

# Superior Resources Limited

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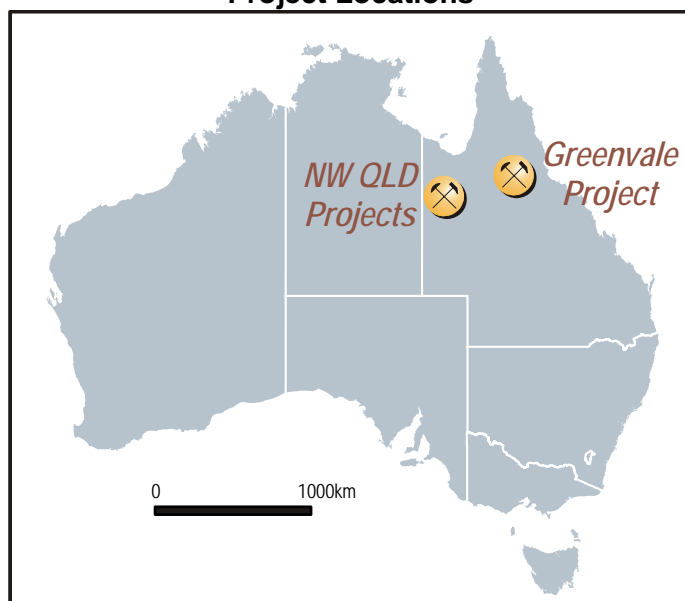
30 SEPTEMBER 2013

## QUARTERLY ACTIVITIES REPORT

### HIGHLIGHTS

- Exploration permit (EPM18987) "Cockie Creek" granted in the Greenvale Project. This will allow field work to commence at the Cockie Creek Copper Prospect and on identified targets surrounding the One Mile Prospect.
- Further work enhances the potential of the Riesling Prospect.
- Five drill holes completed at One Mile.
- Successful rights issue capital raising completed.

### Project Locations



### Superior Resources Limited

ASX:SPQ

#### Board

David Horton – Non-exec Chairman  
Peter Hwang – Managing Director  
Ken Harvey – Exploration Director  
Carlos Fericola – Company Secretary

#### Securities

Ordinary Shares – 177,694,372  
Top 20 hold over 60% of Shares

#### Financial

Cash and Shares – \$1.02M

#### Summary

Superior Resources Limited (SPQ) is a Brisbane based ASX listed mineral explorer whose principle aim is the discovery of a large base metal deposit in northern Queensland. Superior holds a number of exploration projects in northwest Queensland for large Mount Isa type copper and lead-zinc-silver deposits and exploration projects in northeast Queensland for copper-gold-lead-zinc-silver deposits. Superior also holds gold, phosphate and uranium tenements.

#### Share Registry

Link Market Services  
Level 15, 324 Queens Street  
Brisbane, QLD, 4000

#### Web Site

[www.superiorresources.com.au](http://www.superiorresources.com.au)

#### Contact

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## EXPLORATION OVERVIEW

The granting of the Cockie Creek exploration permit (EPM18987) during the quarter completes the granting of the tenements forming the Greenvale Project and gives SPQ access to three high-priority prospects in the One Mile, Cockie Creek and Riesling Prospects.

Work completed on the Riesling Prospect during the quarter included geological mapping and interpretation, soil geochemistry and ground magnetics. Results from this work are promising and significantly enhance the potential of this prospect.

Five drill holes were completed on geophysical targets within the One Mile mining lease during the quarter. While all holes intersected sulphides these were principally pyrite. Drilling of targets outside of the mining lease will now be possible following granting of the surrounding exploration permit. Field work can also now commence on the Cockie Creek Copper Prospect where resources have previously been announced.

No significant work was completed on the northwest Queensland tenements during the quarter.

A reduction in the area of EPM18840 "Harris Creek" from 100 sub-blocks to 30 sub-blocks was made during the quarter.

SPQ's current tenement position, in northeast and northwest Queensland, is shown in Figures 1 and 2 respectively.

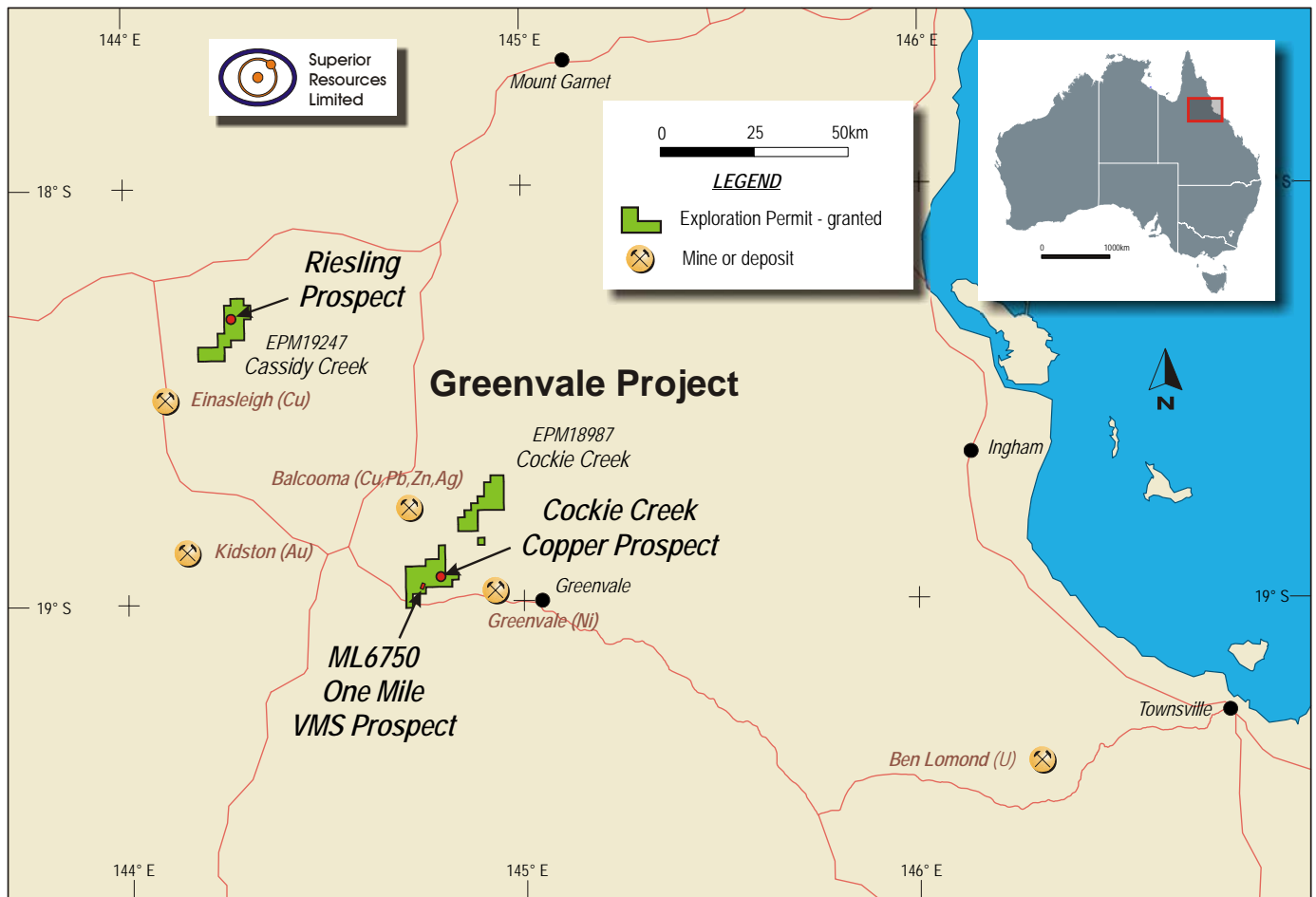


Figure 1. Superior Resources Limited – Greenvale Project location northeast Queensland .

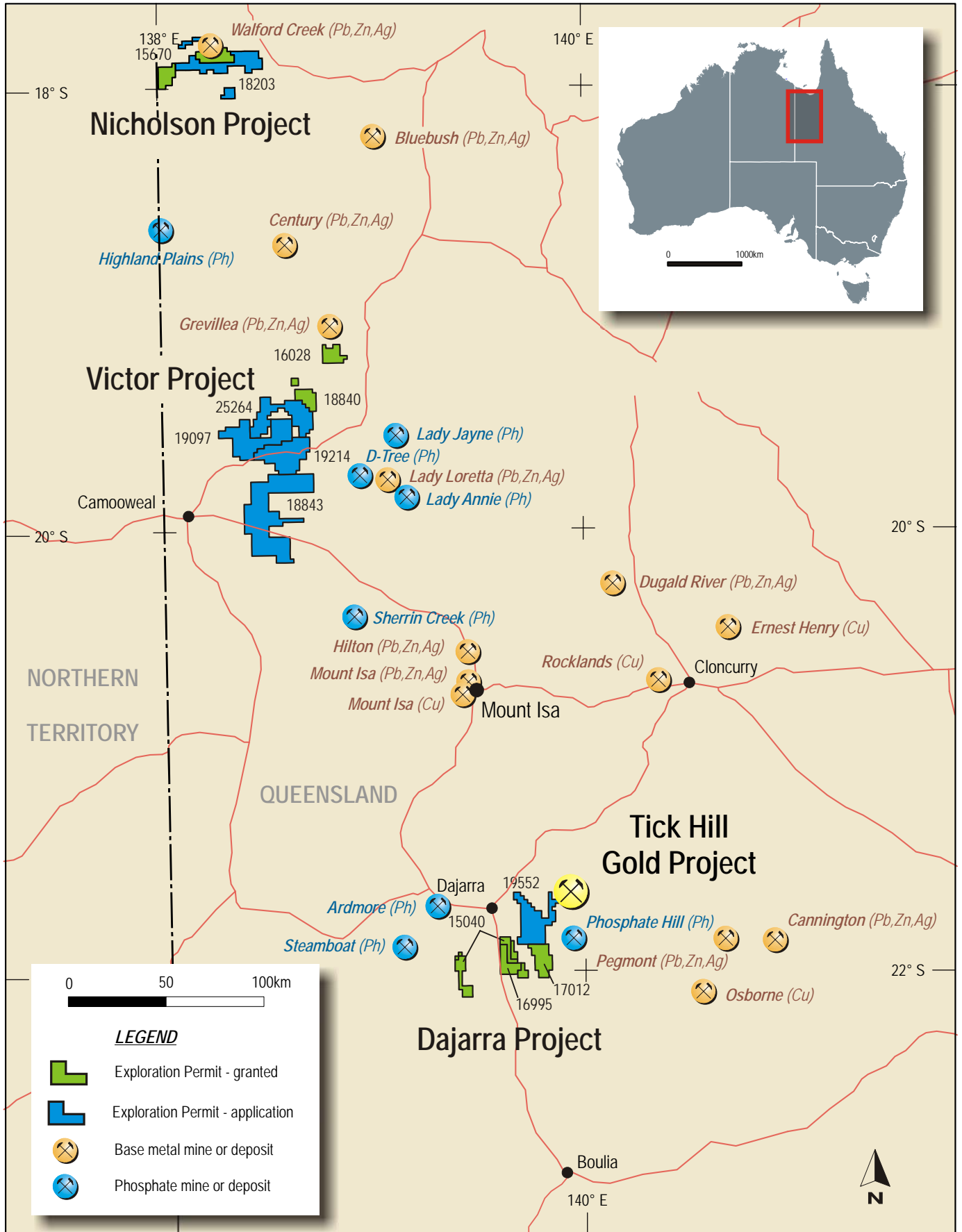


Figure 2. Superior Resources Limited - Northwest Queensland project locations.



## EXPLORATION ACTIVITIES

### Greenvale Project – Northeast Queensland

Granting of EPM18987 “Cockie Creek” occurred on 25 September 2013. The area of the EPM was reduced from 100 sub-blocks to 57 sub-blocks (171 km<sup>2</sup>) on grant to cover the most prospective area and to reduce rents. The Greenvale Project now comprises two granted exploration permits and one mining lease. Granting of EPM18987 will allow field work to commence on the Cockie Creek Copper Prospect and on identified targets surrounding the One Mile mining lease once the formalities with the landholders and native title parties are completed.

### ***EPM19247 “Cassidy Creek” (Burgundy, Riesling and Chablis Prospects)***

A program of soil sampling involving the collection of 281 -80# soil samples at 25m intervals on lines at 100m intervals was completed over the Burgundy and Riesling prospects at the beginning of the quarter. As announced to the ASX on 13 August 2013, this work highlights the central portion of the Riesling Prospect (Riesling Central) which is strongly anomalous in zinc, copper and lead.

Additional work during the quarter on the Riesling Central area included infill soil sampling, a ground magnetic survey and geological mapping and interpretation. Results from this work are promising and significantly enhance the potential of this prospect

Reinterpretation of the geology of the Riesling Central area was completed in the field using geological mapping which had previously been completed by CRAE.

While there is a reasonable amount of sub-outcrop in the area on which the mapping is based, the amount of real outcrop is limited. Most of the Riesling Central area to the east of Fever & Ague Creek shows a broad zone of red-brown coarse-grained ferruginous muscovite-biotite-chlorite-quartz schist which is interpreted as a metamorphosed pyrite-sericite-chlorite alteration zone. Such alteration zones often occur associated with volcanogenic massive sulphide deposits. A thicket of stunted ‘ironwood’ and ‘quinine’ trees grows on the alteration zone (Photo 1). The alteration zone contains more siliceous zones which often contain gahnite (zinc spinel, ZnAl<sub>2</sub>O<sub>4</sub>) and thin gossan zones which are interpreted to reflect sulphide rich zones at depth.

Gahnite is usually considered to form as a result of de-sulphidation during metamorphism of rocks containing sphalerite (zinc sulphide) and gahnite is considered to be a very positive indicator for zinc deposits in metamorphosed host rocks.

A critical element in exploring the Riesling Central area is to establish the likely location of the possible zinc sulphide deposit source responsible for the gahnite mineralisation. Towards the eastern side of the alteration zone a more persistent zone of gossan (Photos 2 and 3) and gahnite quartzite occurs. This zone shows the highest order soil copper and zinc anomalies and it also typically shows a number of somewhat bare-looking geobotanical anomalies reflected by a break in the tree cover and a predominant grass species present (Photo 1). This zone would appear to be the most likely source area of zinc sulphide for the formation of gahnite in the area and it is considered to be the best target area for drilling. It is segmented by northwest trending faults into sub-zones which extend in total for nearly 1km.

The infill soil sampling involved the collection of a further 81 -80# soil samples on lines at 50m intervals to fill in the coverage of the anomalous area indicated by the earlier soil survey. XRF scans of the soil samples using the Niton Portable XRF Analyser for a number of elements including copper, lead and zinc have been completed (Figures 3, 4 and 5). The results provide greater





resolution of the copper, lead and zinc anomalies and show higher copper values in the central and northern portions of the area (maximum 1390ppm copper).

Imaged soil sulphur values (Figure 6) from the soil surveys show an anomaly consistent with the previously identified target zone giving further support for drilling in this area.

All soil samples from the Riesling Central area have also been submitted to ALS Chemex for further analyses by the ICP method with an aqua regia digest. The aqua regia digest is not capable of breaking down gahnite, and the ICP analyses should therefore provide better discrimination of anomalous areas that originate from sphalerite (zinc sulphide) rather than gahnite. The ICP analyses will also provide information on the distribution of additional elements such as silver and antimony.

The ground magnetic survey over the Riesling Central area was completed with a Gemsys GPS magnetometer with readings at 1 second time intervals on lines at both 50m and 100m intervals. A base station magnetometer and a ground control point were implemented to ensure that high quality data was obtained. The new data was 'spliced' into the historical but poorer quality ground magnetic data collected by CRAE to extend the magnetic coverage over the area. A reduced to the pole (RTP) image of the data is shown in Figure 7 with anomalies also highlighting the area identified as the best zone for drill testing mentioned above.



*Photo 1. Riesling Central – A thick stand of 'ironwood' trees growing on ferruginous alteration in the background with a bare-looking area devoid of trees on scattered gossan float coincident with strong soil copper and zinc anomalies in the foreground – 211,320E, 7,972,770N.*





*Photo 2. Riesling Central – A close-up photograph of gossan float within one of the bare-looking geobotanical anomalies with coincident copper and zinc soil anomalies – 211,300E, 7,972,700N.*





Photo 3. Riesling Central – Gossan quartz breccia coincident with copper and zinc anomalies – 211,425E; 7,973,150N.



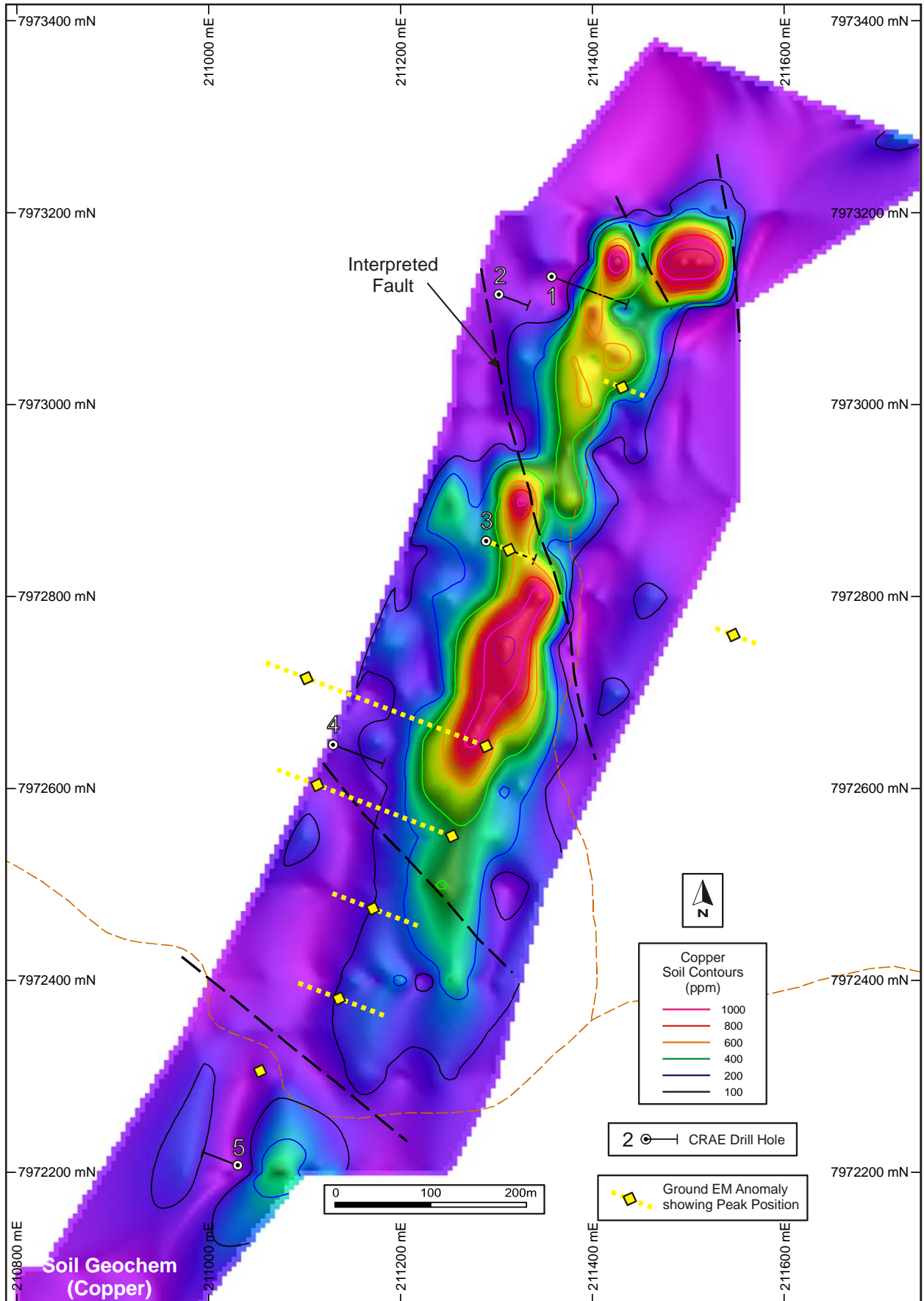


Figure 3. Riesling Central – Soil copper geochemistry.



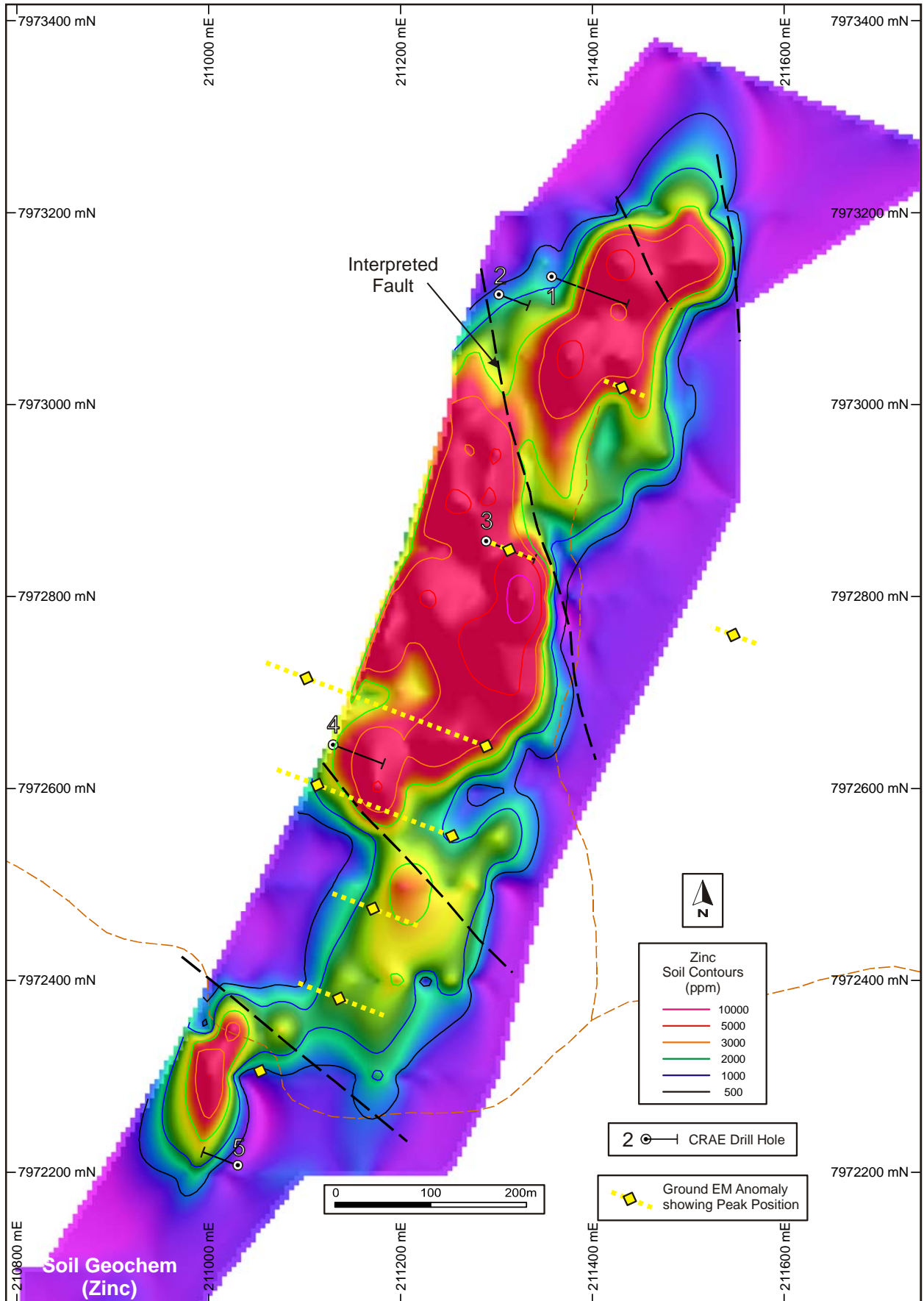


Figure 4. Riesling Central – Soil zinc geochemistry.

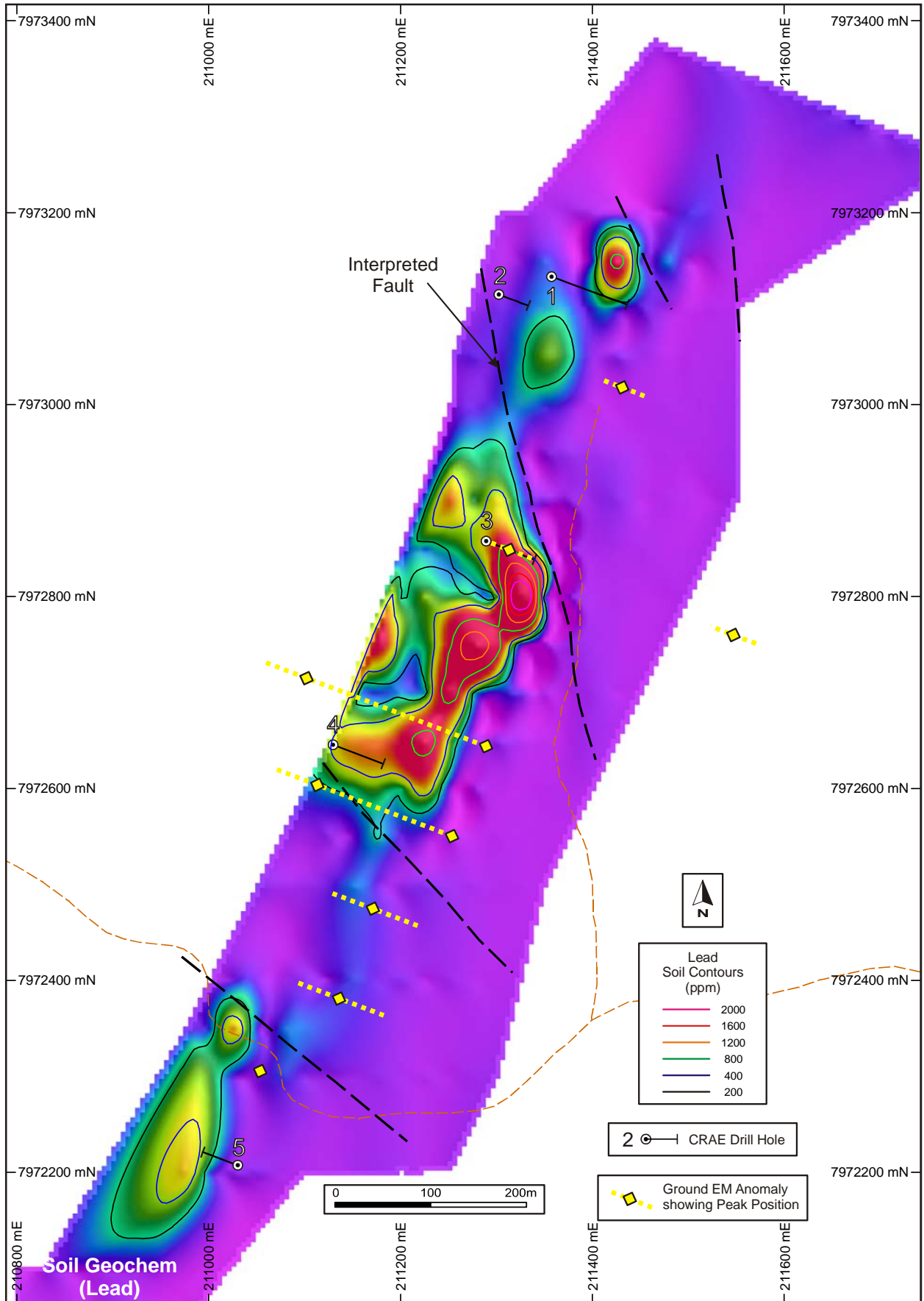


Figure 5. Riesling Central – Soil lead geochemistry.



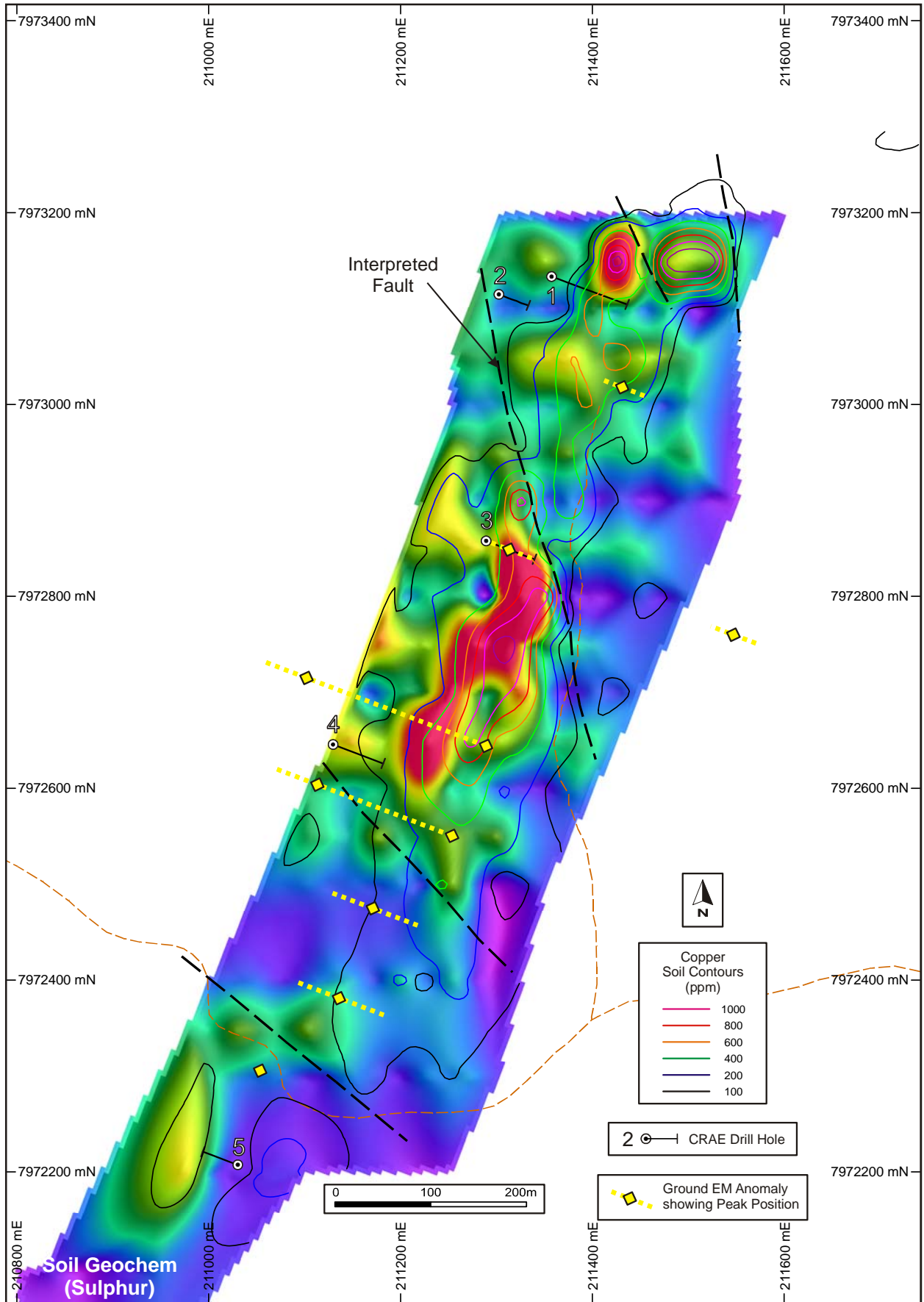


Figure 6. Riesling Central – Soil sulphur geochemistry.

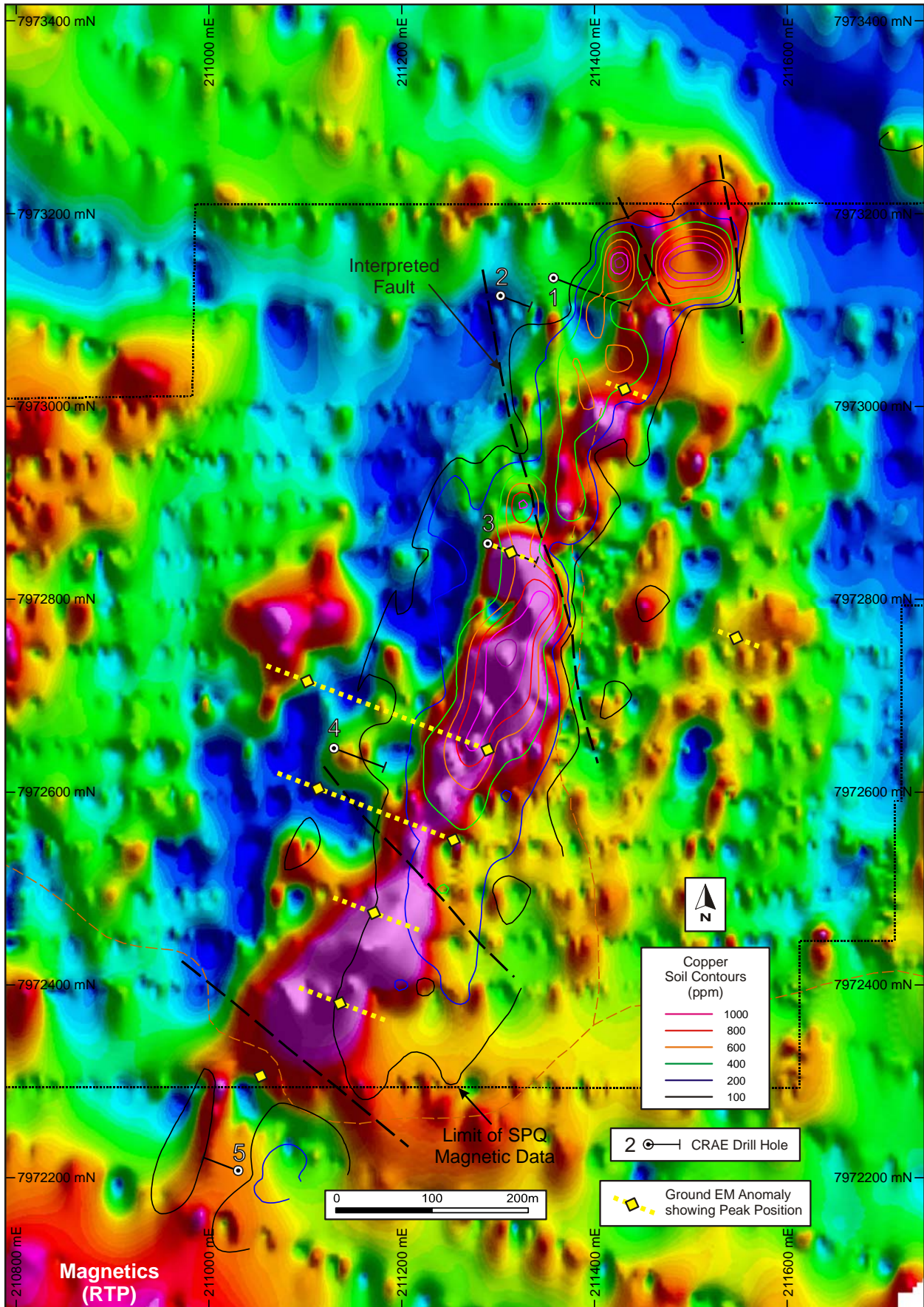
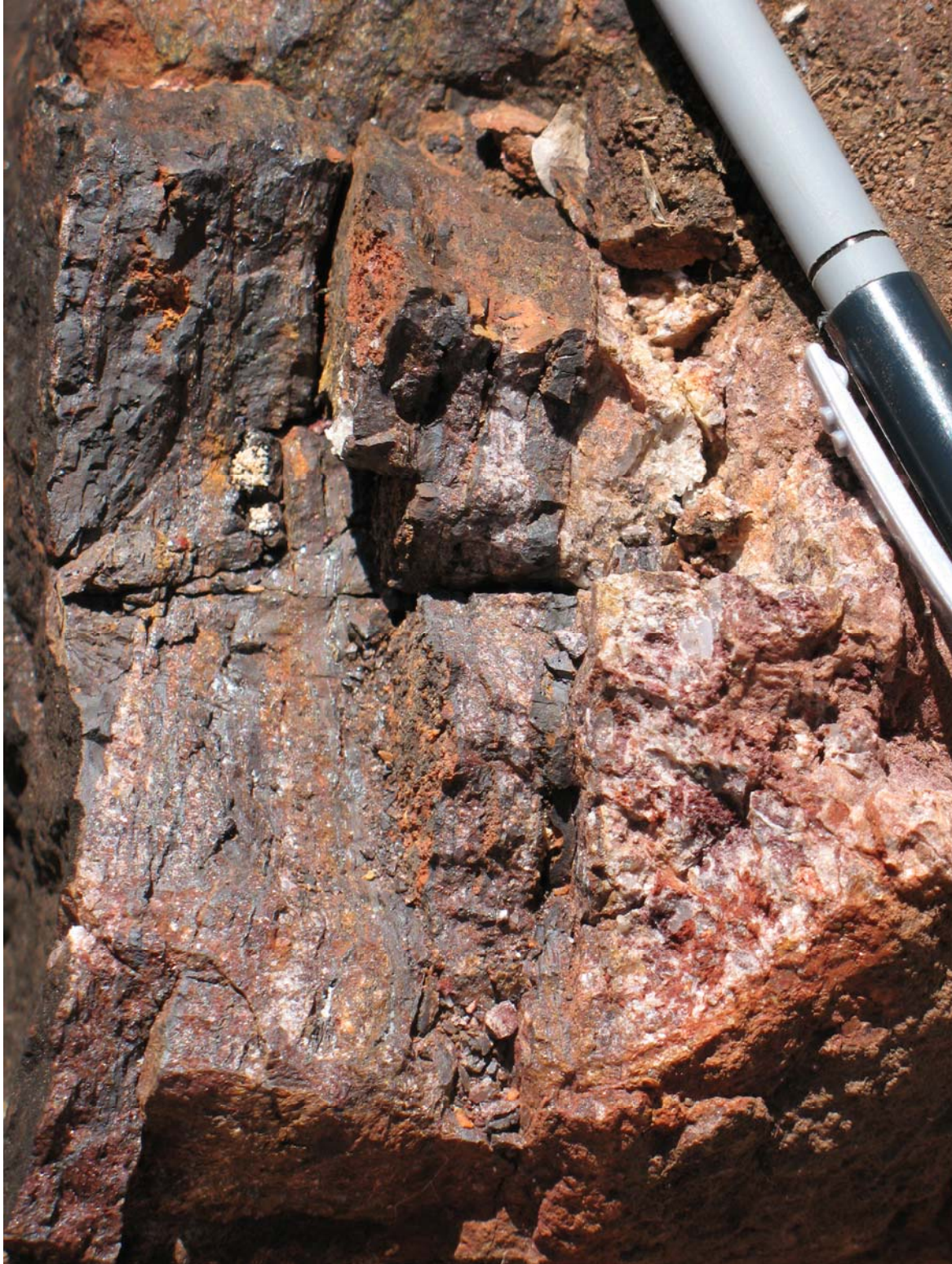


Figure 7. Riesling Central – Ground magnetic survey (RTP).





Inspection of the zinc anomaly obtained over the Burgundy Prospect by the soil sampling completed during the early part of the quarter showed scattered float of gossan in the central part of the anomaly. Some of this gossan appears to be after layered sulphides (Photo 4). While this material is interesting and will require drilling at some time the lower level of the soil zinc and copper values in this area make it a lower priority than the Riesling Central area.



*Photo 4. Burgundy Prospect – Gossan float, apparently after layered sulphides, from the centre of the soil zinc anomaly – 209,925E; 7,970,700N.*





## ML 6750 “One Mile”

Five drill holes totalling 666m were completed on the One Mile mining lease on chargeability targets arising from modeling of an historical Induced Polarisation survey during the quarter. Two holes were drilled into the Eastern Target (Tims Gossan), one hole into the eastern side of the Atkinsons Target, one hole into the Fence Target and one hole into the southern end of the North Target.

Table 1. ML6750 “One Mile” – Drill hole collar locations and other details.

Hole	North (MGA Zone 55)	East (MGA Zone 55)	RL (m)	Depth (m)	Dip (°)	Azimuth (°Magnetic)
SPOM028	7901848	262490	578	150	-60	285
SPOM029	7901664	262413	573	150	-60	285
SPOM030	7902022	262053	575	150	-60	105
SPOM031	7902319	262917	589	120	-60	105
SPOM032	7902436	262575	595	96	-60	105

\* Hole locations established by hand held GPS

All holes intersected disseminated pyrite mineralisation which explains the chargeability anomalies. Substantial amounts of pyrite mineralisation were intersected in holes SPOM029 (52m to 150m – 98m @ 4.2% pyrite) and SPOM031 (30m to 120m – 90m @ 5.1% pyrite). Pyrite contents of these levels are often associated with massive sulphide deposits and typically occur within the footwalls to the deposits.

Copper and zinc values within the drill holes were generally weakly anomalous with the best being 2m @ 0.29% Cu in hole SPOM028 from 132m to 134m and 2m @ 0.13% Zn in hole SPOM032 from 54 to 56m.

The recent grant of EPM18987 will allow drilling of the remaining geophysical and other anomalies outside of the One Mile mining lease area and within the exploration permit (EPM18987) including the substantial gossan protruding from laterite at the North Target Zone (Photo 5).



Photo 5. A large gossan outcrop protruding from laterite at the North Target Zone.





## CORPORATE ACTIVITIES

A substantial portion of this period was focused on capital raising activities. The company commenced and completed a rights issue campaign which closed successfully, considering the difficult market conditions that have dominated this year.

Under the rights issue the company sought to raise up to \$1.5 million (before costs) by the issue of 124,658,933 fully paid ordinary shares at \$0.012. The issue closed on 4 October 2013 with strong support resulting in a total subscription value of \$1,126,061. The company has reserved its right to place the shortfall securities within three months of the close of the issue.

In addition to the capital raising activities, the company continued to engage with several third parties regarding potential participation in the NW Queensland projects as well as potential arrangements concerning third party new project opportunities.

## INVESTMENTS

SPQ maintains an exposure in relation to ASX listed uranium focused company, Deep Yellow Limited (ASX:DYL). At 30 September 2013, the company holds 7,000,000 DYL shares with a closing value of \$140,000.

A handwritten signature in black ink, appearing to read 'Peter Hwang'.

**Peter Hwang**  
**Managing Director**

*The information in this report that relates to Mineral Resources and Exploration Results is based on information compiled by Mr Ken Harvey, a full-time employee and shareholder of Superior Resources Limited, who is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Harvey 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'. Mr Harvey consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*