

High impact copper exploration at Greenvale ramping up with drilling poised to commence at two Cu-Au-Mo porphyry prospects

HIGHLIGHTS:

- First drill rig mobilising this week to Cocky Creek Porphyry Prospect to commence maiden modern diamond drilling program to produce 4,500m of drill core
- Second rig planned to commence Phase 2 Bottletree drilling program, targeting an interpreted intrusion centre of the large-scale Cu-Au-Mo porphyry alteration system discovered during the 2022 program
- Third porphyry prospect, Wyandotte, progressing with initial geological and survey work ahead of a first program of drilling since 1975, scheduled for late 2023 – early 2024
- Commencement of this year's drilling marks the roll-out of Superior's copper strategy of expediting systematic drilling over multiple porphyry prospects distributed across the Greenvale porphyry province
- Drill program objectives:

Cockie Creek

- Targeting two significant, induced polarisation (IP) chargeability anomalies directly below the shallow Cu-Au deposit. The chargeability anomalies are interpreted to potentially represent upper parts of a porphyry intrusive system
- Resource definition drilling of shallow Cu-Au deposit to establish a JORC (2012)-compliant Mineral Resource Estimate and to expand the size of the resource

Bottletree

- Vector towards a porphyry core by targeting an interpreted intrusion centre 400 metres south of 2022 line of drilling, considered likely to be a source of copper and molybdenite mineralisation
- Test for wallrock porphyry deposit potential by investigating the extent of wall rock Cu-Au-Mo mineralisation extending from surface and remaining open at 850m depth as identified during 2022 drilling and a second untested zone to the southwest
- Additional work includes soil surveys across the province including soil extension and ground gravity surveys at Bottletree

Superior Resources Limited (**ASX:SPQ**) (**Superior**, the **Company**) is pleased to announce the commencement of the Company's accelerated copper exploration strategy at its 100%-owned Greenvale Project, 210kms west of Townsville, Queensland (Figure 1). The first of two diamond core rigs will be mobilising this week to conduct two substantial programs of drilling at the Company's most advanced porphyry prospect, Cockie Creek and a Phase 2 program at Bottletree.

Since completion of the 2022 Bottletree program Superior’s team has conducted additional geological modelling at Bottletree, Cockie Creek and a third porphyry target, Wyandotte, which has greatly enhanced the quality and potential of those prospects.

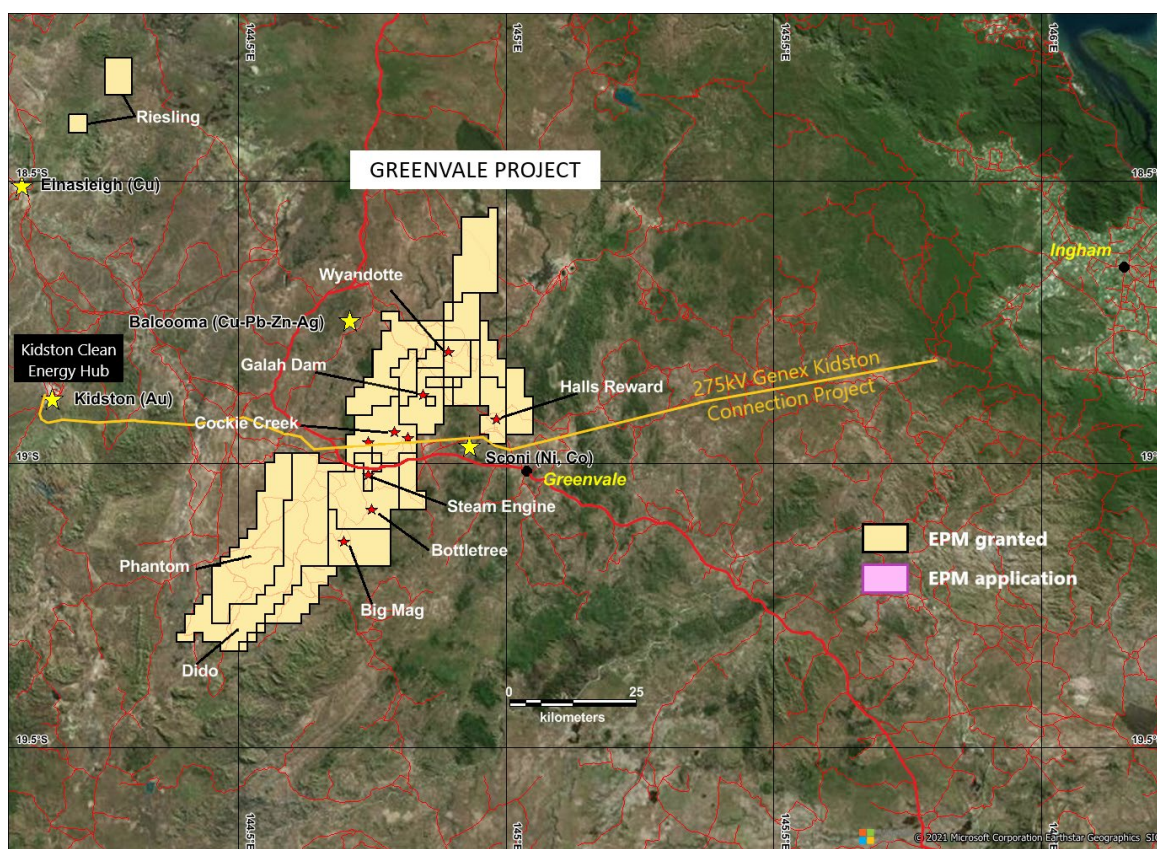


Figure 1. Map showing the locations of the Greenvale Project tenements and select prospects. The Gregory Highway, Kidston Clean Energy Hub and associated power infrastructure corridor are also indicated.

Superior’s Managing Director, Peter Hwang commented:

“The 2022 deep diamond drilling program at Bottletree paid off tremendously with the realisation that the Greenvale corridor of multiple copper prospects stretching about 50 kilometres represents a previously unrecognised copper-gold porphyry province.

“This has given us a new level of excitement and confidence for the prosecution of our copper strategy. Consequently, we have embarked on a rapid acceleration of systematic exploration across the province with the aim of drilling each of the many known or suspected porphyry prospects, including characterising numerous other unnamed copper occurrences.

“As we bring on each of these prospects, the Company and its shareholders will benefit from an incrementally greater exposure to multiple Tier-1 potential copper programs.

“We believe there is no better way to start the program off with Cockie Creek, which historically hasn’t seen any comprehensive drill targeting of the large-system potential that is clearly evident at the prospect. Consistent with our overall focus, our primary objective at Cockie is to discover a large, mineralised porphyry system directly beneath the copper-gold mineralisation that has been partially identified at surface. Historic drill intersections of up to 95 metres @ 0.5% copper and 3 metres @ 9.0 g/t gold exist within the near-surface mineralisation, including an inferred Resource estimate of 13Mt @ 0.42% copper under the 2004 JORC Code. In particular, the drill results indicate that copper grades are improving at depth. However, the most striking

observation is that an intense IP chargeability anomaly lies below the known mineralisation, including a second parallel chargeability anomaly that wasn't recognised by previous explorers and remains untested.

"Resource definition drilling will also feature in the Cockie program with the aim of substantially increasing the Resources and establishing a maiden JORC (2012)-compliant Mineral Resource estimate.

"Bottletree will, of course, remain a key focus this year with a Phase 2 drill program planned in parallel with Cockie. Based on the findings from the 2022 program, Phase 2 will vector towards the potassic core of the porphyry system by tracing the source of mineralising fluids with a second line of drill holes traversing further to the south of the 2022 drilling.

"To cap the year off, we are working towards a program of drilling at Wyandotte, after initial field work significantly upgraded the porphyry potential and scale of the prospect."

Maiden Cockie Creek Drilling Program

Extensive geological and geophysical modelling work has highlighted an exceptional target that has the potential to lead to the discovery of a large porphyry Co-Au-Mo mineralisation system (Figure 2). The work also identified significant potential to expand the historic from-surface Mineral Resource Estimate of **13Mt @ 0.42% Cu** (0.25% Cu cut-off grade) (JORC 2004)¹, which was established over only about half of the known strike of mineralisation at surface and only to shallow depths (Figures 3 and 5).

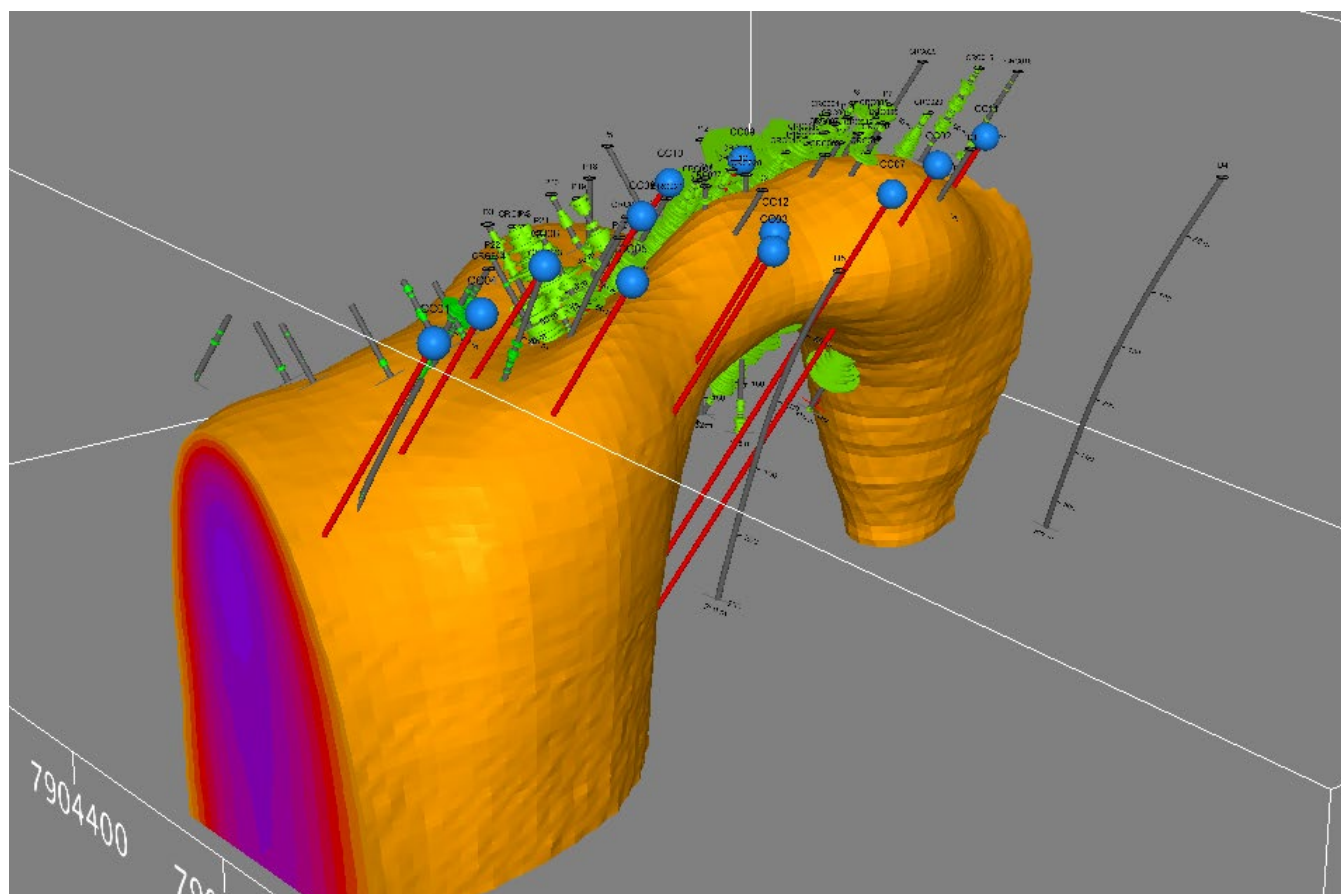


Figure 2. 3D IP chargeability model showing moderate to high chargeability zone. Historical drill holes (grey traces) and copper mineralisation (green) with 2023 planned drill holes in red. Viewed looking northeast.

¹ Refer ASX announcement dated 27 March 2013

The 4,500m Cockie program will comprise:

- 3 deep core holes (1,900m min) drilling under historic Resource drill holes and also testing second untested chargeability anomaly located to the north, adjacent to the historic Resource; and
- 10 resource definition and validation holes (2,600m) to establish an expanded JORC (2012) Mineral Resource Estimate.

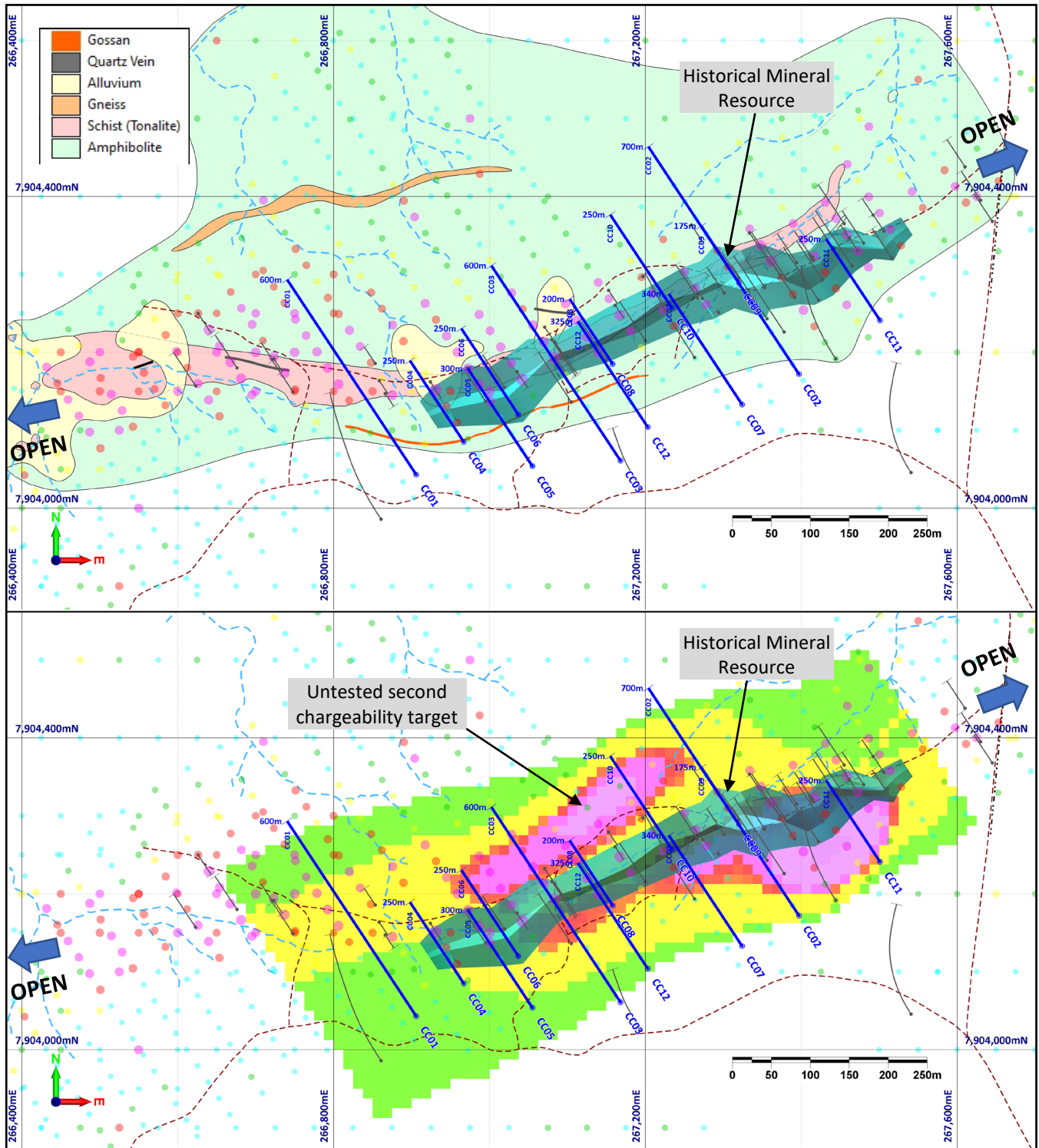


Figure 3. Plan views of Cockie Creek Prospect surface geology (top) and IP chargeability data (bottom). Gridded copper soil geochemistry, planned drill holes (blue traces) and wireframe of historical Mineral Resource are shown in each plan.

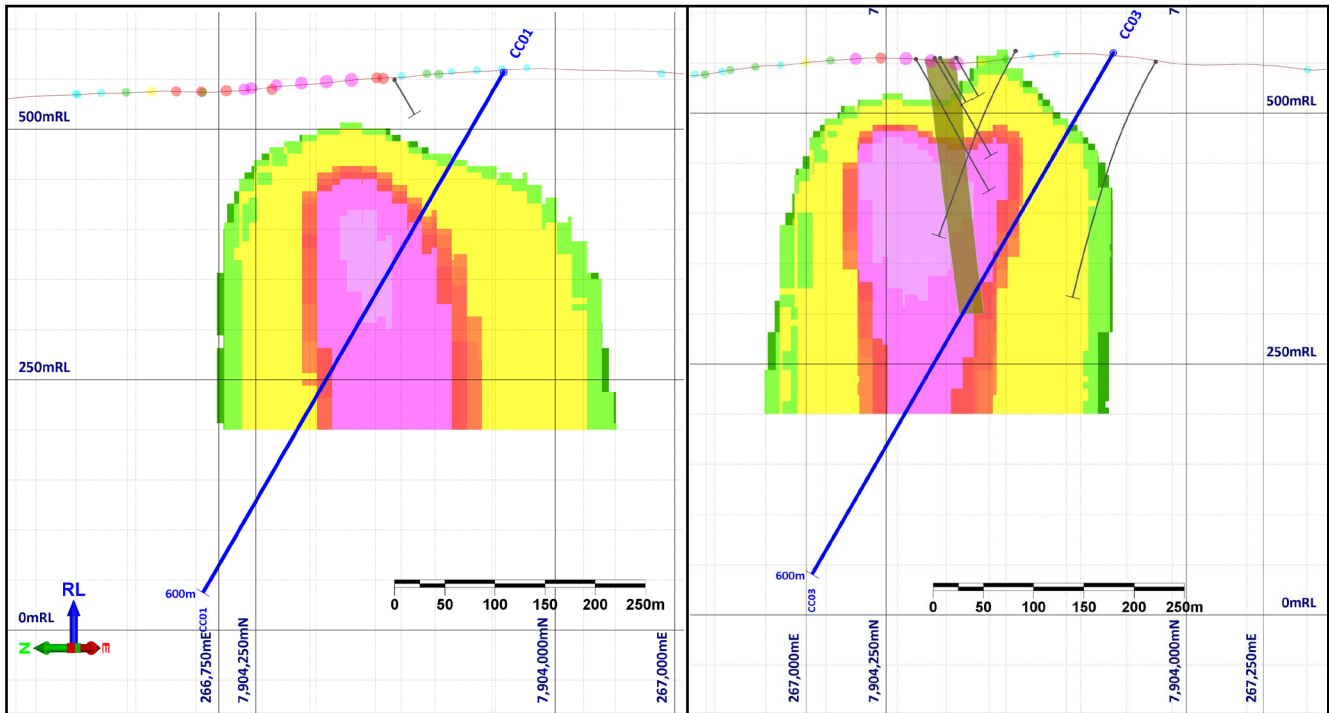


Figure 4. Sectional profiles along the trace of planned drill holes CC01 and CC03 (blue traces), showing planned testing of IP chargeability anomaly at depth and historical Mineral Resource (olive). Historical hole traces shown in light grey.

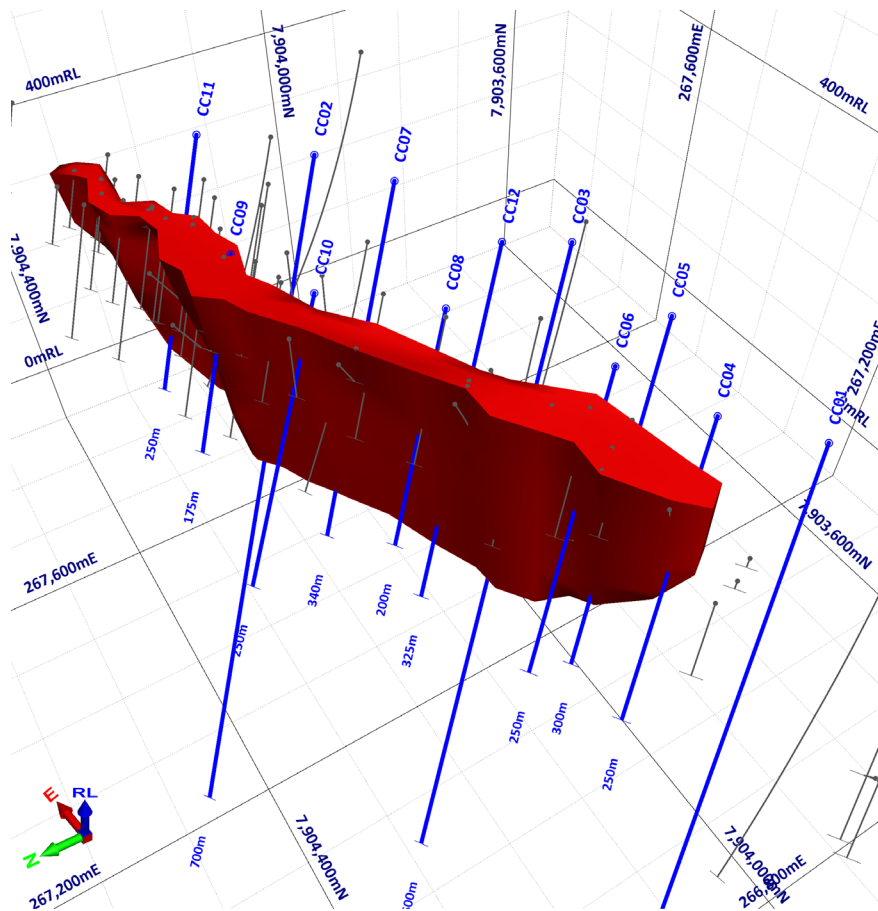


Figure 5. 3D wireframe model of Cockie Creek historical Mineral Resource showing planned drill holes in blue and historical holes in light grey, viewed towards southeast.

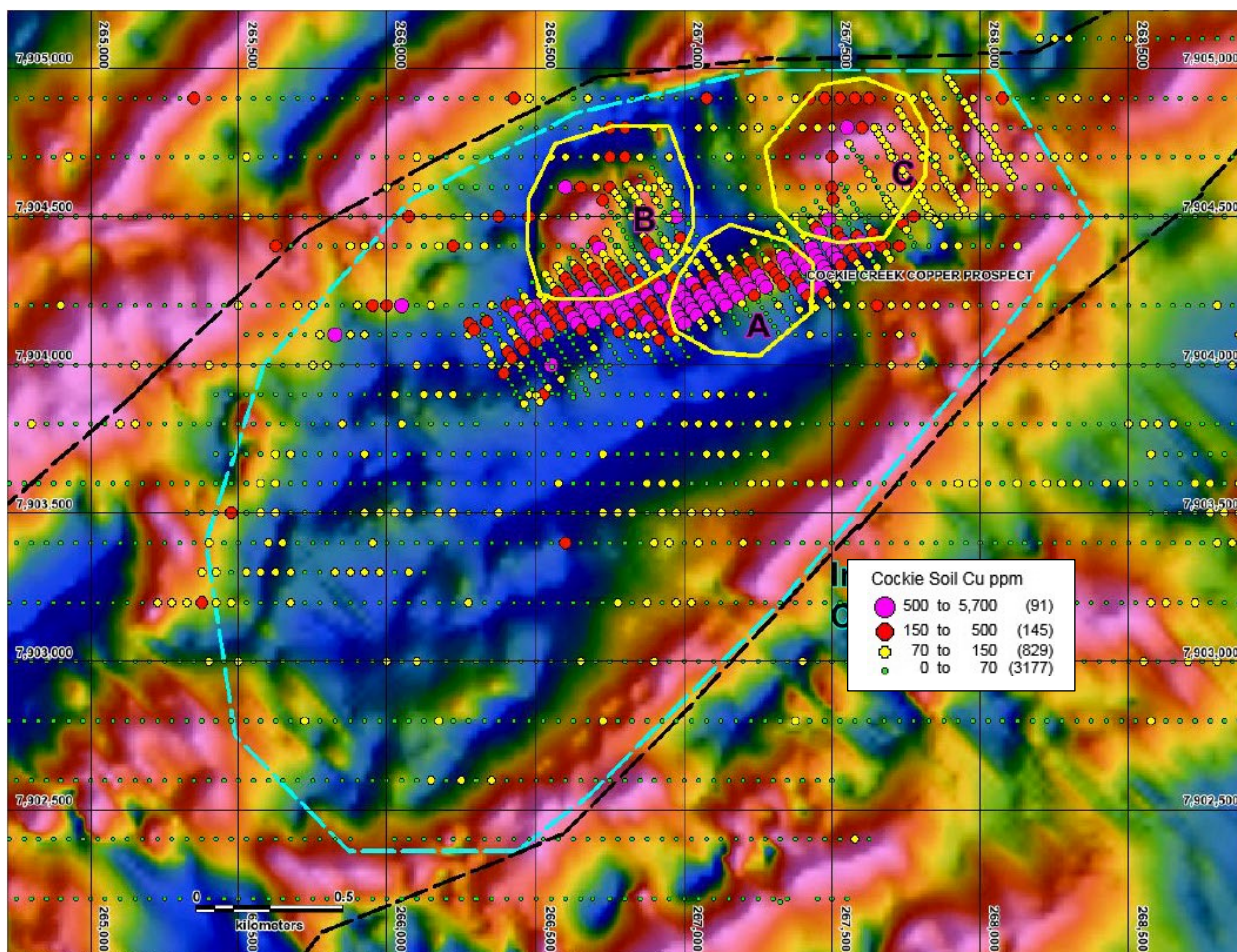


Figure 6. Cockie Creek thematic Cu soil data and interpreted porphyries on TDr VI NSSF processed airborne magnetics data, showing interpreted porphyry intrusions (A to C) within an interpreted intrusive complex.

PORPHYRY Cu-Au-Mo TARGET AT COCKIE

Cockie Creek is characterised by a tabular zone of disseminated copper-gold-molybdenum mineralisation that crops out at surface and extends for over 1.2 kilometres in strike length with a true width of up to 60 metres. The mineralisation shows good continuity and has only been drilled to shallow depths (Figures 2 to 5).

Directly beneath the mineralisation lies a strong IP chargeability anomaly that has not been adequately drilled. Recent geophysical modelling indicates that a second chargeability anomaly lies to the west of and parallel to the main anomaly. The western anomaly has not previously been drilled.

The main target at Cockie Creek is one or more deeper porphyry cores that are likely to be the source of the copper mineralisation. The mineralisation identified by the historic drilling potentially represents leakage into the wall rocks of a nearby mineralised porphyry system.

As appears to be the case at Bottletree, the likely wall rock-hosted mineralisation at Cockie Creek represents a potentially significant outcropping copper resource. **Copper grades are relatively high in porphyry deposit terms (Table 1), with historic results indicating increasing grades at depth. In addition, a significant zone of gold (3m @ 9.0 g/t Au from 80m) in historic hole CRC003 was returned just short of the western chargeable zone.**

Table 1. Cockie Creek Copper Prospect - Selected drillhole intersections from historical data.

Hole	EastMGA	NorthMGA	From (m)	To (m)	Length (m)	Cu (%)	Au (g/t)	Mo (ppm)
CRC002	267380	7904295	0	68	68	0.74	0.12	92
CRC009	267356	7904243	66	163	97	0.48	0.07	114
CRC010	267353	7904283	11	85	74	0.42	0.08	78
CRC011	267320	7904295	1	80	79	0.45	0.06	76
CRC014	267019	7904155	15	56	41	0.50	0.10	48
CRC017	267378	7904226	121	215	94	0.53	0.08	99
CRC023	267037	7904120	53	141	88	0.43	0.06	49
CRC026	266995	7904137	11	84	73	0.44	0.05	22
D1	267448	7904183	180	216	36	0.57	0.10	28
D3	267075	7904227	56	104	48	0.48	0.10	94
P11	267403	7904244	50	108	58	0.64	0.07	-
P12	267339	7904345	50	100	50	0.44	0.07	-
P16	267370	7904307	0	40	40	0.75	0.13	-

Bottletree Phase 2 Drilling Program

Exploration at Bottletree is at an early stage with only four holes targeting a porphyry core having been completed. Extensive wall rock-hosted mineralisation within a large porphyry-style alteration shell has been intersected:

- **BTDD004: 632m @ 0.21% Cu, incl. 224m @ 0.40% Cu** (refer ASX announcement dated 2 June 2022);
- **BTDD005: 314m @ 0.13% Cu** (refer ASX announcement dated 12 April 2023);
- **BTDD010: 73m @ 1,229.5ppm Mo, incl. 14m @ 6,000ppm Mo and 6m @ 13,900ppm Mo;** and
- **SBTRD006: 292m @ 0.22% Cu** (refer ASX announcement dated 25 October 2018).

Each of the 2022 holes were drilled along one line with the same hole directional parameters, which limits the amount of 3D vector interpretation available at this stage. However, from other structural information, it appears that **the main copper-mineralising fluid flow pathways are likely to be moving off the section line A-A' (as defined by holes BTDD004, 005 and 010) towards either a north-westerly or south-westerly direction** (Figures 7 and 8). In other words, BTDD010 and possibly BTDD005 may have intersected the northern margin of the higher-grade wall rock-hosted copper zones and overall potassic alteration zone (Figures 7 and 8).

The Company considers that the latest drilling has reached a point that is potentially within “close” proximity to either a source potassic core zone of a mineralised porphyry system or large zones of mineralisation related to one or more of the porphyry intrusions that have been identified during the 2022 program.

The 2023 program is currently on track for a late July commencement and will comprise:

- a planned minimum of 2,000 metres of diamond core drilling across centre of the overall 2km x 1.5km prospect-scale soil geochemistry anomaly, targeting (Figure 9);
- drill testing of two wall rock-hosted mineralisation zones; and
- a gravity survey and extension of the multi-element soil geochemistry grid westwards within the area of recent soil cover on the western side of the prospect.

Importantly, uranium-lead radiometric dating of zircon and rhenium-osmium radiometric dating of molybdenite will be obtained in order to determine the age of the mineralisation system, which is currently considered to be Ordovician (485-444Ma). Such a date would correlate the intrusive system with the Ordovician Macquarie Arc, which hosts the Cadia-Ridgeway mine.

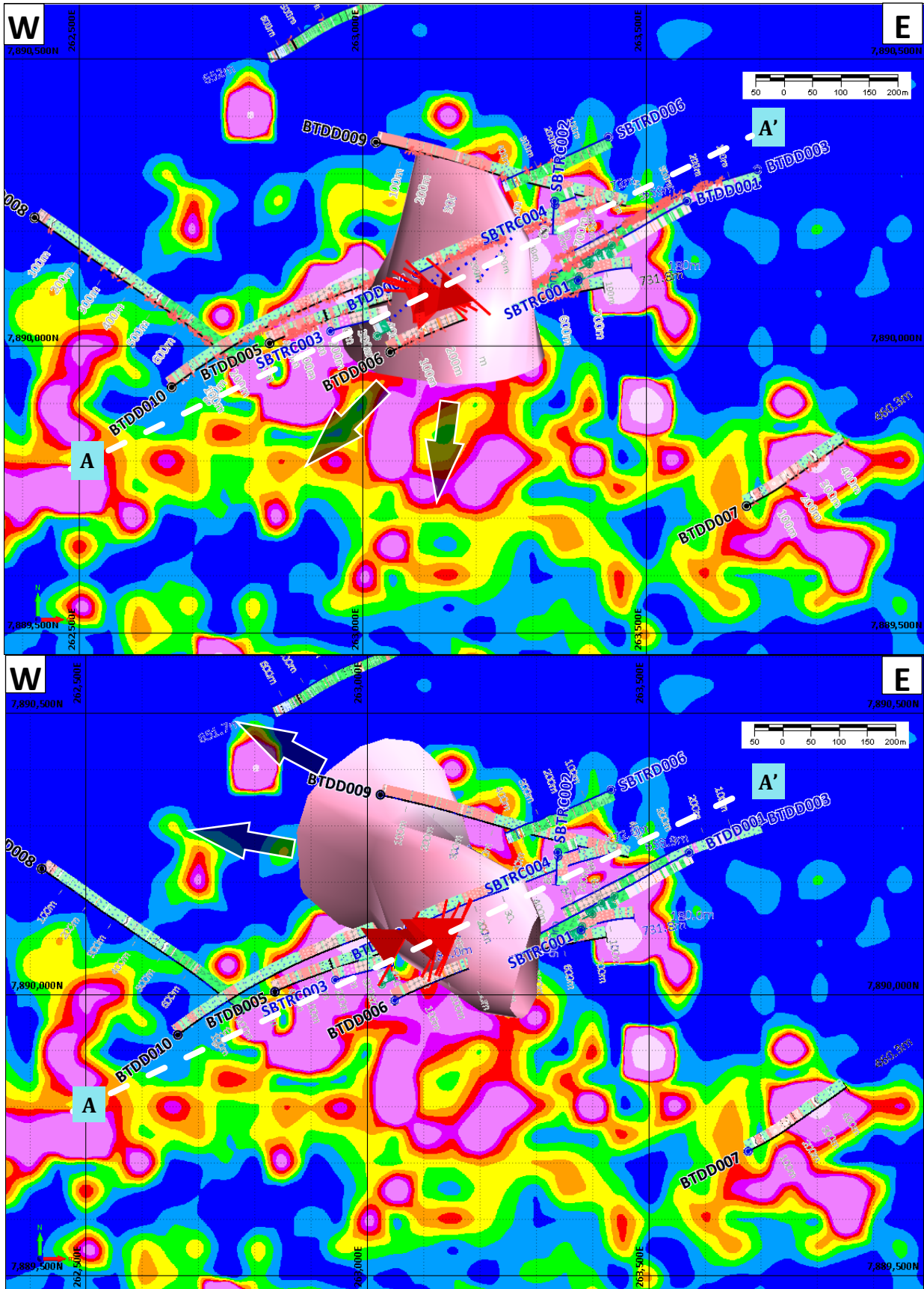


Figure 7. Plan views of Bottletree Prospect showing 3D models of the general zone of main potassic alteration on Cu data. SSW potassic model (top) with enlarged dip triangles representing larger chalcopyrite veins that cross-cut foliation and WNW potassic model (bottom) with enlarged dip triangles representing chalcopyrite veins aligned with foliation.

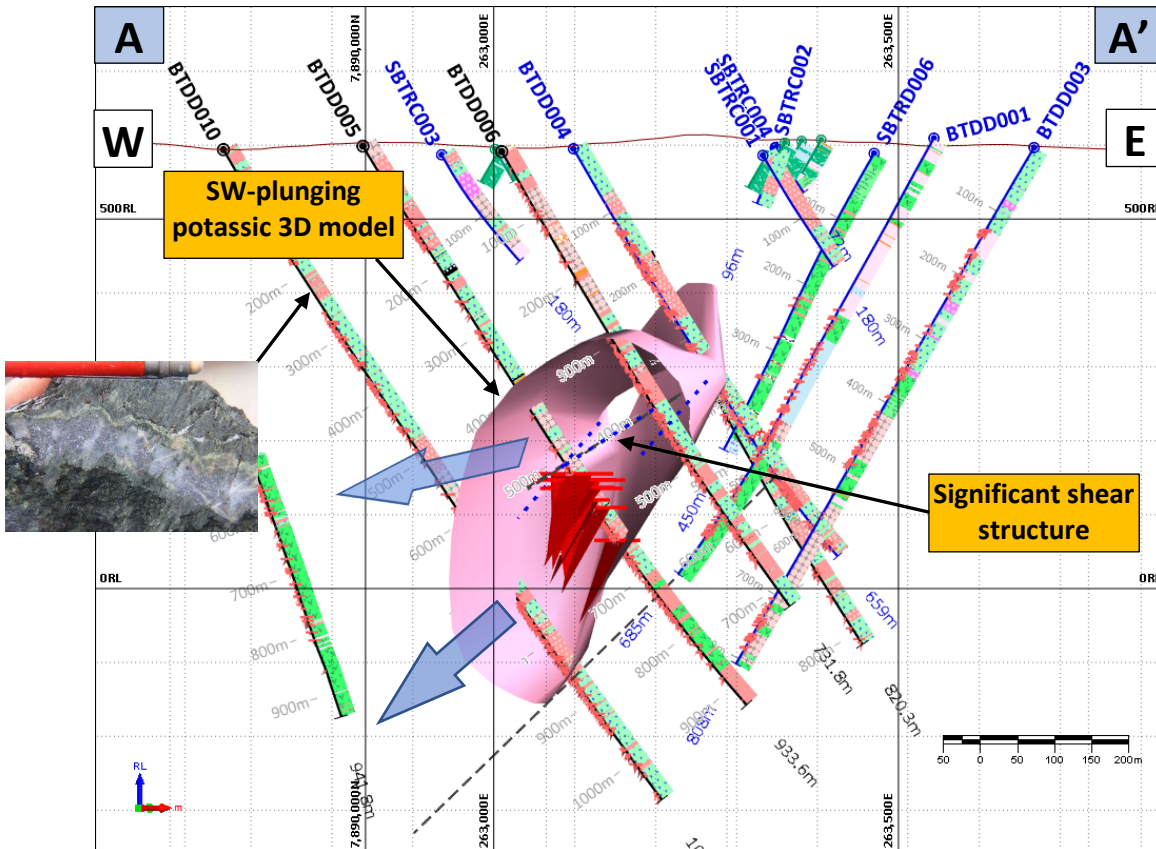


Figure 8. Cross section A-A' showing 3D model of the general zone of main potassic alteration which, based on alteration and structural information, plunges with a range of dips towards the south-southwest. Large blue arrows indicate possible vector directions towards a porphyry potassic core. An early-stage quartz-chalcopyrite vein is also shown.

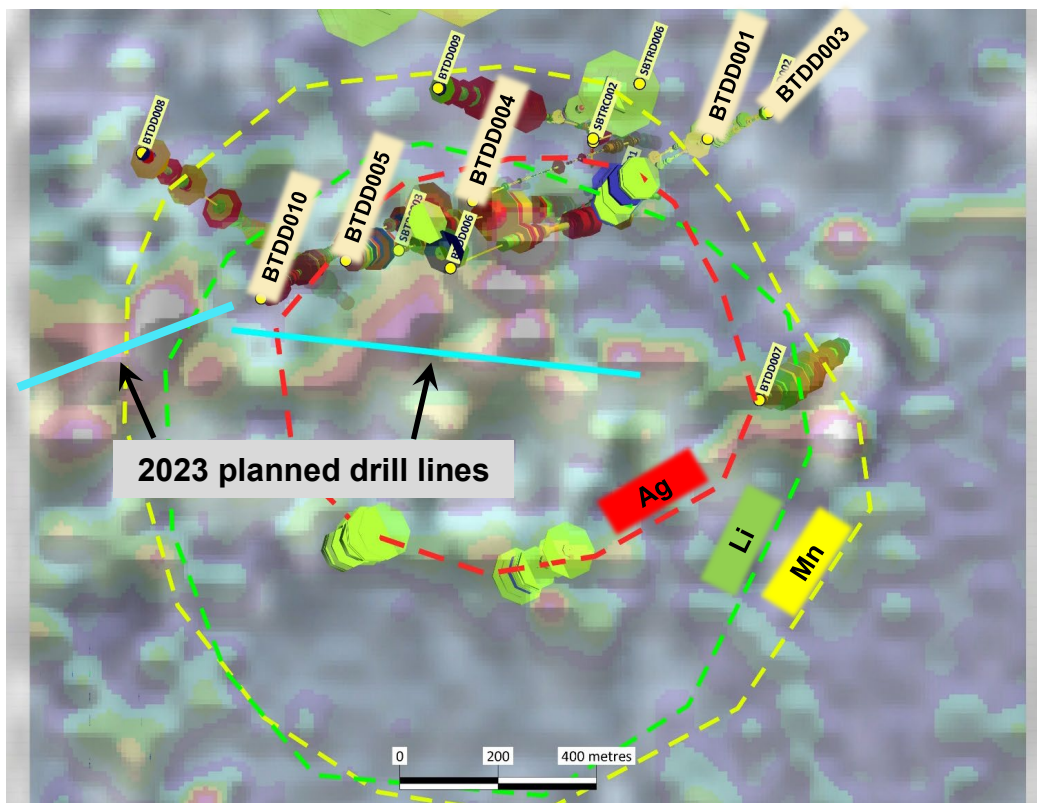
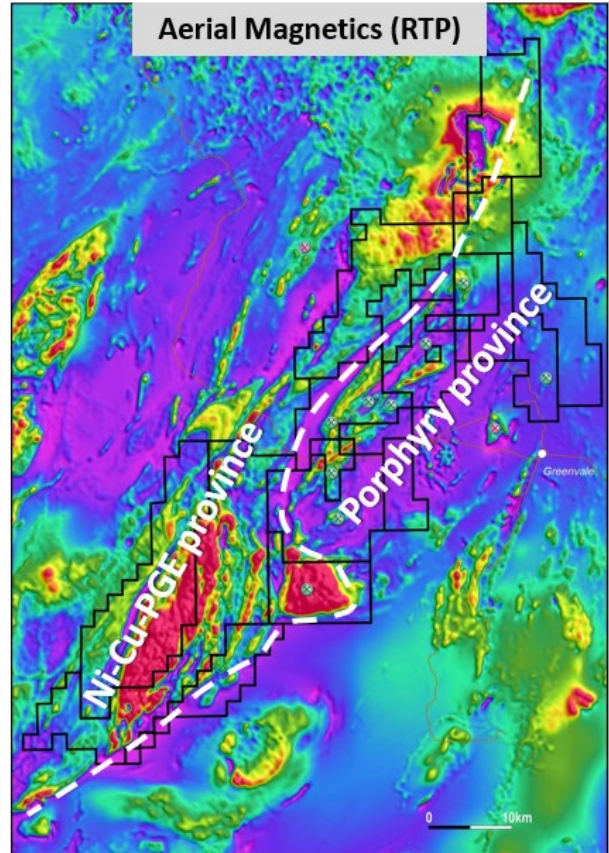
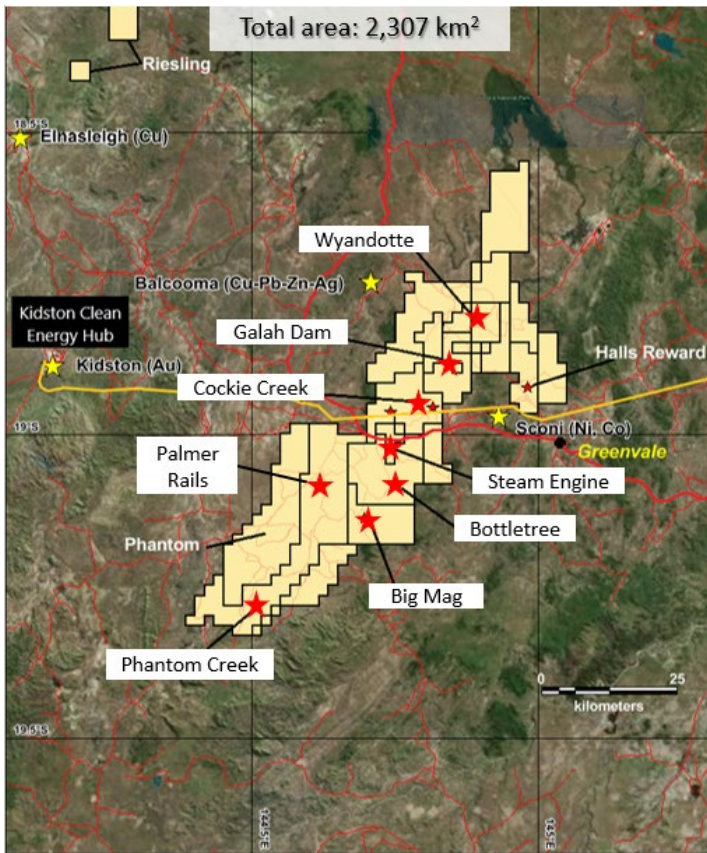


Figure 9. Proposed 2023 drill lines, recent Superior drill holes and silver, lithium and manganese soil geochemical haloes over gridded soil molybdenum geochemistry background. Down-hole alteration indicated as disks centred on drill hole traces. 2023 drill holes will target potential fluid pathway zones to the south, southwest and west-southwest of 2022 holes.

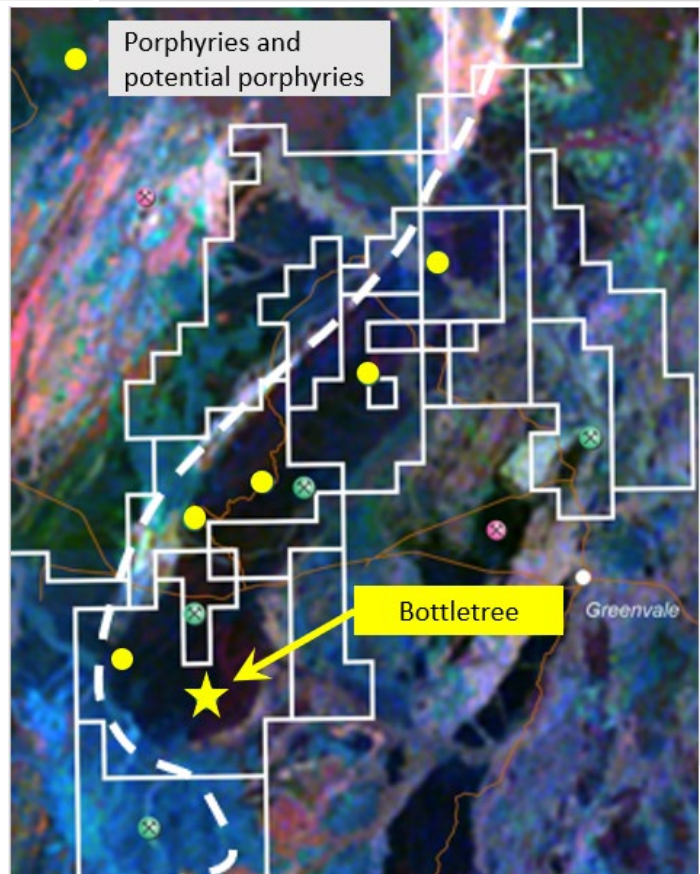
Greenvale – Juxtaposed porphyry and magmatic Ni-Cu-PGE sulphide provinces



Superior has long recognised the copper potential within the Lucky Creek Corridor. However, recent exploration drilling at Bottletree, coupled with regional geological investigations over several years has enabled the characterisation of the Lucky Creek Corridor as a fossil island arc porphyry province, hosting numerous porphyry and potential porphyry systems recurring along a 50 km zone. Superior is taking the lead with Tier-1 potential copper-gold porphyry exploration in this part of Australia.

Juxtaposed against the Greenvale Porphyry Province is a second province formed by a completely different geological genesis model. Originally formed at a much deeper crustal level, the Greenvale Magmatic Nickel-Copper-PGE Sulphide Province has been technically proven in terms of the presence of such mineralising systems. However, the province remains practically unexplored.

Superior enjoys a first mover advantage over the entire province, which presents as one of the best sulphide Ni-Cu-PGE propositions in Australia.



About Superior Resources

Superior Resources Limited (ASX:SPQ) is an Australian public company exploring for large lead-zinc-silver, copper, gold and nickel-copper-cobalt-PGE deposits in northern Queensland which have the potential to return maximum value growth for shareholders. The Company is focused on multiple Tier-1 equivalent exploration targets and has a dominant position within the Carpentaria Zinc Province in NW Qld and Ordovician rock belts in NE Qld considered to be equivalents of the NSW Macquarie Arc. For more information, please visit our website at www.superiorresources.com.au.

Reporting of Exploration Results: *The information in this report as it relates to exploration results and geology was compiled by Mr Peter Hwang. Mr Hwang is Managing Director and a shareholder of Superior Resources Limited. Mr Hwang is a Member of the Australian Institute of Geoscientists and 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'. Mr Hwang consents to the inclusion in the report of the matters based on the information in the form and context in which it appears*

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