

## Summary

### Bottletree Copper Prospect (Greenvale)

- 2022 Bottletree drilling program commenced on 15 June 2022 with the collaring of the program's first diamond core hole, **BTDD005**.
- Holes BTDD005 to BTDD009 have been completed since commencement of the 2022 program.
- The primary objectives of the 2022 drilling program are to build a geological model of the local geological setting to better understand the mineralising system and to identify porphyry-related alteration zones and zonation of alteration to enable vectoring towards the central mineralised potassic core(s).
- Several dacite porphyry intrusions and varying degrees of disseminated and vein quartz-chalcopyrite mineralisation, locally with molybdenite, as well as pyritic sheeted sulphide veins have been intersected by each of the holes.
- "Text-book" porphyry potassic alteration (K-feldspar-biotite-magnetite) has been identified, confirming the presence of a buried porphyry system. Drilling is vectoring closer to a mineralised porphyry source.
- Current hole BTDD010 with a total planned depth of 1,000m has just commenced, aims to intersect the potassic alteration zone down-dip and vector towards the core of the mineralised system.
- Detailed results and findings will be released to market shortly.

### Cockie Creek Porphyry Copper Prospect (Greenvale)

- Preparations underway for commencement of drilling program.
- Potential for significant porphyry Cu-Au mineralisation.
- Current Mineral Resource Estimate: **13MT @ 0.42% Cu** (0.25% Cu cut-off grade) (JORC 2004), based on strike length of 1.2kms and a maximum depth of 250m. Compiling Mineral Resource Estimation to comply with JORC, 2012.
- Interpreted buried porphyry intrusions within an intrusive complex.
- Two large, intense IP chargeability targets at depth beneath the defined structurally controlled mineralisation corridor.

### New tenement applications expand the Greenvale Project

- Three new EPM applications totalling 900km<sup>2</sup> have been made to cover additional areas prospective for magmatic Ni-Cu-PGE sulphide deposits, expanding the Greenvale Nickel Project to 2,058km<sup>2</sup>.
- The new applications also cover known uranium occurrences.

## Superior Resources Limited

### ASX:SPQ

### Board

Carlos Fernicola – Chairman  
Peter Hwang – Managing Director  
Simon Pooley – Non-Exec Director  
Carlos Fernicola – Company Secretary

### Securities

Ordinary Shares – 1,701,220,418  
Top 20 holders: 37% issued capital

### Summary

Superior Resources Limited is a Brisbane based ASX-listed mineral explorer with a portfolio of large base metal exploration projects, including a developing portfolio of nickel-cobalt projects in northern Queensland. The projects include large targets for Mount Isa style copper and lead-zinc-silver deposits in north western Queensland and exploration projects in northeast Queensland for VMS and porphyry style copper-gold-silver-molybdenum deposits. The Company's cobalt projects are located across the northern Queensland region.

### Share Registry

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Brisbane, QLD, 4000

### Web Site

www.superiorresources.com.au

### Contact

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# PROJECT LOCATIONS

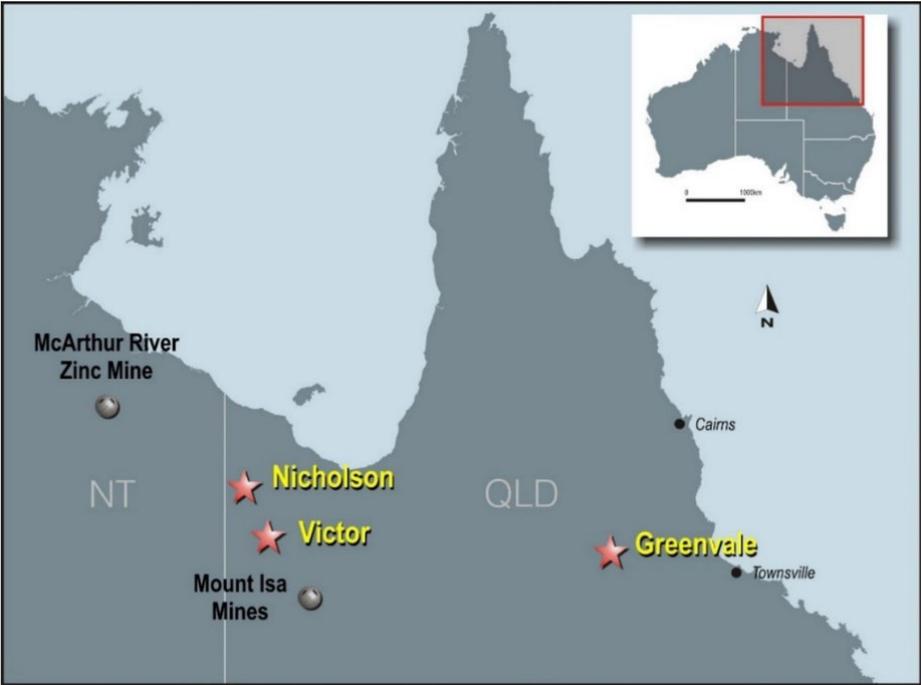


Figure 1. Location map showing the Company’s current portfolio of projects.

# GREENVALE PROJECT

Operational activities during the Quarter were focussed entirely at the Company’s 100%-owned Greenvale Project (Figures 1 and 2).

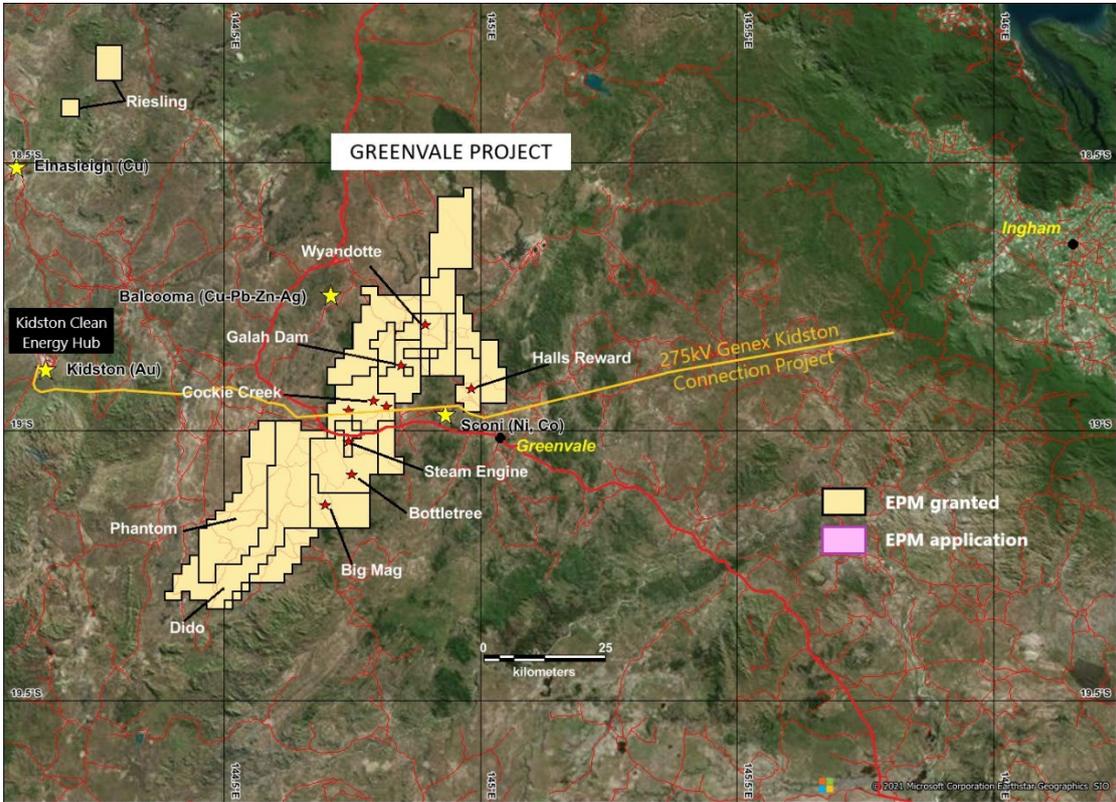


Figure 2. Greenvale Project tenements and prospects shown over satellite imagery. Note: recent new tenement applications are not shown (refer section “New Tenement Applications” below).

## **BOTTLETREE (PORPHYRY Cu-Au)**

*Very large scale copper system emerging at Bottletree*

The following summarises the main exploration activities that have been conducted during the Quarter at Bottletree.

### **BACKGROUND**

- Deep diamond drilling during 2021 targeted a large and intense MIMDAS IP chargeability anomaly with two holes (BTDD001 and BTDD003) collared to the east of the anomaly and drilled approximately westwards.
- It became evident from the first two holes that porphyry-style Cu-Au mineralisation is located to the west of the chargeability anomaly and located more centrally within the large 2km x 1.5km soil copper anomaly that defines the prospect area.
- A third hole (BTDD004) was subsequently collared approximately 300m to the west of the IP anomaly and drilled towards the east, scissoring the first two holes. This hole intersected very strong porphyry-style vein and disseminated Cu-Au-Mo mineralisation, which is considered to be distal to a mineralised porphyry intrusive system (refer ASX announcement 2 June 2022):

*Overall Copper intersection:*

- **632m @ 0.21% Cu, 0.03g/t Au, 0.60ppm Ag, 18.0ppm Mo** from 5m below surface

*Significant porphyry-style mineralisation:*

- **224m @ 0.40% Cu, 0.05g/t Au, 0.90ppm Ag, 3.5ppm Mo** from 242m, including:
  - **2m @ 1.01% Cu, 0.24g/t Au, 2.7ppm Ag, 9.5ppm Mo** from 337m
  - **103m @ 0.53% Cu, 0.05g/t Au, 1.4ppm Ag, 3.3ppm Mo** from 363m
  - **1m @ 5.25% Cu, 0.31g/t Au, 10.7g/t Ag, 1.5ppm Mo** from 363m
  - **12m @ 1.01% Cu, 0.07g/t Au, 2.2ppm Ag, 1.9ppm Mo** from 363m
  - **15m @ 1.19% Cu, 0.15g/t Au, 3.6ppm Ag, 1.9ppm Mo** from 451m.
- A total of 6 high priority porphyry targets were identified within the prospect area by interpretation of re-modelled geophysics and multi-element soil data. An additional intense soil Cu and aerial magnetics target was also identified on the western edge of the prospect area and extending westwards under cover for an undetermined distance.
- Observations from BTDD004 together with information from soil geochemistry and geophysical datasets indicate that a very large copper-gold porphyry system potentially exists at Bottletree.

### **2022 DRILLING**

- The 2022 Bottletree deep diamond drilling program commenced on 15 June 2022 with the collaring of diamond core hole **BTDD005**.
- Since the commencement of the 2022 program, holes BTDD005 to BTDD009 have been completed (Figure 3).
- Hole BTDD010 is currently being set up and expected to commence drilling on the date of this report (refer below for a summary of objectives relating to this hole).

## 2022 PROGRAM OBJECTIVES (BTDD005 – BTDD009)

- The primary objectives of the 2022 drilling program are to target various geochemical, geological and geophysical zones in order to:
  - build a geological model to better understand the local geological setting relevant to the intrusive system that has been identified; and
  - identify porphyry-related hydrothermal alteration zones and zonation of alteration to enable vectoring towards the central mineralised potassic core(s) of a porphyry system.
- Reporting of information that is material to the objectives of the program and project is appropriate only when sufficient holes have been drilled, drill hole data has been collated and the data has been adequately compiled and considered by the Company. A report on the outcomes from holes BTDD005 to BTDD009 is nearing completion.

## SUMMARY

- Detailed geological information from holes BTDD005 to BTDD009 has been compiled and geological modelling and other studies are in progress.
- **To assist with understanding the complex geology associated with the mineralisation system, the Company engaged internationally respected porphyry expert, Dr Greg Corbett, to review the core and report on the mineralisation system.**
- Several dacite porphyry intrusions and varying degrees of disseminated and vein quartz-chalcopyrite mineralisation, locally with molybdenite, as well as pyritic sheeted sulphide veins have been intersected by each of the holes.
- **The strong copper mineralisation intersected in the several holes drilled so far represents wall-rock porphyry mineralisation sourced from one or more nearby Cu-Au-Mo mineralised porphyry systems (Figure 7).**
- **The current program has resulted in a major break-through. Significantly, “text-book” porphyry potassic alteration (K-feldspar-biotite-magnetite) has been identified in hole BTDD005 at between approximately 450m to 650m down hole, which is the best confirmation of a buried porphyry system at Bottletree. The confirmation is also an indication that we are vectoring closer to a porphyry source for the mineralisation.**
- BTDD010, which has just commenced drilling, is collared 150m to the west of BTDD005 to follow the shear-controlled potassic zone down dip (Figures 3 to 6).

## BTDD010 OBJECTIVE

- BTDD010 is designed to drill towards BTDD004 and beneath the originally planned pathway for BTDD005 (BTDD005, as drilled, deviated severely towards the south). Planned total depth is 1,000m.
- The objective for BTDD010 is to intersect the down-dip extension of the potassic alteration zone intersected by BTDD005 and vector towards the main mineralised potassic and core zone of the porphyry system.

## REPORTING

- The outcomes from the 2022 holes that have been completed to date will be reported to the market shortly.



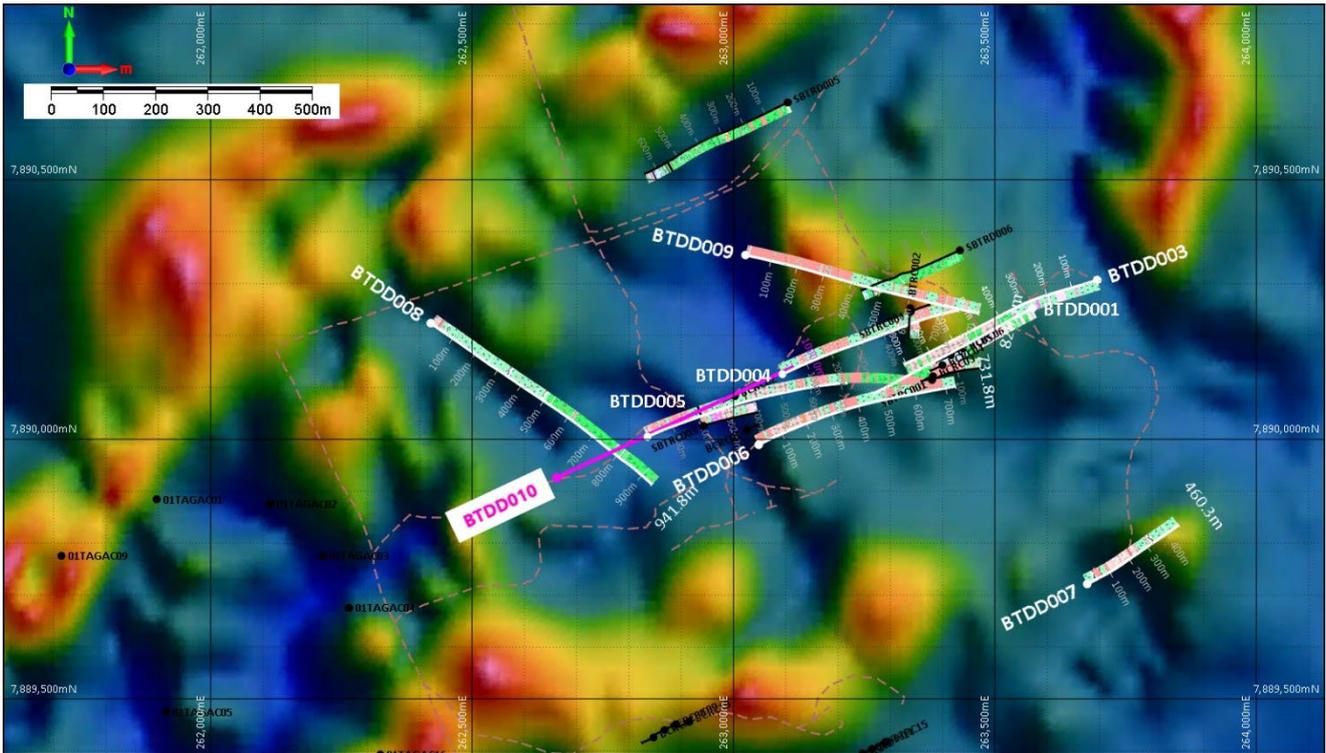


Figure 5. Image of aerial magnetic data (TDr VI NSSF) over the Bottletree Prospect area, overlain by drill hole traces and down hole lithology.

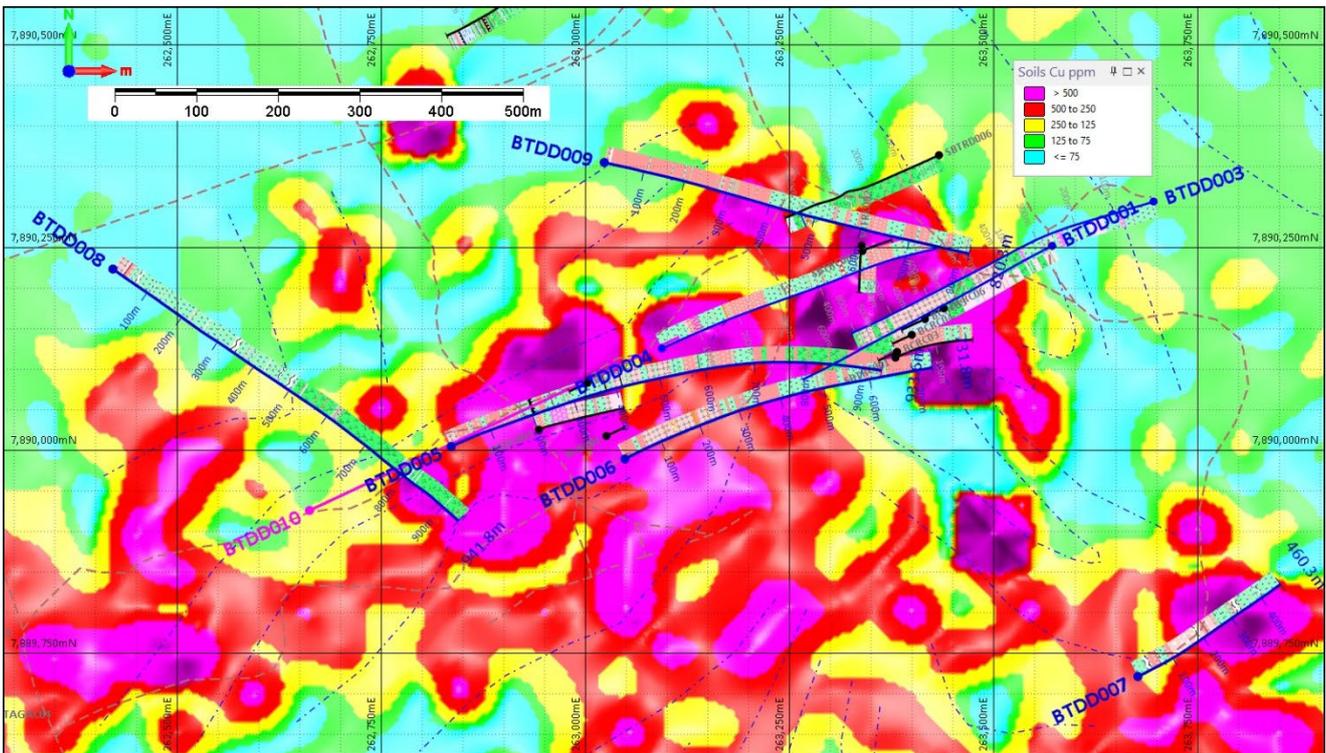


Figure 6. Image of soil copper over the Bottletree Prospect area, overlain by drill hole traces and down hole lithology.



Figure 7. BTDD006 – 531.7m (left) - quartz-pyrite-chalcopyrite-pyrrhotite; 491.8m (right) – breccia infill quartz-pyrite-chalcopyrite-pyrrhotite.

## COCKIE CREEK (PORPHYRY Cu-Au)

- Preparations underway for commencement of drilling program.
- Potential for significant porphyry Cu-Au mineralisation system.
- Current Mineral Resource Estimate: **13MT @ 0.42% Cu** (0.25% Cu cut-off grade) (JORC 2004), based on strike length of 1.2kms and a maximum depth of 250m (Refer ASX announcement dated 27 March 2013). Compiling Mineral Resource Estimation to comply with JORC, 2012.
- Interpreted porphyry intrusions within an intrusive complex (Figure 8).
- Two large, intense IP chargeability targets at depth beneath the defined mineralisation (Figure 9).
- Analysis of geophysical and geochemical datasets including the 3D remodelling of geophysical IP chargeability data to identify potential extensions to current copper Resource.

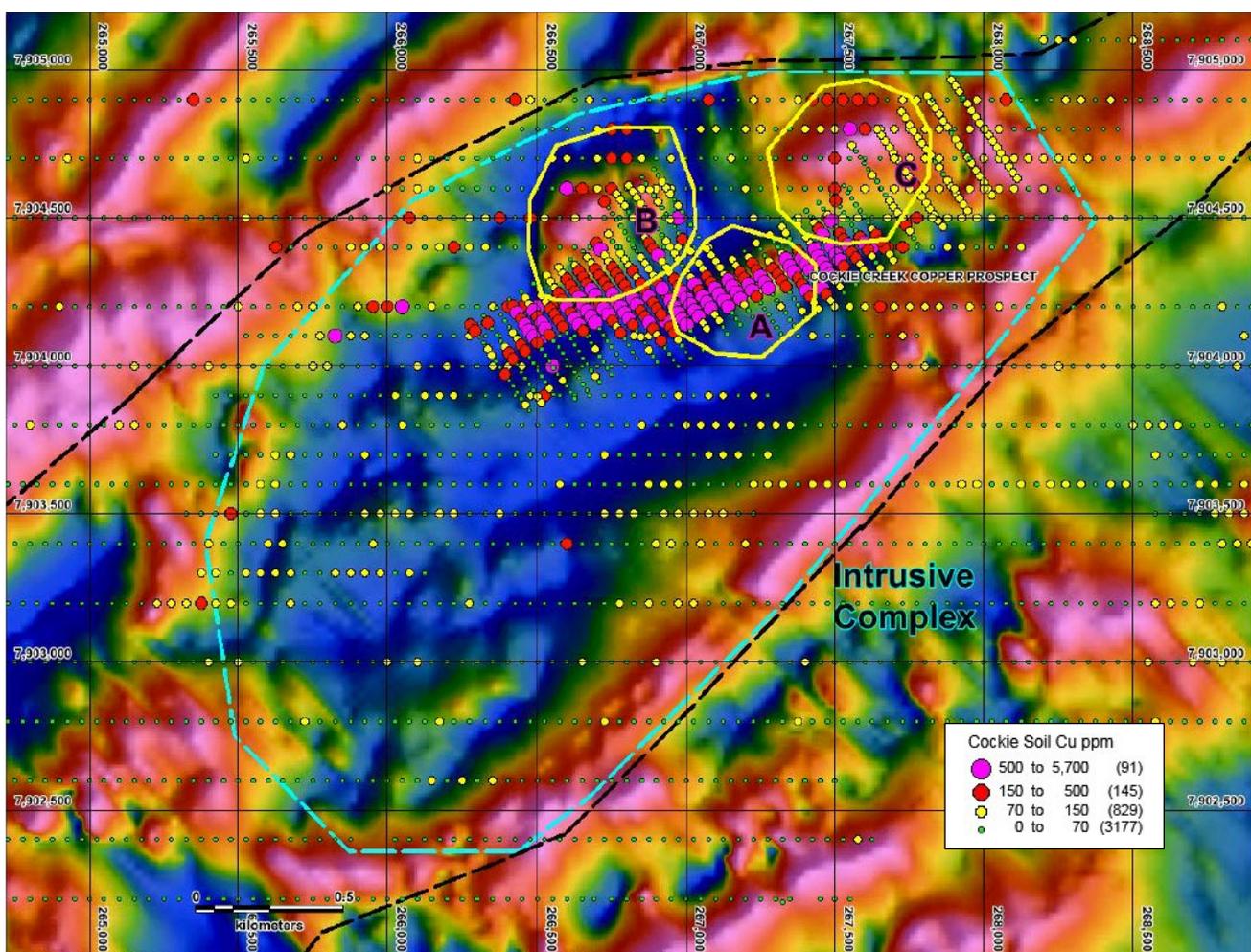


Figure 8. Cockie Creek thematic Cu soil data and interpreted porphyries on TDr VI NSSF processed airborne magnetics data, showing interpreted porphyry intrusions within an interpreted intrusive complex.

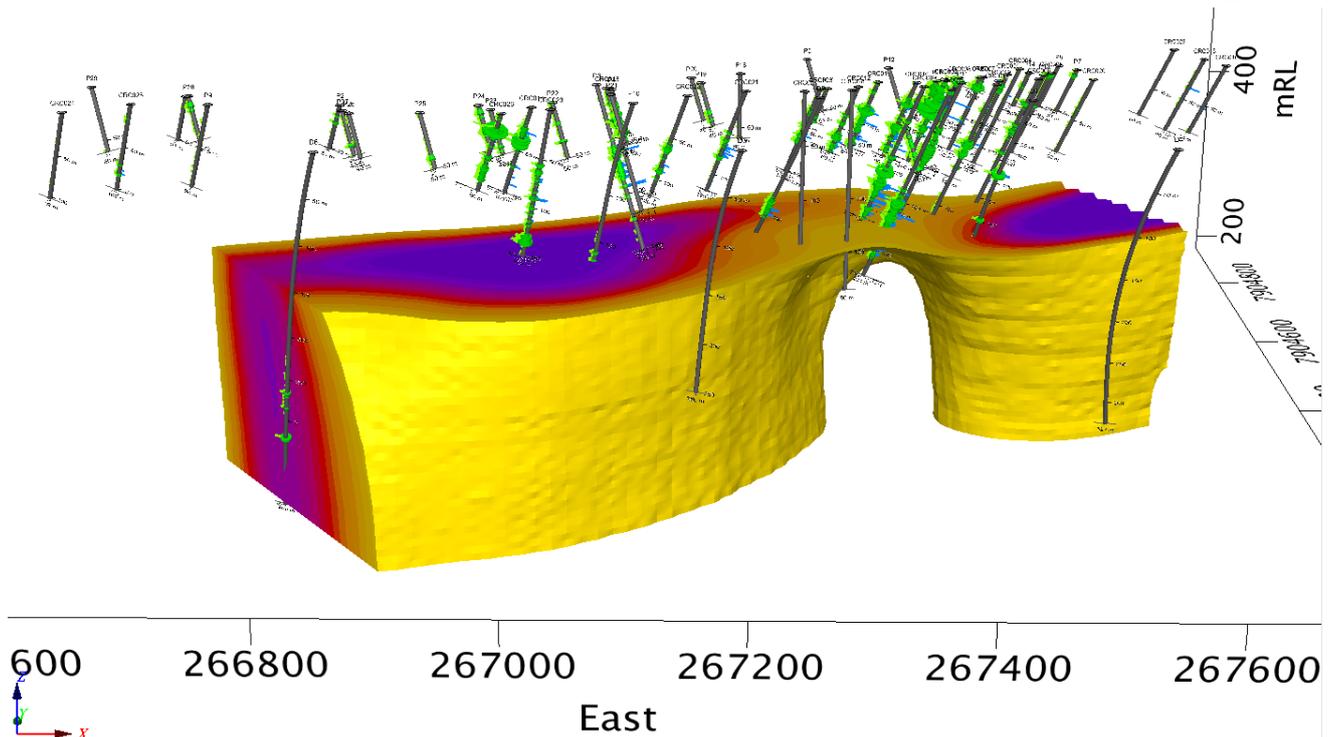


Figure 9. 3D modelled IP chargeability below approximately 200m below surface, showing historical drill holes and copper mineralisation (in green), viewed looking north.

#### NEW TENEMENT APPLICATIONS

- Applications for three new exploration permits for minerals (EPM) were made during the reporting period. Each of the applications comprises 100 sub-blocks, covering a total of 900km<sup>2</sup>, being the maximum size permitted for an EPM (Figure 10).
- The applications were made for the purpose of covering additional terrain considered prospective for Voisey's Bay style magmatic Ni-Cu-PGE sulphides.
- The EPM areas include several high priority magnetic features that were considered by Anglo American to be priority intrusion-related magmatic sulphide targets.
- The area also includes several known uranium occurrences. The Company will be collating all available information relating to the uranium occurrences, including any historic exploration conducted in the area. Notably, the local area is known for uranium mineralisation, with the Oasis Uranium Prospect located approximately 25kms to the north-northwest.

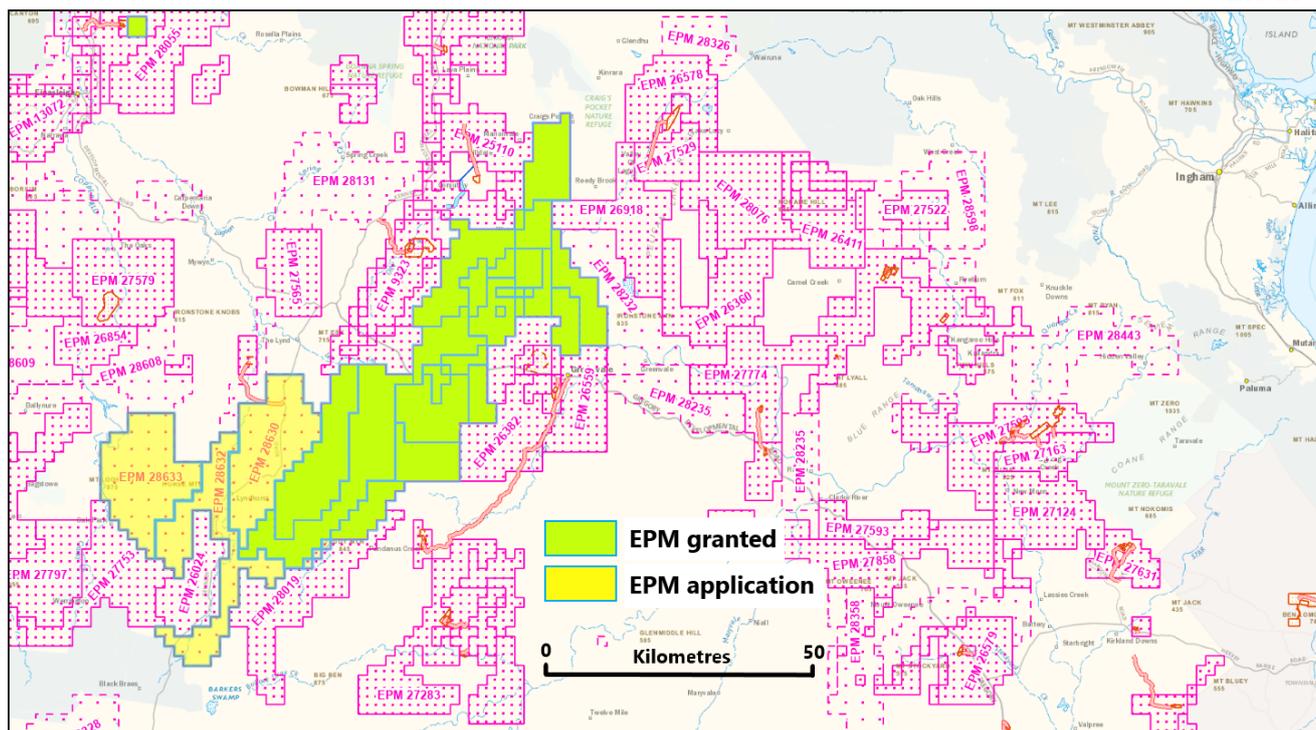


Figure 10. The expanded 100%-owned Greenvale Project tenements showing new EPM applications in yellow.

## CORPORATE AND COMMERCIAL

### Investments

Superior maintains an exposure in relation to ASX listed entity, Deep Yellow Limited (ASX:DYL).

As at 30 September 2022, the Company held 74,244 DYL shares with a closing value of \$60,137.64.

### Related Party Matters

Payments to Directors of the Company and related parties during the March Quarter totalled \$96,340, comprising remuneration and superannuation.

### ASX Listing Rule 5.3.3

Appendix 1 sets out information that is required under ASX Listing Rule 5.3.3 (for exploration entities).

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Managing Director

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**Reporting of Results:** *The Exploration Results and interpretations contained in this report reflect information that has been reported in ASX market announcements as noted within this report. The Company confirms that it is not aware of any new information that materially affects the information included in the relevant original market announcements.*

*The Bottletree Prospect exploration results, geology, geophysical imagery and drilling was compiled by Dr Peter Gregory, who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and an independent consultant to the Company. Dr Gregory does not hold shares or any other interest in the Company. He has inspected the Bottletree Project site, reviewed all primary data, inspected drill core and its context, 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Gregory consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.*

*Information in this report that relates to the Dido/Big Mag Project were originally announced on the ASX Market Announcements Platform on 16 March 2022. The Company confirms that it is not aware of any new information that materially affects the information provided in the ASX announcement. Information relating to the Dido/Big Mag Project were compiled and evaluated by Mr Peter Hwang, an executive director and shareholder of Superior Resources Limited and a Member of the Australian Institute of Geoscientists. Mr Hwang has sufficient experience which is relevant to this style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person under the 2012 edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Hwang consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.*

**Reliance on previously reported information:** *In respect of references contained in this report to previously reported Exploration Results, Mineral Resources or Exploration Targets, Superior confirms that it is not aware of any new information or data that materially affects the information, results or conclusions contained in the original reported document. In respect of previously reported Mineral Resource estimates, all originally reported material assumptions and technical parameters underpinning the estimates continue to apply and have not been materially changed or qualified. The form and context in which the relevant Competent Person's findings are presented have not been materially modified from the original document.*

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## Appendix 1

### DISCLOSURES REQUIRED UNDER ASX LISTING RULE 5.3.3

- Mining tenements held at the end of the quarter and their location

State	Tenement Name	Tenement ID	Location	Interest	Holder	Comments
QLD	Hedleys 2	EPM15670	Nicholson	100%	SPQ	Granted
QLD	Hedleys South	EPM18203	Nicholson	100%	SPQ	Granted
QLD	Tots Creek	EPM19097	Victor	100%	SPQ	Granted
QLD	Scrubby Creek	EPM19214	Victor	100%	SPQ	Granted
QLD	Cockie Creek	EPM18987	Greenvale	100%	SPQ	Granted
QLD	Cassidy Creek	EPM19247	Greenvale	100%	SPQ	Granted
QLD	Dinner Creek	EPM25659	Greenvale	100%	SPQ	Granted
QLD	Wyandotte	EPM25691	Greenvale	100%	SPQ	Granted
QLD	Cockie South	EPM26165	Greenvale	100%	SPQ	Granted
QLD	Victor Extended	EPM26720	Victor	100%	SPQ	Granted
QLD	Twelve Mile Creek	EPM26751	Greenvale	100%	SPQ	Granted
QLD	Dido	EPM27754	Greenvale	100%	SPQ	Granted
QLD	Arthur Range	EPM27755	Greenvale	100%	SPQ	Granted
QLD	Phantom Creek	EPM27932	Greenvale	100%	SPQ	Granted

- Mining tenements acquired and disposed of during the end of the quarter and their location

State	Tenement Name	Tenement ID	Location	Interest	Holder	Comments
QLD	Six Mile Creek	EPM28630	Greenvale	100%	SPQ	Application
QLD	Lyndhurst	EPM28632	Greenvale	100%	SPQ	Application
QLD	Middle Creek	EPM28633	Greenvale	100%	SPQ	Application

- Beneficial percentage interests held in farm-in or farm-out agreements at end of the quarter

State	Project Name	Agreement Type	Parties	Interest held at end of quarter by exploration entity or child entity	Comments

Abbreviations:

EPM Exploration Permit for Minerals, Queensland  
 SPQ Superior Resources Limited