



SA - The Environment for Exploration Success

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Managing Director

2 December 2009





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A Structured Approach to Exploration

- ❖ Tenement acquisition - increase strategic landholding
- ❖ “slow to the drill”
- ❖ Favoured a more strategic approach
- ❖ Employing appropriate use of modern technology to better identify drill targets defined by low-cost, high-confidence, geochemistry and geophysics.
- ❖ Developed relationships with Stakeholders
- ❖ Substantially increased data base
- ❖ Commenced beneficiation test work

Pipeline to Development Nov 2008

PHASE 1 GREENFIELDS PROJECTS

BURRA NORTH	EL3716,
MONGOLATA	EL4233,
BURRA WEST	EL3604,
SPALDING	EL3686,
MINLATON	EL4031,
MT BRYAN	EL4032

PHASE 2 BROWNFIELDS PROJECTS

BURRA CENTRAL – EL4226

PHASE 3 ADVANCED PROJECTS

**NO WALKUP DRILL TARGETS
PROJECT DATA REVIEW
GEOLOGICAL MAPPING
GEOCHEMICAL SAMPLING
GEOPHYSICAL SURVEYING**

**TARGETS TO DRILL
RAB DRILLING
RC DRILLING
DIAMOND DRILLING
GEOPHYSICAL SURVEYING**

**POTENTIAL RESOURCES
RESOURCE DRILLING
METALLURGICAL SAMPLING
ENVIRONMENTAL STUDY
FEASIBILITY STUDY**

Field Supervisor Peter Cleary taking
FPXRF analysis at Minlaton



2004/06/19

Monster Mine Open Pit



Pipeline to Development Nov 09

PHASE 1 GREENFIELDS PROJECTS

BURRA WEST	EL3604,
MT BRYAN	EL4032,
KOOLYWURTIE	EL4312
BAGOT WELL	EL4291
MT TINLINE	EL4362
REDBANKS	ELA255/09
HALLET HILL	ELA316/09
WASHPOOL	ELA205/09

PHASE 2 BROWNFIELDS PROJECTS

SPALDING	EL3686
BURRA CENTRAL	EL4226,
MONGOLATA	EL4233,
PRINCESS ROYAL	EL3549,
BLACK HILL	EL3716,
MINLATON	EL4031

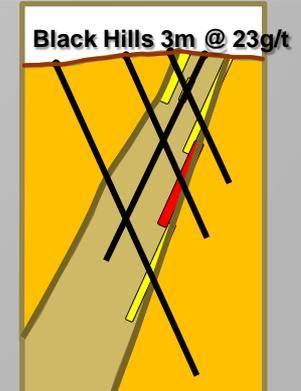
PHASE 3 ADVANCED PROJECTS

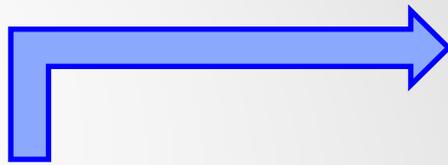
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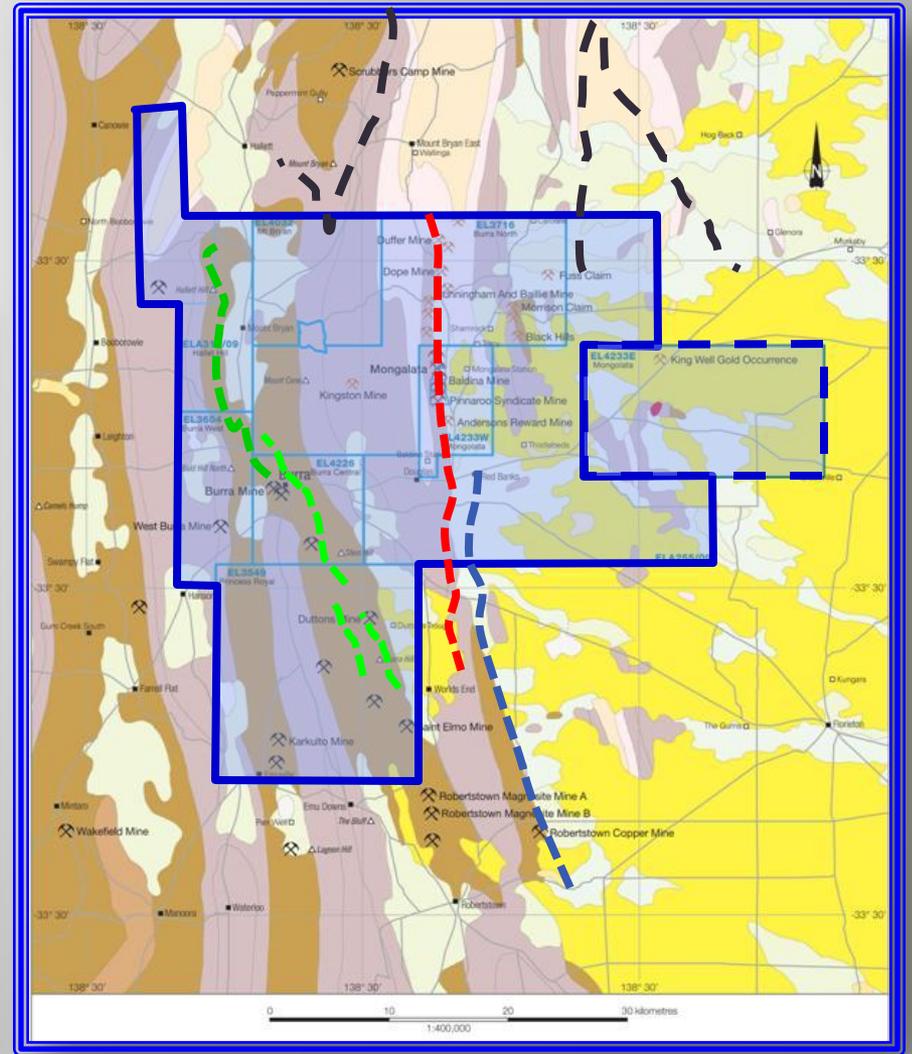
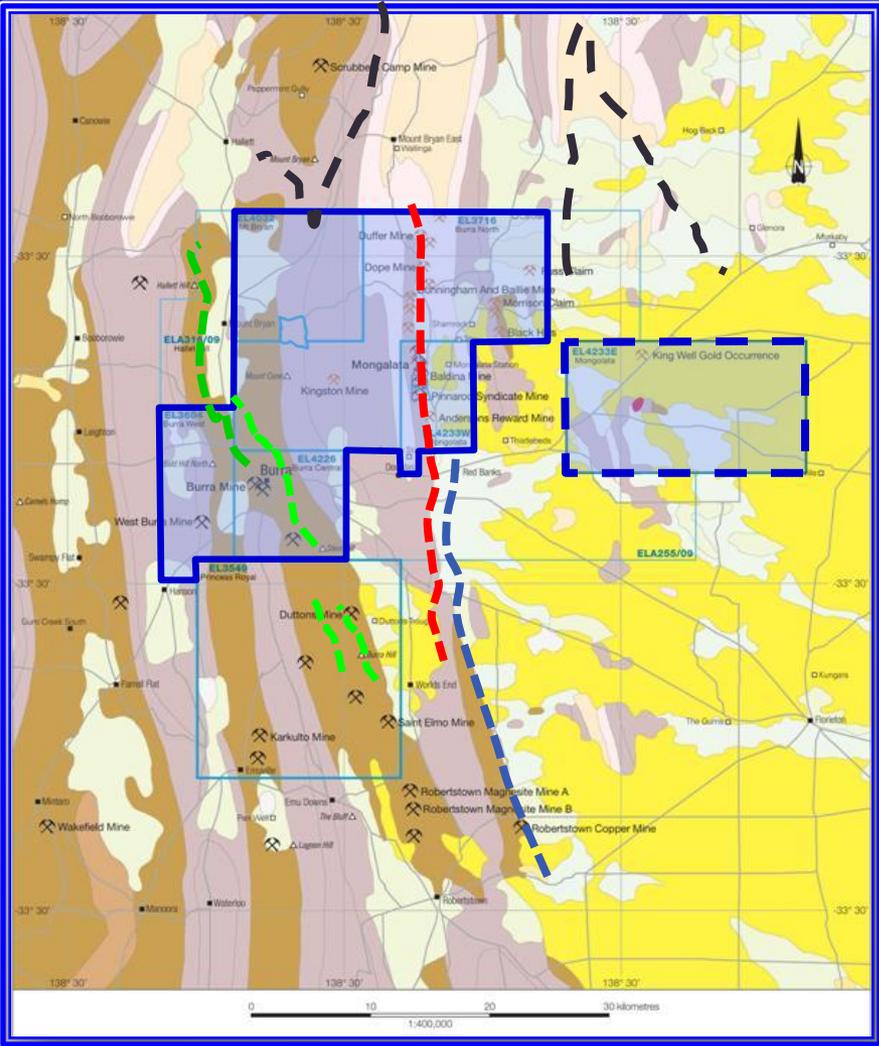
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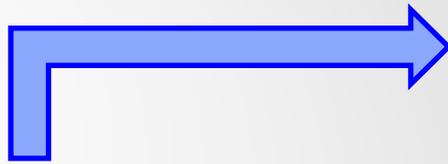


Burra Area Initially 5 Tenements – 5 ELs 871 km²



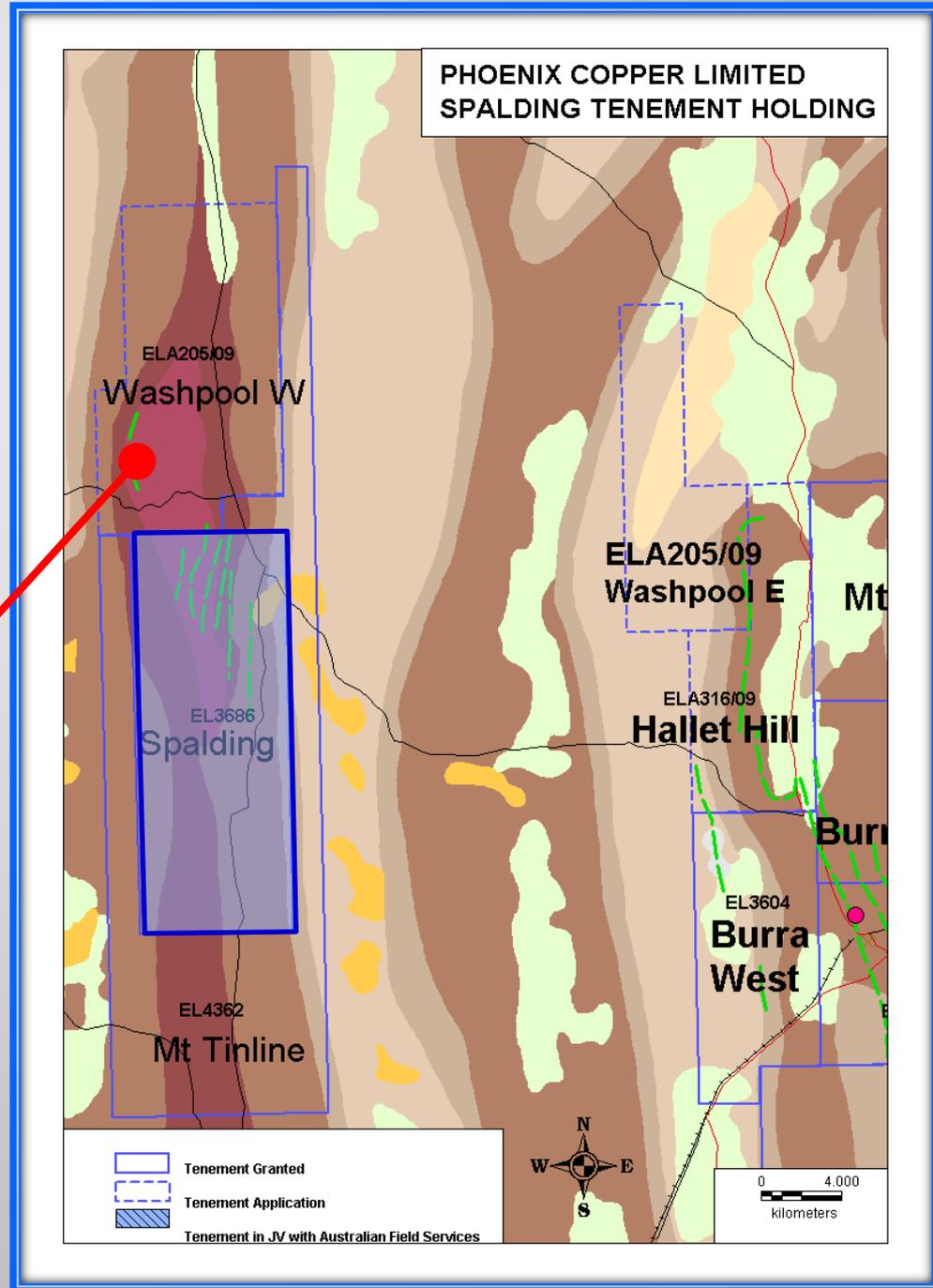
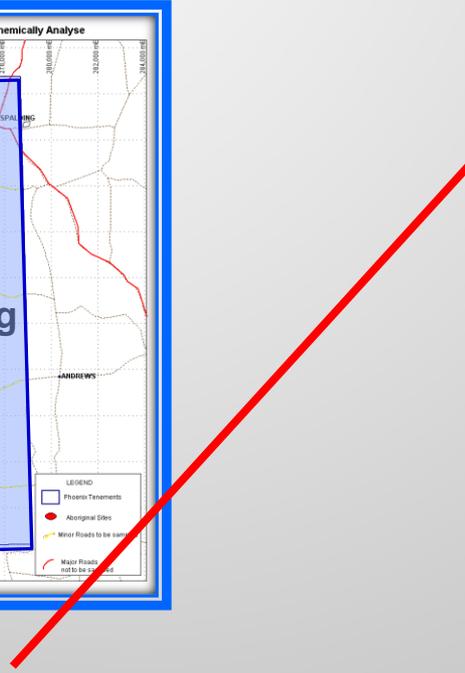
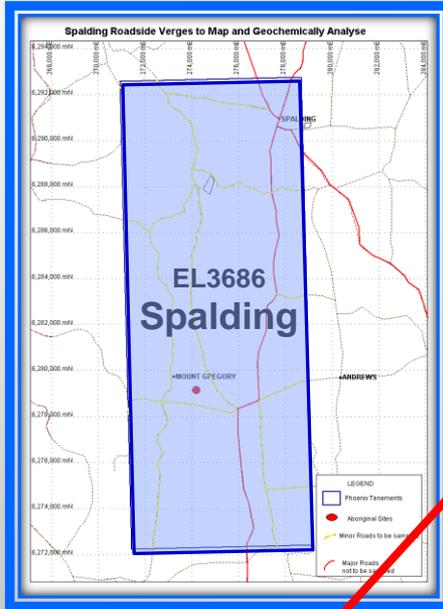
**Currently 9 tenements –
6 ELs & 3 ELAs > 1,800 km²**

— — — — — Phosphate trend lines - - - - - Manganese trend lines
- - - - - Copper trend lines - - - - - Gold trend lines



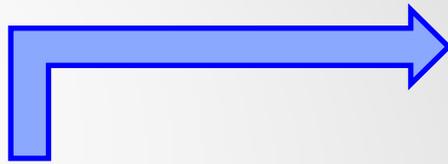
Spalding Area Initially 1 x EL
157 km²

Currently 2 x ELs & 1 x ELA
>563 km²

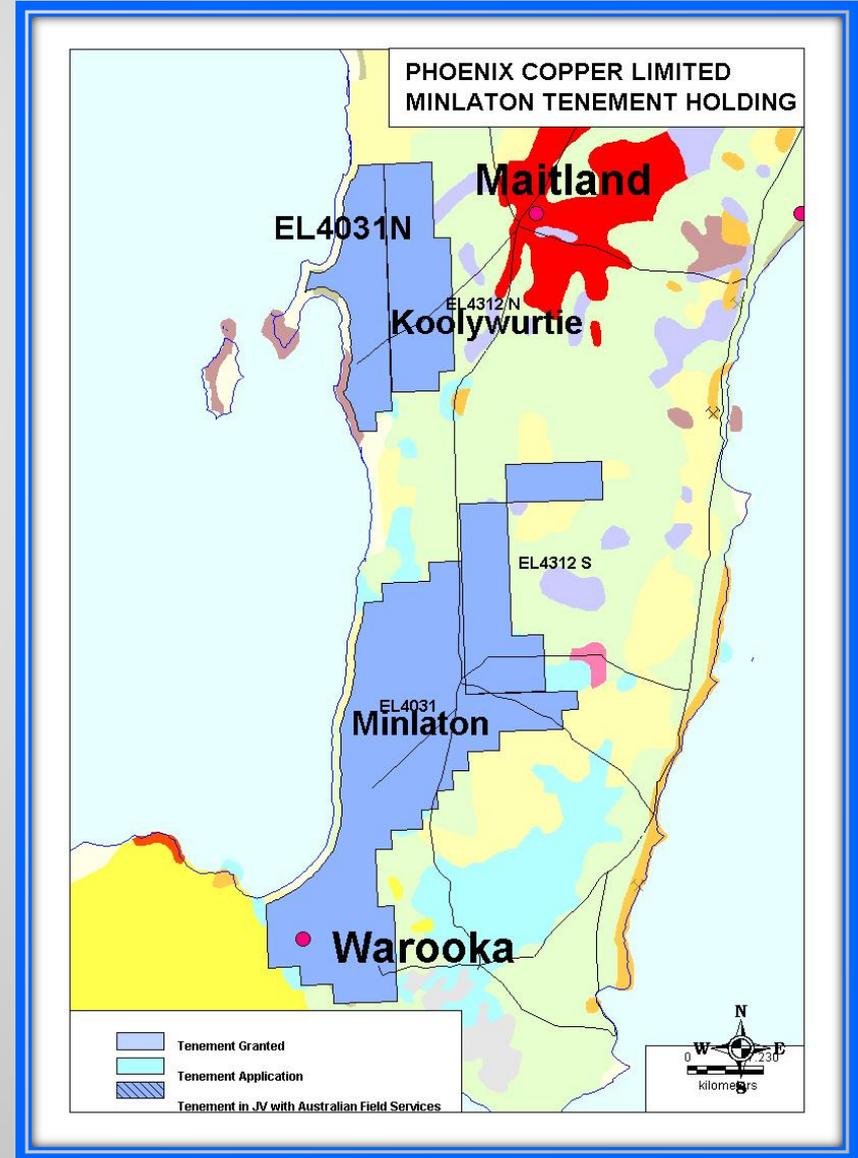
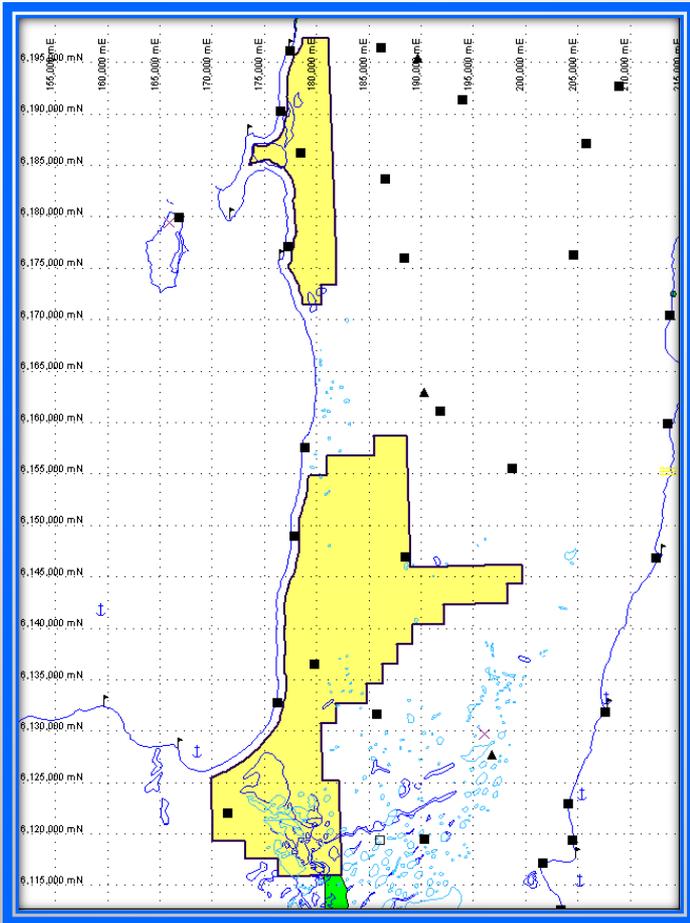


Covers Nth portion of Spalding inlier.
Wheal Sarah; Cut Creek; New Burra Mines

 Copper trend lines



Minlaton Area Initially 1 x ELA 547km²



Currently 2 x ELs >802 km²

Six Project Areas

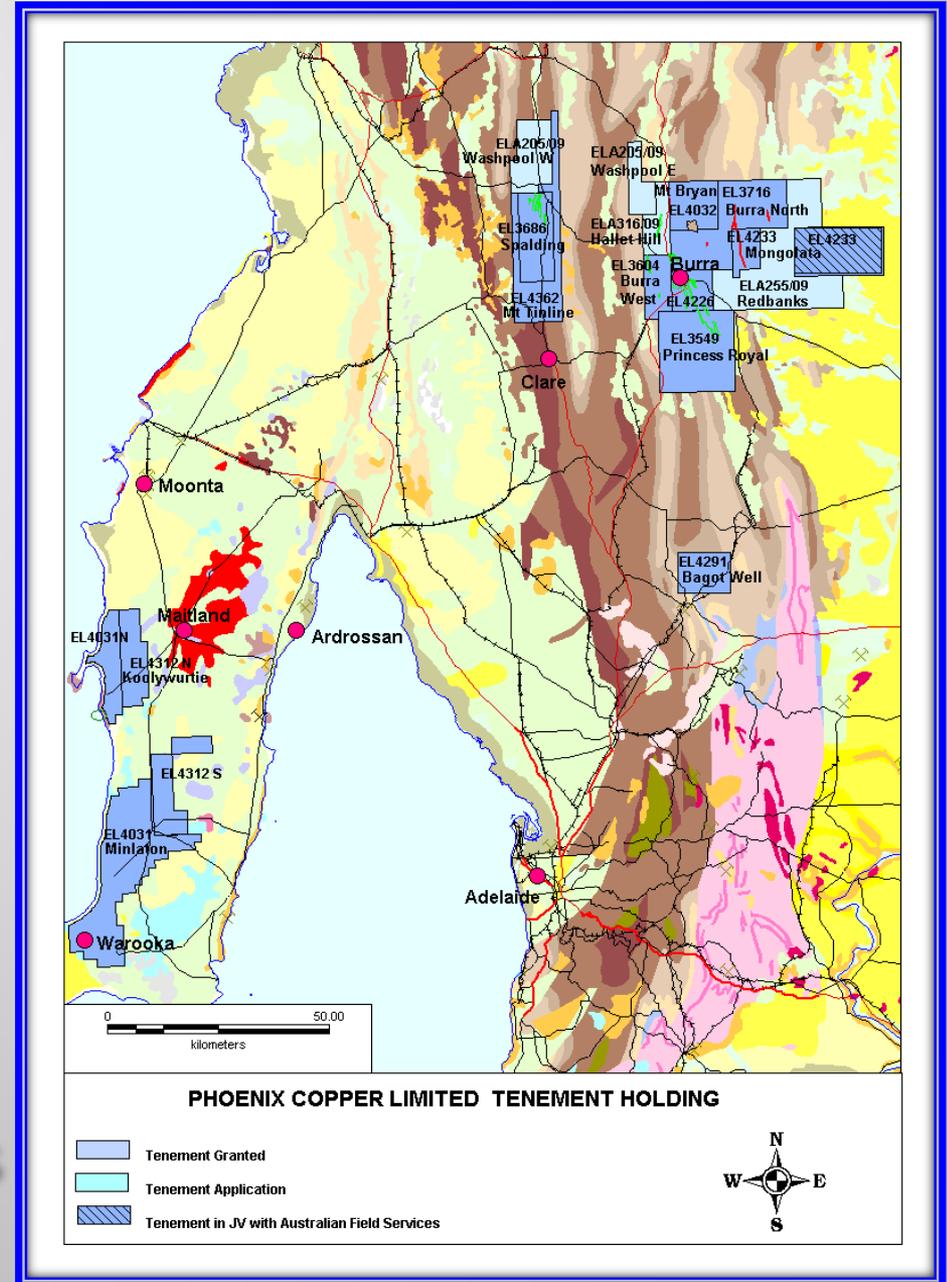
- Mongolata
- Princess Royal
- Spalding
- Burra
- Minlaton
- Kapunda (Bagot Well)

Initially

1,575 km²; 5 ELs & 2 ELAs

Currently

3,159 km²; 11 ELs & 3 ELAs

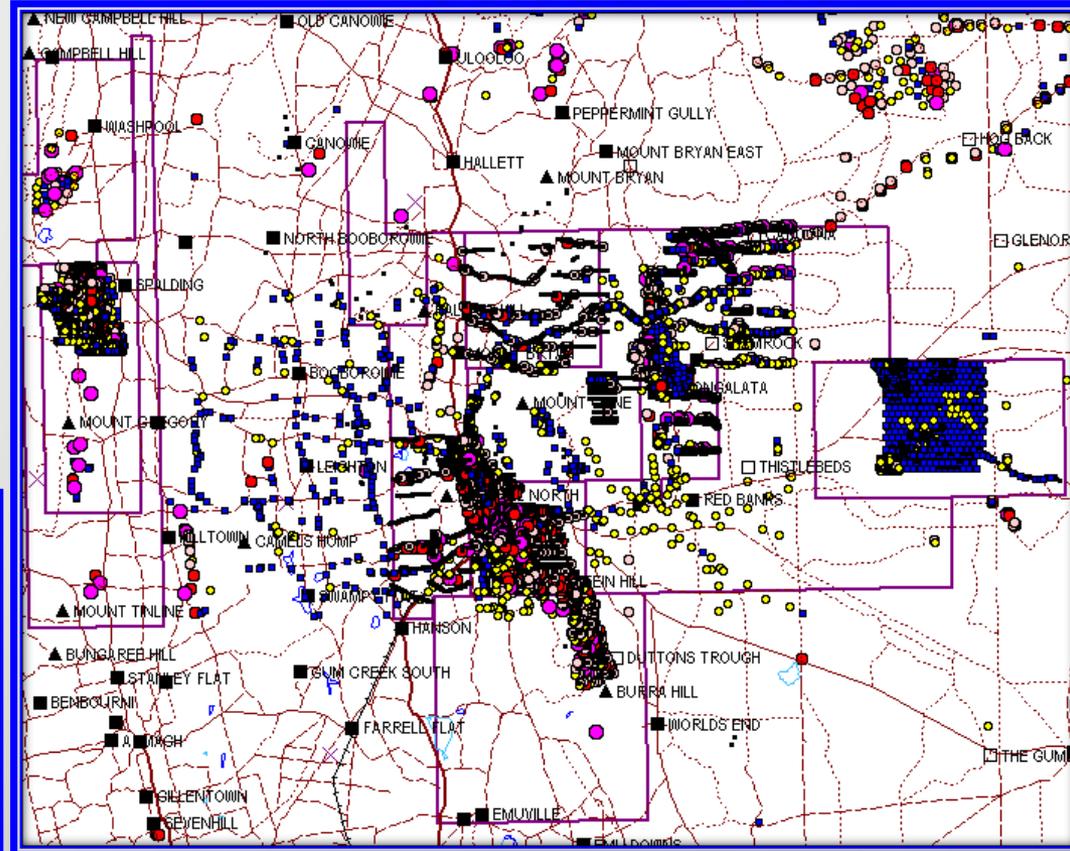


Geochemical Sampling

October 2009

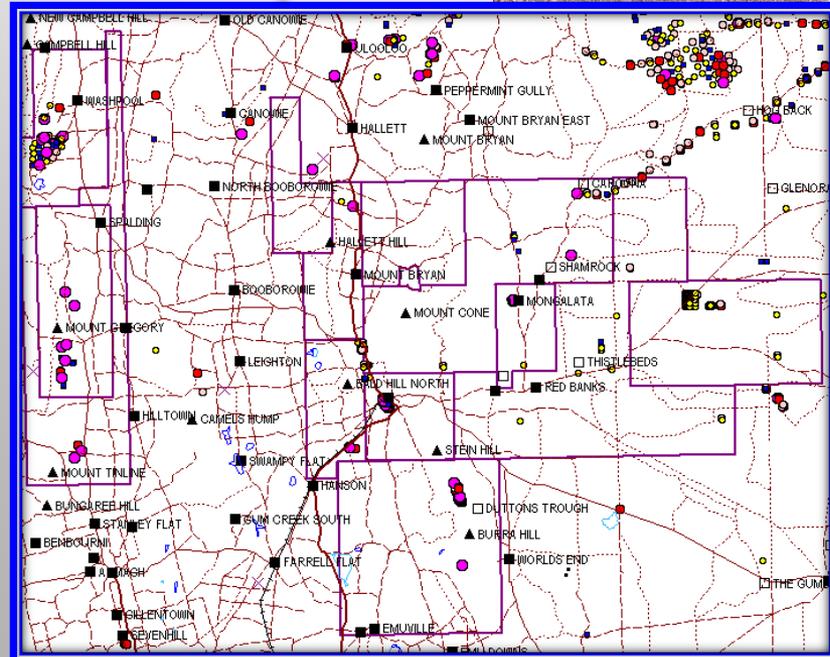


- >36,000 XRF (Σ40k) analyses
15mths to Oct 09.
- Conventional cost \$1,332,000 - 27 element analyses
February 2009



geochem_denorm by CU_PPM

●	160 to 460,000	(26648)
●	80 to 160	(12726)
○	40 to 80	(16138)
●	20 to 40	(24561)
■	1 to 20	(32995)
■	-10,000 to 1	(66476)



Burra/Spalding Geochem Au/Cu

Targets to Oct 09.

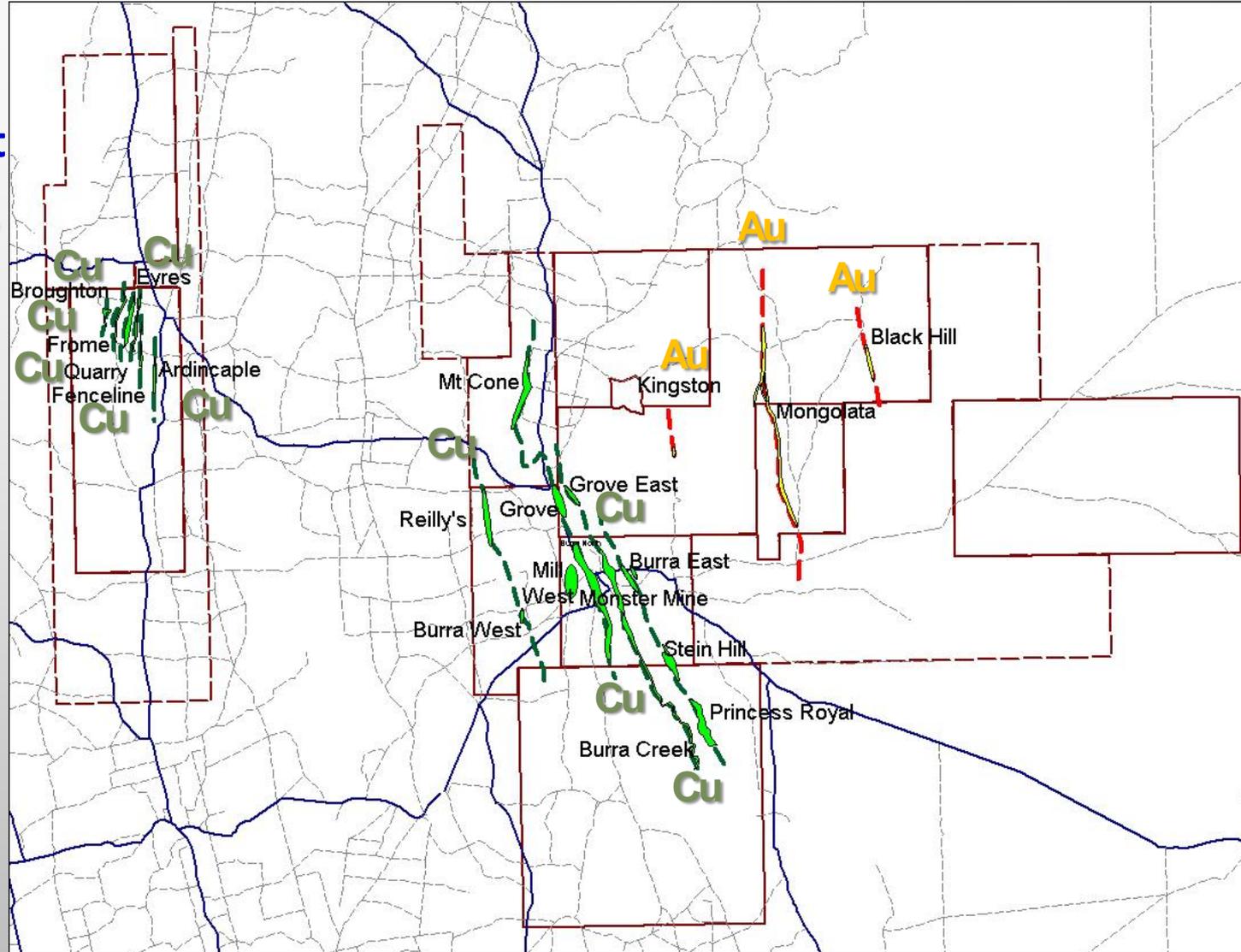
17 anomalies

- On 13 significant geochem trends

- 10 Copper, and

- 3 Gold

in soils sampling to October 09.

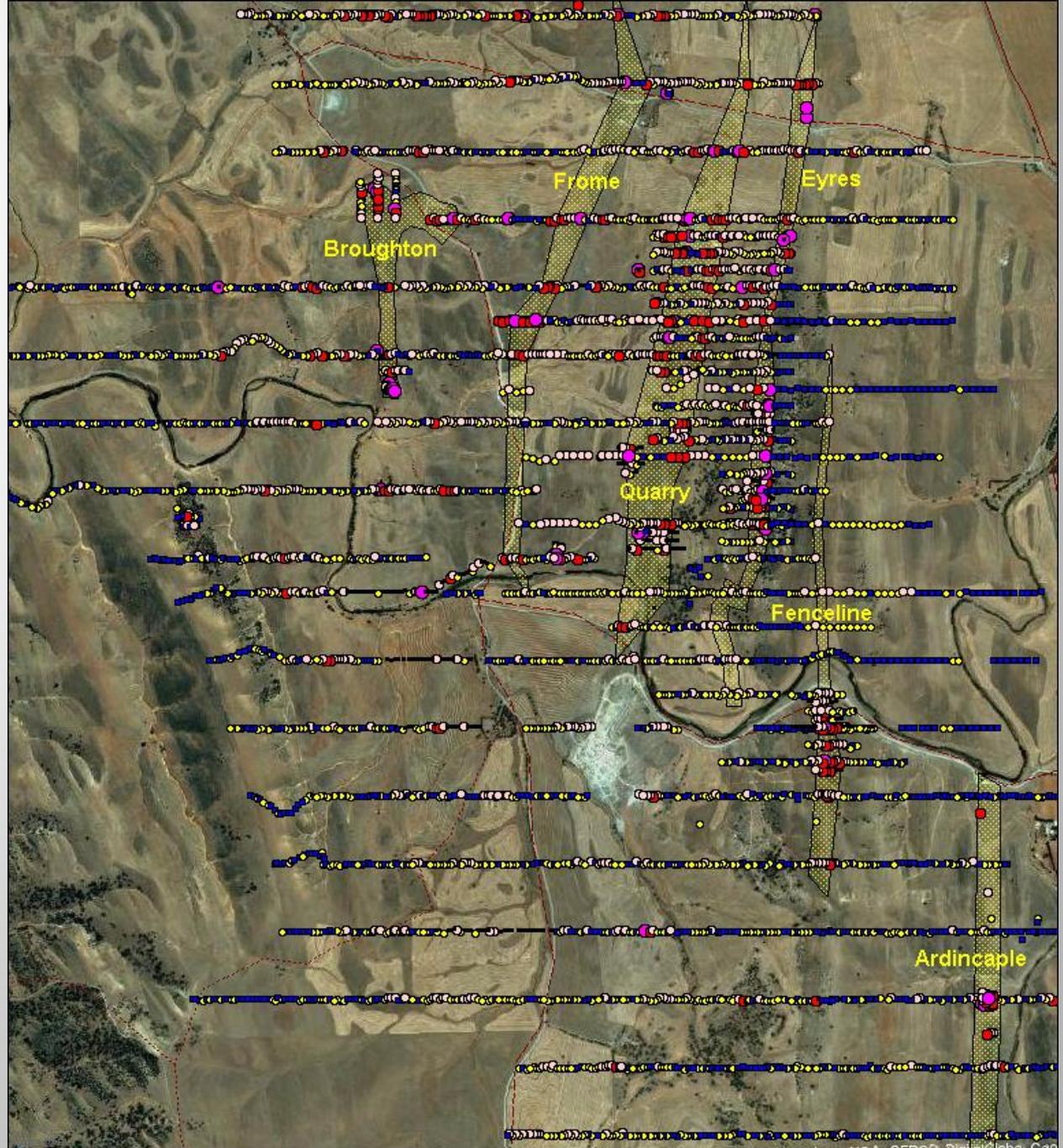


Spalding Geochemical Anomalies Identified

No previous drill holes
 have tested the 6 x
 Copper geochemical
 anomalies at Spalding,
 40km west of Burra.

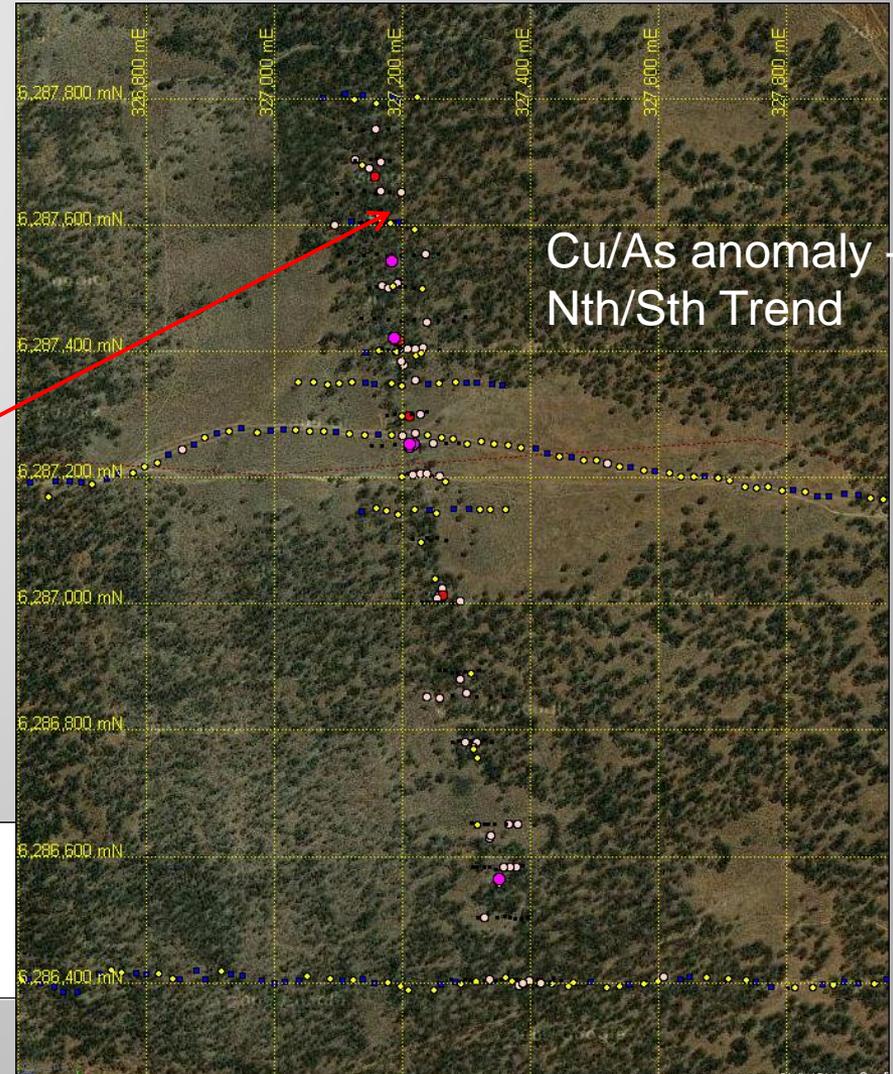
Niton_2008 by Cu

●	160 to 460,000	(218)
●	80 to 160	(339)
○	40 to 80	(734)
●	20 to 40	(9)
▪	-10,000 to 1	(9580)
	all others	(1)



Mongolata Geochemical Anomalies Identified

Cu/Au surface soil anomaly - historic workings at Black Hill, 7.3km NE of the Mongolata battery. Encouraging soils analyses up to 0.60 g/t Au and 0.16% Cu - 1.5 km NNW trending anomaly.

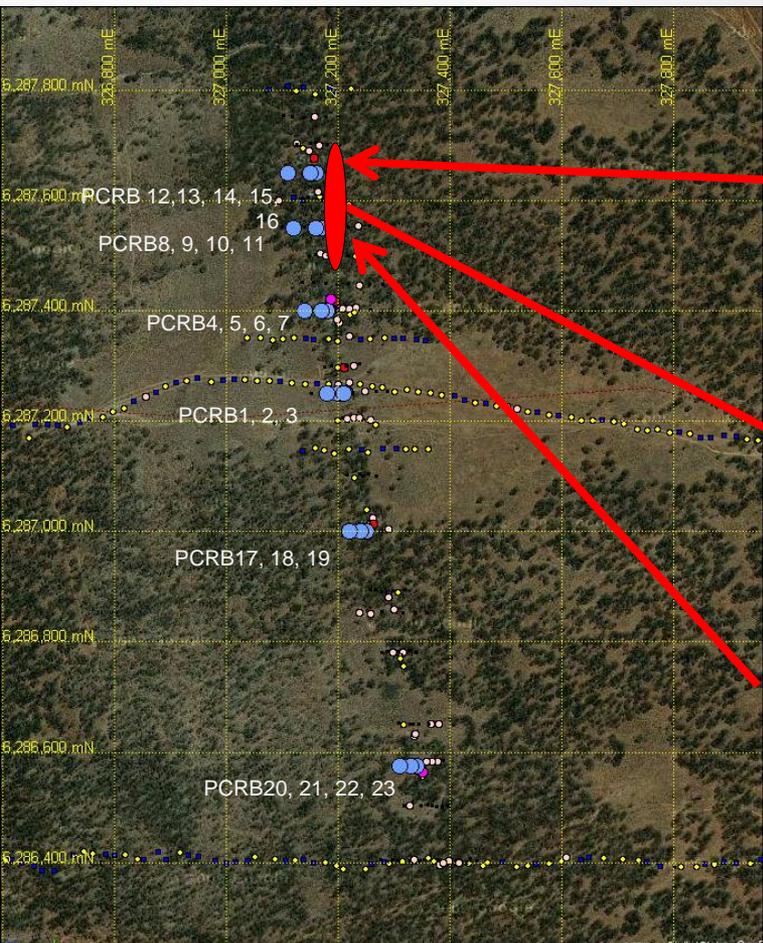


LEGEND:

Niton_2008 by Cu

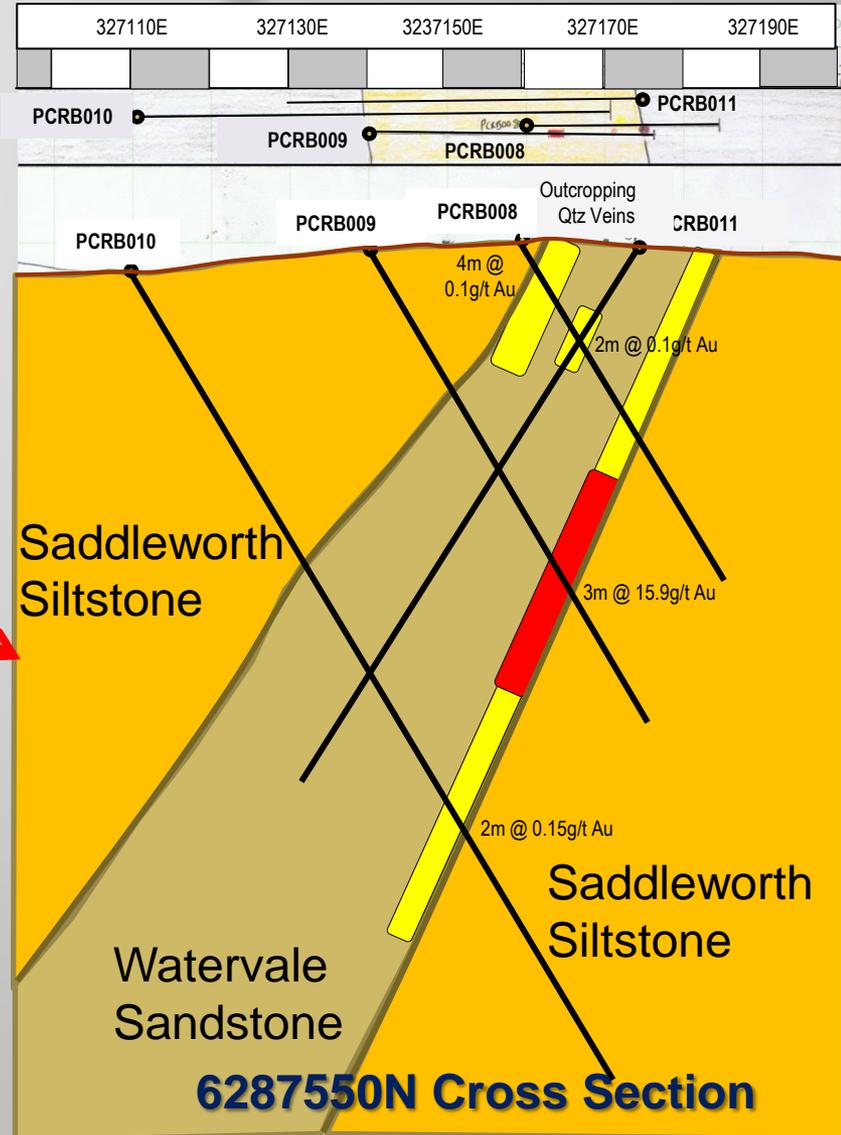
● (pink)	160 to 460,000	(218)
● (red)	80 to 160	(339)
○ (white)	40 to 80	(734)
● (yellow)	20 to 40	(9)
■ (blue)	-10,000 to	1 (9580)
■ (white)	all others	(1)

Black Hill Gold Prospect Recent Drilling Results



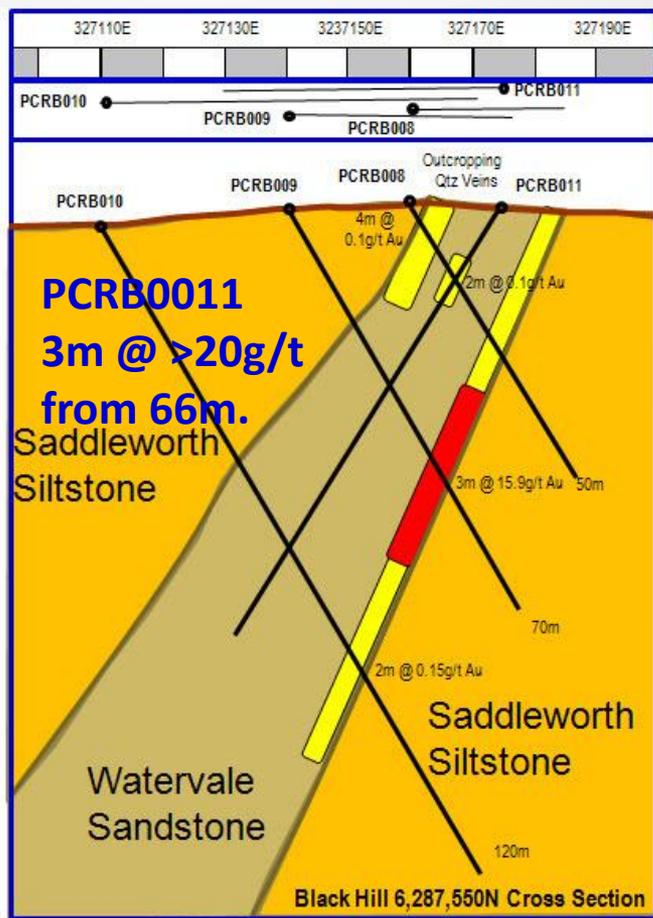
PCRB0014
6m @ 23g/t
from 66m.

PCRB0011
3m @ >20g/t
from 66m.



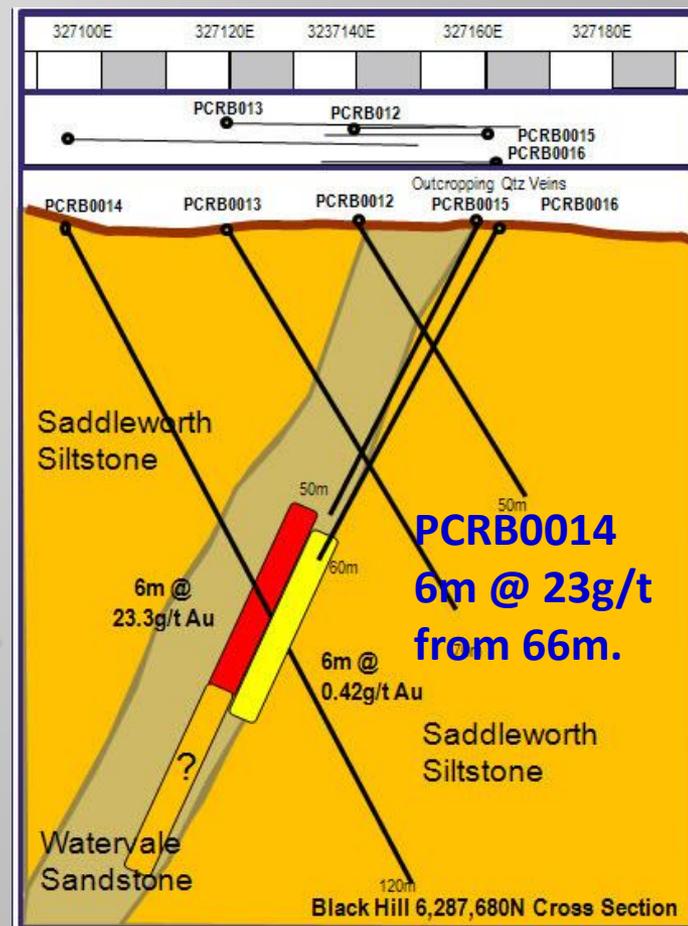
Black Hill Gold Prospect

Both holes interpreted same structural & stratigraphic position; -60° west dipping, sheared, Qtz carbonate veined, Fe, Cu & Mn rich, F/W sheared contact of Watervale Sandstone within Saddleworth Siltstone



PCR0014 – 6m at 23.35 g/t

1m	66m to 67m	23.9g/t
1m	67m to 68m	48.39g/t
1m	68m to 69m	19.79g/t
1m	69m to 70m	26.79g/t
1m	70m to 71m	7.379g/t
1m	71m to 72m	14.19g/t



Minlaton Geochemical Anomalies Identified

Geophysics Reviewed

971 FPXRF analyses, 17 soil samples and 50 calcrete samples taken.

Three Targets Identified

1. Balgowan

Moonta style Cu/Au, a NW-trending corridor of magnetite/silica alteration associated with Hiltaba Suite granitoids.

2. Roger Corner Extended

Bore hosts elevated Cu in water overlying a possible deep crustal lineament that could be a conduit for mineralising fluids.

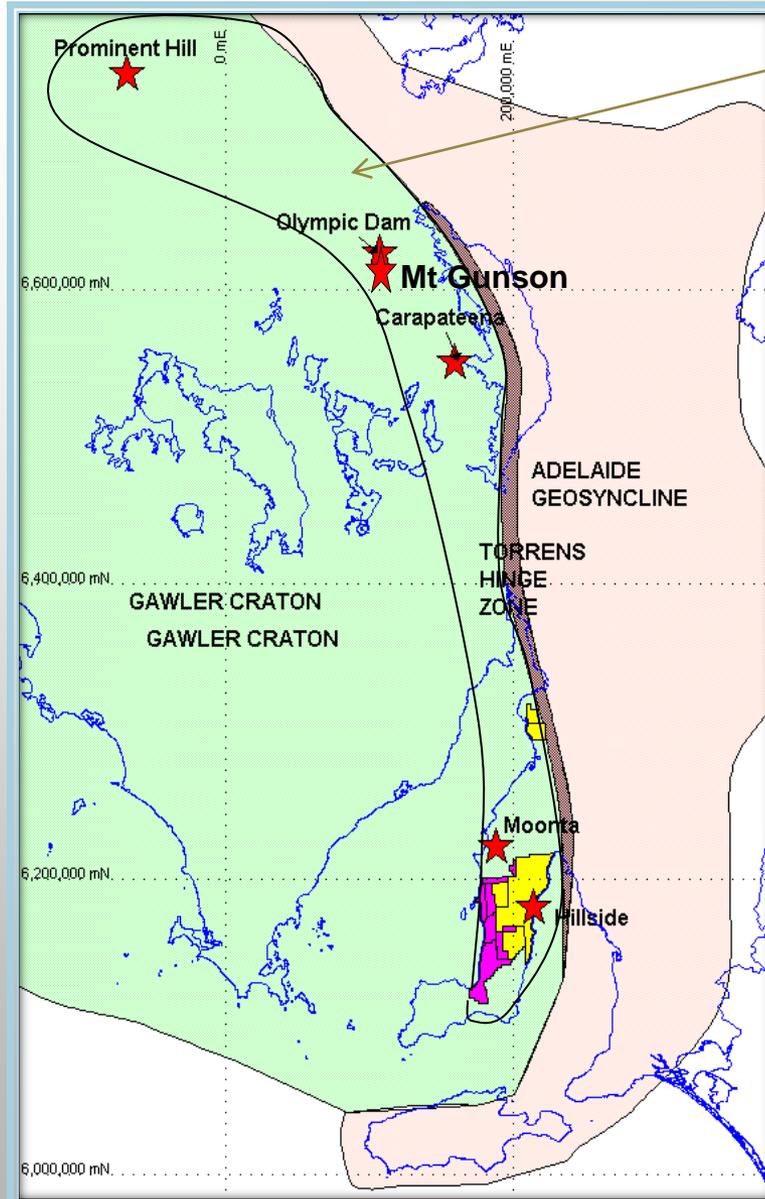
3. Fault Associated Copper Mineralisation.

Aeromagnetic data reveal several deep seated fault zones similar to the Pine Point Fault zone.

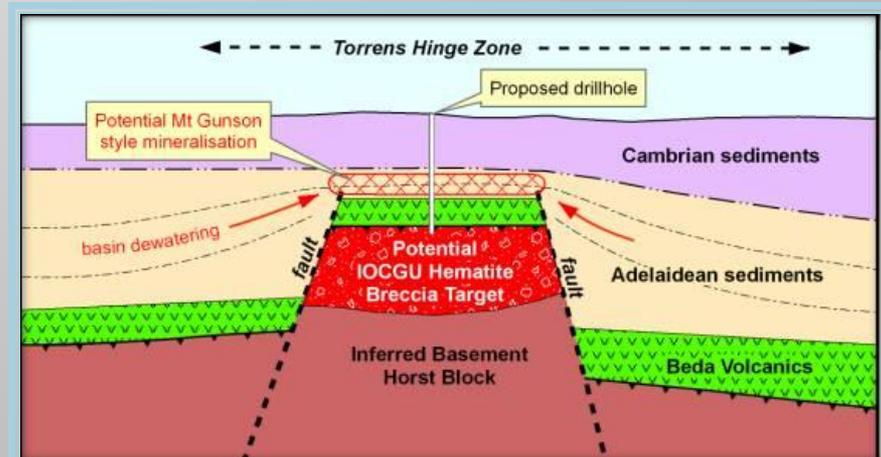
The Balgowan and Roger Corner structural trends may be analogous features.

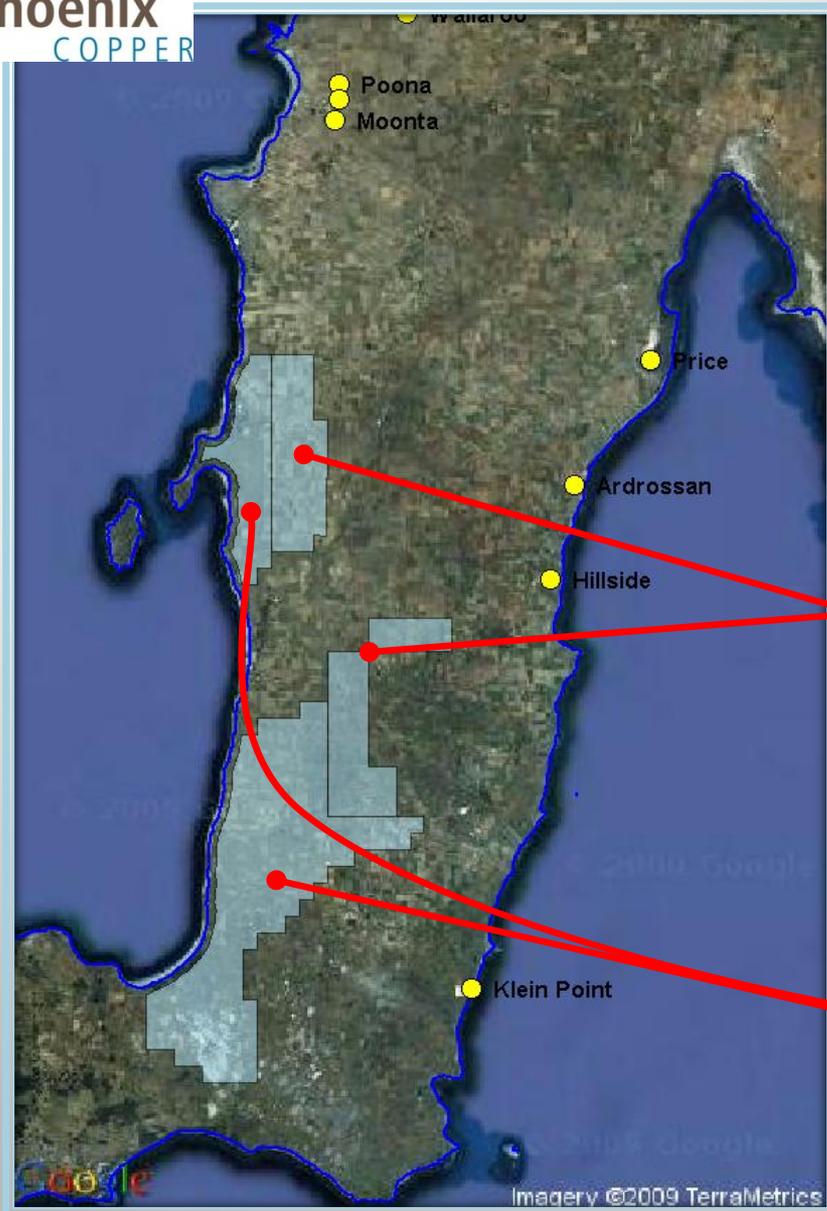


PROJECT LOCATION



- Tenements occur in the southern portion of the Olympic IOCGU Domain
- In the north, hematite dominant mineralisation occurs at Olympic Dam, Prominent Hill and Carrapateena
- In the south, magnetite dominant mineralisation occurs at Hillside and Moonta- Wallaroo



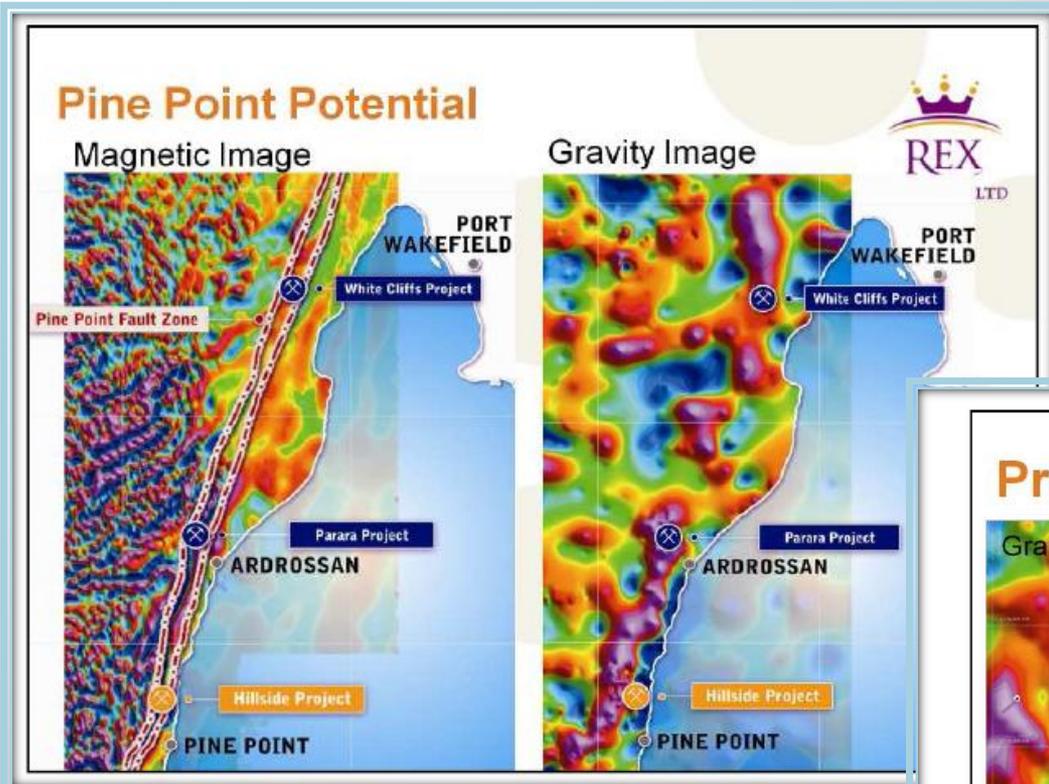


CURRENT TENEMENT HOLDING

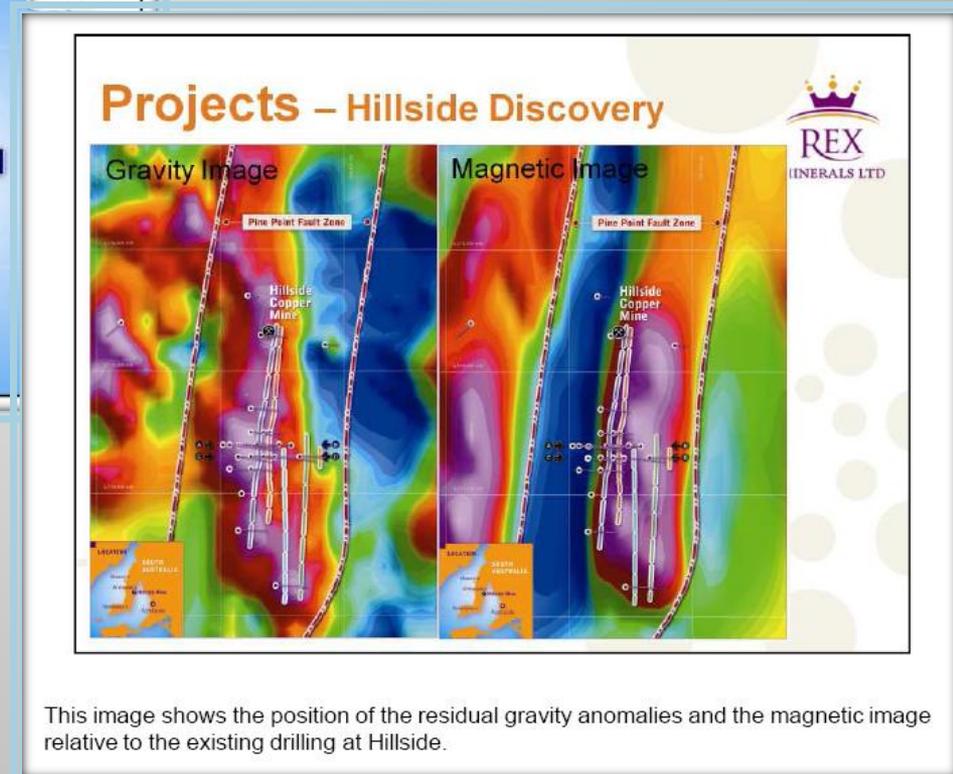
- ☐ Phoenix Copper/Wellington
- Significant Projects

EL4312 (2 x Blocks) Koolywurtie 255 km²
Phoenix

EL4031 Minlaton (2 x Blocks) 547 km²
Wellington (Phoenix)



COPPER GOLD EXPLORATION MODEL



This image shows the position of the residual gravity anomalies and the magnetic image relative to the existing drilling at Hillside.

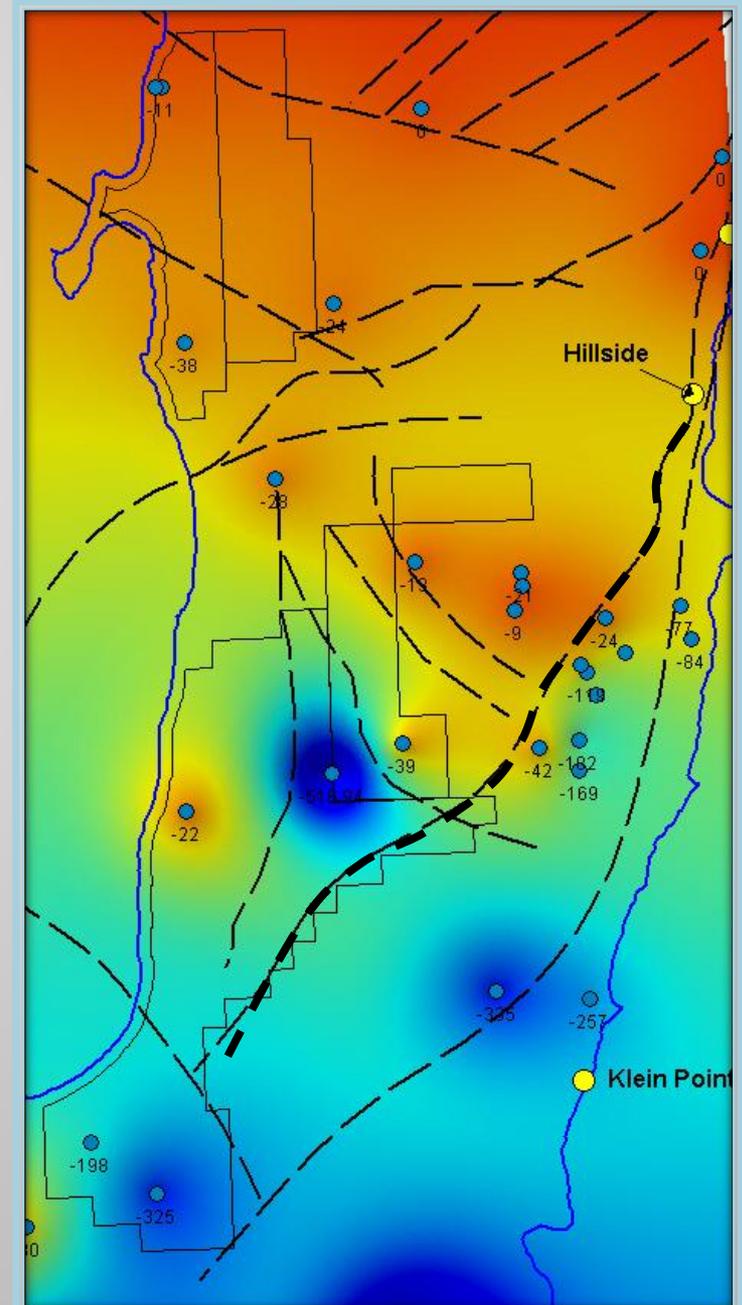
Hillside a model for copper – gold mineralisation in the Yorke Peninsula
Note coincident magnetic and gravity high in centre of structure

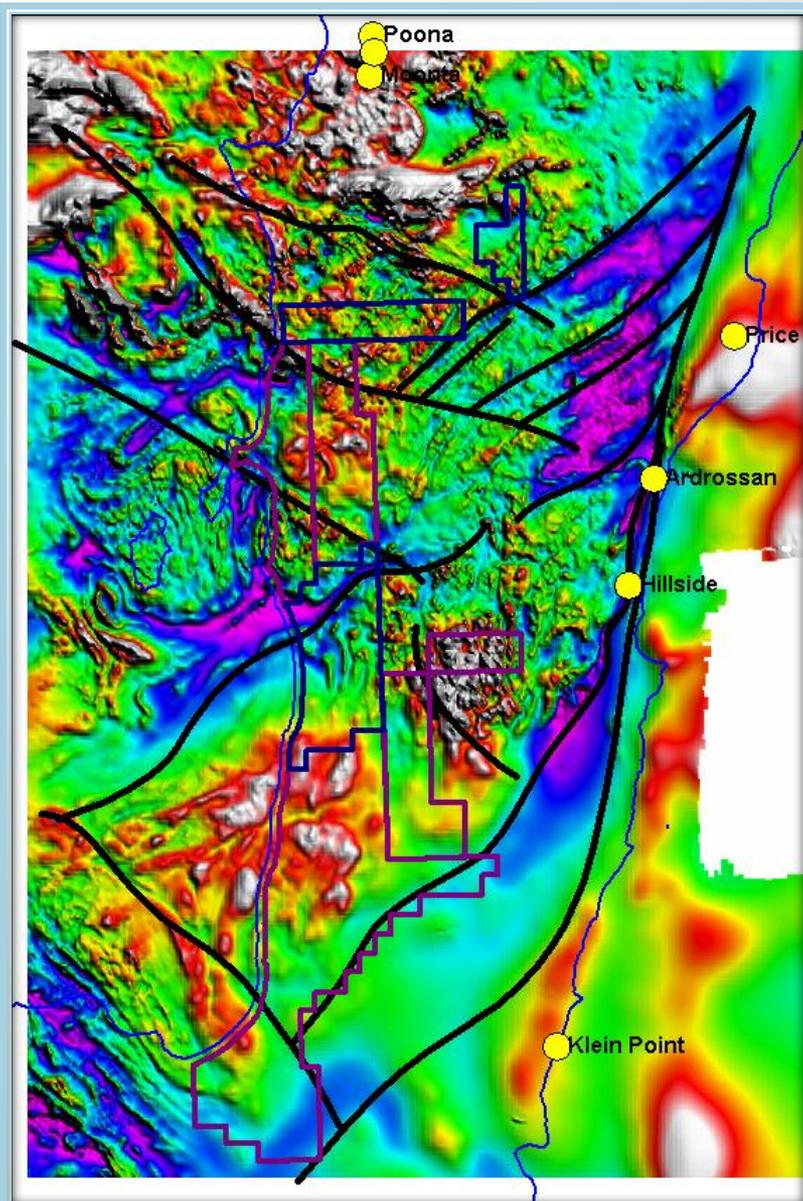
Mineralisation appears to be fault controlled and magnetite dominant

DEPTH TO CAMBRIAN

There is limited data however in general cover is less than 40m deep in the bulk of the tenement area.

Cover may be expected to be greater than several 100m deep in the far south of the tenement block.





MAGNETICS

Magnetics contoured with major structures and projects shows a series of **contemporaneous** structures splaying off the regionally significant Pine Point Fault, host to mineralisation at Hillside.

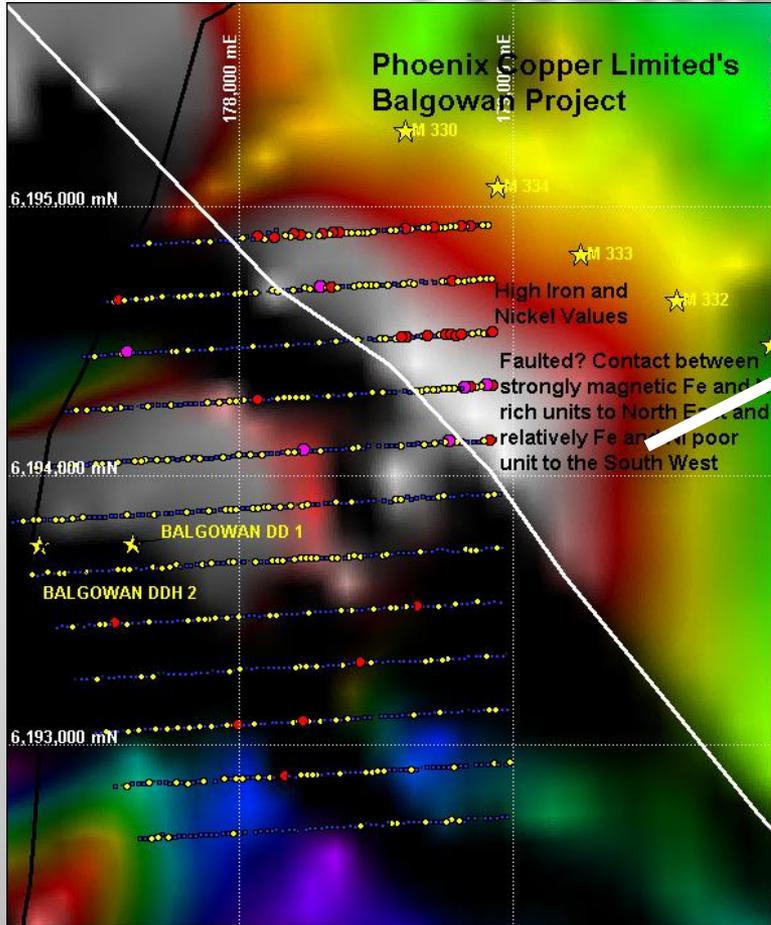
The Pine Point Fault can be interpreted to **extend south west into PNX EL.**

Splays from the Pine Point Fault are evident throughout the EL.

Local **magnetic anomalies** are an important indicator of magnetite enrichment in this style of copper-gold mineralisation

Moonta style magnetic features occur in the northern portion and the south eastern portion of the PNX EL.

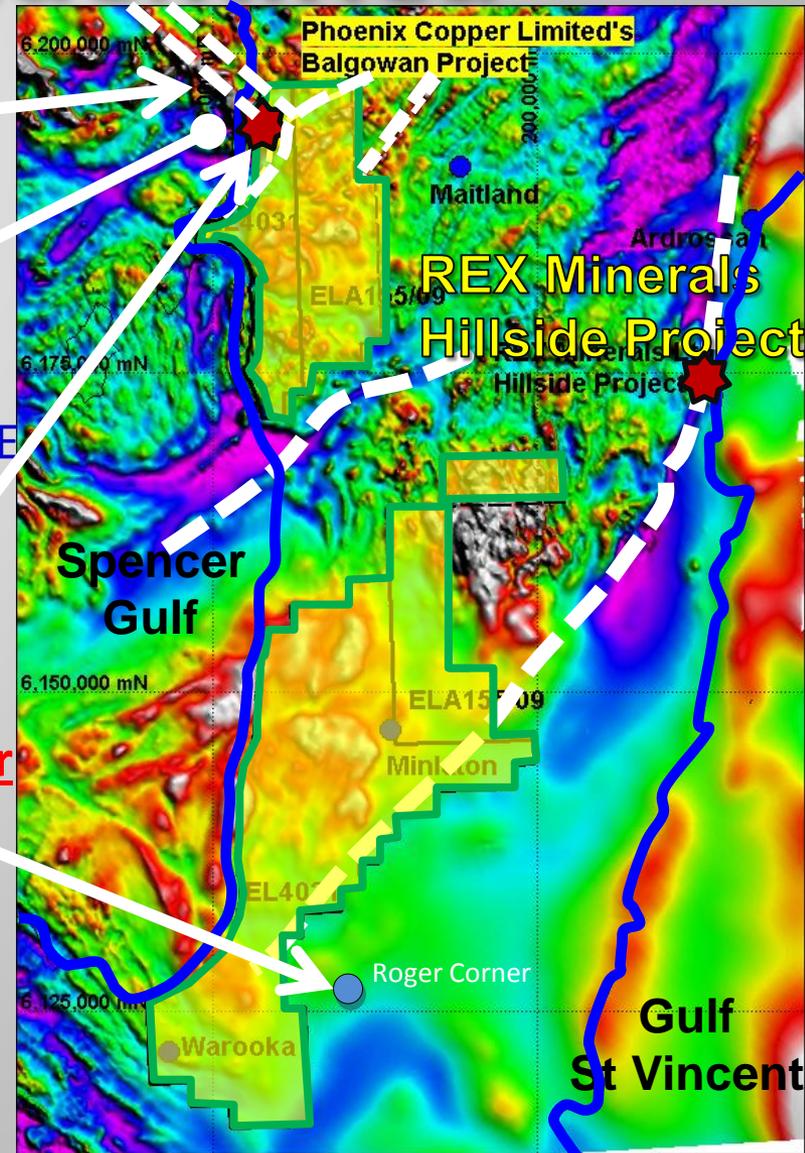
Minlaton Geochemical Anomalies Identified



NW trending Magnetic anomaly - Balgowan

A series of NE trending faults at Balgowan & Roger Corner

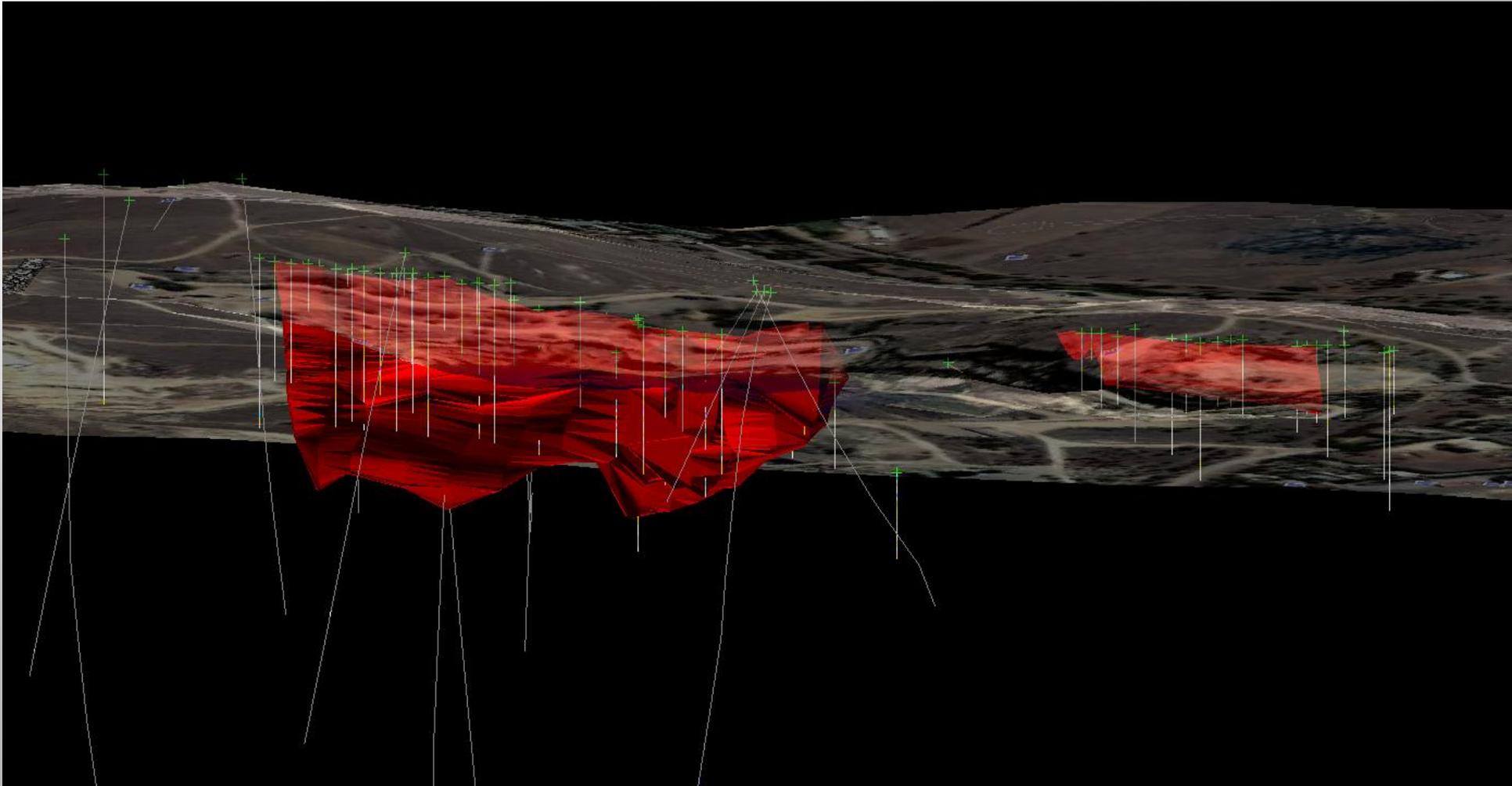
Boundaries of underlying magnetic unit better defined & structures potentially important to mineralisation identified.



Prospectivity

- ***Structural splays*** off the ***Pine Point Fault*** are as prospective as the main fault. Both intersect similar geology and appear to have formed ***contemporaneously***.
- The ***Hiltaba Suite*** event (responsible for the formation of IOCGU deposits within the Gawler Craton and nearby Hillside Prospect) is evident within much of Phoenix' tenements.
- The Moonta-Wallaroo mineralisation now believed to form a ***part of this group of deposits*** and occurs on the western side of the Yorke Peninsula in geology interpreted similar to PNX ELs.
- Hillside IOCGU model – PNX targeting ***structurally controlled, magnetic anomalies, shallow depth, with associated gravity response***.

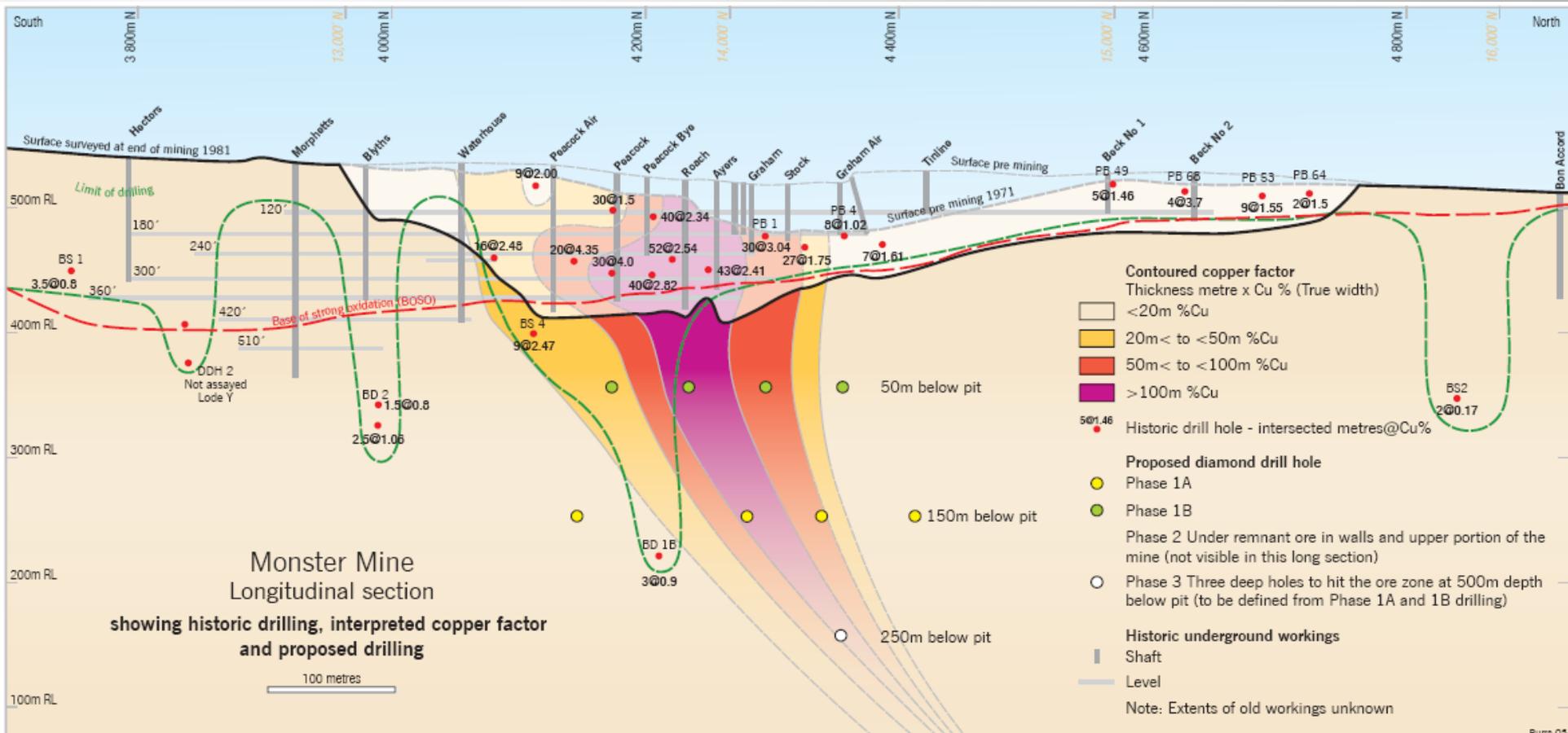
Vulcan Image - Monster Mine Ore Body



Monster Mine Report to PIRSA

Long Section Outlining Possible Work Program

Report submitted to PIRSA. Await Minister's decision re exploration currently excluded from EL4226.



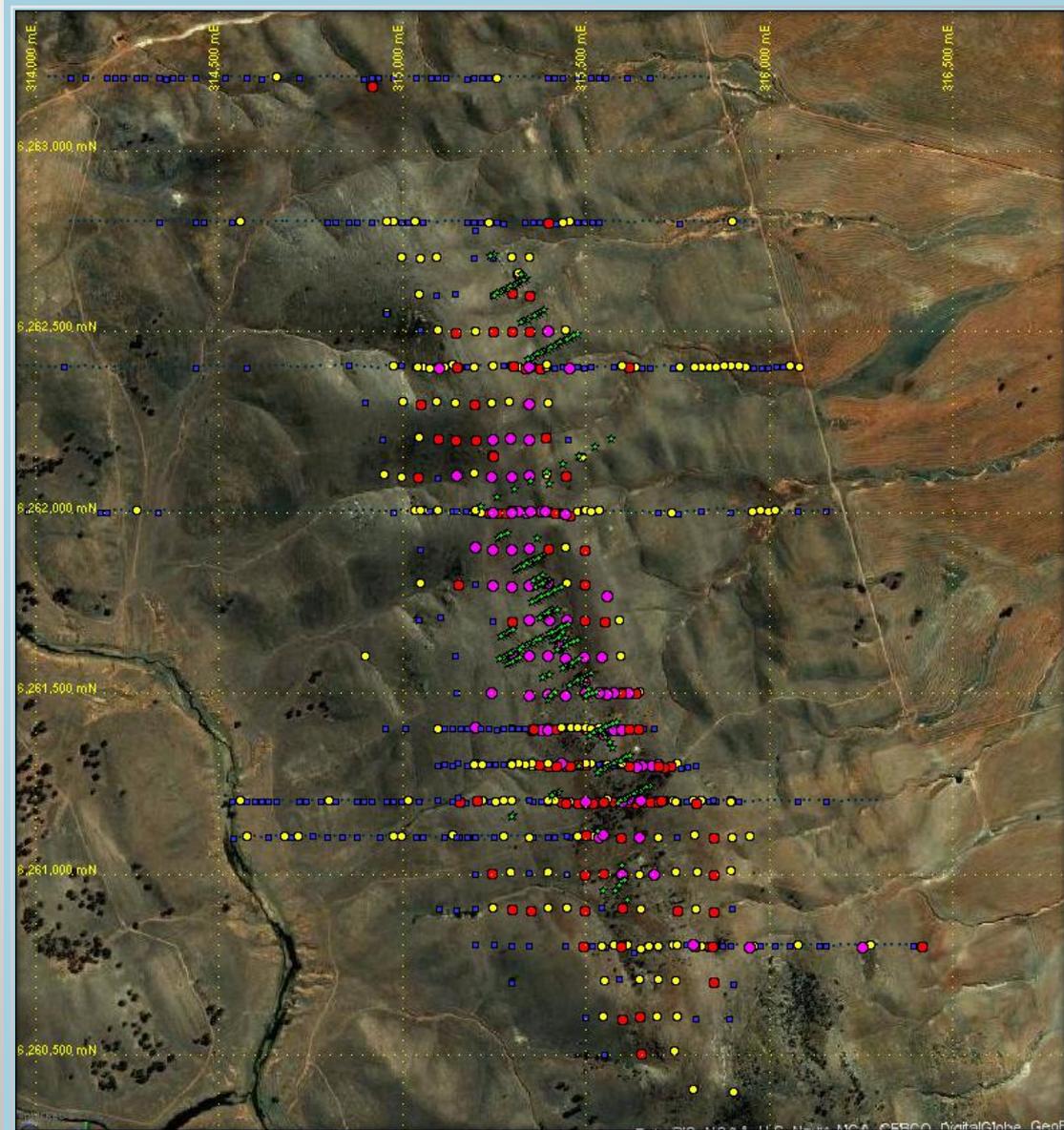
Princess Royal



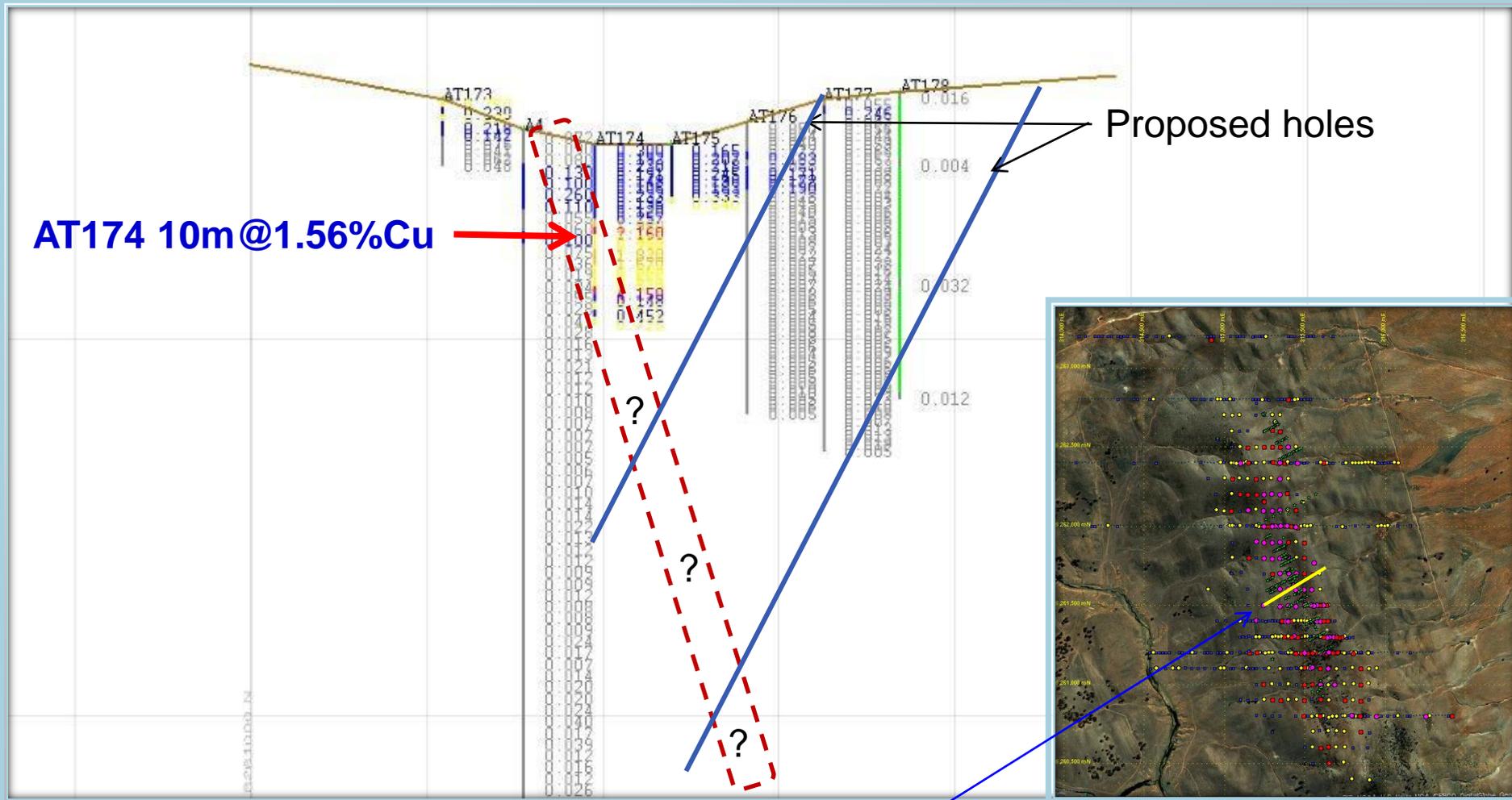
Azurite and Malachite from Princess Royal

geochem_denorm by CU_PPM

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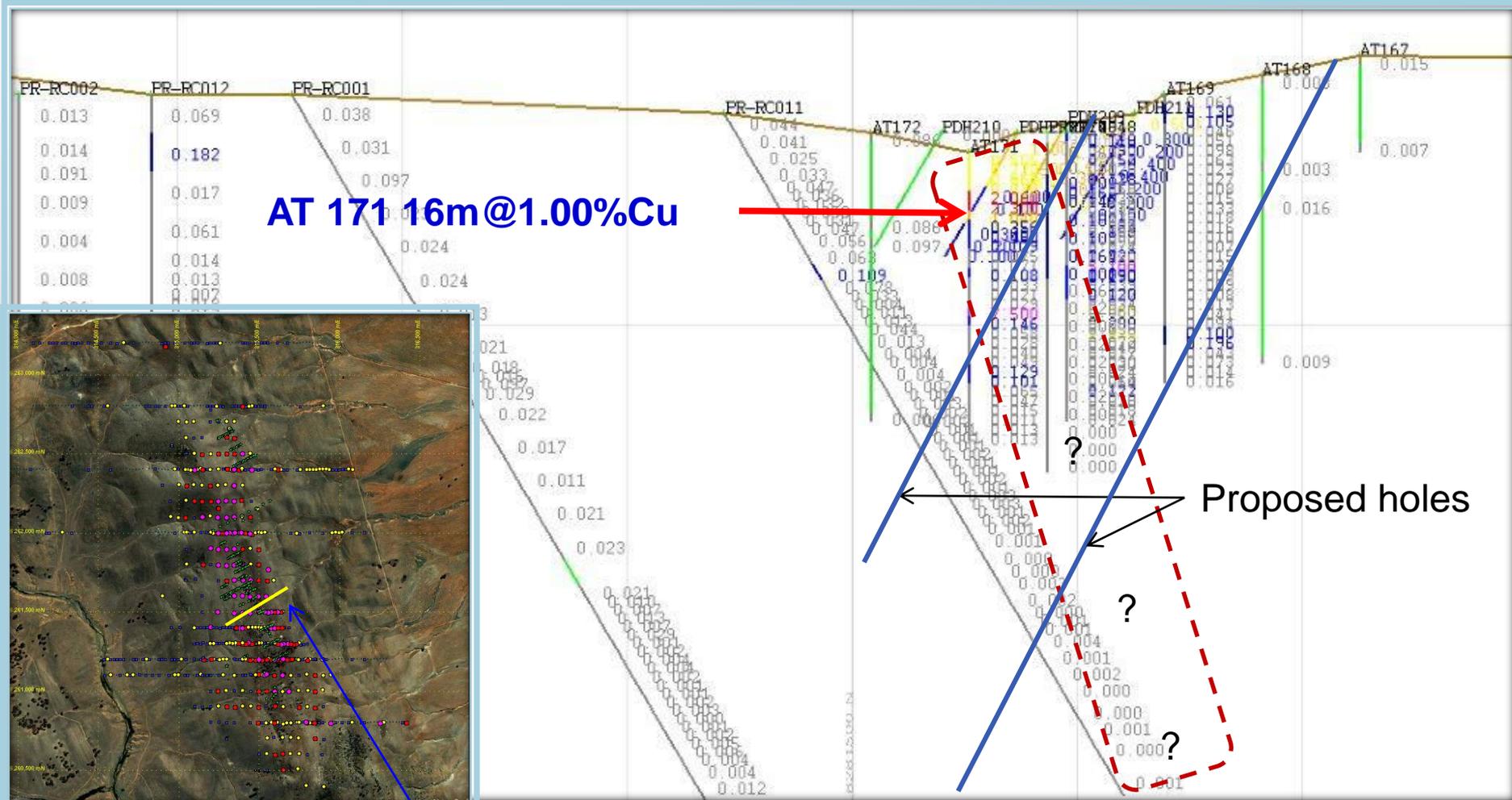


Princess Royal



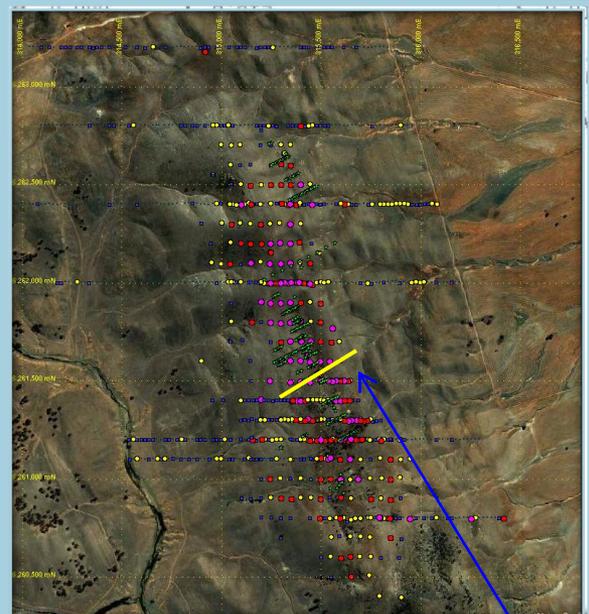
550mN Cross Section

Princess Royal



AT 171 16m@1.00%Cu

Proposed holes



500mN Cross Section

BURRA COPPER ORES COULD BE BENEFICIATED BY ORE SORTING





pho



Feed Size	10 - 75mm
Feed Rate	Up to 80T/hr
Dimensions (No Feeders)	4 975mm (L) x 1 685mm (W) x 3 075mm (H)
Dimensions (With Feeders)	7 899mm (L) x 1 685mm (W) x 3 218mm (H)
Weight	8 000kg
Electric Power	Single and Three Phase (approx. 10kW)
Compressed Air	30 Normal Cubic Metre/Tonne blasted
Ejection System	High Speed Air Ejection System
Availability	36 weeks from receipt of order



SENSORS OVERVIEW

Technology	Attenuation	Sensor	Usage in Product
Reflected Infra-red	Infra-red source	In development	UFS ULS
Radiometric	(by natural Radiation)	PMT with Scintillator	UFS ULS
Optical	Laser, diff. Colors	PMT	UFS ULS
Electromagnet. (EM)	Alternating EM Field	EM-Coils	UFS ULS
Dual Energy X-ray	X-ray source. $\leq 225\text{kV}$	Linear Detector Array	UFS ULS

Investigative Route

- **Proof of Concept – Optical**
- **Reflected Infra-red Media**
- **Size Optimisation**



Critical Size Determination

Malachite 5% of Specimen

Azurite 1% of Specimen

Dolomite - Dominant



Crusher

Ore Sorter

Azurite 5% of Specimen

Malachite 40% of Specimen

Dolomite

Dolomite

Dolomite

Waste

Investigative Route

- **Proof of Concept – Optical**
- **Reflected Infra-red Media**
- **Size Optimisation**
- **Beneficiation Multiples**
- **Resource Size & Mineral ID (S & O)**
- **Product Type & Treatment Options**
- **Optimal Market Opportunities**



Competent Person's Statement

The information in this presentation that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mark Manly who is a member of the Australasian Institute of Mining and Metallurgy. Mark Manly is a full-time employee of Phoenix Copper. Mark Manly has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mark Manly consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.