

## Summary

### Bottletree Copper Prospect (Greenvale)

- Assays relating to the first 2021 deep diamond core hole at Bottletree (BTDD001), targeting a MIMDAS IP chargeability anomaly returned over 550m of variable grade copper mineralisation. BTDD001 confirmed that the IP chargeability anomaly highlighted an extensive zone of copper mineralisation that is distal to a mineralised porphyry system likely located about 500m to the west of the chargeability anomaly.
- Initial batches of assays from 2021 soil geochemistry survey and drill core samples (BTDD003 and BTDD004) were received at the end of the reporting period. Compilation of soil geochemical grid and drill hole assay data commenced and continuing during April 2022. Further batches of assays to be received during April 2022.
- Planning of 2022 drilling programs targeting the core of several mineralised potential porphyry systems.
- Secondary target: at least five near-surface, large, high order Cu zones.

### Steam Engine Gold Deposit (Greenvale)

- Historic Windmill East and Origin prospects: High grade gold up to 65.9 g/t Au in rock chips identify a potential 4km gold lode corridor that straddles the area between Steam Engine and Bottletree Feasibility Study commenced on Steam Engine and Eastern Ridge lodes.
- Multiple parallel, poorly exposed gold lodes with substantial strike lengths identified at Windmill East and Origin determined to be identical to Steam Engine Lode and largely untested by drilling.
- Progressing mining and toll treatment strategy studies and Mining Lease application.
- Post reporting period – Steam Engine Mineral Resource increased to **4.18 Mt @ 1.5 g/t Au for 196,000 ounces of gold.**

### Big Mag and Dido/Phantom (Greenvale)

- Superior was granted the third and last outstanding exploration permit (EPM27932) to secure the Dido Intrusive Complex, which has confirmed potential to host Voisey's Bay / "Julimar-Gonneville" – style Nickel-Copper-PGE magmatic sulphide systems.
- Limited historic drilling by Anglo American confirmed the presence of fertile host rocks carrying magmatic sulphide mineralisation with up to **133m @ 0.12% Ni and 105m @ 0.14% Ni (up to 0.58% Ni, 0.28% Cu, 290ppb Pd, 220ppm Pt).**
- Target generation progressing using high quality aerial VTEM and magnetic survey datasets.

## 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 LOCATION



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

## GREENVALE PROJECT

Operational activities at the Greenvale Project continued to be the focus for the Company during the reporting period (Figures 1 and 2). Although lengthy turn-around times have been experienced with the sample assay laboratories, substantial analysis of 2021 exploration results and data relating to new copper-gold and nickel-copper-PGE prospects was conducted.

### • BOTTLETREE (Porphyry Cu-Au)

- Assays relating to the first 2021 deep diamond core hole at Bottletree (**BTDD001**), targeting a MIMDAS IP chargeability anomaly returned over 550m of variable grade copper mineralisation. BTDD001 confirmed that the IP chargeability anomaly highlighted an extensive zone of copper mineralisation that is distal to a mineralised porphyry system, likely located about 500m to the west of the chargeability anomaly (Figures 3, 4 and 5);
- Geological analysis of drill core from 2021 deep diamond core holes: two holes (**BTDD001**, **BTDD003**) targeting an IP chargeability anomaly and a third scissor hole (**BTDD004**) testing intense phyllic alteration zone and quartz-magnetite alteration west of the IP chargeability anomaly;
- Analysis of structural, geological and historic drill hole data relating to the Bottletree Prospect;
- Initial batches of assays from 2021 soil geochemistry survey and drill core samples (BTDD003 and BTDD004) were received at the end of the reporting period. Delivery of the remaining outstanding assay data from the drill holes and soil geochemistry grid has just been completed as at the publishing date of this report. The assay data is currently being compiled and will be reported to the market shortly; and
- Planning of 2022 drilling programs targeting the core of several mineralised potential porphyry systems is underway.

### • STEAM ENGINE (Lode Au)

- **Historic Windmill East and Origin prospects: High grade gold up to 65.9 g/t Au in rock chips** identify a potential 4km gold lode corridor that straddles the area between Steam Engine and Bottletree;

- Multiple parallel, poorly-exposed gold lodes with substantial strike lengths identified at Windmill East and Origin determined to be identical to Steam Engine Lode and largely untested by drilling;
  - **Mining scenario modelling** and **development strategy** studies;
  - Commenced **toll treatment** discussions with third parties;
  - **Feasibility Study** on Steam Engine and Eastern Ridge lodes;
  - **Metallurgical studies**;
  - **Environmental studies**;
  - Progressing **mining lease application**; and
  - Planning Resource extension **geophysical surveys**.
  - Planning of 2022 drilling programs
- **DIDO / ARTHUR RANGE / PHANTOM (Magmatic sulphide Ni-Cu-PGE)**
    - Superior was granted the third and last outstanding exploration permit (EPM27932) to secure the Dido Intrusive Complex, which has confirmed potential to host Voisey's Bay / "Julimar-Gonneville" style Nickel-Copper-PGE magmatic sulphide systems; and
    - Prospectivity analysis and target generation.
  - **COCKIE CREEK / GALAH DAM / WYANDOTTE (Porphyry Cu-Au)**
    - Analysis of recent and historic exploration data to better define porphyry systems;
    - **Geophysical modelling** of IP survey data;
    - Planning 2022 drilling programs.

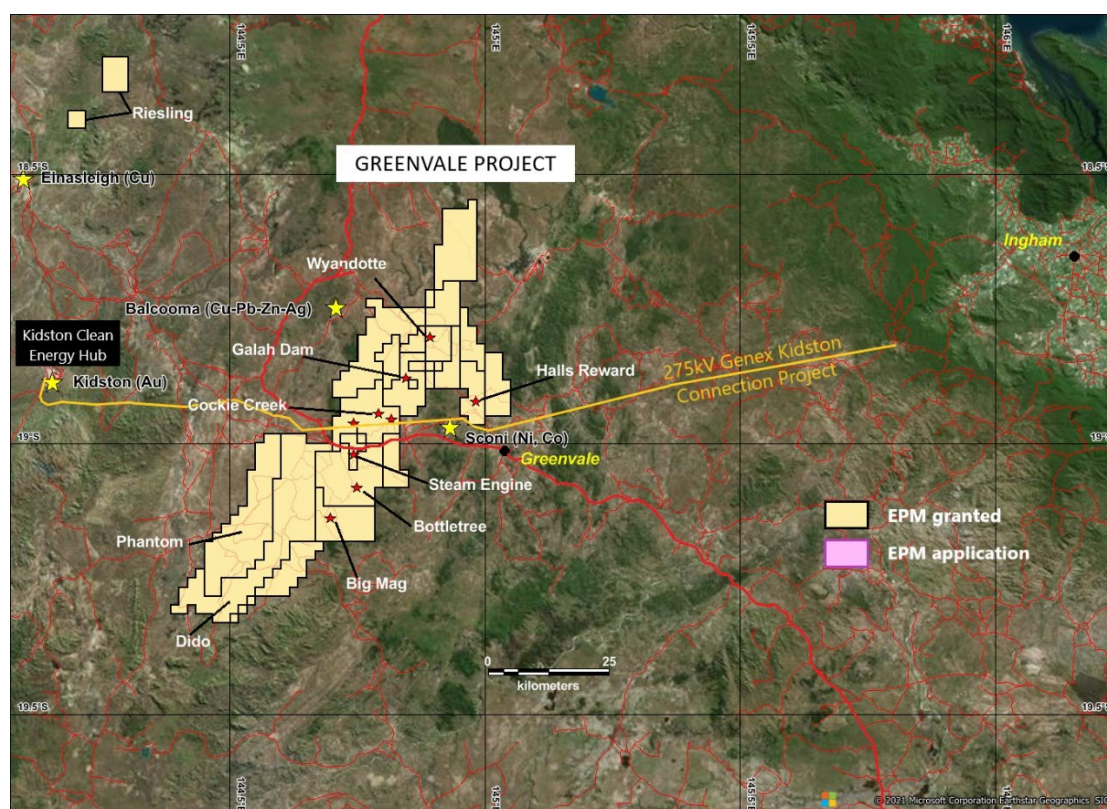


Figure 2. Greenvale Project tenements and prospects shown over satellite imagery.



## Bottletree Copper Prospect

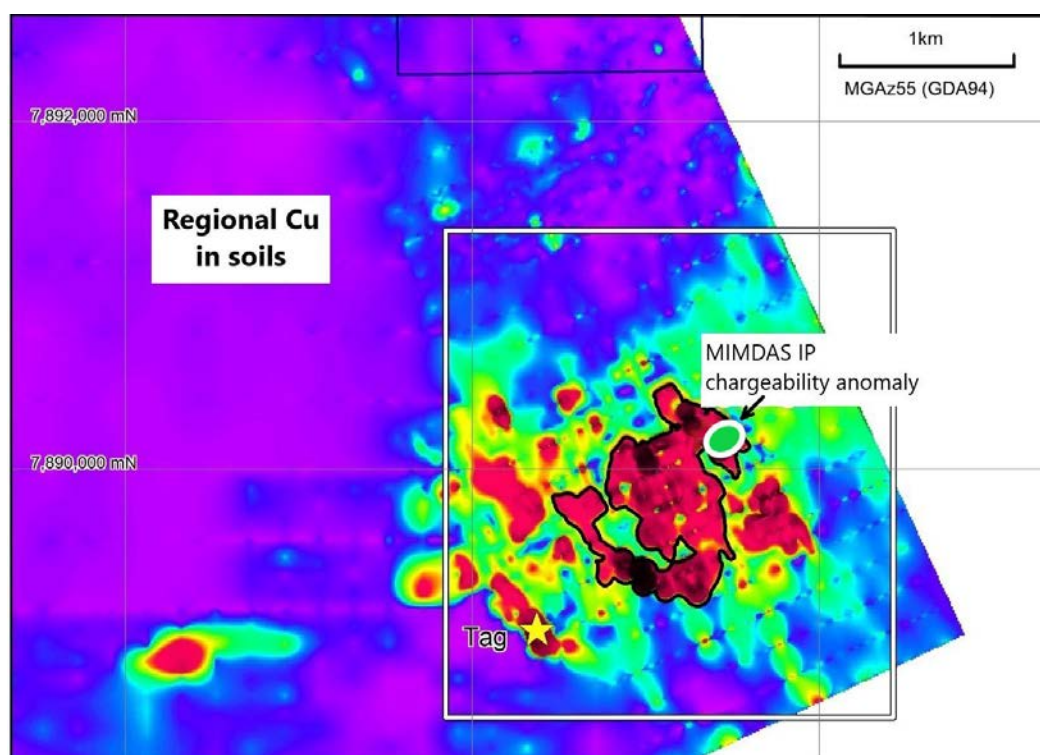


Figure 3. Regional Cu-in-soil (historic data) processed image showing the large scale Bottletree copper anomaly and the location of the MIMDAS IP chargeability anomaly that was targeted during 2021.

### BTDD001 Assay Results – over 550m of variable grade Cu-Au-Ag mineralisation

BTDD001, drilled to 684.6m, tested the IP chargeability anomaly located on the outer edge of a 1.5km x 1km soil copper anomaly that defines the Bottletree Prospect (**Distal Copper Zone**) (Figure 3). The IP chargeability anomaly highlighted a part of a large zone of disseminated and vein copper mineralisation that extends for 750m within a major northwest-striking mineralised structural corridor (Figures 3, 4 and 5).

The hole intersected extensive disseminated and vein copper-gold-silver mineralisation over variably broad intervals from 132m to 684.6m (End of Hole), with coherent intervals ranging up to 87m and intensely-mineralised shear-related chalcopyrite-pyrrhotite-quartz veins returning up to 2.79% Cu (Table 1). The down-hole thickness of copper mineralisation is considerable, with an overall interval between 132m – 684.6m returning **552.6m @ 0.16% Cu, 0.02g/t Au, 0.7g/t Ag** (refer ASX announcement dated 25 January 2022).

BTDD001 confirmed that the extensive copper mineralisation highlighted by the chargeability anomaly does not represent part of the main mineralised porphyry stock, but late-stage mineralisation sourced from a large copper-gold porphyry system located nearby and to the west of the anomaly.

Notably, the bottom 20m of BTDD001 (outside and on the western side of the IP anomaly) intersected chalcopyrite veining of a different character and more akin to that the upper half of hole BTDD004 where quartz-chalcopyrite and quartz-chalcopyrite-molybdenite veins appear more porphyry-style (Figures 4, 5 and 6).

In addition, the mineralisation is more extensive than indicated by the chargeability anomaly and crops out at surface. Although the mineralisation spatially associated with the IP anomaly is distal to the potential source porphyry stock, the amount of copper mineralisation is considerable and is currently observed over at least 750m surface strike, 500m width and 600m vertical extent.

**Table 1. Summary Cu, Au and Ag geochemistry for hole BTDD001.**

Hole ID		From (m)	To (m)	Interval (m)	Cu (%)	Au (g/t)	Ag (g/t)
BTDD001		132	684.6	552.6	0.16	0.02	0.7
	incl	146	161	15	0.23	0.04	1.6
		156	158	2	0.73	0.15	4.9
		212	216	4	0.59	0.09	3.0
		282	294	12	0.27	0.03	1.0
	incl	309	319	10	0.72	0.08	2.1
		310	315	5	1.14	0.13	3.3
		313	314	1	2.79	0.24	7.8
		313	317	4	1.32	0.16	3.9
		432	519	87	0.28	0.03	1.0
	incl	458	469	11	0.30	0.04	1.0
	incl	479	482	3	0.66	0.08	2.1
	incl	493	503	10	0.45	0.05	1.6
	Incl	493	494	1	1.29	0.07	4.5
	incl	506	519	13	0.35	0.03	1.2
		528	533	5	0.34	0.03	1.1
		536	544	8	0.29	0.03	0.9
	incl	565	585	20	0.44	0.06	1.6
		580	582	2	1.45	0.33	5.5
	incl	666	675	9	0.40	0.06	1.6
		666	670	4	0.60	0.08	2.5
		667	668	1	1.30	0.10	4.7
		673	679	6	0.32	0.03	1.1

The observations relating to molybdenum (Mo) within historic hole SBTRC003 and recent BTDD004 suggest proximity to a buried mineralised porphyry, while at the same time enabling a new understanding of the more distant coarse shear-related copper veining. This veining is now interpreted as resulting from a later mineralising phase that is genetically related to the porphyry, but formed as a result of a changing structural regime during the collapse of the porphyry system. The polymetallic veining is considered to have affinities with similar late shear veining developed in some Central European porphyry deposits as stress fields change after the main stockwork and sheeted vein mineralisation stage within the porphyry and release of mineralising fluid into the broader environment, distal to the porphyry<sup>1</sup>.

The copper mineralisation in the vicinity of the IP anomaly offers good scope for significant resources to be defined in the 750m strike of the known, but poorly tested structural corridor.

<sup>1</sup> Refer Drew, L.J., USGS Scientific Investigations Report 2005-5272

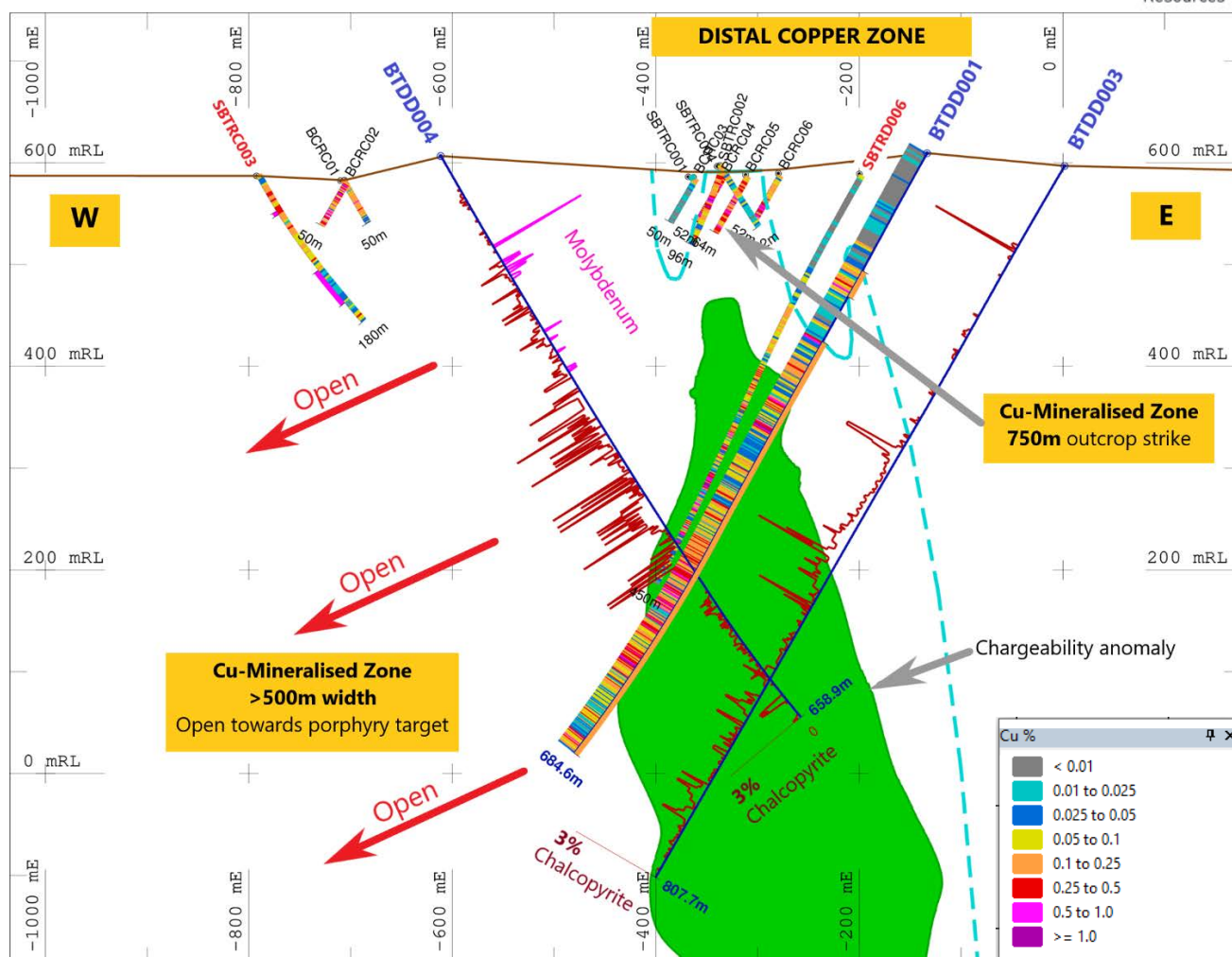


Figure 4. West-East cross section across the Distal Copper Zone and the area west, which porphyry-type copper veining is more common. Thematic copper assays for BTDD001 and select historical holes are indicated. Histograms of visually estimated chalcopyrite in holes BTDD003 and BTDD004 (red), molybdenite in BTDD004 and SBTRC003 (purple), as well as the MIMDAS IP chargeability anomaly 50mV/V shell are also indicated.



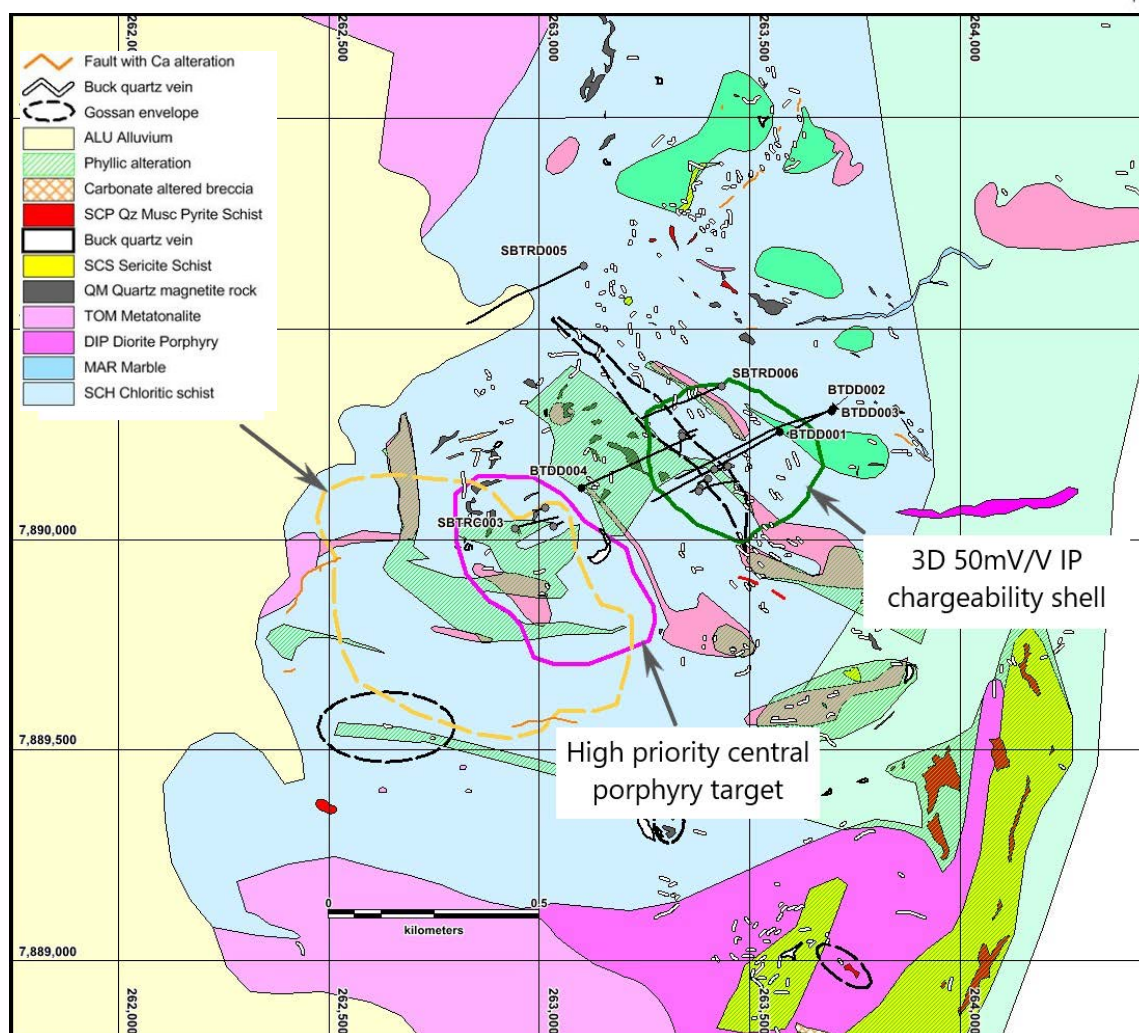


Figure 5. Mapped geology at Bottletree with select recent drill holes, IP chargeability shell and central high priority porphyry target (mapping after Nick Tate, Geomap).

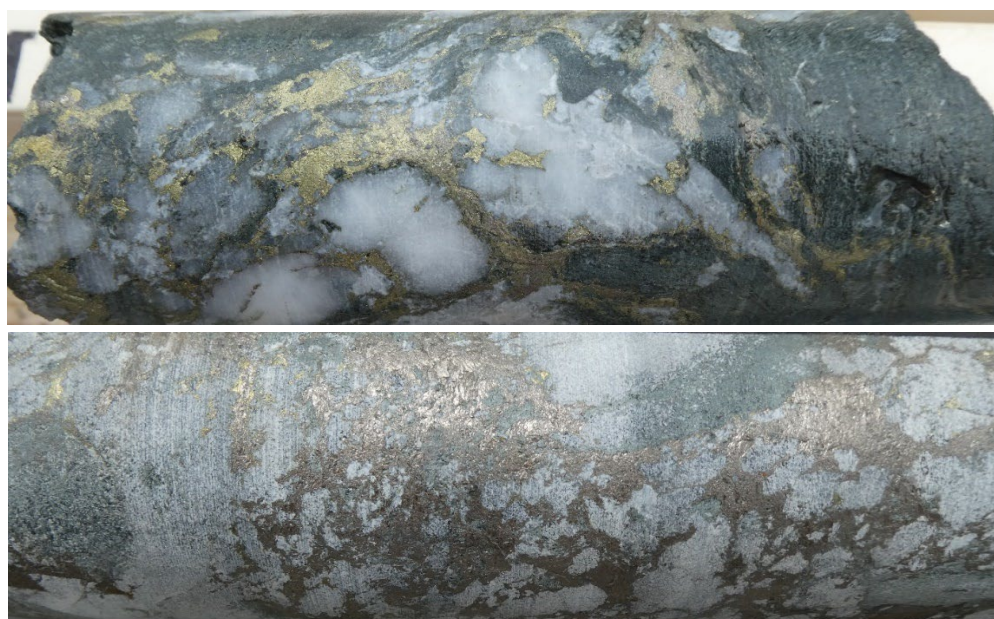


Figure 6. Top - BTDD001, 667.40m, brecciated buck quartz and associated chalcopyrite-pyrrhotite veining in dark green chloritic shear zone.

## BTDD004

BTDD004 has confirmed that areas lying to the west of the large IP chargeability anomaly and towards a large, interpreted Cu-Au-Mo porphyry system target are mineralised with extensive, strong copper sulphide mineralisation. It is evident that the Company's 2018 MIMDAS IP survey appears not to have identified the copper mineralisation west of the IP anomaly or other areas of extensive mineralisation associated with the 1.5km x 1km Cu-in-soil geochemical anomaly including that associated with the interpreted porphyry intrusion target.

BTDD004 was collared 200m west of the IP chargeability anomaly and drilled in an east-north-easterly direction to a total depth of 658.9m. Planned as a 'scissor hole' to the first two holes (BTDD001 and BTDD003), BTDD004 was designed to test part of the large soil Cu anomaly west of the IP chargeability anomaly and mapped zones of silica-magnetite alteration and phyllic alteration now thought to occur above and to the east of a buried mineralised porphyry (Figure 7).

Strong copper sulphide mineralised vein sets were intersected over an interval of approximately 200m immediately west of the chargeability anomaly. Variable degrees of vein and disseminated copper mineralisation were intersected over most of the hole from near surface. Importantly, veins of quartz-chalcopyrite-molybdenite which resemble Type-B veins in a porphyry system have been intersected. Porphyry Type-B veins are a classic indication of a nearby porphyry system (Figures 8 to 10).

A porphyry system at Bottletree would likely be located at deeper levels and to the west of the chargeability anomaly. This location is also coincident with the large and intense 1.5km x 1km copper and gold soil anomaly, a large oval potential intrusion centre interpreted from airborne magnetic survey imagery and a part-coincident oval feature on satellite imagery.

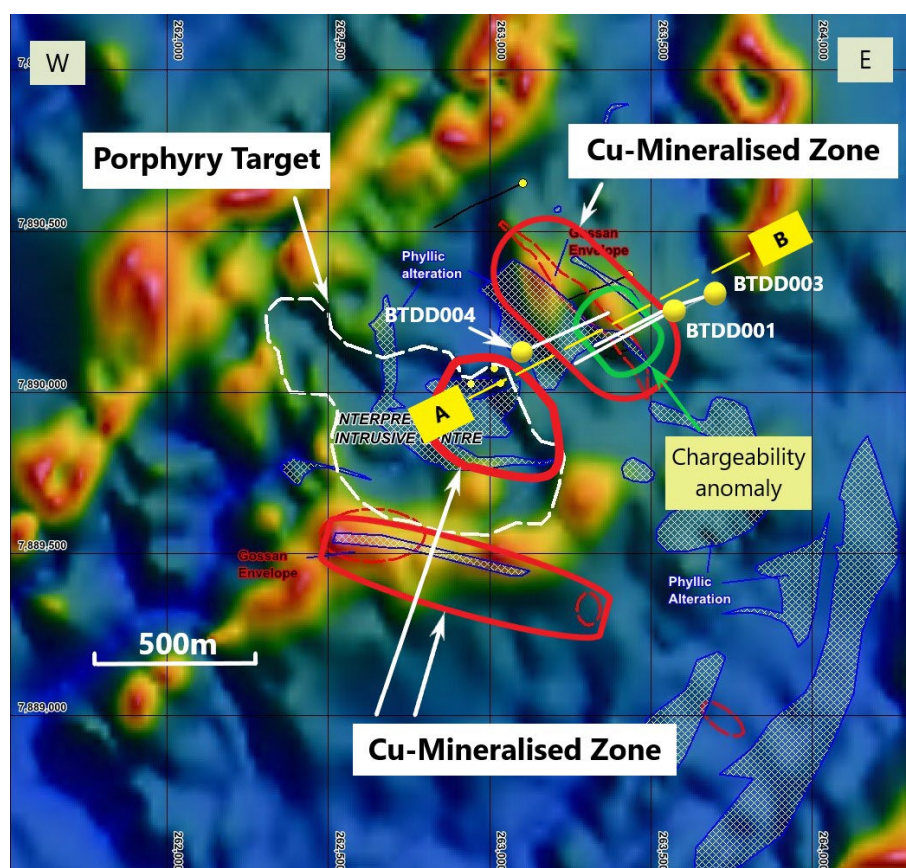


Figure 7. Colour TDr VI NSSF magnetic image over the Bottletree area showing an interpreted intrusive or porphyry (Porphyry Target), IP chargeability iso-surface and select high order soil copper envelopes (Cu-Mineralised Zones). Cross section (Figure 4) through IP chargeability anomaly and 2021 drill holes shown and marked A-B.





Figure 8. BTDD004 (412.9m). Buck quartz vein with massive pyrrhotite-pyrite-chalcopyrite infill.



Figure 9. BTDD004 (364.9m, left). Quartz-pyrite-chalcopyrite vein. BTDD004 (376.8m, right). Buck quartz-chalcopyrite-pyrite-pyrrhotite fracture infill vein.





Figure 10. Deformed granular quartz vein with molybdenite along walls and internal chalcopyrite (BTDD004, 120.3m). Several such veins intersected in BTDD004 are interpreted as possible A or B Type veins within a porphyry system.

## Steam Engine Gold Project

### Summary

Numerous rock chip assay results from samples collected during detailed geological mapping of the six-kilometre corridor between Steam Engine and Bottletree returned up to 65.9 g/t Au and identified a potential 4km gold corridor (Figure 11).

Multiple parallel, poorly exposed gold lodes with substantial strike lengths at Windmill East and Origin appear identical to the Steam Engine Lode.

The exposed lodes are largely untested by drilling and present excellent potential to add substantial ounces to the Steam Engine Mineral Resource.

Although Superior has not conducted any prior work at the new Windmill East and Origin prospects, the lodes appear to be highly mineralised and identical in style to the Steam Engine Lode. Rock chips collected during November 2021 returned up to 65.9 g/t Au from Origin and up to 18.6 g/t Au from Windmill East.

Historic Au-in-soil geochemical data over the area indicates that Windmill East and Origin are directly on-trend to Steam Engine's Dinner Creek Lode, located about 1.5 kms to the northeast. A large anomalous zone of Au-in-soils located around the outer northern edge of the Bottletree Copper Prospect lies about 1km to the south of Origin.

The Windmill East and Origin prospects provide Superior with excellent potential to significantly increase total Resource ounces for the Steam Engine Project, further boosting the potential of the project, which currently totals **4.18 Mt @ 1.5 g/t Au for 196,000 ounces of gold<sup>2</sup>**.

### Potential Development and Forward Plans

Superior has continued a series of mining studies on the growing Steam Engine Resource for the purpose of identifying the most beneficial strategy for the project. These studies include metallurgical, ore pre-concentration, environmental and an overall feasibility study. Modelling of various potential development

<sup>2</sup> Mineral Resource Estimate based on results from 2021 drilling program. Refer ASX announcement "Material upgrade in Steam Engine Resource to 196,000 oz Au with 80.6% increase to Measured and Indicated categories", dated 11 April 2022.

scenarios including a range of toll treatment options and larger-scale development modelling are currently underway.

Toll treatment discussions with third parties commenced during the reporting period.

A mining lease application process is progressing.

2022 exploration drilling programs are being finalised, with the aim of commencing drilling during May 2022. The programs will comprise both Resource expansion programs focussing on the expansion of the Steam Engine and Eastern Ridge lodes and also exploration programs targeting the extensive new lode zones such as Windmill East, Origin and areas to the west of the Steam Engine Lode.

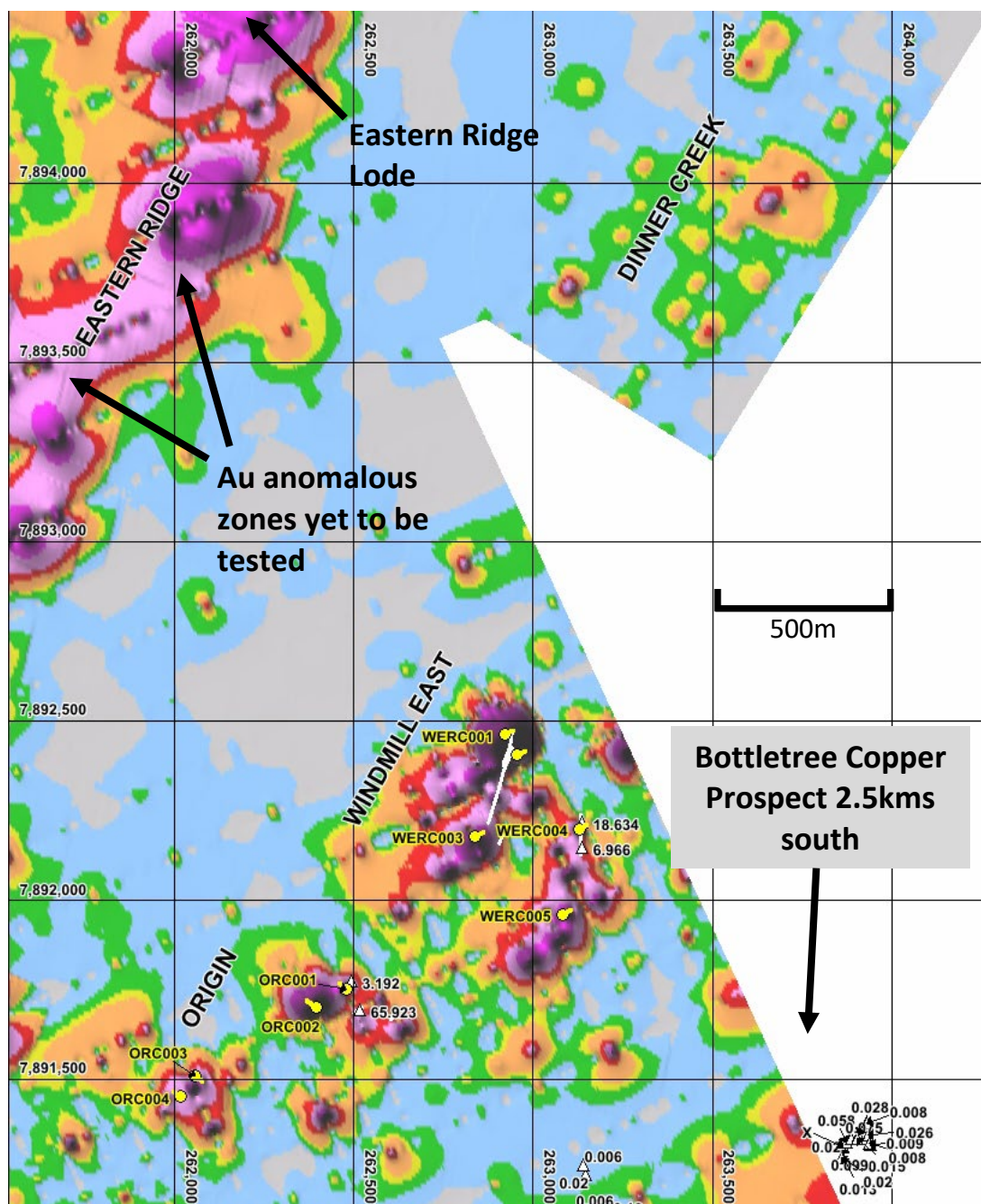


Figure 11. Soil gold image with mapped surface gold lodes at Windmill East and Origin prospects with connection to the Dinner Creek prospect and sub-parallel to the Steam Engine lodes. Historical shallow drill holes are shown, mapped lodes where exposed (white) and rock chip gold results (g/t Au).



## Magmatic Sulphide Ni-Cu-PGE – Big Mag and Dido Prospects

### Summary

Superior was granted the third and last outstanding exploration permit (EPM27932) to secure the Dido Intrusive Complex (Figure 12), which has confirmed potential to host Voisey's Bay / "Julimar-Gonneville" style Nickel-Copper-PGE magmatic sulphide systems.

Limited historic drilling by Anglo American confirmed the presence of fertile host rocks carrying magmatic sulphide mineralisation with up to **133m @ 0.12% Ni** and **105m @ 0.14% Ni (up to 0.58% Ni, 0.28% Cu, 290ppb Pd, 220ppm Pt)**<sup>3</sup>.

Academic consultants considered these intrusions to show **"striking similarities [to] those that host the [world-class] Lac des Iles Pd-Pt deposit"**.

Anglo American concluded **"mafic and ultramafic intrusive complexes that were previously unknown in the area do in fact exist and have the potential to host Ni-Cu-PGE sulphide deposits similar to that at Voisey's Bay"** and their drill results **"are considered to be very significant"** and show that **"(i) the rights rocks are present, (ii) there are multiple untested intrusions and (iii) the magmas are fertile – all of which are very encouraging for further Ni [sulphide] exploration"**<sup>4</sup>.

Numerous (>40) magnetic and EM conductor targets identified by Anglo American; only two targets drilled; positive drill holes received no further follow-up; numerous high-quality targets not followed up.

Superior is in a sector-leading Ni-Cu-PGE position, aided by the advantage of having enormous amounts of modern exploration data generated by Anglo American on proven Ni-Cu-PGE magmatic sulphide terrain, including large, high resolution airborne geophysical surveys totalling more than 5,070 line-kilometres and information from petrographic and academic studies on key rock types.

Forward plans include continuing geophysical interpretation of airborne electromagnetic (EM) and IP survey data to identify EM conductor and IP chargeability targets, field inspections of priority targets and preparation of drill programs.

With the grant of EPM27932, the Company's Ni-Cu-PGE project has expanded to 1,158 km<sup>2</sup> with the overall Greenvale Project totalling 1,749 km<sup>2</sup> (Figure 12).

### Targeting by Anglo American

During 2004, Anglo American conducted an Australia-wide targeting exercise for giant, world-class Ni-Cu-PGE ore bodies of the Voisey's Bay (Canada) or Noril'sk (Russia) styles. Their exercise considered regional geological, geochemical, digital terrain modelling, magnetic, gravity and seismic tomographic datasets.

They identified approximately 100 magnetic, airborne EM and soil geochemistry targets that were considered to be prospective for magmatic Ni-Cu-PGE ore deposit systems (Figure 13).

**The Dido/Big Mag Project area was ranked within the top ten targets on the basis of a bullseye magnetic feature (Big Mag), located on a craton margin directly associated with known layered mafic intrusions**<sup>5</sup>.

<sup>3</sup> CR67201, Dixon, 2011, Polito, Project Review Report, 2010, Anglo American; CR77624, Price, 2013, Annual Report for the period May 2012 to May 2013, Cazaly Resources Limited

<sup>4</sup> CR67201, Dixon, 2011, Polito, Project Review Report, 2010, Anglo American

<sup>5</sup> CR79623, Kelly, 2013, Final Report for EPM15646 for the period 15 May 2007 to 14 May 2013, Anglo American.

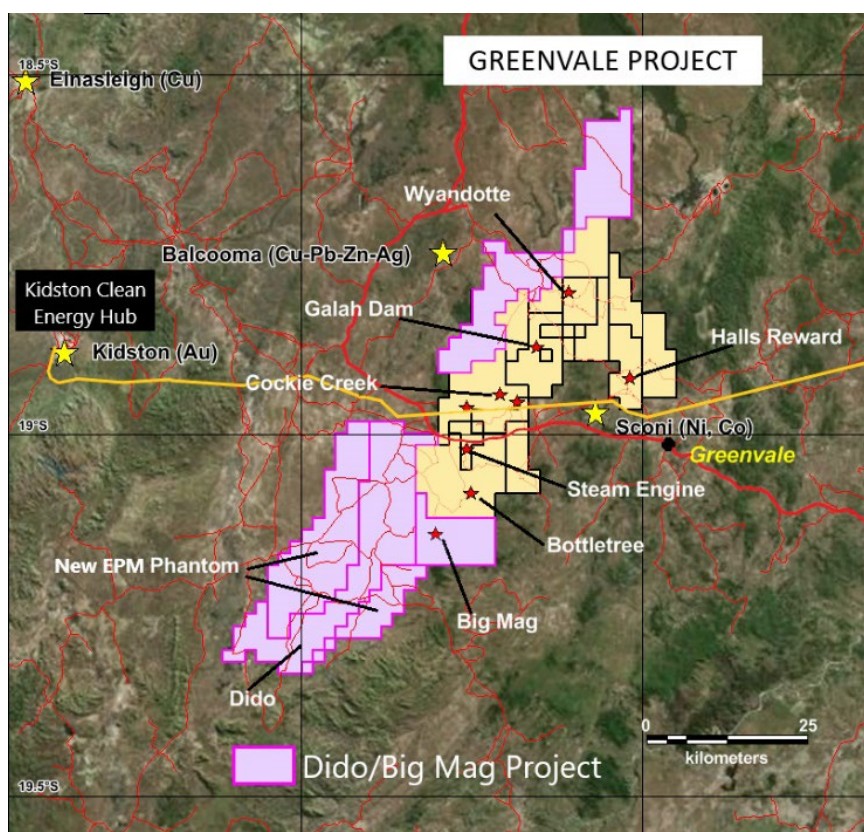


Figure 12. Location of the Greenvale Project tenements showing the Dido/Big Mag Project shaded purple. Key Greenvale Project prospects and the Kidston Clean Energy Hub and associated power corridor also marked.

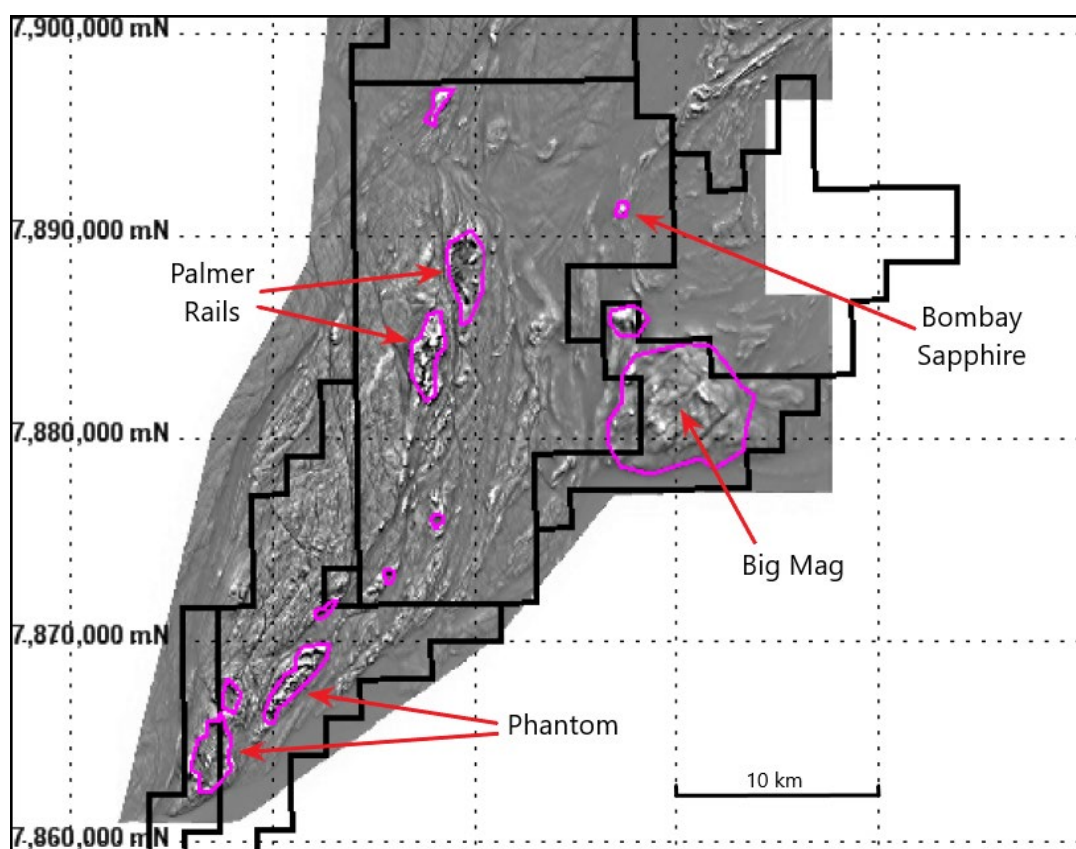


Figure 13. TMI 1VD greyscale aerial magnetics survey data showing Dido Batholith, select initial Anglo American magnetic anomaly targets (purple) and historic Anglo American EPM tenements (Adapted from CR 79623, Kelly, 2013, Final Report for EPM15646 for the period 15 May 2007 to 14 May 2013, Anglo American).



### Follow-up work by Anglo American – Palmer Rails targets

From interpretation of existing regional airborne magnetic survey data, Anglo American identified numerous high priority magnetic anomalies representing mafic and ultramafic intrusions. Only two of these anomalies, Palmer Rails North and Palmer Rails South, were followed up with a range of exploration sampling and mapping techniques as well as ground IP geophysical surveys over three years.

Soil sampling identified Ni-Cu-Co-Cr-PGE geochemical anomalies over the two targets. At Palmer Rails North, the anomaly is 2.4 kms long and ranges from 150m to 450m wide and at Palmer Rails South, multiple discrete anomalies range from 500m to 900m in diameter.

**Each of the Ni-Cu-Co-Cr-PGE anomalies are coincident with IP geophysical and magnetic anomalies (Figure 14).**

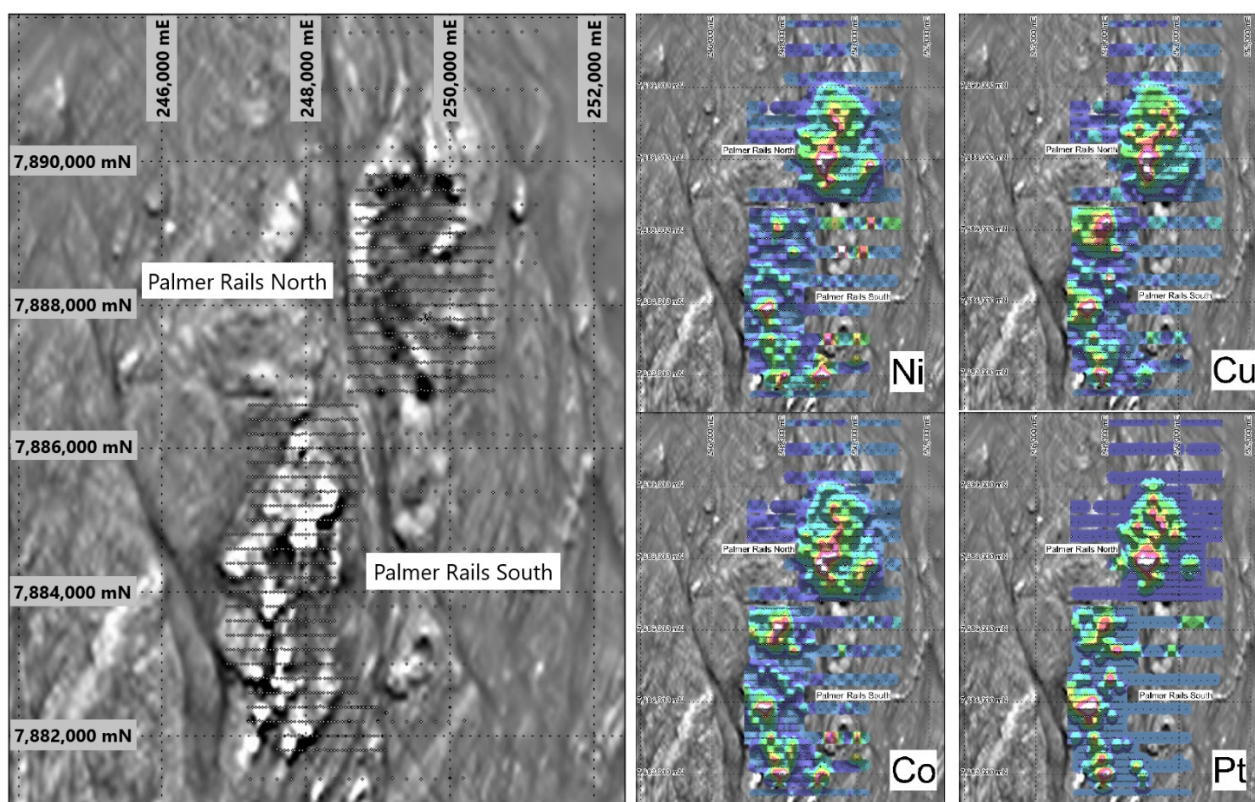


Figure 14. TMI 1VD greyscale aerial magnetic images of Palmer Rails North and South (N-S field of view: 11km). Soil geochemistry survey over the Palmer Rails North and South targets showing coincident anomalous Ni, Cu, Co and Pt concentrations over the intrusions (right) (After: CR79623, Kelly, 2013, Final Report for EPM15646 for the period 15 May 2007 to 14 May 2013, Anglo American).



## Discovery of Voisey's Bay-style Ni-Cu-PGE system

Nine diamond core holes for 2,643.1m were drilled into the Palmer Rails North and South intrusions.

**Magmatic sulphides were intersected in most of the holes** within several mafic-ultramafic rock types, which include tonalite, diorite, gabbro, gabbro-norite, olivine gabbro, wehrlite, troctolite and pyroxenite. The magmatic sulphides within the northern intrusion are present as intergrown pyrrhotite-chalcopryite-pentlandite grains, intercumulus to silicates.

**Results from the drilling include<sup>6</sup> (Figure 15):**

- **133m @ 0.12% Ni;**
- **105m @ 0.14% Ni; and**
- **with up to 0.58% Ni, 0.28% Cu, 290ppb Pd, 220ppb Pt in sub-intervals.**

Variable textures and grain sizes within the rocks indicate that **the intrusions were formed from multiple pulses of magma**. In addition, the intrusions showed substantial contamination with silica and volatiles from the country rock. **Variable textured olivine gabbro and troctolites are typically associated with large Ni-Cu-PGE magmatic sulphide ore deposits similar to Voisey's Bay.**

Nickel abundances are significantly depleted in the Palmer Rails South intrusion. **This implies nickel sulphide accumulation is likely to have occurred nearby.**

The researchers also concluded that there are striking similarities between the Palmer Rails rocks and those hosting the Lac des Iles Pd-Pt deposit (Ontario), the Stella Intrusion (South Africa), Rincon del Tigre (Bolivia) and Maracas (Brazil).

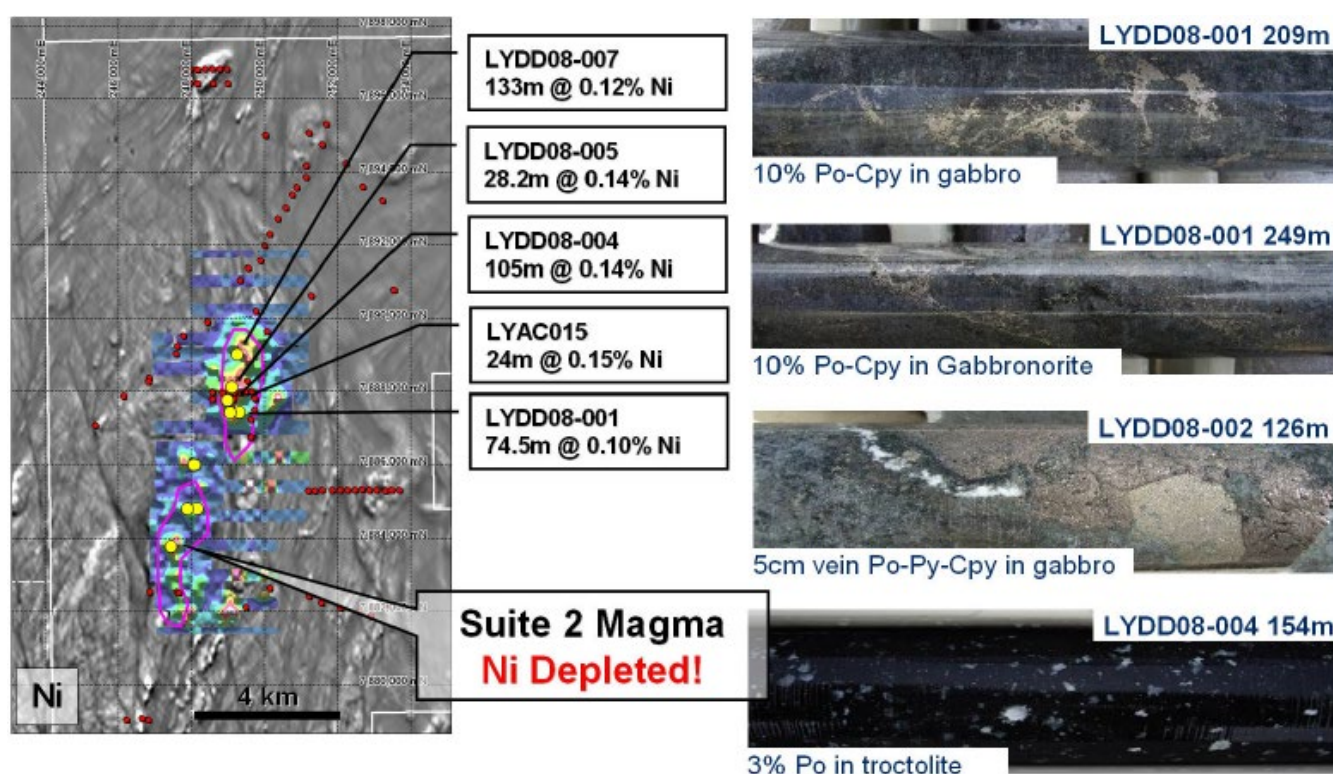


Figure 15. Anglo American diamond drilling on the Palmer Rails North and South intrusions. Select interval average grades for nickel sulphide mineralisation is indicated (left). Examples of lithologies and mineralisation intersected in drill core.

<sup>6</sup> CR79623, Kelly, 2013, Final Report for EPM15646 for the period 15 May 2007 to 14 May 2013, Anglo American.

Anglo American considered<sup>7</sup> the results to be “very significant” on the basis that:

- the presence of troctolites, pyroxenites and gabbro-norites are indicative of an association with large-scale Ni-Cu-PGE magmatic sulphide ore bodies such as Voisey’s Bay, so the ‘right rocks’ are present;
- all of the other mafic-ultramafic intrusions interpreted from the airborne magnetic data are likely to have similar lithologies;
- the presence of magmatic sulphides, evidence of wall rock contamination and multiple phases of magma intrusion is “extremely encouraging as they are key features of other magmatic Ni-Cu-PGE ore systems”; and
- whole-rock and mineral chemistry of the rocks indicates that nickel depletion, sulphide trapping and accumulation is likely to have occurred nearby.

### No further follow-up

During the latter two years of Anglo American’s tenure, additional ground IP geophysics and a large 5,070 line-kilometre Spectrem airborne geophysical survey (TMI, EM, DTM and Radiometrics) were conducted. Whilst EM conductor targets were identified, Anglo American’s momentum on the project appeared to weaken, partly due to inclement weather preventing access for one calendar year and partly due to their conclusion that the EM conductors were not of sufficient quality. The project was then farmed out to Cazaly Resources in 2013. Cazaly were unable to negotiate acceptable terms for access with the relevant landowner and both companies immediately decided to relinquish the project.

### Sector-leading Ni-Cu-PGE potential

Superior considers that:

- the Spectrem airborne and other ground geophysical survey data and resulting anomalies (some of which were considered by Anglo American to be very high priority) were not followed up and are of significant interest;
- numerous (obvious) high priority mafic-ultramafic intrusions (including potential chonoliths) interpreted from magnetic imagery by Anglo American and Superior have received no exploration work and are likely to be caused by Voisey’s Bay-style intrusions (a conclusion made by Anglo American). Only the Palmer Rails target received an initial round of drilling;
- a significant factor in Anglo American’s and Cazaly’s decision to relinquish the project tenements was the diminishing availability of funding during 2012 and 2013, which was the beginning of a deep and protracted global downturn in the exploration sector; and
- the Dido/Big Mag Project is a sector-leading Ni-Cu-PGE magmatic sulphide exploration project.

So far, Superior has identified more than 40 high priority airborne magnetic targets. Interpretation of airborne EM data and the selection of EM targets is ongoing. The quality of the anomalies identified by Superior to date, are compelling. Two examples of unexplored high priority magnetic anomalies, the north western corner of Big Mag and the Phantom anomaly, are shown in Figure 16.

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<sup>7</sup> CR67201, Dixon, 2011, EPM15646 “Lynd” Fourth Annual Report for the period May 2010 to May 2011, Appendix 1, Polito, Project Review Report, 2010, Anglo American.

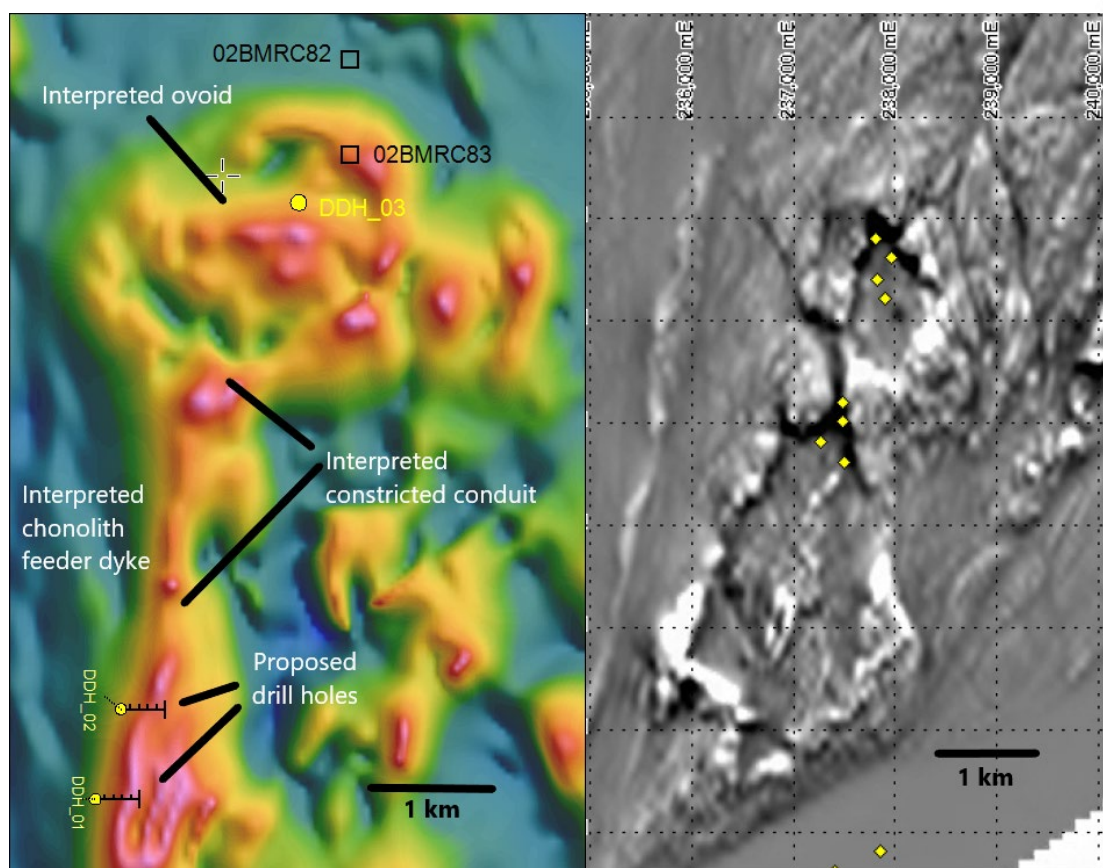


Figure 16. TMI 1VD aerial magnetic images of north western corner of Big Mag anomaly as modelled and interpreted by Superior (left) and Phantom anomaly (right). Yellow diamonds on the Phantom anomaly (right) are Spectrem EM anomalies interpreted and selected by Anglo American (Source (Phantom): CR67201, Dixon, 2011, EPM15646 "Lynd" Fourth Annual Report for the period May 2010 to May 2011, Appendix 1, Polito, Project Review Report, 2010, Anglo American).

### Forward plans

The Dido/Big Mag Project covers a substantial area (1,158km<sup>2</sup>) and contains a large number of high priority Ni-Cu-PGE targets that will require systematic exploration.

Activities completed:

- key historic data acquisition and review;
- initial geological review and assessment;
- completed initial Aboriginal cultural heritage and native title party searches; and
- finalised landowner access and compensation agreement.

Preliminary activities currently underway:

- modelling and interpretation of Spectrem EM geophysical data;
- modelling of magnetic anomalies to assist with drill program planning;
- planning of additional soil and geophysical surveys;
- planning ground logistics and reconnaissance site inspections; and
- arranging drilling contractors.



## CORPORATE AND COMMERCIAL

### Capital Raising

The Company raised \$4,500,000 via an oversubscribed placement of 118,421,053 fully paid ordinary shares to institutional and sophisticated investors at a price of \$0.038 per share<sup>8</sup>.

### Investments

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

As at 31 March 2022, the Company held 74,244 DYL shares with a closing value of \$76,100.10.

### Related Party Matters

Payments to Directors of the Company and related parties during the March Quarter totalled \$89,000, 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).

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

Contact:

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Further Information:

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<sup>8</sup> Refer ASX announcement dated 31 January 2022.

**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 not been on the Bottletree Project site, but has reviewed all primary data, inspected drill core located in Townsville 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.

The Steam Engine Project exploration results and related information were originally announced on the ASX Market Announcements Platform on 18 January 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 Steam Engine Project were compiled by Mr Kevin Richter, an employee of Superior Resources Limited, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Richter 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 Richter consents to the inclusion in this report of the matters based on his 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.

**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

### 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

- 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	Phantom Creek	EPM27932	Greenvale	100%	SPQ	Granted

- 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