Superior Resources

ASX Announcement

16 October 2023

Strong assays from Cockie Creek second hole extend porphyry Cu and Au mineralisation with higher grades and broader intersection

HIGHLIGHTS:

- **Second Cockie Creek drill hole, CCDD002, confirms higher grades and broader width of porphyry copper and gold mineralisation at deeper levels:**
  - **117m @ 0.52% Cu, 0.11g/t Au** and **109ppm Mo** from 20m (**CCDD002**)
    - incl. **71m @ 0.69% Cu, 0.13g/t Au** and **158ppm Mo** from 27m
    - incl. **36m @ 0.77% Cu, 0.14g/t Au** and **146ppm Mo** from 56m
    - incl. **10m @ 1.08% Cu, 0.20g/t Au** and **44ppm Mo** from 56m
- **CCDD002 confirms good continuity of mineralisation eastwards from CCDDD001, which returned:**
  - **71m @ 0.48% Cu** and **70ppm Mo** from 16m (**CCDD001**)[1]
    - incl. **31m @ 0.65% Cu** and **80ppm Mo** from 36m
- **Assays are from eastern part of the Mineral Resource area (Discovery Outcrop) and confirm strong nature of mineralisation within the Resource envelope**
- **Sulphide mineral assemblages, mineralisation grades and the presence of abundant porphyry "B veins" and late-stage "D veins" at Cockie Creek are all features typical of porphyry Cu-Au-Mo deposits**
- **Mineral Resource area (Discovery Outcrop) crops out at surface and likely to represent one of several hydrothermal fluid pathways originating from a mineralised porphyry core located beneath the Discovery Outcrop**
- **Porphyry intrusions and mineralisation thickening with depth. Mineralisation also broadens westwards from the Discovery Outcrop towards interpreted large porphyry intrusion centres**
- **Potential for the discovery of a large porphyry Cu-Au-Mo mineralisation system**
- **Numerous batches of assays yet to be received from the labs**

Superior Resources Limited (**ASX:SPQ**) (**Superior**, the **Company**) is pleased to announce new copper and gold assay results from the second hole drilled (**CCDD002**) under the Company's maiden program at the Cockie Creek Prospect. Cockie Creek is one of several porphyry copper-gold-molybdenum prospects within the Company's 100%-owned Greenvale Project (**Fig. 1**).

The copper and gold assays from CCDD002 are of relatively high grade in terms of porphyry copper-gold-molybdenum deposits and confirm the grades encountered in nearby historical drill holes. The assays are

[1] Refer to ASX announcement dated 25 September 2023

also similar, but stronger, than those encountered in CCDD001, the first drill hole in the program (refer to ASX announcement dated 25 September 2023).

In particular, the assays continue to confirm that the actual copper grades have consistently exceeded visual estimations of chalcopyrite mineralisation observed within the core.

Observations from the mineralisation, including the extensive strong potassic alteration indicate the possibility that a potassic core may be located nearby and beneath the Discovery Outcrop.

The current program represents the first systematic drilling at Cockie for over thirty years and the first to target the prospect as a porphyry system. The program as planned comprises 17 HQ diamond core holes for a total of 6,650m with the following objectives:

- target two high order induced polarisation (IP) chargeability anomalies directly below the Discovery Outcrop. The chargeability anomalies are interpreted to represent the upper zones of a mineralised Cu-Au-Mo porphyry core;
- target interpreted large intrusion centres west of the Discovery Outcrop; and
- establish a JORC (2012)-compliant upgraded Mineral Resource Estimate on the Discovery Outcrop.

Completed drilling to date comprises seven holes for a total of 2,773 metres of core.

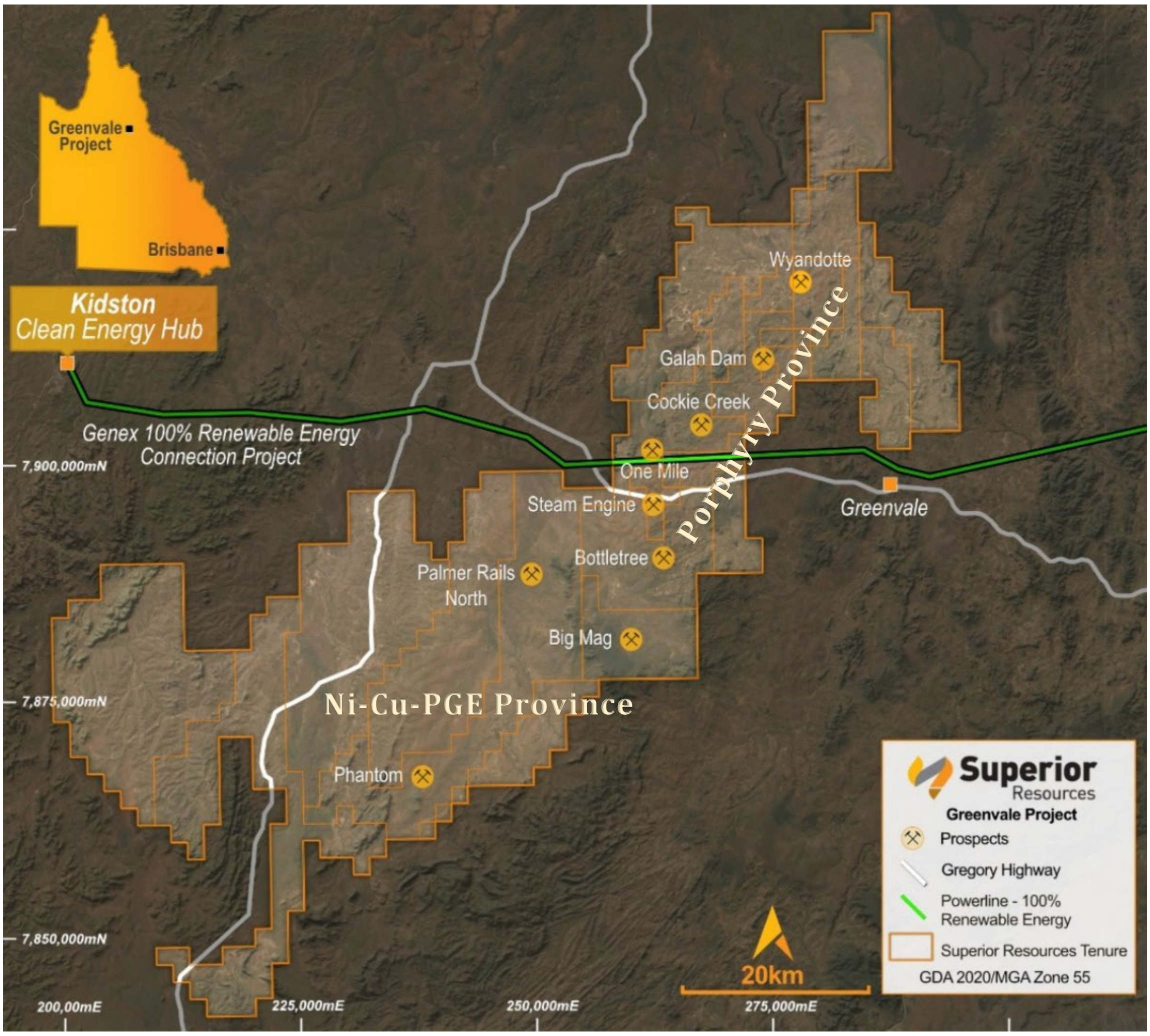


***Figure 1**. Map showing the locations of the Greenvale Project tenements and select prospects. The Gregory Highway, Kidston Clean Energy Hub and associated power infrastructure corridor are also indicated.*

Superior's Managing Director, Peter Hwang commented:

"Cockie Creek continues to impress with the consistent intensity and continuity of copper mineralisation being returned from each batch of assays from the labs. Based on our visual examinations of core from the other holes, we expect strong results to continue.

"This is a strong mineralisation system that exhibits well developed geological features that are typical of copper-gold-molybdenum porphyry deposits.

"The work ahead of us now is to interpret all of the geological information contained in the core together with the assay results as they are received from the labs. This will enable the development of a mineralisation system model to vector the next holes towards the core of the system, which potentially could be located close to the current levels of drilling. We are aiming to continue the drilling towards the end of the year."

Maiden Drilling Program

Drilling commenced on the eastern end of the historical copper zone in early July 2023. A total of 2,773m for seven HQ diamond drill holes (CCDD001 – CCDD007) cored from surface have been completed to date (**Fig. 2**). The program, as planned, comprises a total of 17 holes for 6,650 metres.

As a result of several factors, including the quantity of new data obtained from the drilling that requires analysis and degree to which the drilling has outpaced the receipt of laboratory assays, drilling operations have been paused at Cockie Creek and diverted to the Bottletree Prospect.

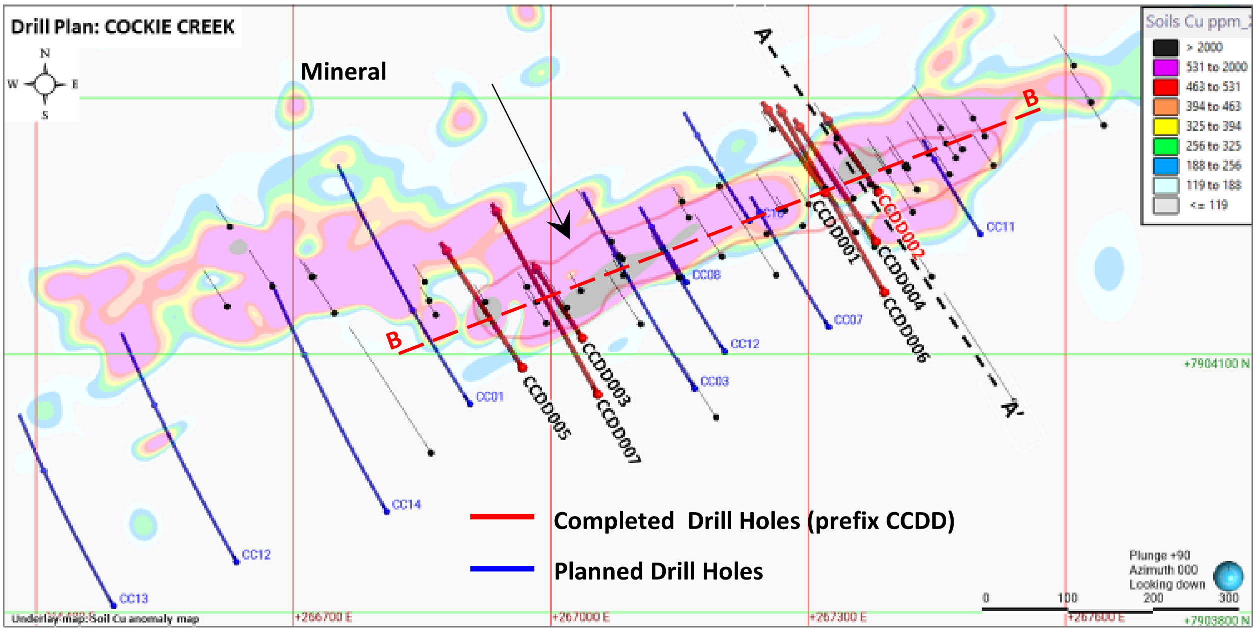


***Figure 2**. Plan map of the Cockie Creek Discovery Outcrop area showing completed drill holes CCDD001 – CCDD007 (in black), planned but not yet drilled holes (in blue) and historic drill holes (in grey) over gridded Cu soil geochemistry. CCDD002 is labelled in red. Outline of Mineral Resource at surface and cross section A-A' are shown.*

Drill hole CCDD002

New complete assays for CCDD002 indicate that a broad zone of relatively higher grade copper and gold mineralisation indicative of a porphyry system was intersected near surface at Cockie Creek (**Table 1**).

The location of drill hole CCDD002 was sited to further validate historical drilling, which intersected a long intersection of copper and gold mineralisation associated with porphyry-style alteration (**Figs. 3 and 4**).

The holes have intersected a range of porphyritic intrusive rocks, which include quartz diorites, diorites and lesser tonalites that have intruded meta-andesites and related meta-volcanic units.

Table 1: CCDD002 intersections at various cutoffs

Hole ID		From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	Ag (g/t)	Mo (ppm)
CCDD002		**20**	**137**	**117**	**0.52**	**0.11**	**1.1**	**109**
	incl	20	123	103	0.57	0.11	1.2	121
	incl	27	98	71	0.69	0.13	1.5	158
	incl	36	45	9	0.76	0.14	1.4	278
	incl	56	92	36	0.77	0.14	1.7	146
	incl	56	66	10	1.08	0.20	2.2	44

INTERSECTION SUMMARY:

- **117m @ 0.52% Cu, 0.11g/t Au** and **109ppm Mo** from 20m (**CCDD002**)
  - incl. **71m @ 0.69% Cu, 0.13g/t Au** and **158ppm Mo** from 27m
  - incl. **36m @ 0.77% Cu, 0.14g/t Au** and **146ppm Mo** from 56m
  - incl. **10m @ 1.08% Cu, 0.20g/t Au** and **44ppm Mo** from 56m

The CCDD002 interval of 117m @ 0.52% Cu is similar but longer and of slightly lower grade than that in the twinned historical drill hole CRC002 (68m @ 0.75% Cu) as shown in **Table 2**. However, it exceeds the length and grade of the copper interval in CCDD001 (71m @ 0.48% Cu), the first hole of the Cockie Creek program[2].

MINERALISATION AND IMPLICATIONS ON COCKIE CREEK PORPHYRY GENESIS

Chalcopyrite mineralisation is predominantly confined within a strong foliation fabric developed within the porphyry intrusions and wall rock meta-andesite and related volcanic rocks. It is associated with pyrite, pyrrhotite and minor molybdenite.

The reduced nature of the sulphide mineral assemblage (pyrrhotite-bearing) and associated hydrothermal alteration (absence of primary anhydrite, gypsum, and hematite) in both intrusions and meta-andesite and related meta-volcanic wall rocks is consistent with Cockie Creek forming from relatively reduced hydrothermal fluids from a reduced I-type arc magma with a weak magnetic character underlying the prospect.

The weak magnetic character of reduced I-type arc magmas is due to the predominance of primary, non-magnetic ilmenite over magnetite in contrast to oxidized I-type arc magmas. Consequently, the large magnetic low associated with the interpreted intrusive complex within which Cockie Creek is located (refer **Fig. 16**) is entirely consistent with a reduced porphyry model. The Bottletree porphyry prospect is also located within a magnetic feature or domain that lacks rocks of high magnetic character.

[2] Refer to ASX announcement dated 25 September 2023 for further details regarding CCDD001.

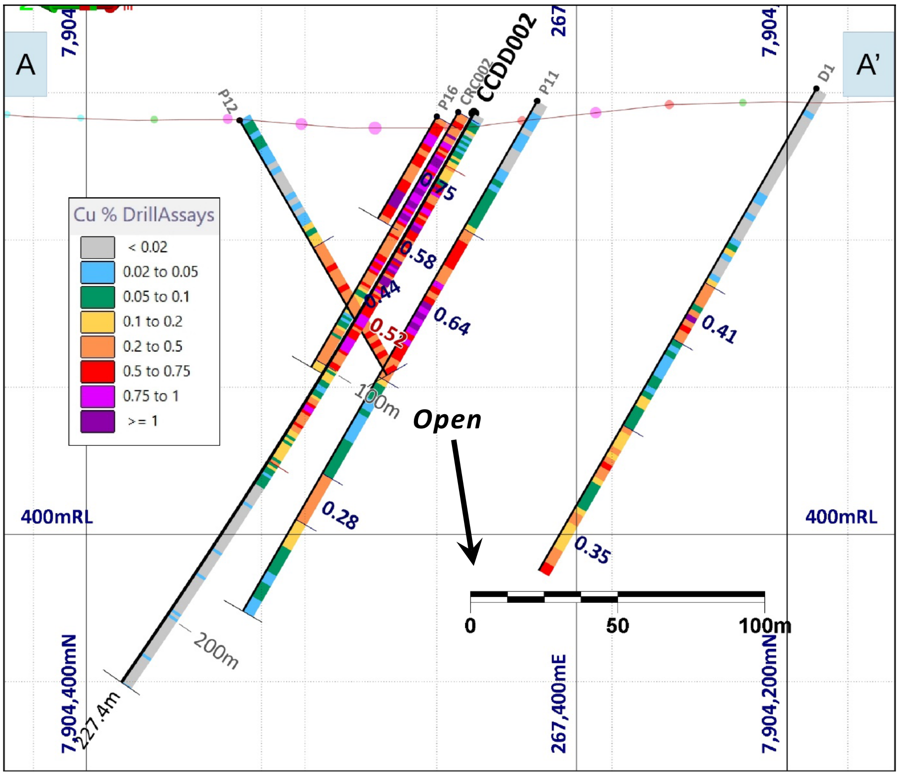


***Figure 3**. Cross section (+/-15m) taken along A-A' (refer Figure 2) looking east-northeast showing CCDD002 and historic CRC002 (twinned) and proximal historical drill holes. Down-hole copper assay values (1m intervals) are represented as grade categories.*

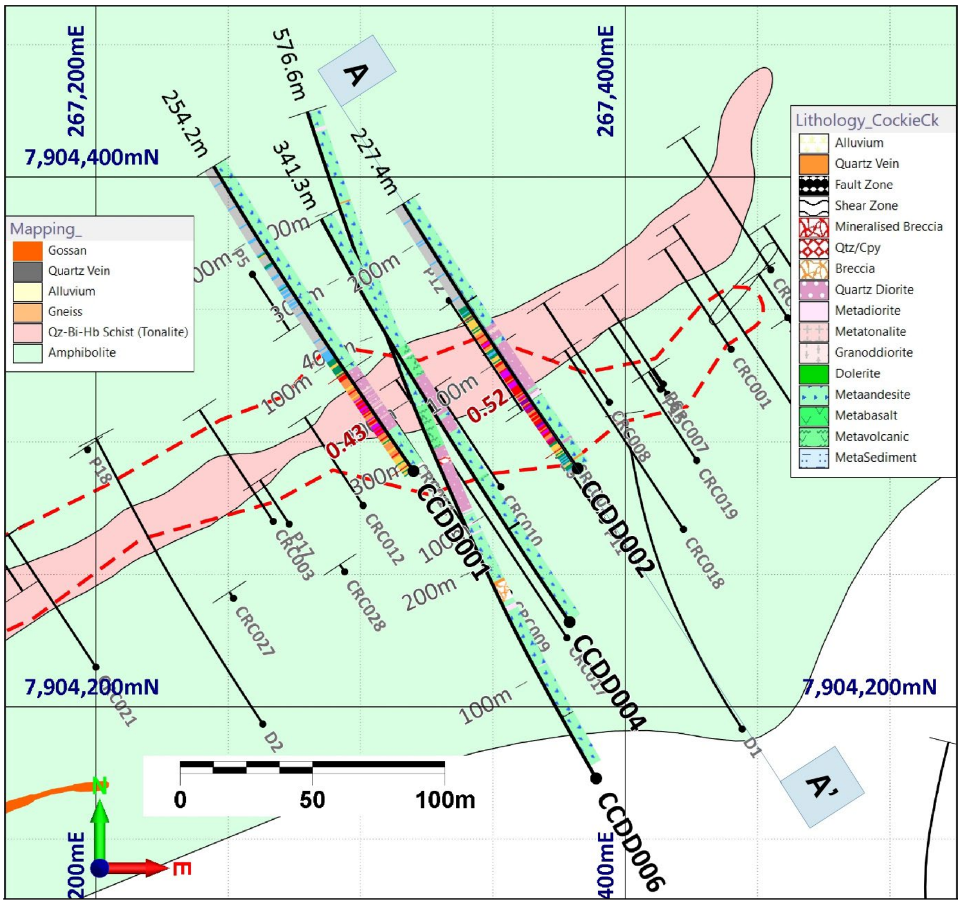


Figure 4. Plan geological map of Cockie Creek showing drill holes from the current program with assay data (CCDD001 and CCDD002) and lithologies from core logging. Note: only lithology is shown for CCDD004 and CCDD006. Note the longer Cu intersection and higher Cu grades that extend well into the wall rocks in CCDD002 compared to CCDD001.

ALTERATION

The earliest stage of hydrothermal alteration identified in CCDD002 is moderate to intense **potassic** alteration. It is widespread and defined by flakes of fine-grained biotite in all intrusions and wall rock lithologies. Potassic alteration is associated with Cu-Au (Mo) mineralisation and is dominated by a sulphide mineral assemblage consisting of pyrite and chalcopyrite with lesser pyrrhotite and rare molybdenite.

Biotite flakes and sulphide minerals are aligned within a strong foliation fabric that imparts a pale brown colour to the rock. This early stage potassic alteration is overprinted by widespread and intense **sodic-calcic** alteration, which is defined by dark green actinolite and milky white albite with variable epidote producing a yellowish tinge. Pyrite, chalcopyrite and lesser pyrrhotite and molybdenite accompany **sodic-calcic** alteration (**Fig. 5**).

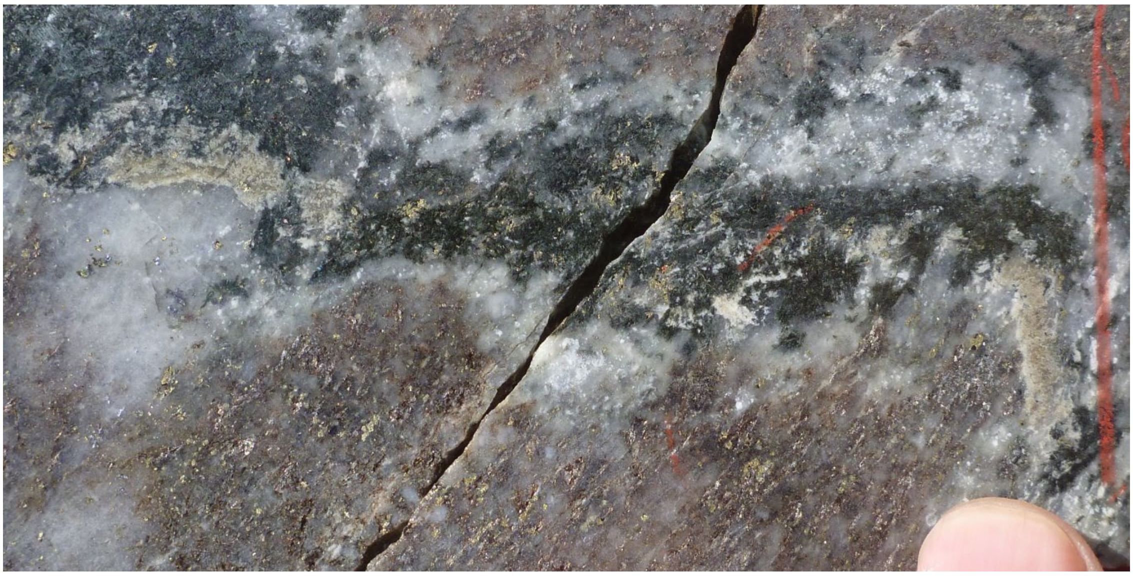


Figure 5*. Core from CCDD002 (67.8 m) with a strongly deformed quartz-pyrite-chalcopyrite vein crosscutting well foliated and potassic altered (biotite) quartz diorite. Note the alignment of brown flakes of hydrothermal biotite and sulphide mineral within the foliation. The vein is surrounded by a zoned sodic-calcic alteration selvage consisting of dark green actinolite (inner) and greyish white albite and quartz (outer). Interval contains 0.54% Cu, 0.15 g/t Au, and 61 ppm Mo.*

In addition to mineralising the rocks, this alteration event has remobilised significant copper and gold associated with the earlier potassic alteration event. Evidence of this remobilisation includes recrystallised quartz and redistribution of chalcopyrite, pyrite and pyrrhotite into fractures and at the margins of many quartz veins (**Figs. 6 and 7**).

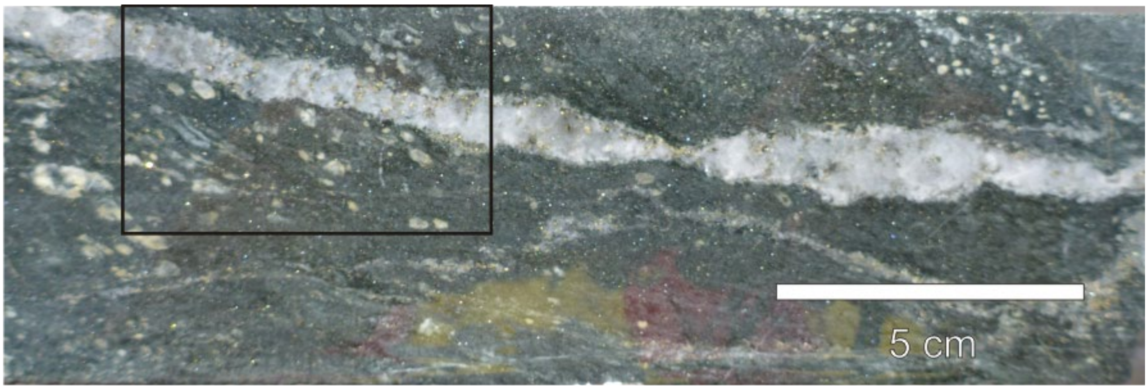


Figure 6*. Core from CCDD002 (41.5m) showing a typical recrystallised quartz-pyrite-chalcopyrite-pyrrhotite ± molybdenite vein (1 cm wide) in foliated, vesicular meta-andesite. The sulphide minerals (brassy yellow) have been remobilized and redistributed into narrow (~1 mm) fractures oriented perpendicular to the vein margins. Interval contains 0.52% Cu, 0.1 g/t Au, and 29 ppm Mo. Outlined box shows area enlarged in Figure 7.*

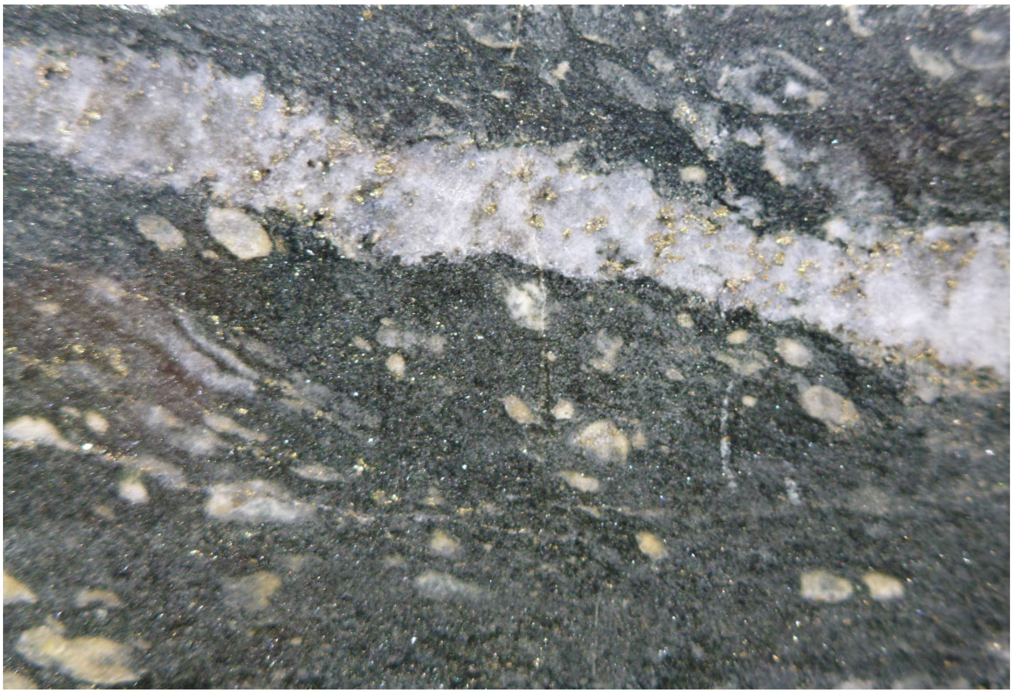


Figure 7. *Enlarged area from Figure 6. The sulphide minerals (brassy yellow) have been remobilized and redistributed into a series of narrow fractures (~1 mm) that are oriented perpendicular to the vein margins. Rock affected by strong potassic alteration (brown biotite) with later chlorite replacement (forest green). Interval contains 0.52% Cu, 0.1 g/t Au, and 29 ppm Mo.*

A third stage of hydrothermal alteration consisting of sericite, epidote and chlorite replaces hydrothermal biotite, actinolite and albite associated with the earlier stages of potassic and sodic-calcic alteration. This late sericite-chlorite replacement is a weak to moderate retrograde event and although widespread, is rarely focussed over zones more than a few tens of centimetres in CCDD002.

PORPHYRY SYSTEM VEINS

The observed alteration types are directly associated with several varieties of quartz, pyrite, chalcopyrite and commonly pyrrhotite veins that typically range from millimetres to several centimetres in width. As noted, most veins are partially deformed and recrystallised.

However, discrete wall-rock parallel bands of chalcopyrite and pyrite are preserved in some quartz veins and indicate multiple open-space vein-filling events and extensional vein growth. These features are characteristic of "**B veins**" in porphyry-style deposits (**Figs. 8 and 9**).

Another common type of vein encountered in CCDD002 are narrow, sulphide-rich "stringer" veins and veinlets typically 1-10 mm in width containing pyrite, chalcopyrite and rare pyrrhotite. They crosscut the "**B veins**" and resemble "**D veins**" in porphyry deposits. The D veins may display narrow alteration selvages of pale greenish yellow sericite in the intrusive rocks and forest green chlorite after actinolite and biotite in the meta-andesites and related meta-volcanic rocks (**Figs. 10 and 11**).

Figure 8. *Core from CCDD002 (44.6 m) with a deformed 3 cm wide quartz-pyrite-chalcopyrite-pyrrhotite ± molybdenite vein crosscutting foliation in a probable quartz diorite. Despite the deformation and partial recrystallisation, discrete wall-rock parallel bands of chalcopyrite and pyrite are preserved indicating multiple open-space vein-filling events and extensional "crack-seal" vein growth. These features are characteristic of "B veins" in porphyry copper-gold-molybdenum deposits. Interval contains 1.03% Cu, 0.18 g/t Au, and 619 ppm Mo.*

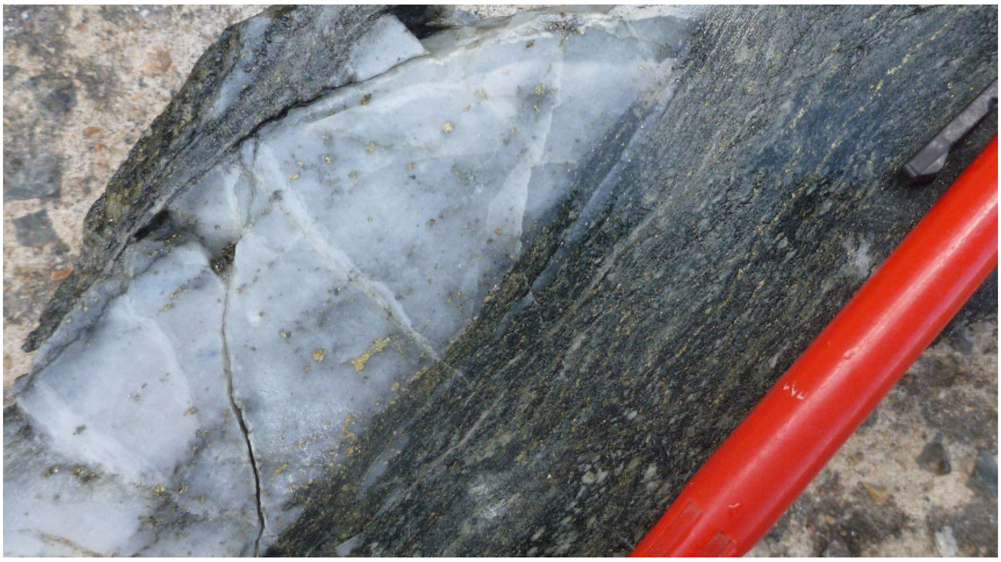


Figure 9. *Core from CCDD002 (58.0 m) with a 3 cm wide quartz vein with sharp edges and discrete but discontinuous, wall-rock parallel bands of blebby chalcopyrite-pyrite ± pyrrhotite ± molybdenite in strongly foliated quartz diorite that has undergone intense potassic alteration (biotite). Such vein textures indicate multiple open-space vein-filling events and extensional "crack-seal" vein growth. These features are characteristic of "B veins" in porphyry copper-gold-molybdenum deposits. Interval contains 1.27% Cu, 0.22 g/t Au, and 65 ppm Mo.*

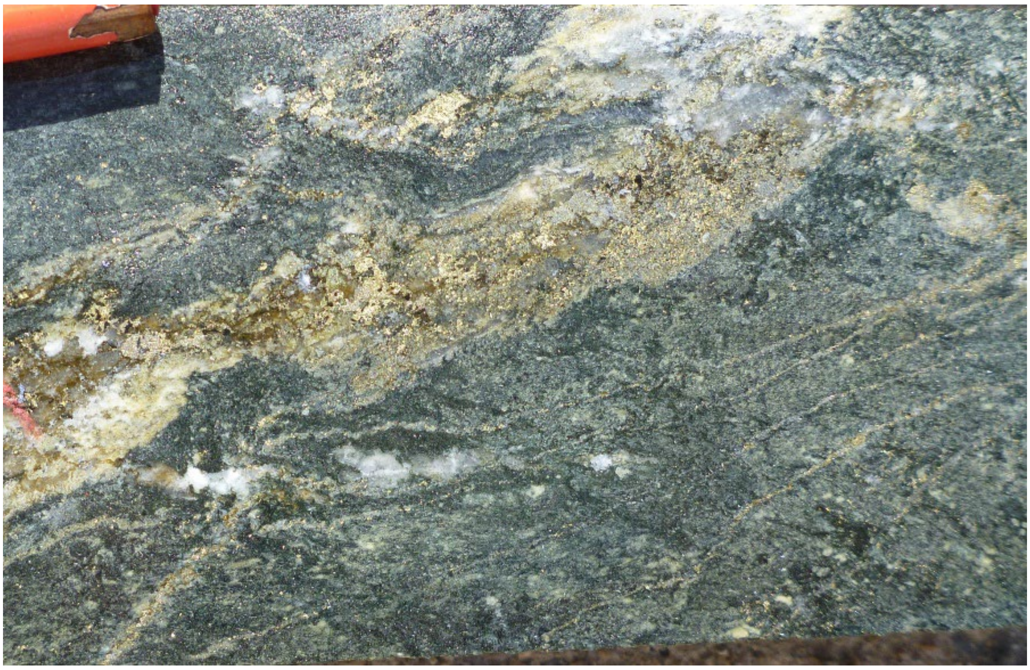


***Figure 10**. Core from CCDD002 (47.2 m) with a deformed 1 cm wide quartz-pyrite-chalcopyrite-molybdenite vein and later sulphide "stringer" veins of pyrite-chalcopyrite ± pyrrhotite in the foliation fabric of potassically altered (biotite) unit with subsequent chlorite alteration. The veins are surrounded by narrow alteration selvages of pale yellowish green sericite. Such features are characteristic of "D veins" in porphyry copper-gold-molybdenum deposits. Interval contains 0.68 % Cu, 0.17 g/t Au, and 213 ppm Mo.*

***Figure 11**. Core from CCDD002 (64.2 m) with a 5 cm wide zone of intense yellowish green sericite and minor epidote associated with disseminated to semi-massive clots of chalcopyrite-pyrite that overprint intense potassic alteration (biotite) in foliated meta-andesite. This localised sericitization post-dates the potassic (biotite) and sodic-calcic (albite-actinolite) stages of alteration and is associated with sulphide stringer or "D veins" in CCDD002. The potential introduction and/or remobilisation of Cu and Au associated with previous alteration events may enhance the grade of the rock. For example, the 1 m interval hosting this sample contains 1.30% Cu, 0.28 g/t Au, and 4 ppm Mo.*

Synopsis to date

- The results from CCDD002 confirm the strong Cu and Au grades from historical drilling in the area. The grades are typical of those found in porphyry Cu-Au-Mo deposits and support the application of a porphyry model.
- The reduced nature of the sulphide mineral assemblage (pyrrhotite-bearing) and associated hydrothermal alteration (absence of primary anhydrite, gypsum, and hematite) in the intrusions, meta-andesite and related meta-volcanic wall rocks is consistent with Cockie Creek forming from relatively reduced hydrothermal fluids.
- Despite syn- and post-mineralisation deformation, many quartz-sulphide veins retain textural features consistent with formation in an open-space extensional environment and appear analogous to extensional "B veins" in porphyry systems. Similarly, the abundant narrow sulphide "stringer" veins and veinlets cutting the "B veins" are analogous to late stage "D veins" in porphyry deposits.
- The reduced nature of the hydrothermal fluids suggests that a relatively reduced I-type magma may be the source of the metalliferous fluids and the causative intrusion may have a weakly magnetic character.
- The drilling program is paused in order to further assess the available data and build a more robust geological that can be used to target areas at Cockie Creek favourable for expanding the dimensions of the known mineral resource.
- Assay results for CCDD003 to CCDD007 will enable further interpretation and understanding of the porphyry mineral system operating at Cockie Creek.

Western Extension Area

Analysis of core from the current drilling together with the geological and geophysical data has identified significant potential for the continuation of the main copper-mineralised zone westwards from the historical Mineral Resource. The continuation of the main copper zone (and consequently, the Mineral Resource) westwards, is evidenced in one western-most historical drill hole that intersected significant mineralisation at depth and strike of (but outside) the Mineral Resource. The mineralisation in this historical hole does not appear to reach the surface (i.e., a blind zone) and does not show a surface soil geochemistry expression (**Fig. 12**).

In addition, aerial magnetic data clearly highlights a continuation of the same structure on which the main copper zone is developed. The Western Extension Zone continues for at least one kilometre and lies adjacent and to the north of a large circular magnetic feature (**Fig. 13**).

3D modelling of IP chargeability data shows substantial broadening of a large high chargeability zone at the western end of the historical Mineral Resource (**Fig. 14**). The limits of the IP survey prematurely terminates the high chargeability zone at the western and eastern ends of the prospect area. A large-scale modern IP survey is being planned for the Cockie Creek prospect area and surrounds to cover most of the interpreted intrusive complex.

The mineralisation at Cockie Creek remains open in all directions and is surrounded by several significant magnetic features, potentially representing one or more mineralised Cu-Au porphyry system cores.

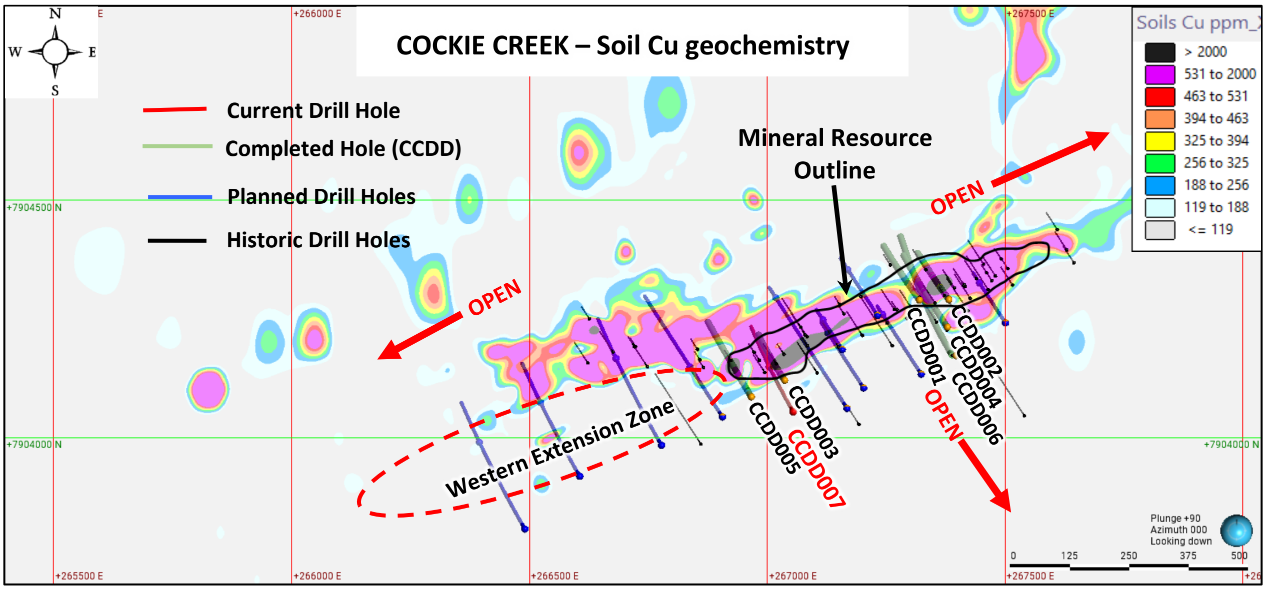


***Figure 12**. Gridded soil Cu geochemistry of the Cockie Creek area showing the Western Extension Zone, outline of historical Mineral Resource and current program drill holes.*

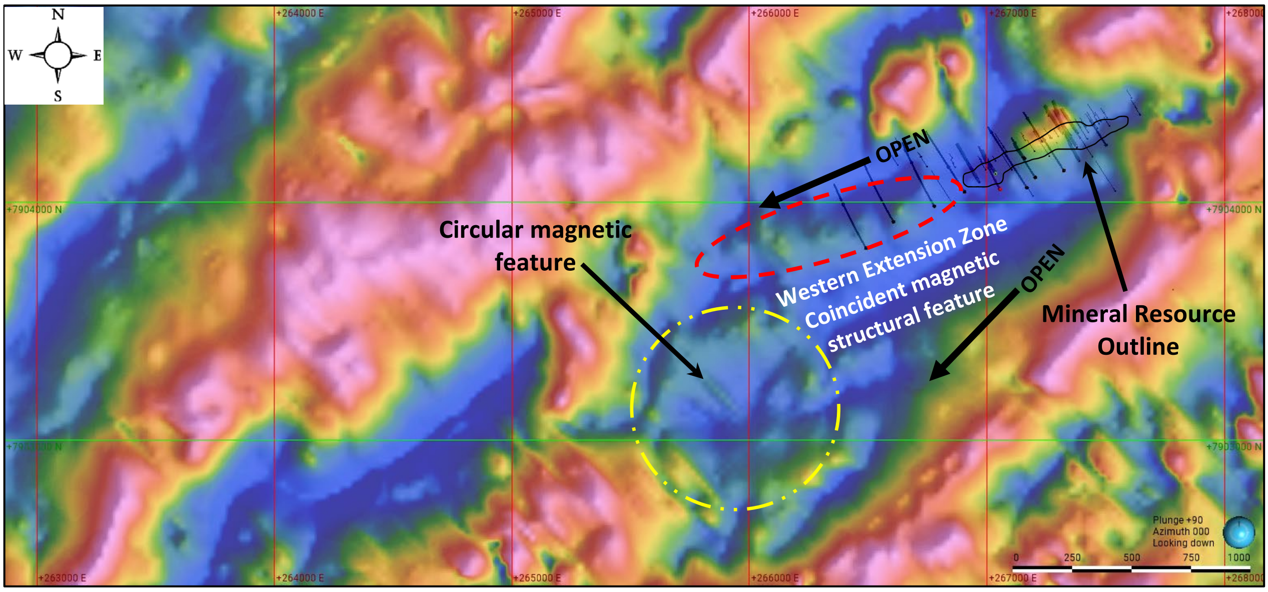


***Figure 13**. Aerial magnetic image (RTP) of the Cockie Creek regional area showing the outline of the historical Mineral Resource and the Western Extension Zone (red polygon) as supported by a linear series of magnetic features. A prominent large circular magnetic feature is located south of the Western Extension Zone (yellow circle).*

Background information on cockie creek

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 (**Fig. 14**). The work also identified significant potential to expand the historic Mineral Resource Estimate of **13Mt @ 0.42% Cu** (0.25% Cu cut-off grade) (JORC 2004)[3], which was established over only about half of the known strike of mineralisation at surface and only to shallow depths (**Fig. 15**).

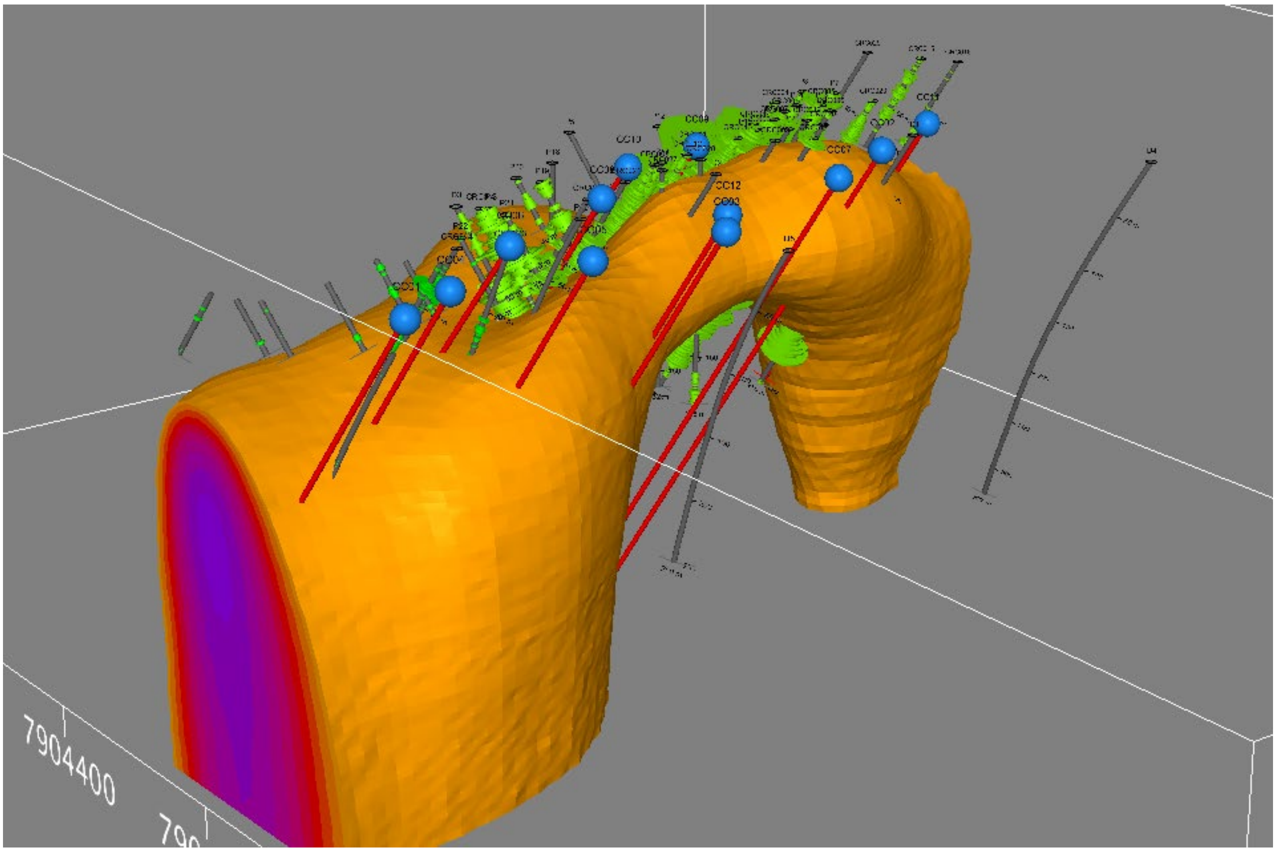


Figure 14. *3D IP chargeability model showing moderate to high chargeability zone. Historical drill holes (grey traces) and copper mineralisation (green) with 2023 planned drill holes in red. Viewed looking northeast.*

[3] Refer ASX announcement dated 27 March 2013

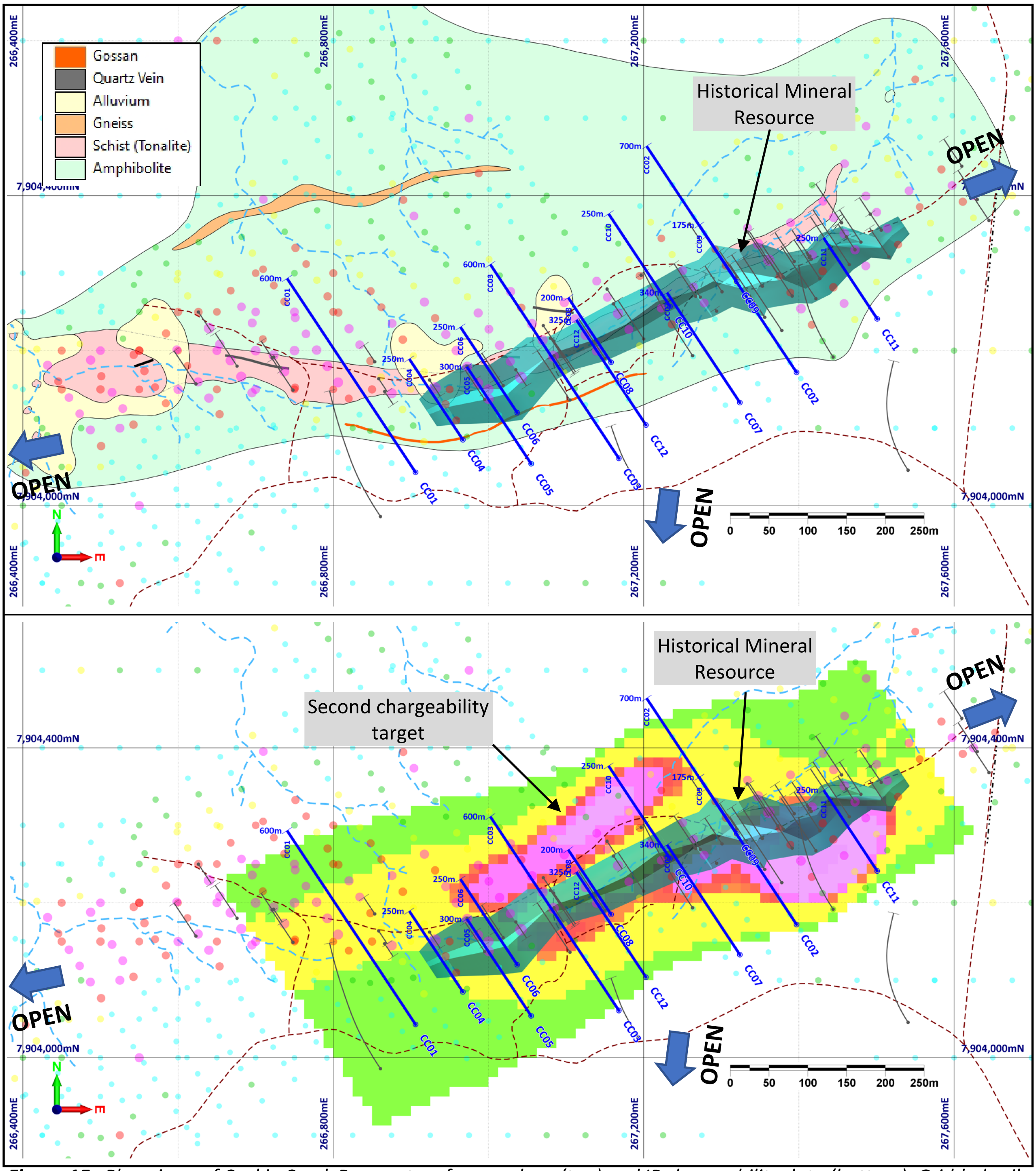


***Figure 15**. Plan views of Cockie Creek Prospect surface geology (top) and IP chargeability data (bottom). Gridded soil copper geochemistry, planned drill holes (blue traces) and wireframe of the historical Mineral Resource are shown in each plan.*

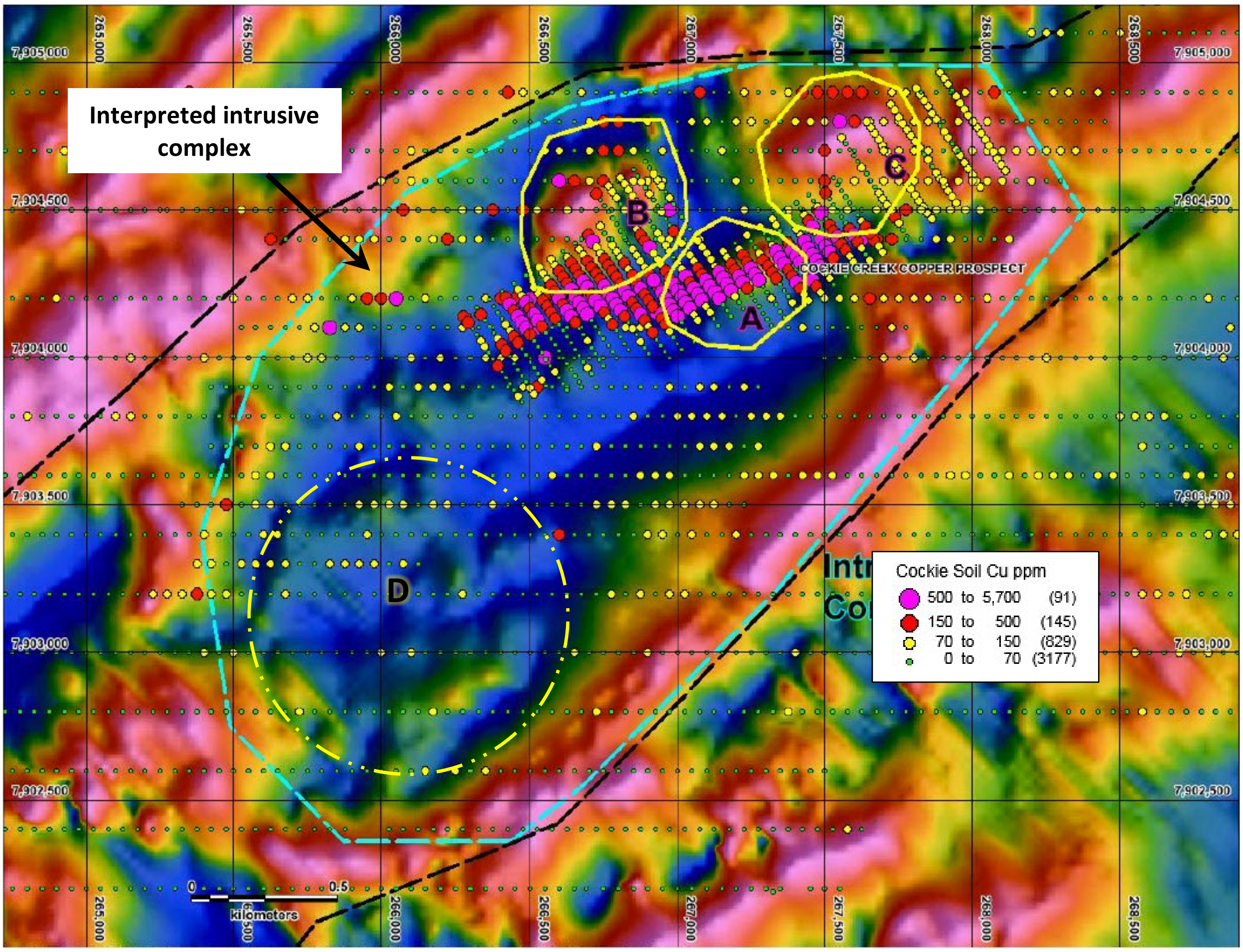


***Figure 16**. Cockie Creek thematic Cu soil data and interpreted porphyries on TDr VI NSSF processed airborne magnetics data, showing interpreted porphyry intrusions (A to D) within an interpreted intrusive complex.*

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 (**Figs. 14 and 15**).

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.

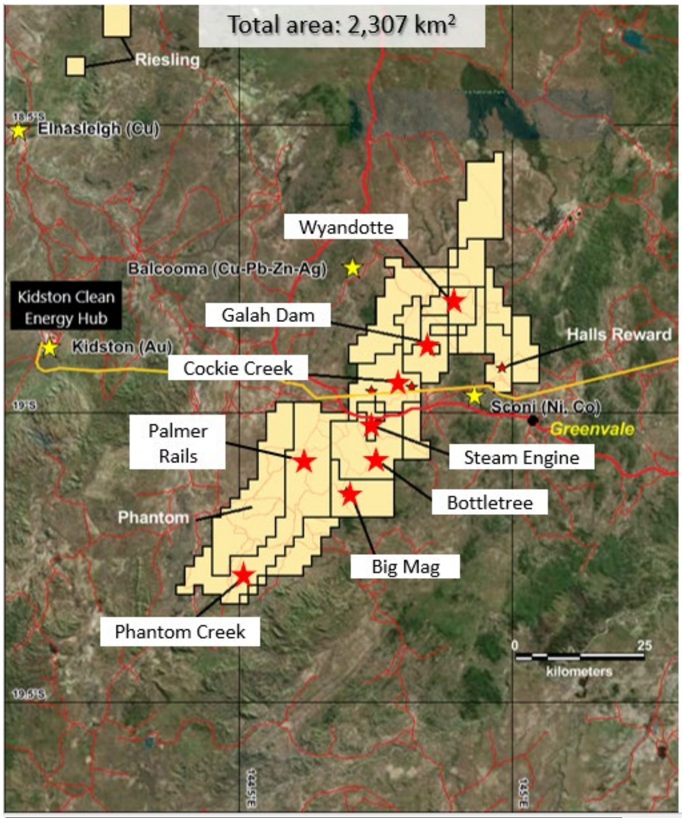
The main target at Cockie Creek is one or more deeper porphyry cores that are likely to be the source of the copper mineralisation. The mineralisation identified by the historic drilling potentially represents leakage into the wall rocks of a nearby mineralised porphyry system.

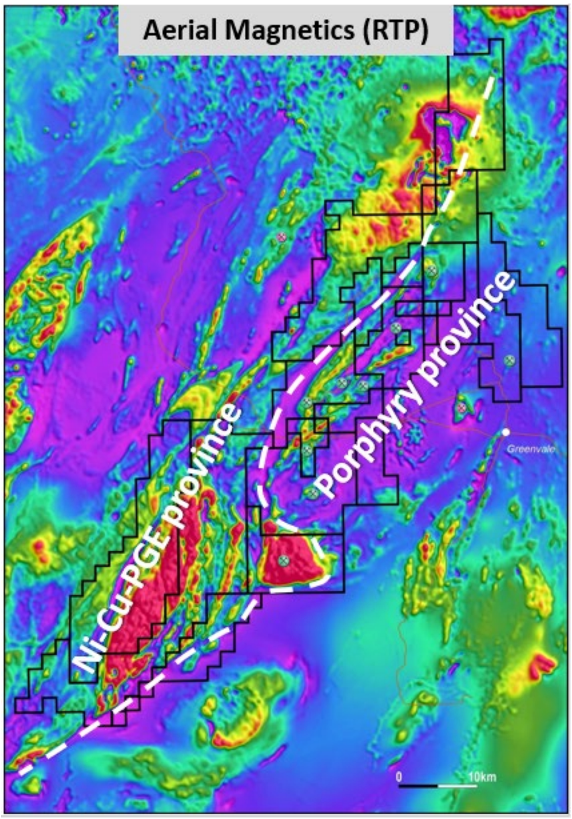
As appears to be the case at Bottletree, the likely wall rock-hosted mineralisation at Cockie Creek represents a potentially significant outcropping copper resource. **Copper grades are relatively high in porphyry deposit terms (Table 2), with historic results indicating increasing grades at depth. In 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 2. 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
CRC003	267267	7904270	80	83	**3**		**9.0**	
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	-

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

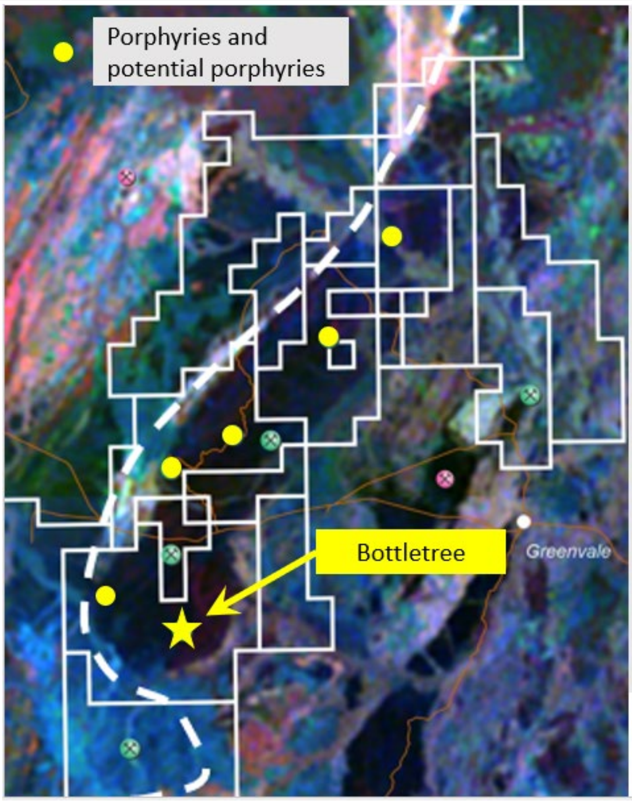




Superior has long recognised the copper potential within the Lucky Creek Corridor. However, recent exploration drilling at Bottletree, coupled with regional geological investigations over several years has enabled the characterisation of the Lucky Creek Corridor as a fossil island arc porphyry province, 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 copper, nickel-copper-cobalt-PGE, lead-zinc-silver and gold 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 Dr Stephen Rowins, an employee of Superior Resources Limited. Dr Rowins 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'. Dr Rowins consents to the inclusion in the 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 or Mineral Resources, 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.*

Forward looking statements: *This document may contain forward looking statements. Forward looking statements are often, but not always, identified by the use of words such as "seek", "indicate", "target", "anticipate", "forecast", "believe", "plan", "estimate", "expect" and "intend" and statements that an event or result "may", "will", "should", "could" or "might" occur or be achieved and other similar expressions. Indications of, and interpretations on, future expected exploration results or technical outcomes, production, earnings, financial position and performance are also forward-looking statements. The forward-looking statements in this presentation are based on current interpretations, expectations, estimates, assumptions, forecasts and projections about Superior, Superior's projects and assets and the industry in which it operates as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made. The forward-looking statements are subject to technical, business, economic, competitive, political and social uncertainties and contingencies and may involve known and unknown risks and uncertainties. The forward-looking statements may prove to be incorrect. Many known and unknown factors could cause actual events or results to differ materially from the estimated or anticipated events or results expressed or implied by any forward-looking statements. All forward-looking statements made in this presentation are qualified by the foregoing cautionary statements.*

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APPENDIX 1

Reported drill hole collar details

Hole ID	Easting (m)	Northing (m)	RL (m)	Depth (m)	Dip°	Azimuth°
CCDD001	267320	7904289	542	254.2	-60	327
CCDD002	267382	7904290	543	227.4	-60	327
CCDD003	267037	7904120	560	303.6	-70	327
CCDD004	267379	7904232	552	284.3	-60	327
CCDD005	266967	7904085	552	345.7	-60	327
CCDD006	267389	7904173	552	575.6	-65	330
CCDD007	267055	7904054	563	725.7	-70	331

APPENDIX 2

JORC Code, 2012 Edition (Table 1)

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Drilling from surface comprised HQ diameter diamond core drilling to end of hole. • Diamond core samples will be obtained by splitting core in half using a core saw. • The drill bit sizes used in the drilling are considered appropriate to indicate the degree and extent of mineralisation. • 1m representative samples will be assayed for base metals, gold, silver and other elements at SGS laboratories in Townsville. • Assaying for gold will be via fire assay of a 50-gram charge. • Sample preparation at SGS laboratories in Townsville for all samples is considered to be of industry standard.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	• Drilling from surface was performed using standard diamond drilling techniques. • Drilling was conducted by Deepcore Drilling Pty Ltd using a Crawler Mounted Boart Longyear LM90 Drill Rig with Rod Handler and a Crawler Mounted Boart Longyear LF130 Drill Rig with Rod Handler. • All holes were surveyed using a Reflex Gyro north-seeking gyroscopic instrument to obtain accurate down-hole directional data.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Sample recovery was performed and monitored by Superior's contractors and Superior Resources' representatives. • The volume of sample collected for assay is considered to be representative of each 1m interval. • Diamond drill core recovery was logged. Recovery overall was close to 100%.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• Geological logging was conducted during the drilling of each hole by a geologist having sufficient qualification and experience for the mineralisation style expected and observed at each hole. • All holes were logged in their entirety at 1m intervals. • All logging data is digitally compiled and validated before entry into the Superior database. • The level of logging detail is considered appropriate for resource drilling. • Magnetic susceptibility data for each 1m sample interval was collected in the field. • All core was logged for structure with structures being recorded in relation to a bottom line marked on the core and established using Reflex equipment. Logging included both and Alpha and Beta angles. Data from structural logging of planar features was converted to grid dips and dip directions as well as plan parameters to allow structures to be plotted on sections and allow structures to be projected to the ground surface by software.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*	• The sample collection methodology is considered appropriate for diamond drilling and will be conducted in accordance with standard industry practice. • Diamond drill core will be split in half using a diamond saw with half of the sample being sent for assay and the remainder retained for reference. Core halving was done along the bottom line marked on the core for structural logging. • The sample sizes are considered appropriate to the style of mineralisation being assessed. • Quality Assurance (**QA**)/Quality Control (**QC**) protocols are instigated such that they conform to mineral industry standards and are compliant with the JORC code.

Criteria	JORC Code explanation	Commentary
	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• (QA) processes with respect to chemical analysis of mineral exploration samples includes the addition of blanks, standards and duplicates to each batch so that checks can be done after they are analysed. As part of the (QC) process, checks of the resultant assay data against known or previously determined assays to determine the quality of the analysed batch of samples. An assessment is made on the data and a report on the quality of the data is compiled. • Quality control will include determinations of duplicate samples every 50 samples or so to check for representative samples. There was a conscious effort on behalf of the samplers to ensure consistent weights for each sample. Comparison of assays of duplicates shows good reproducibility of results. • The above techniques are considered to be of a high quality and appropriate for the nature of mineralisation anticipated. The 2-3kg sample size is appropriate for the rock being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• All samples will be submitted to SGS laboratories in Townsville for gold and multi-element analysis. • Samples will be crushed, pulverised to ensure a minimum of 85% pulp material passing through 75 microns, then analysed for gold by fire assay method GO FAA50V10 using a 50-gram sample. • Multi-element analyses will be conducted using a four acid digestion followed by an ICP-OES/MS finish for the following 31 elements: Ag, Al, As, Ba, Ca, Ce, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Se, Sn, Sr, Ti, U, V, W, and Zn. • Certified gold, multi-element standards and blanks will be included in the samples submitted to the laboratory for QA/QC. • Additionally, SGS will use a series of its own standards, blanks, and duplicates for the QC of the elements assayed.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Some holes described in this report are holes that twin historical holes for the purpose of verification of historical assay results. • Logs were recorded by field geologists on hard copy sampling sheets which were entered into spreadsheets for merging into a central database. • Laboratory assay files were merged directly into the database.

Criteria	JORC Code explanation	Commentary
		• The data is routinely validated when loading into the database. • No adjustments to assay data were undertaken.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Drill hole collars have been recorded in the field using handheld GPS with three metre or better accuracy. The collar locations will be further defined using DGPS to give sub-one metre accuracy. • The area is located within MGA Zone 55. • Topographic control is currently from DGPS point data that has been merged with RL-adjusted contours.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Further drilling is necessary to establish a Mineral Resource that is compliant with JORC (2012).
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The majority of holes have been designed to drill normal to interpreted mineralisation trends. However, there has been insufficient drilling and geological interpretation to determine if there is a bias to sampling as a result of drilling oblique to or down dip on mineralised structures. • No orientation sample bias has been identified at this stage.
Sample security	• *The measures taken to ensure sample security.*	• Samples are delivered directly to the SGS assay laboratory in Townsville by Superior's contractors. • Sample security measures within the SGS laboratories are considered adequate.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews of the sampling techniques and data have been undertaken to date.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The areas reported for the Cockie Creek Prospect lie within Exploration Permit for Minerals 18987, which is held 100% by Superior Resources. • Superior Resources holds much of the surrounding area under granted exploration permits. • Superior has agreements or other appropriate arrangements in place with landholders and native title parties with respect to work in the area. • No regulatory impediments affect the relevant tenements or the ability of Superior Resources to operate on the tenements.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• All historical drilling reported in this report has been completed and reported in accordance with their current regulatory regime. • Previous work on the prospect has been completed by MIM and Beacon Minerals Ltd. • Soil geochemical survey data compiled by MIM was used in this report for the purpose of part characterising the Cockie Creek mineralisation. • Compilation in digital form and interpretation of the results of that work in digital form has been completed by a Competent Person.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Cockie Creek Prospect is hosted in a quartz-biotite-hornblende schist unit enclosed within a metamorphosed basic volcanics sequence. • Mineralisation style is disseminated and vein sulphide of probable intrusion-related hydrothermal origin. • On the basis of observations made in holes CCDD001 to CCDD007, mineralisation at the Cockie Creek Prospect is considered to be porphyry-related. More geological, geochemical and drill data is required to fully understand the mineralisation system.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level) of the drill hole collar*	• A drill hole collar table is included in Appendix 1 to this report.

Criteria	JORC Code explanation	Commentary
	○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Exploration results will be reported as a length weighted average of all assays. • No metal equivalent values are planned to be reported.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• Downhole length, true width not known until further drilling provides more *information* on the nature of the mineralised body.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Included.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Significant intersections have been included within the report.
Other substantive	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk*	• Publicly available and historic soil geochemical data and airborne magnetic survey data was compiled, examined and interpreted to aid in the interpretation of geological observations made from the available drill core.

Criteria	JORC Code explanation	Commentary
exploration data	*samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Specific upcoming activities include: • Progress the Cockie Creek drilling program to completion; • Soil geochemistry survey over the prospect area; • Electrical geophysical surveys, including IP and VTEM.