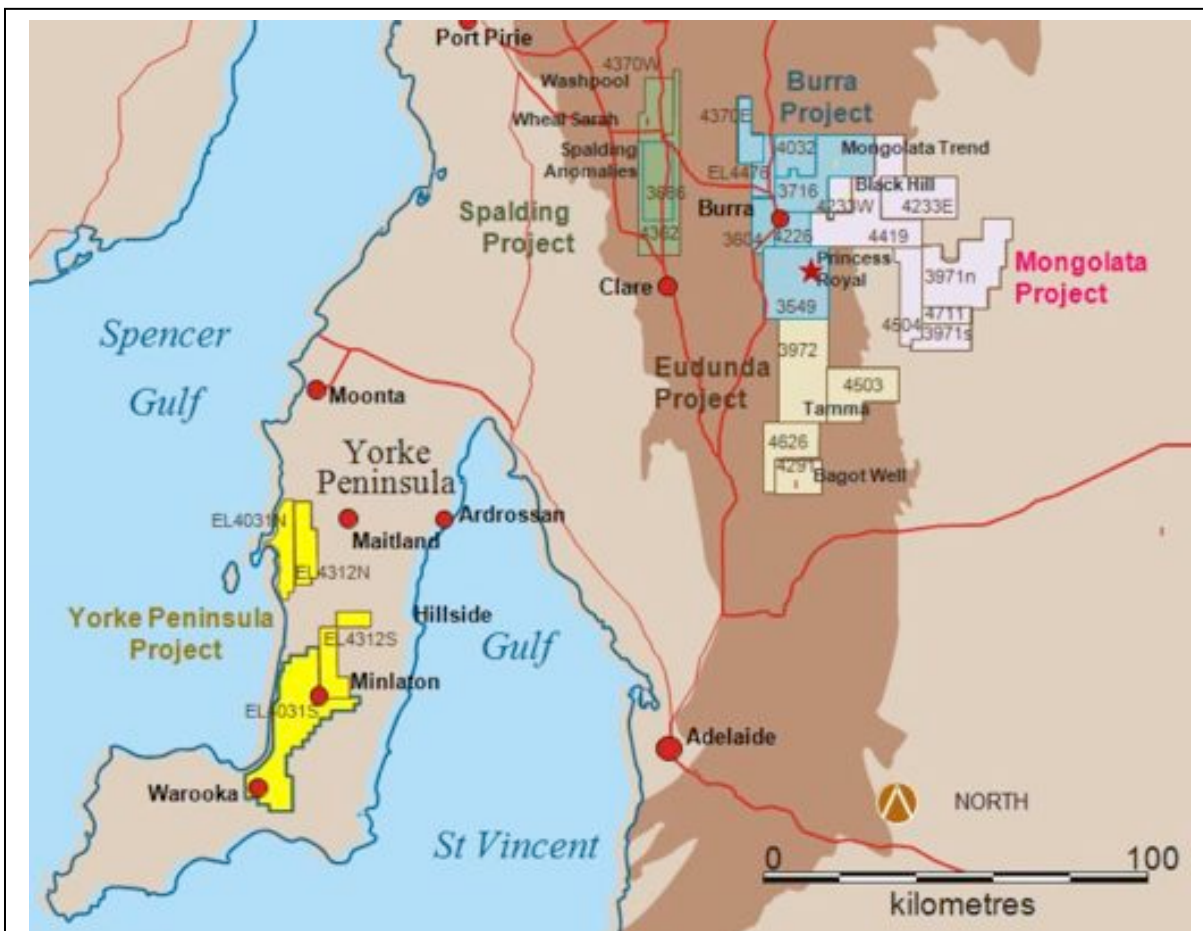
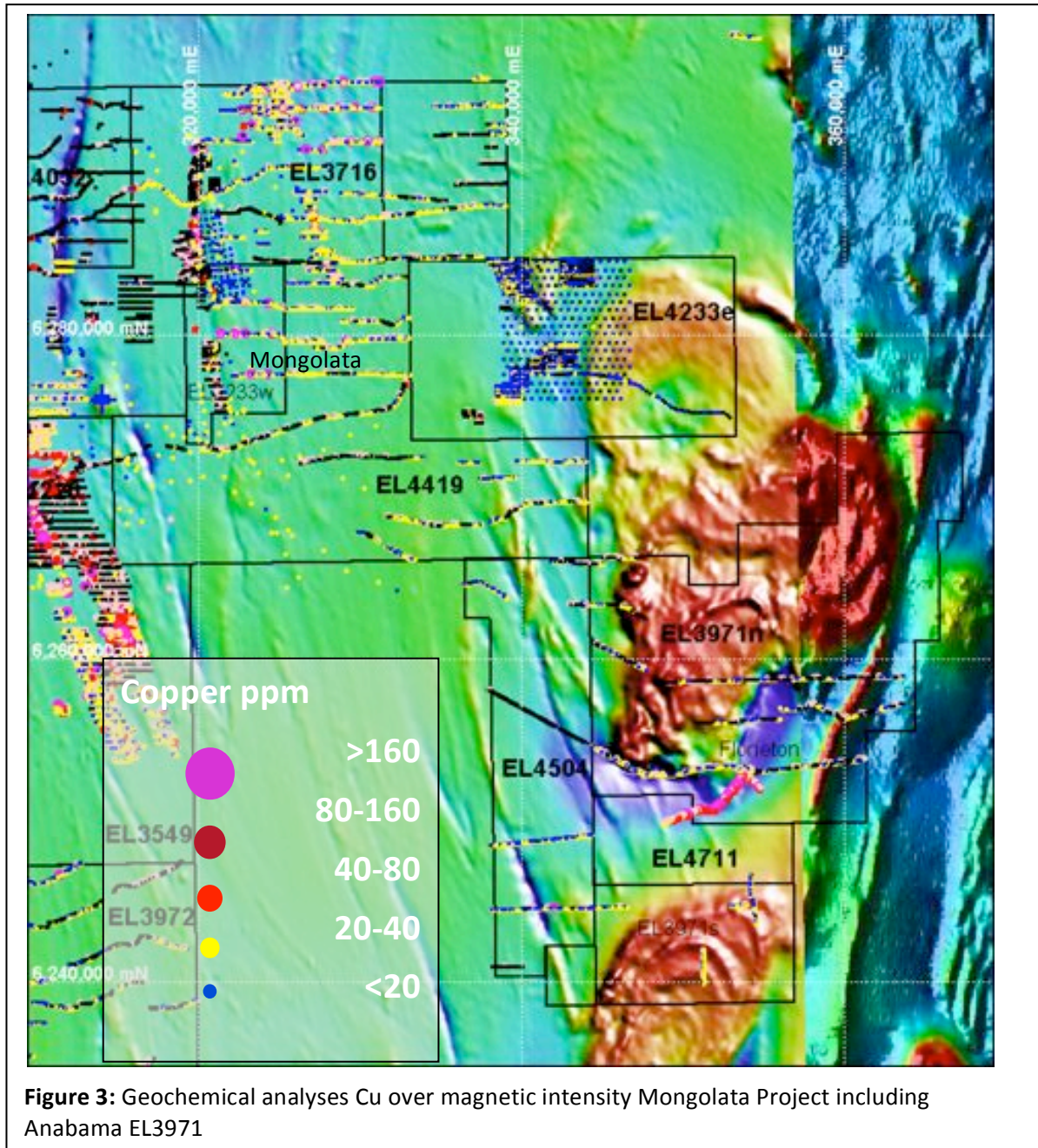


Figure 2: Burra-Eudunda-Spalding and Yorke Peninsula tenement and prospect location plan.

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total of analyses taken on the Mongolata project to 24,200. Targets generated this period compliment the Mongolata gold trend defined in 2008-2009 and Black Hill gold trend found in 2009-10. In work from this period Cu is found to be anomalous around the rim of the magnetic high centered in EL3971, see figure 3 below. Note the large high just south of the magnetic anomaly at Florieton. Once more detailed sampling has better defined specific targets Rotary Air Blast or Aircore drilling will be used to test these anomalies.



**Figure 3:** Geochemical analyses Cu over magnetic intensity Mongolata Project including Anabama EL3971

#### 4.4 EUDUNDA PROJECT

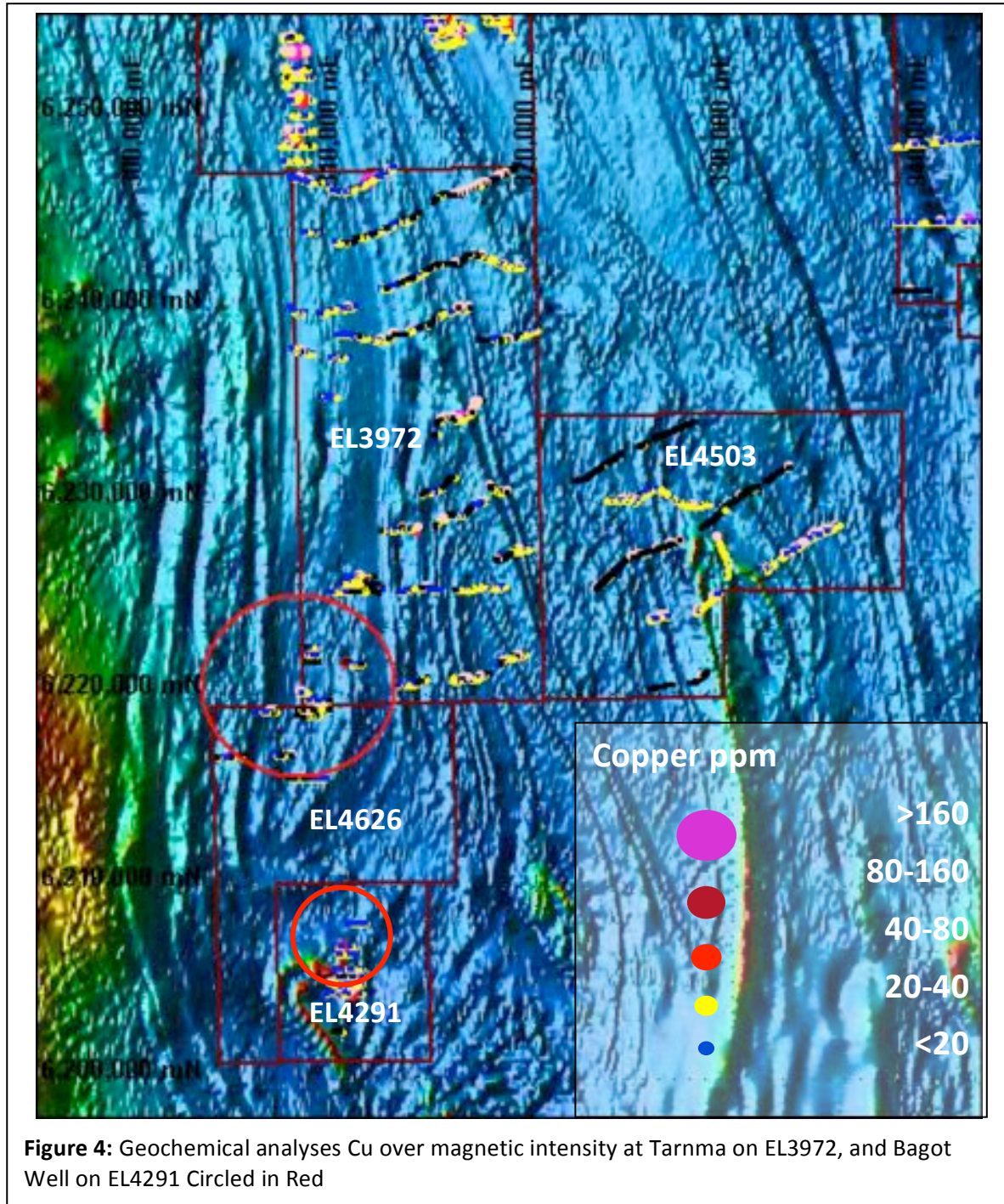
##### 4.4.1 Tarnma EL3972, Bagot Well EL4291, Bagot Well North EL4626 and Australia Plains EL4503

5351 FPXRF analyses were taken on the Eudunda tenements Tarnma EL3972, Bagot Well EL4291, Bagot Well North EL4626 and Australia Plains EL4503 during the period. 6027 analyses have been

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taken in total on these tenements and zones of particular interest are found around Tarnma in the south west of EL3972 (and in the north west of EL4626) and in central EL4291 (see **figure 4** below). Rotary Air Blast or Aircore drilling of these anomalies will ensue





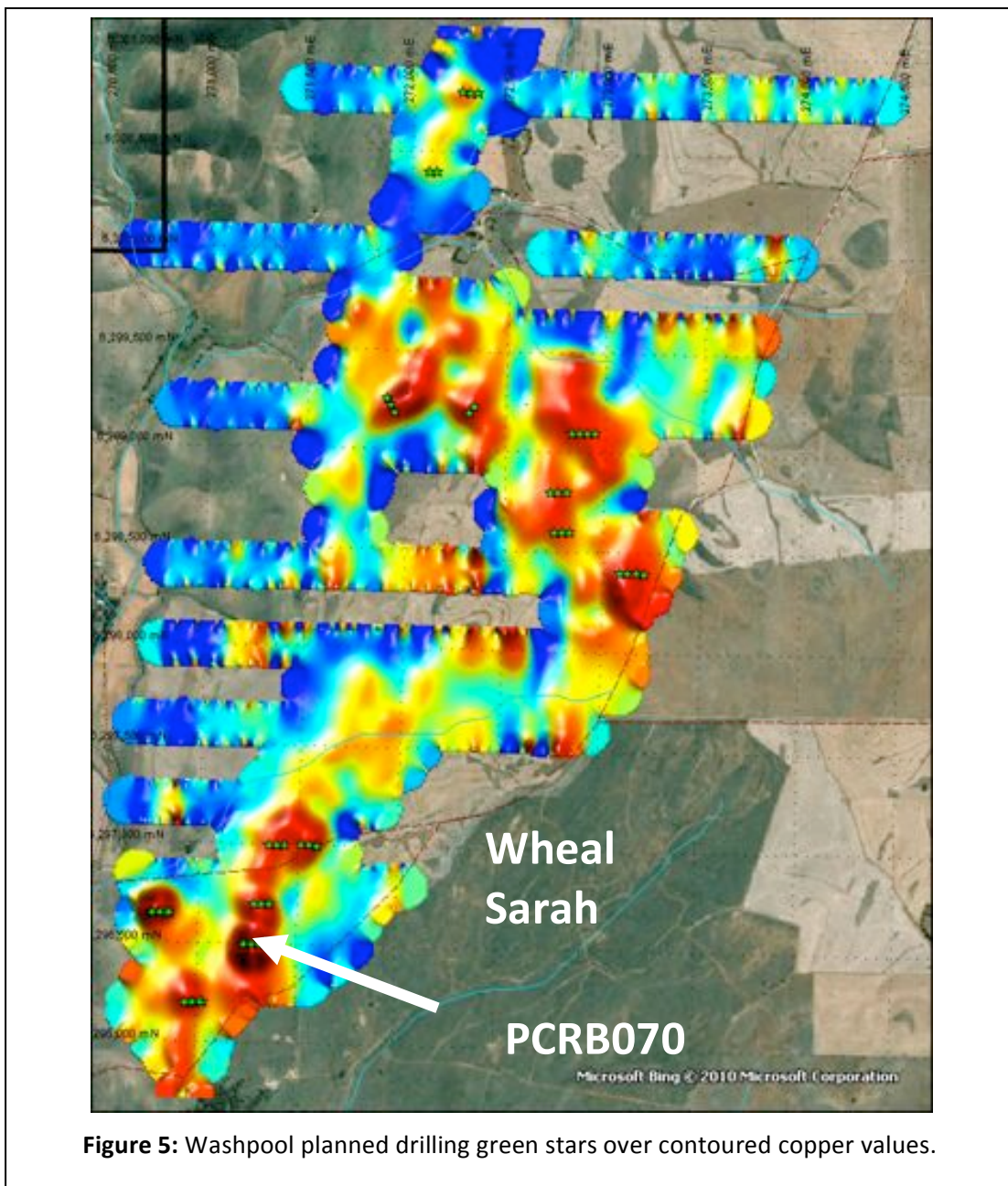
#### 4.5 SPALDING PROJECT

##### 4.5.1 Washpool and Wheal Sarah RAB Drilling

A Rotary Air Blast (RAB) drilling program commenced on the 4<sup>th</sup> of April 2011 to test the many gossanous outcrops and significant copper trends identified by FPXRF analysis in the Spalding Inlier in 2010. Drilling commenced near the old Wheal Sarah copper mine which produced 6,500kg of copper metal from 24 tons of ore at 27% between 1858 and 1918.

To date 29 holes PCRB061-089 for 1069m have been completed with the most significant Field Portable X ray Fluorescence copper analysis being 9m at ~0.50% Cu from 2m in PCRB070 located 400m east of the old Wheal Sarah workings, see **figure 5**.

Details of this program will be presented in the June quarterly report.

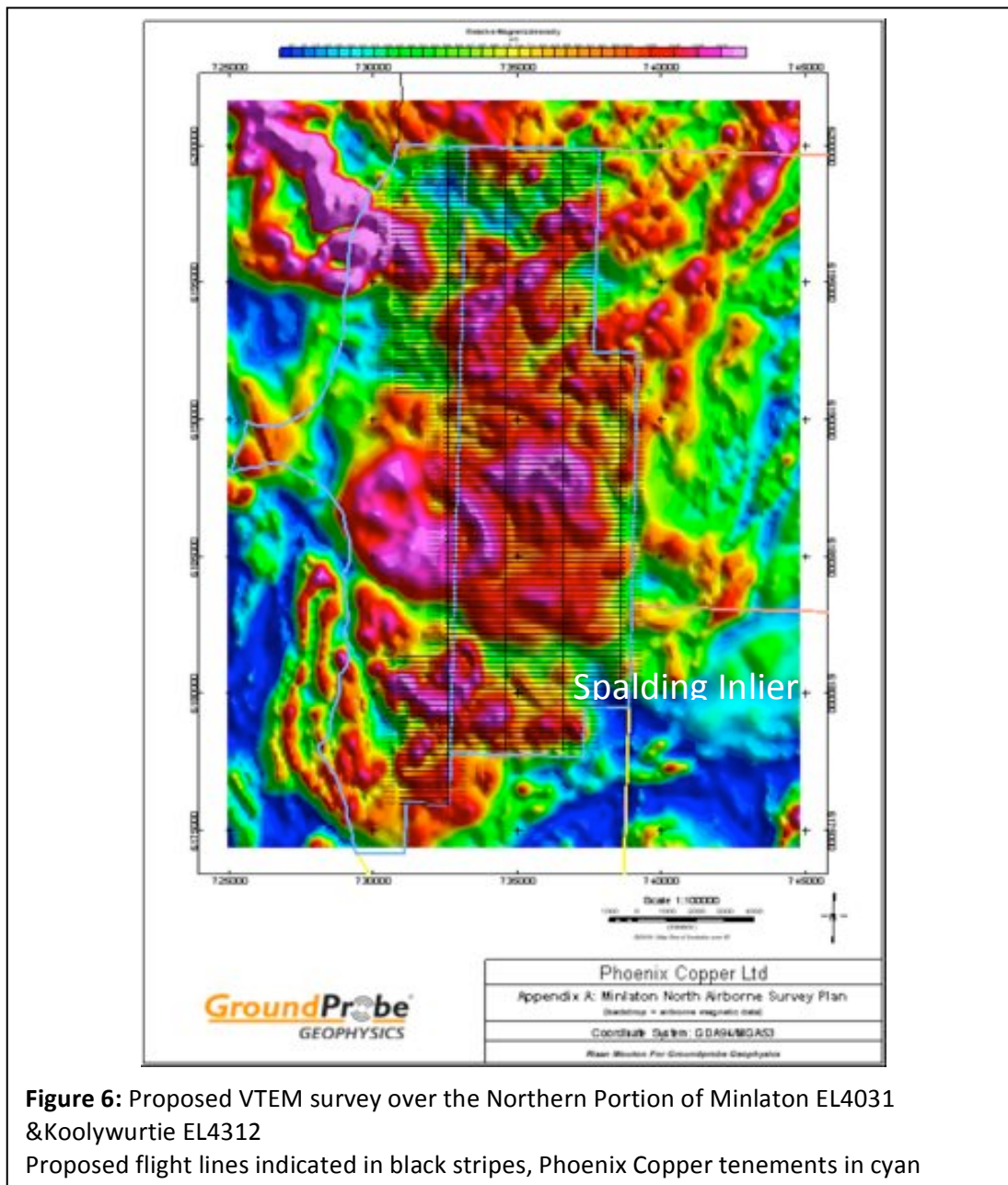




## 4.6 YORKE PENINSULA

### 4.6.1 VTEM Survey

The planned “Falcon Gravity” and “VTEM,” (Versatile Time-Domain Electro-Magnetics), geophysical surveys that use airborne platforms to map possible mineralisation associated with inferred geological structures and targets generated from aeromagnetic data interpretation that was to begin in March 2011 has been postponed until later in the year.



**Figure 6:** Proposed VTEM survey over the Northern Portion of Minlaton EL4031 &Koolywurtie EL4312  
Proposed flight lines indicated in black stripes, Phoenix Copper tenements in cyan

The survey that is now aimed to begin in the second half of 2011 and is expected to be completed within 3-4 days.

Once data has been processed, collated and interpreted, final data to assist in the identification of drill targets is expected to be available within two months and drilling could then ensue.

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Specific area ground gravity surveys may also assist in the final delineation of drilling targets, but a decision on this method will be reserved until the full array of VTEM data has been assessed.

## **5 FINANCIAL & CORPORATE**

### **5.1 Finance**

Phoenix Copper held a cash balance of \$2.32M at 31 March 2011.

During the March quarter, the Company received cash receipts of \$593,000 through the sale of 76.85 tonne of copper cement from the Mountain of Light operation. Production costs of approximately \$1.45M were incurred for the quarter which included costs associated with the mining of the Rosmann East pit, stacking of fresh ore on the new cell, significant maintenance costs associated with the refurbishment of cone 2 in addition to the ongoing cost of production of copper cement product through the processing plant. Additionally revenues relating to two copper shipments that occurred in late March were yet to be received by the end of the quarter.

A total of \$425,000 in capital purchases predominantly for the Mountain of Light operation, including construction of leach pad cell 7, was incurred for the quarter. Exploration and evaluation payments made by the Company over the previous three months were \$254,000.

### **5.2 Equity**

At 31 March 2011, the Company had on issue a total of 92,949,512 fully paid ordinary shares, 1,000,000 performance rights, 1,500,000 performance shares and 15,976,665 unlisted options exercisable at various prices with varying expiry dates.

On 7 January 2011 an employee exercised 35,000 options to convert to 35,000 ordinary fully paid shares at an exercise price of 14.6 cents per option.

On 11 March 2011, the Company completed a placement of 7,053,320 fully paid ordinary shares at 28 cents each and 2,351,102 free options (each option exercisable for one fully paid ordinary share at an exercise price of 35 cents within a 2 year exercise period ending 11 March 2013) to raise a total of \$1,974,930 before expenses within Phoenix Copper's 15% placement limit under Listing Rule 7.1.

### **COMPETENT PERSON'S STATEMENT**

The information in this report that relates to Exploration Results is based on and accurately reflects information compiled by Mr Mark Manly, who is a fulltime employee of Phoenix Copper Limited and a Member of The Australasian Institute of Mining and Metallurgy. Mr Manly has sufficient experience relevant to the style of mineralisation and the type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Manly consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Paul J Dowd, Managing Director

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