



# Investor Presentation

*Greenvale copper and nickel  
provinces*

Peter Hwang – Managing Director  
October 2022

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ASX:SPQ





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# Corporate snapshot



## Carlos Alberto Fernicola

Non-Executive Chairman

*B.Com, FCA, F Fin, FCIS, FCSA, GradDipAdvAcctg, GDippAppFinInv, GDipAppCorpFin*

Carlos has 30+ years of experience in accounting, taxation, audit and the financial services industry. He is a Fellow of Institute of Chartered Accountants ANZ, Fellow of the Governance Institute of Australia and Fellow of the FSIA.



## Peter Henry Hwang

Managing Director

*B.Sc. (Hons), LLB, MAIG, MGSA, MQLS*

Peter has 12+ years experience as a gold, base metals and diamond geologist and 21 years experience as a lawyer at Freehills, Ashurst and Minter Ellison, specialising in mining, commercial, M&A, mining infrastructure, regulatory and native title law.



## Simon James Pooley

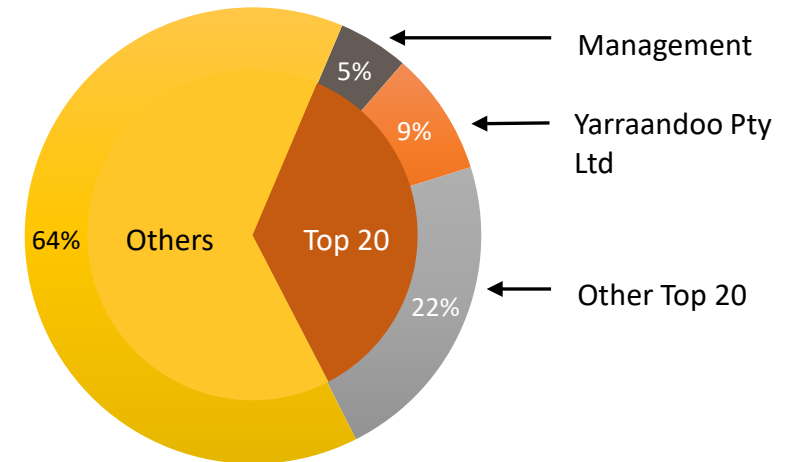
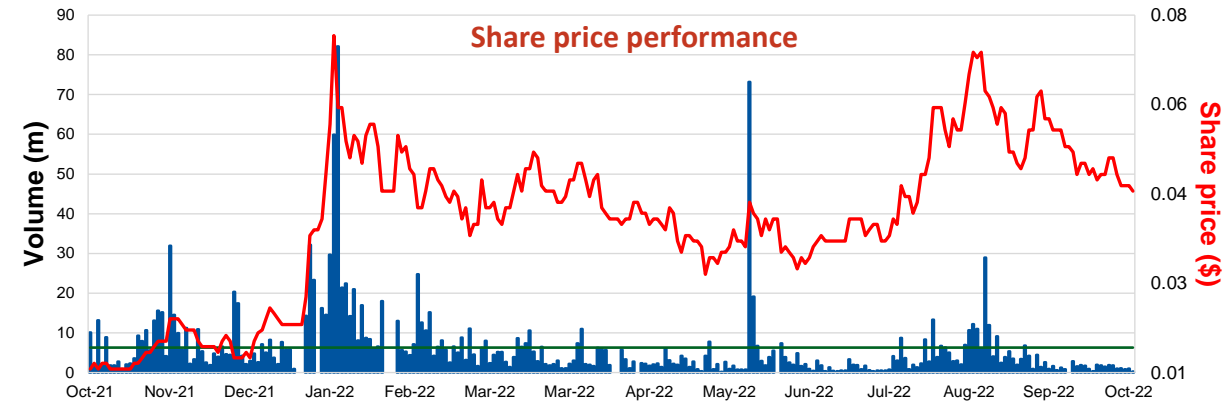
Non-Executive Director

*MAusIMM, GAICD*

Simon was formerly Chief Operating Officer for Novo Resources Corp., General Manager Operations for Millennium Minerals Limited and General Manager Exploration and Business Development for CopperCo Limited.

1. As at 17 October 2022

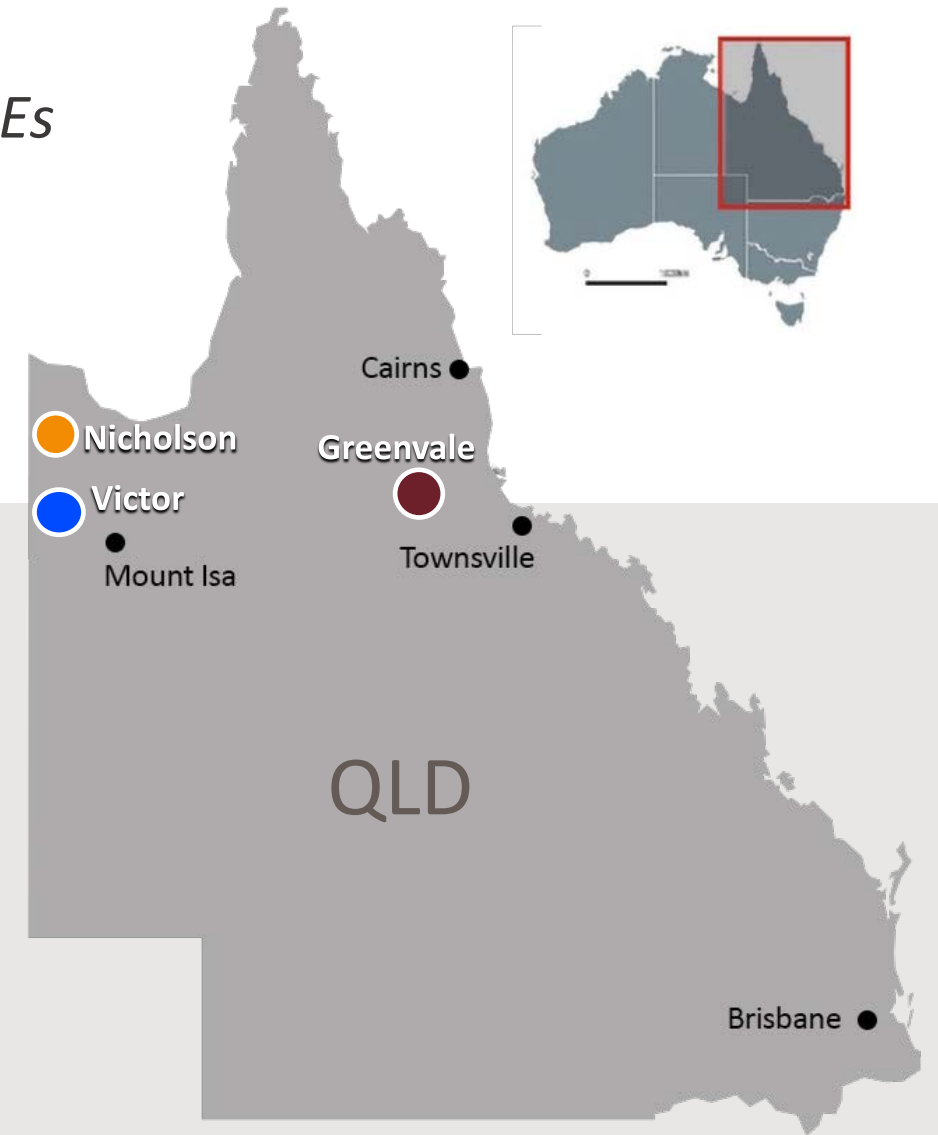
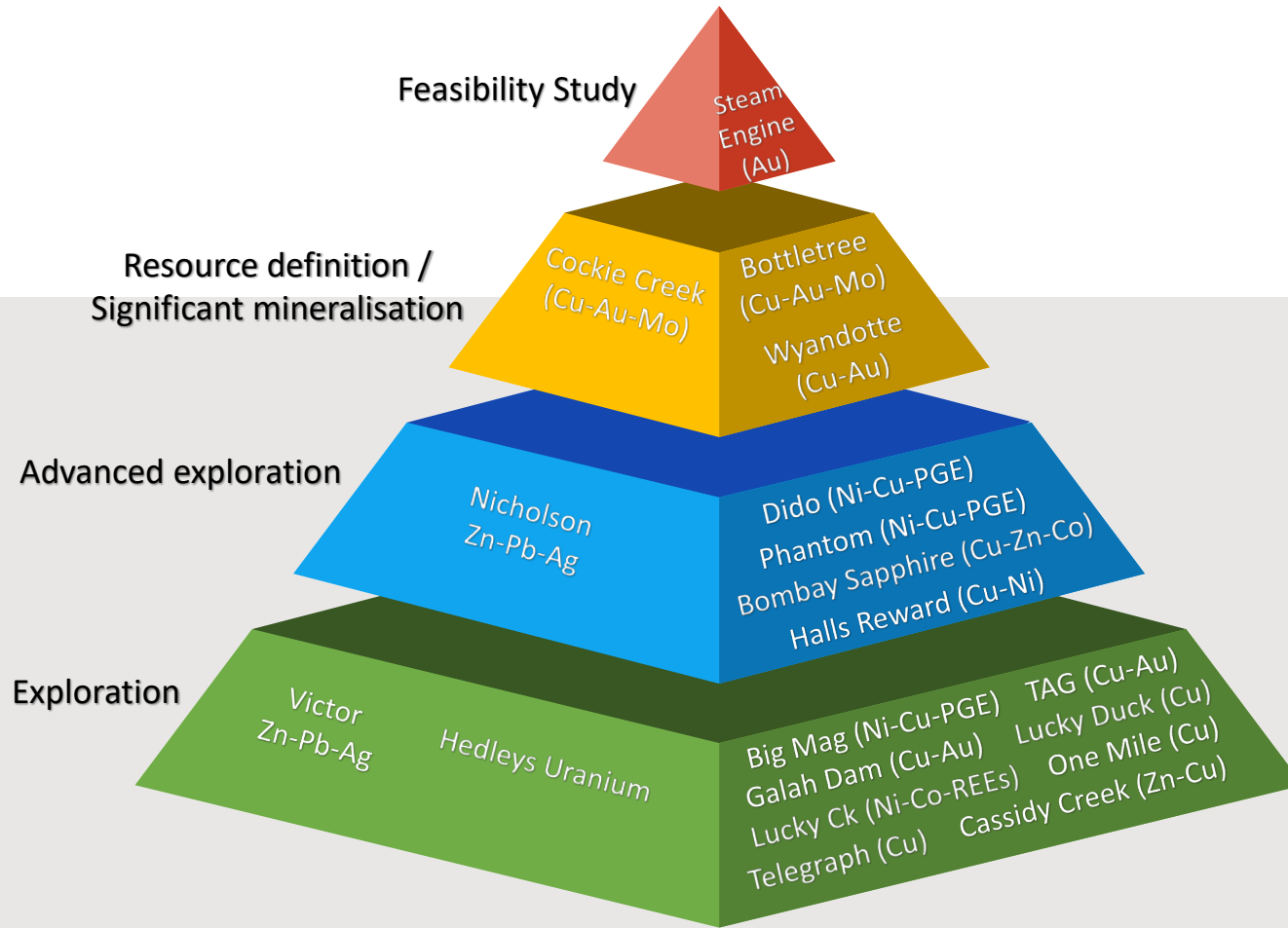
Share Price <sup>1</sup> <b>\$0.05</b>	Issued Shares <b>1,701m</b>	Market Cap <b>\$85m</b>
Cash <b>\$2.3M</b>	Debt <b>\$nil</b>	Top 20 Holdings <b>36%</b>



Growth through discovery – multiple tier 1-potential exploration projects

# Project portfolio – 100% SPQ

Leveraging the green transition – Cu, Ni, Zn, Co, U, REEs





# Operational snapshot

Targeting Cu, Ni, Zn discovery and defining copper and gold resources in Queensland

Porphyry Cu-Au-Mo			Ni-Cu-PGE	Au
Bottletree	Cockie Creek	Wyandotte	Dido, Big Mag, Phantom Creek	Steam Engine
<b>632m @ 0.21% Cu<sup>1</sup></b> incl 224m @ 0.40% Cu incl 103m @ 0.53% Cu	<b>13Mt @ 0.42% Cu<sup>2</sup></b> (54,600t Cu)	<b>Shallow Exploration Target<sup>3</sup>:</b> 0.4Mt @ 2.2% Cu (8,800t Cu) - 1.0Mt @ 1.9% Cu (19,000t Cu)	<b>Voisey's Bay style Ni-Cu-PGE</b>	<b>2.72Mt @ 2.0 g/t Au</b> (171,000 ounces Au) <sup>4</sup>
<b>Very large scale Cu system emerging:</b> <ul style="list-style-type: none"> <li>Large drilling program underway</li> <li><b>Targeting interpreted mineralised porphyry core</b></li> <li>1.5km x 1km Cu soil anomaly over porphyry target</li> <li>Several large Cu 'leakage' mineralised zones surrounding interpreted core</li> </ul>	<b>Large IP chargeability anomaly beneath Cu Resource:</b> <ul style="list-style-type: none"> <li><b>Porphyry Cu-Au-Mo system</b></li> <li>Upcoming maiden JORC (2012) Mineral Resource Estimate</li> </ul>	<b>High grade copper deposit related to interpreted Cu-Au porphyry:</b> <ul style="list-style-type: none"> <li>Mineral Resource Estimate to be established</li> <li>No exploration since 1975</li> </ul>	<b>Voisey's Bay style Ni-Cu-PGE:</b> <ul style="list-style-type: none"> <li><b>Proven Voisey's Bay-style Ni-Cu-PGE deposit systems</b></li> <li>Fertile troctolite intrusions identified by Anglo but not followed up or inadequately followed up</li> </ul>	<b>Feasibility Study in progress</b> <b>Toll treatment discussions</b> <b>Scoping Study (Base Case)<sup>5</sup>:</b> <ul style="list-style-type: none"> <li><b>\$24.2M cash flow (post tax @ A\$2,200/oz; \$41M @ A\$2,500)</b></li> <li><b>Only 70,000oz mined</b></li> <li><b>\$5.1M CAPEX (pre-production and closure)</b></li> </ul>

1: Refer ASX announcement, 2 June 2022

2: JORC (2004) Inferred; Refer ASX announcement, 27 March 2013

3: Refer ASX announcement, 15 June 2021

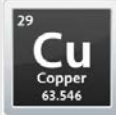
4: JORC Measured, Indicated and Inferred; Refer ASX announcement, 11 April 2022

5: Refer ASX announcement, 27 April 2021

Growth through discovery

# Greenvale Project

Multiple tier-1 discovery opportunities



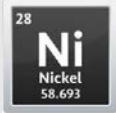
**Transformational advances towards major discovery at Bottletree**



**Ramping Up: pipeline of significant porphyry Cu-Au systems**



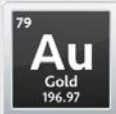
**Large drilling program underway**



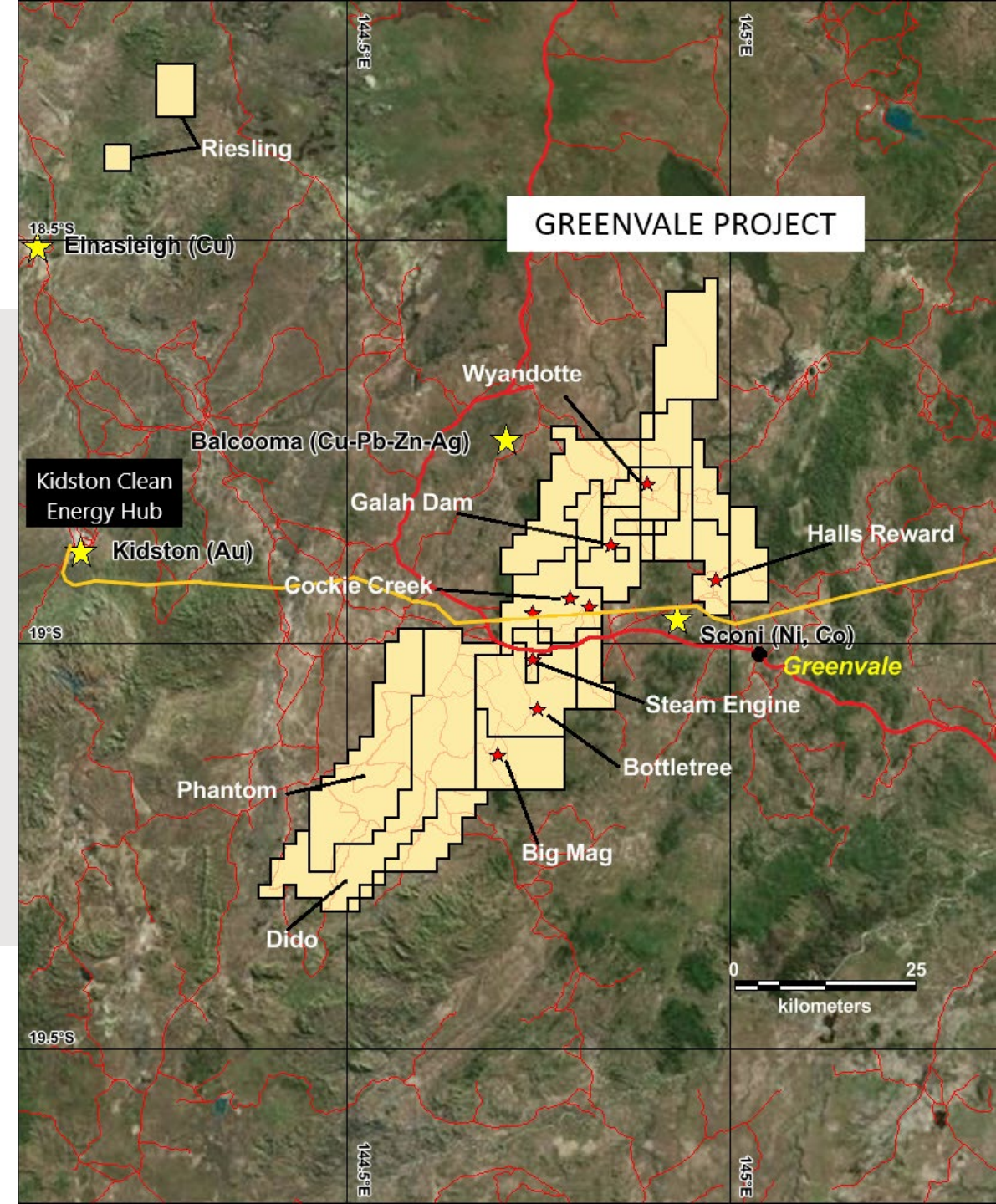
**First mover advantage on new Ni-Cu-PGE Province**



**Recent pegging spree by [Rio Tinto](#) & others to the west**



**Feasibility Study: Steam Engine Gold toll treatment**





# Greenvale Project

**GREENVALE PROJECT**

Riesling

Einasleigh (Cu)

Kidston Clean Energy Hub

Kidston (Au)

Balcooma (Cu-Pb-Zn-Ag)

Wyandotte

Galah Dam

Cockie Creek

Sconi (Ni, Co)

**Greenvale**

Steam Engine

Phantom

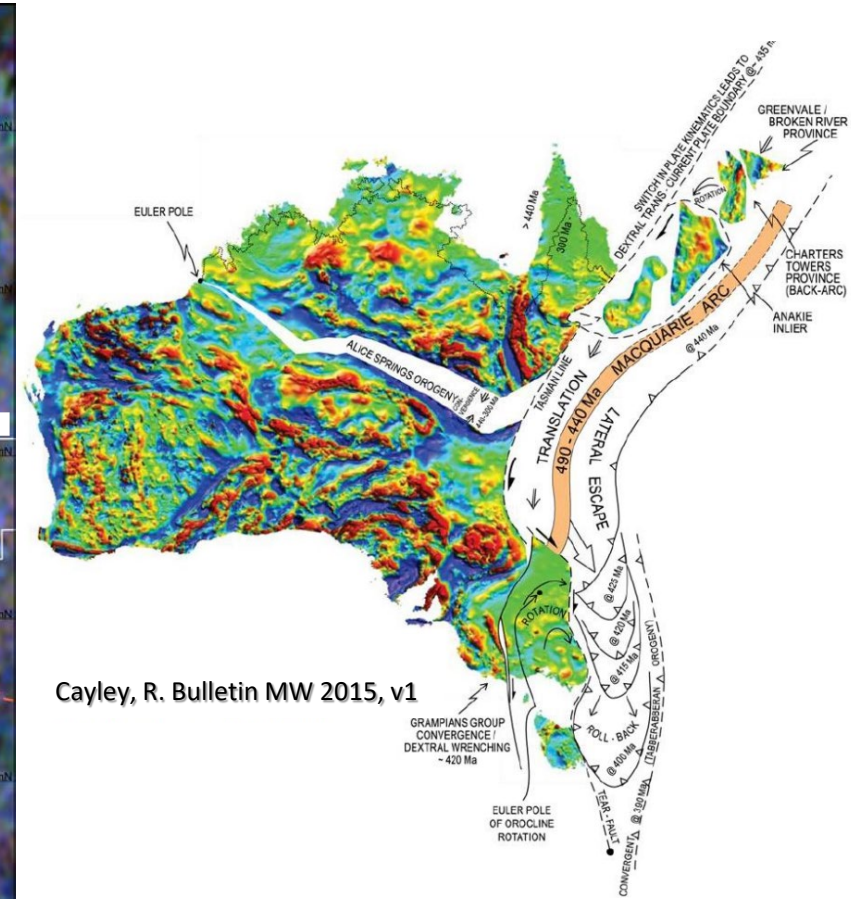
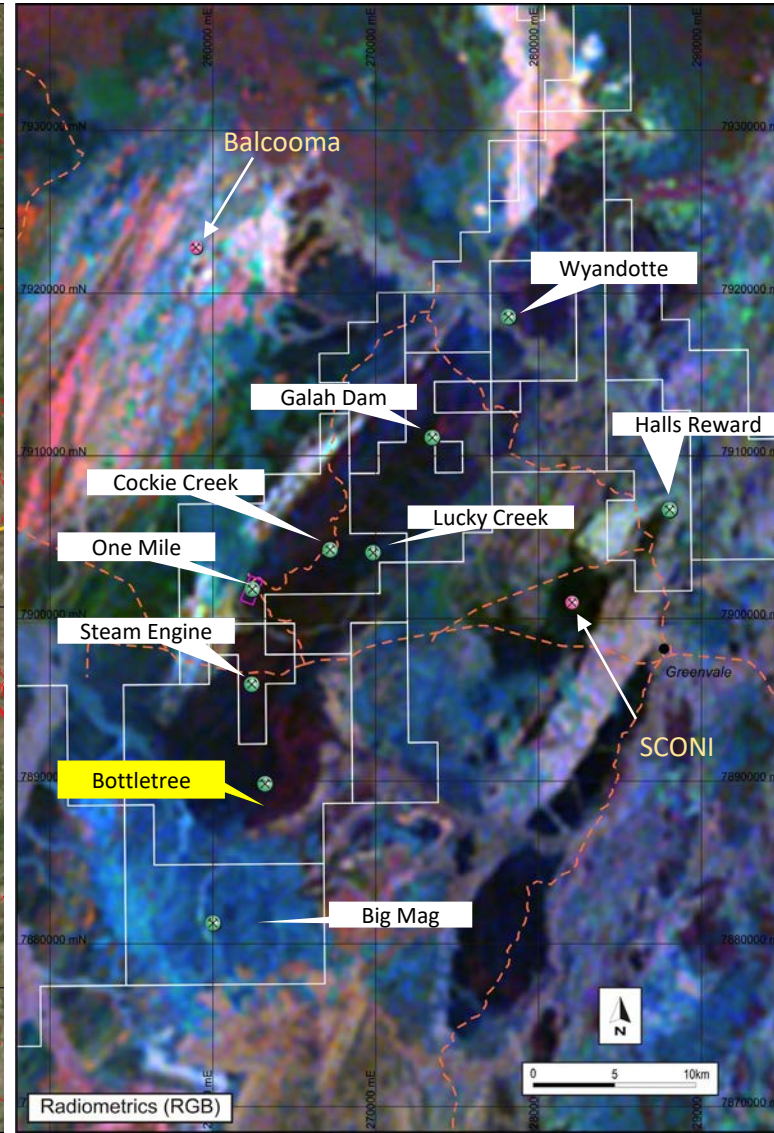
Bottletree

Big Mag

Dido

Halls Reward

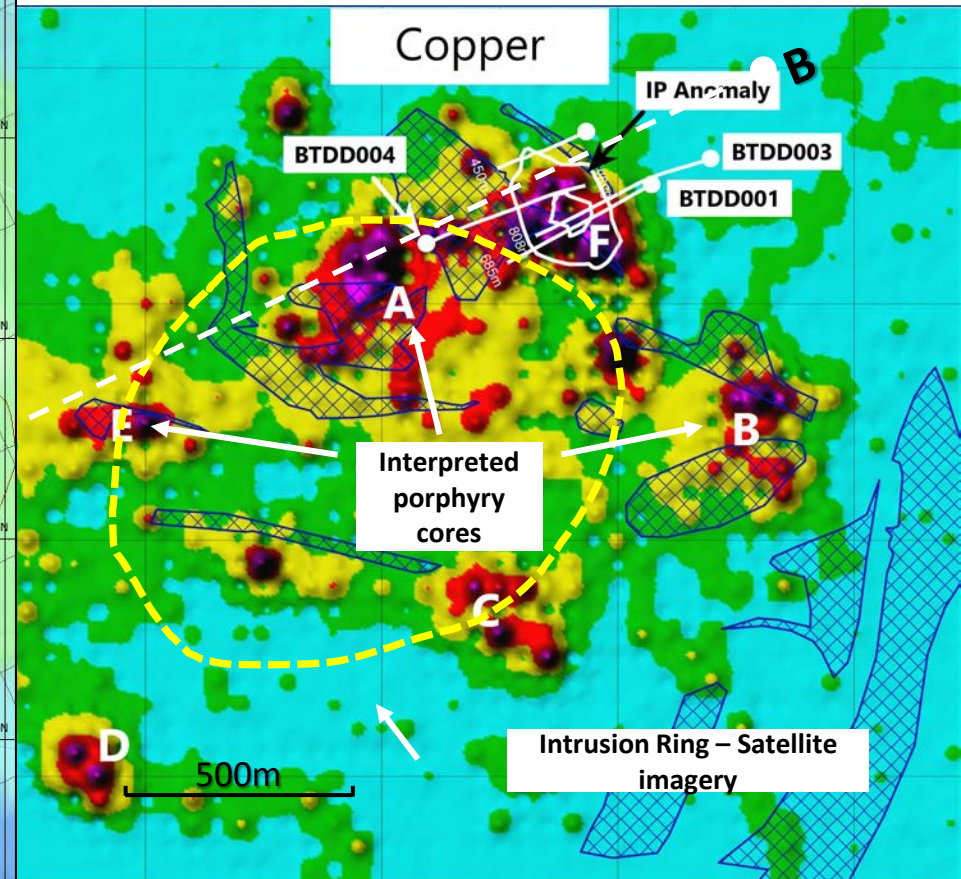
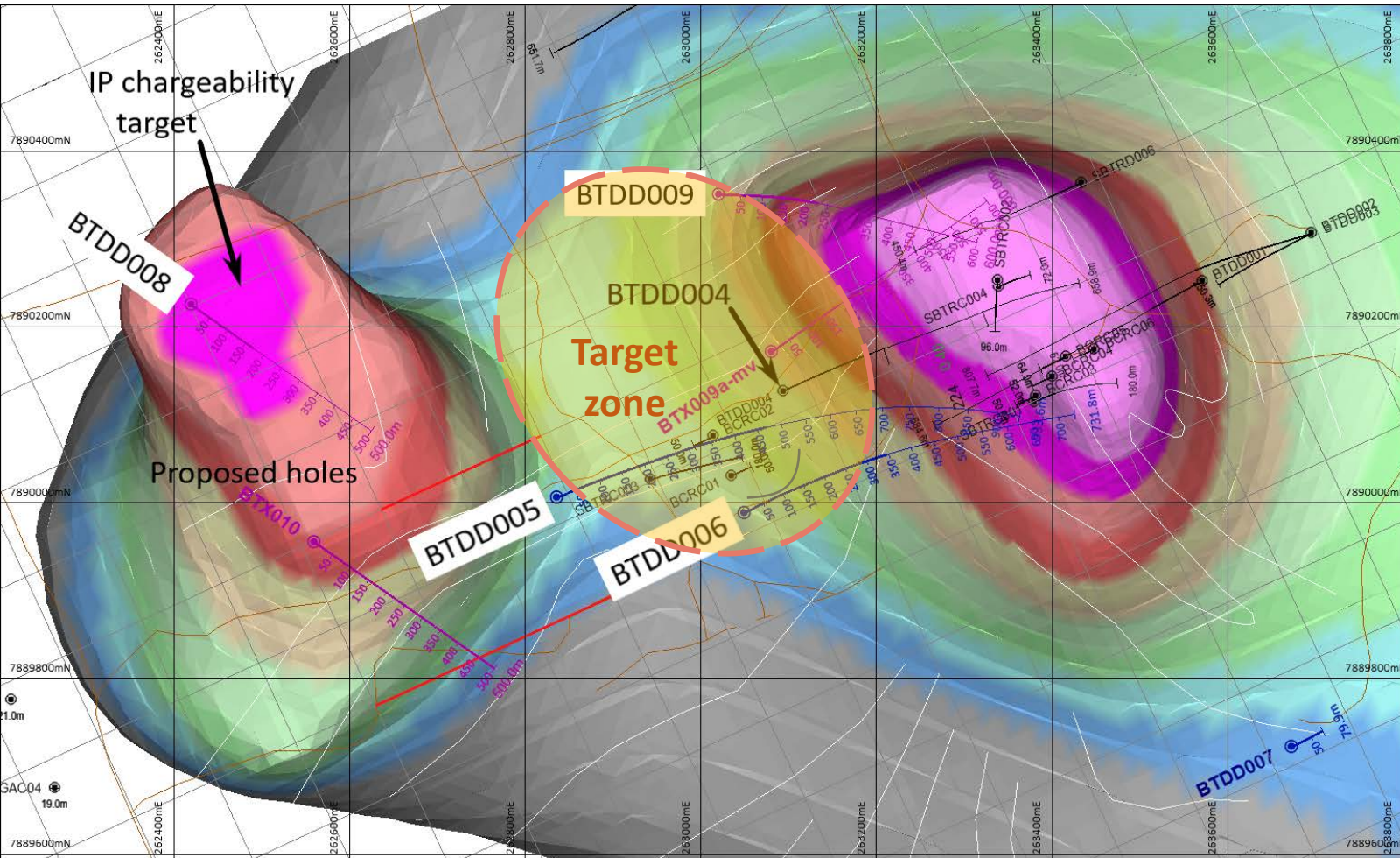
0 25  
kilometers



Cayley, R. Bulletin MW 2015, v1

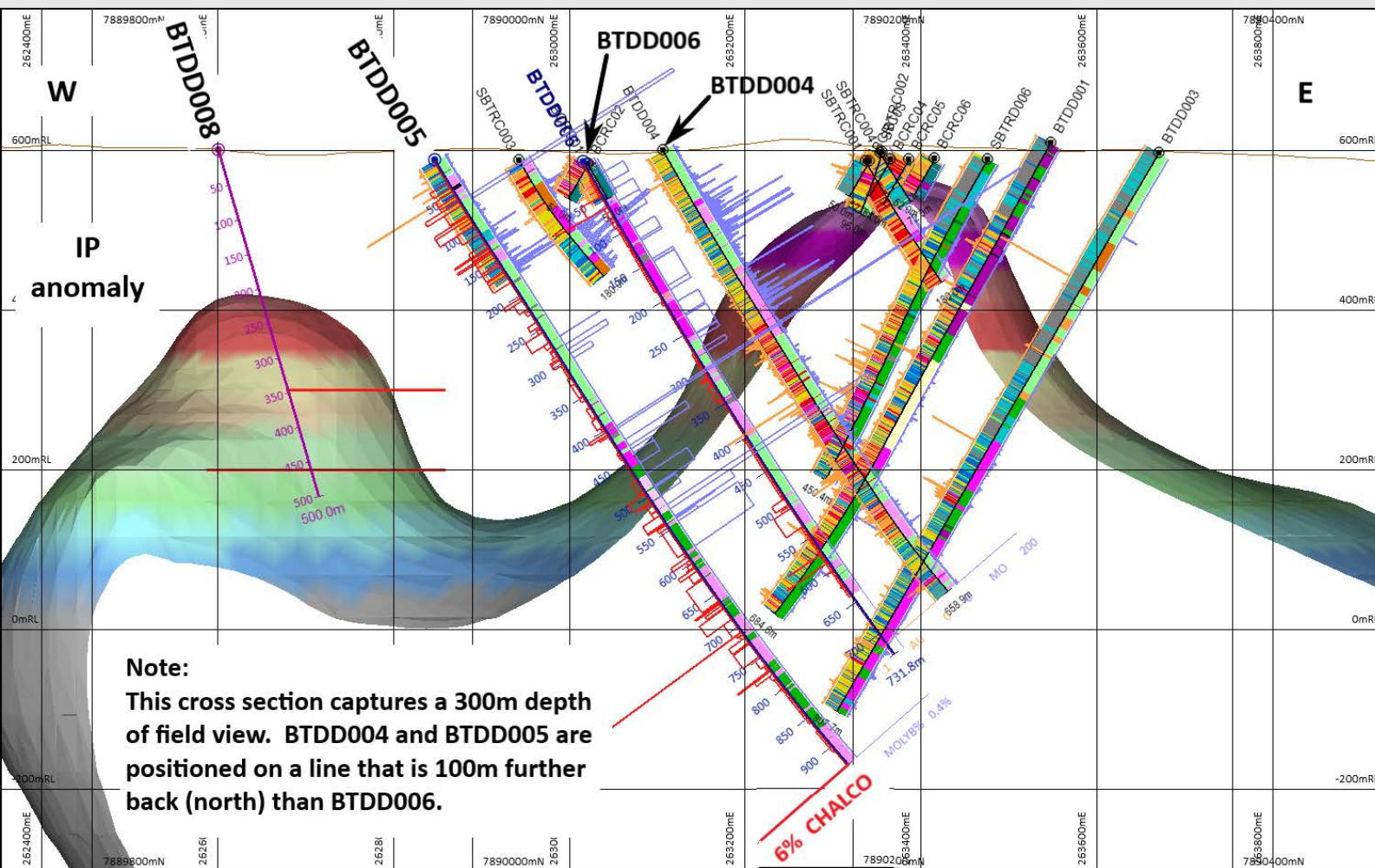


# Bottletree – Large-scale Cu-Au interpreted porphyry system





# Bottletree – Large-scale Cu-Au interpreted porphyry system



## Emerging large-scale copper system

632m @ 0.21% Cu, 0.03g/t Au, 18.0ppm Mo<sup>6</sup>  
 incl. 224m @ 0.40% Cu, 0.05g/t Au, 3.5ppm Mo  
 incl. 103m @ 0.53% Cu, 0.05g/t Au, 3.3ppm Mo  
 incl. 15m @ 1.19% Cu, 0.15g/t Au, 1.9ppm Mo

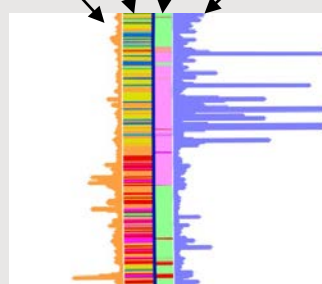
## Drilling to date has intersected interpreted outer rim of porphyry system and interpreted late-stage porphyry intrusions

## 2022 drilling program targeting central zone of interpreted porphyry

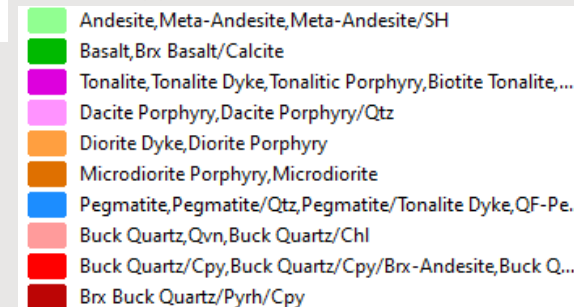
### Copper %



Au g/t    Cu %    Lithology    Mo ppm

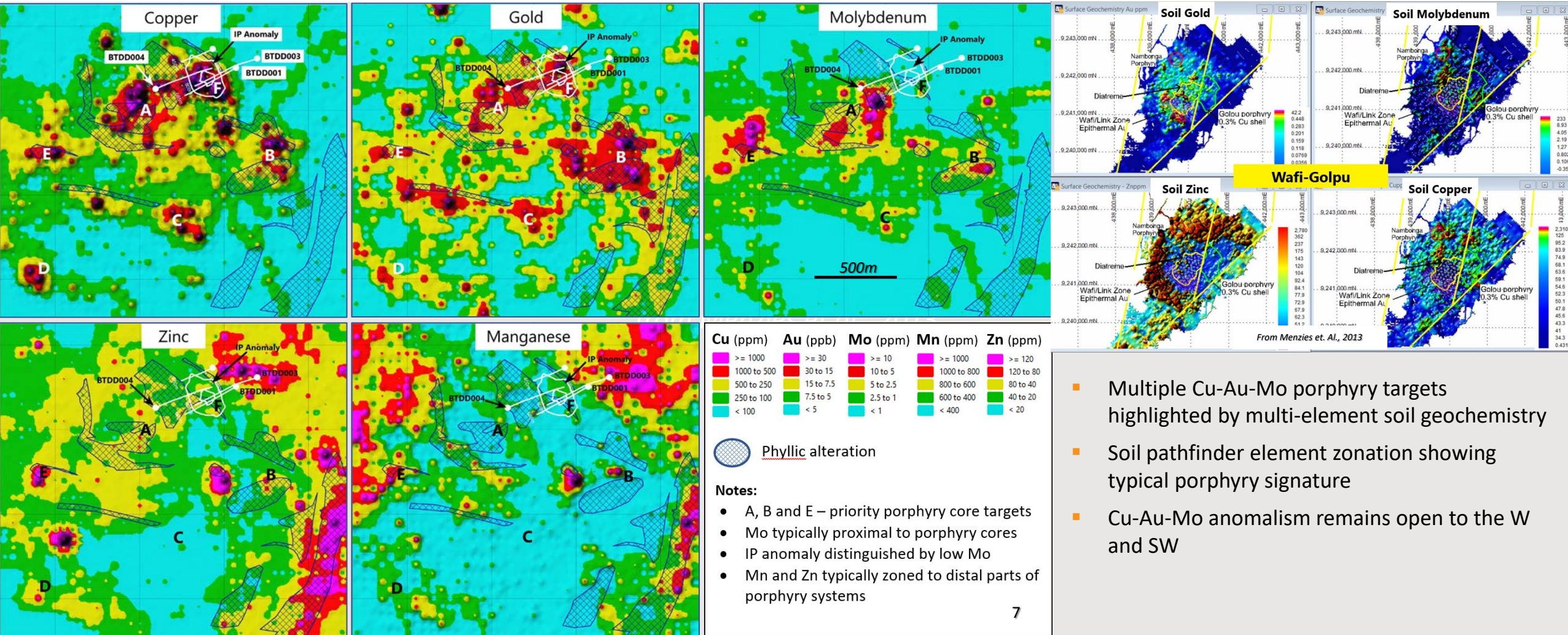


### Lithology



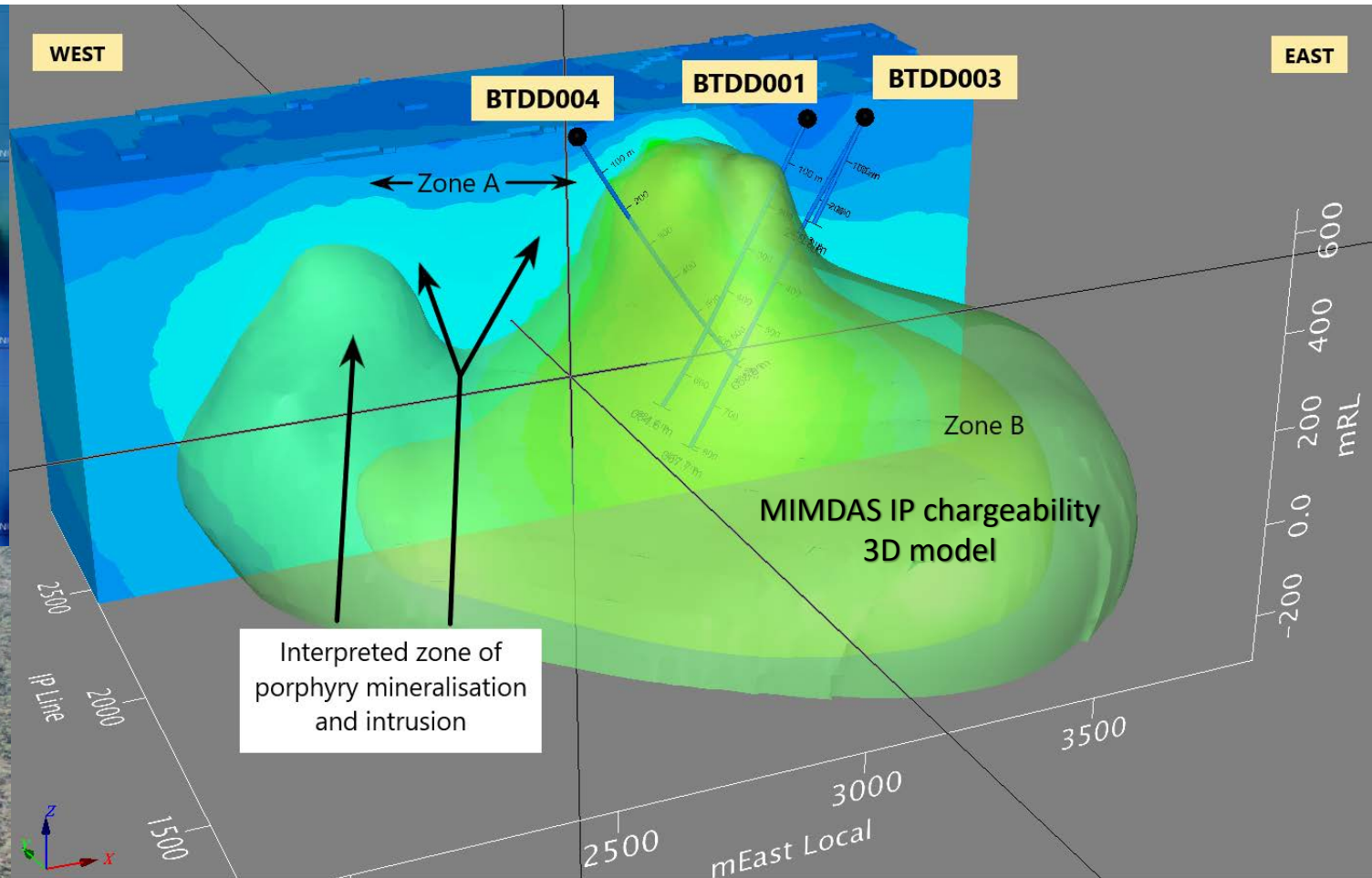
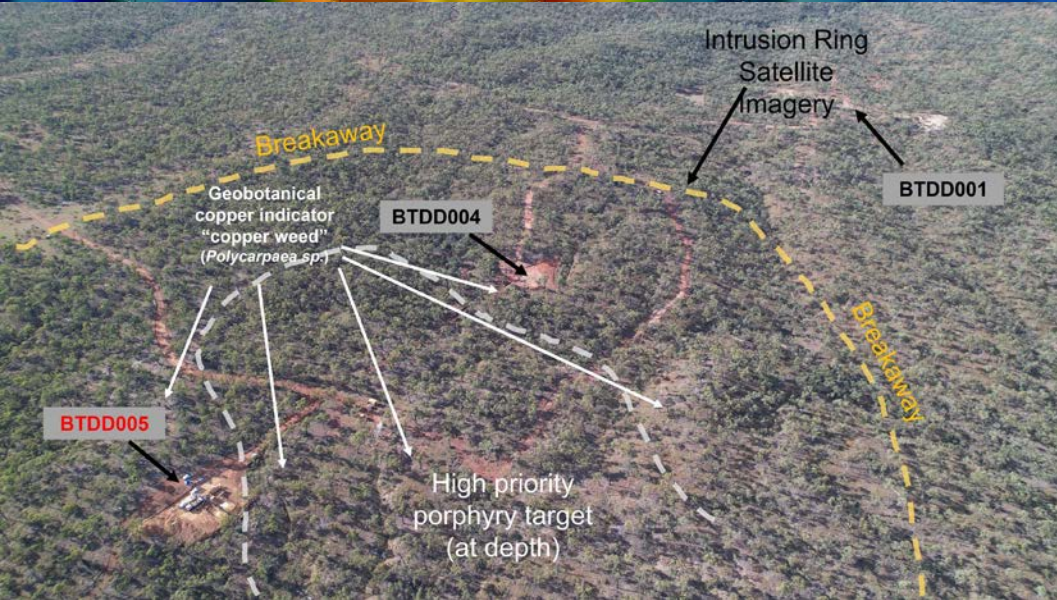
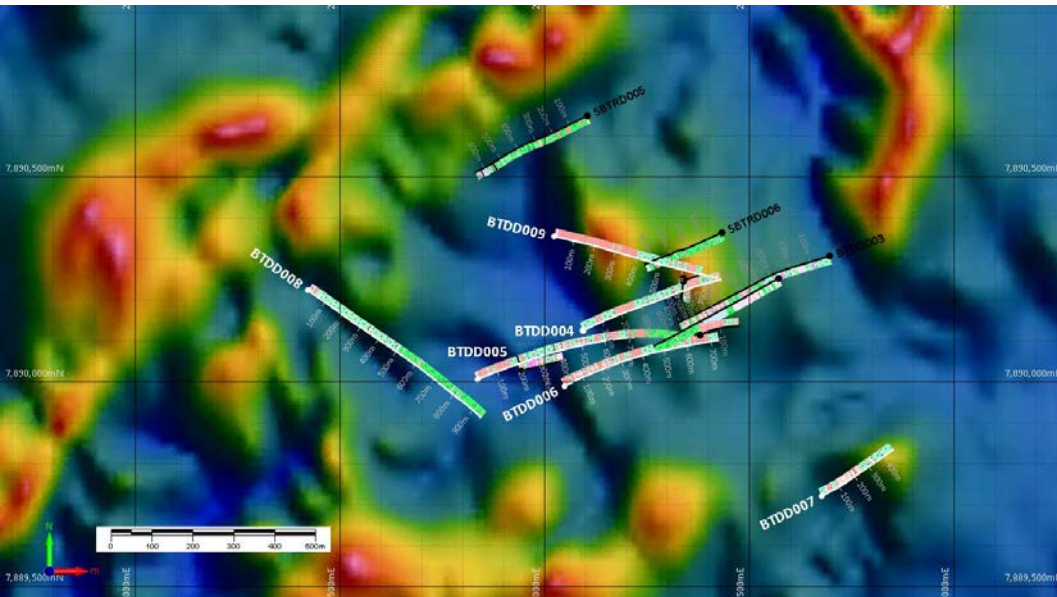


# Bottletree – Large-scale Cu-Au interpreted porphyry system





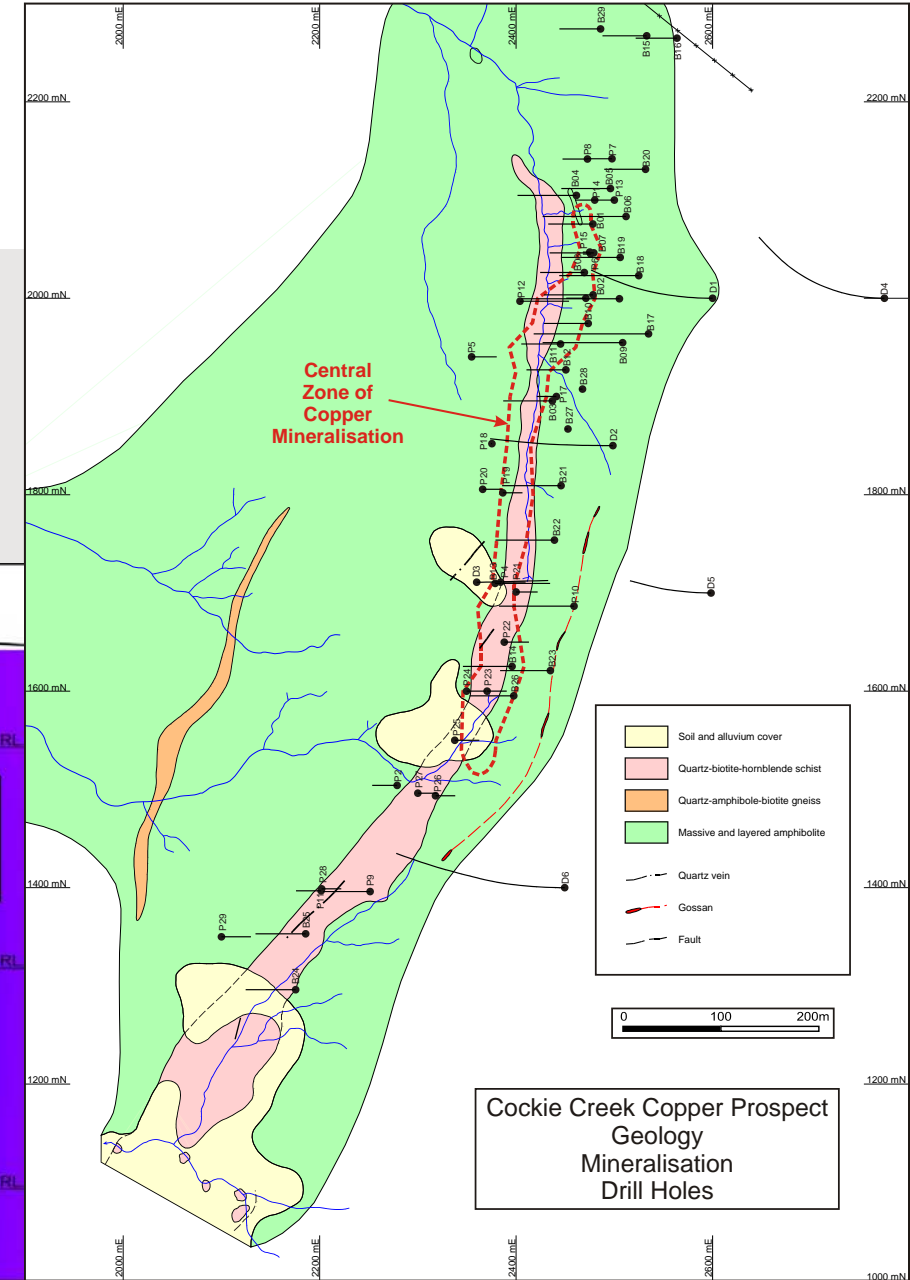
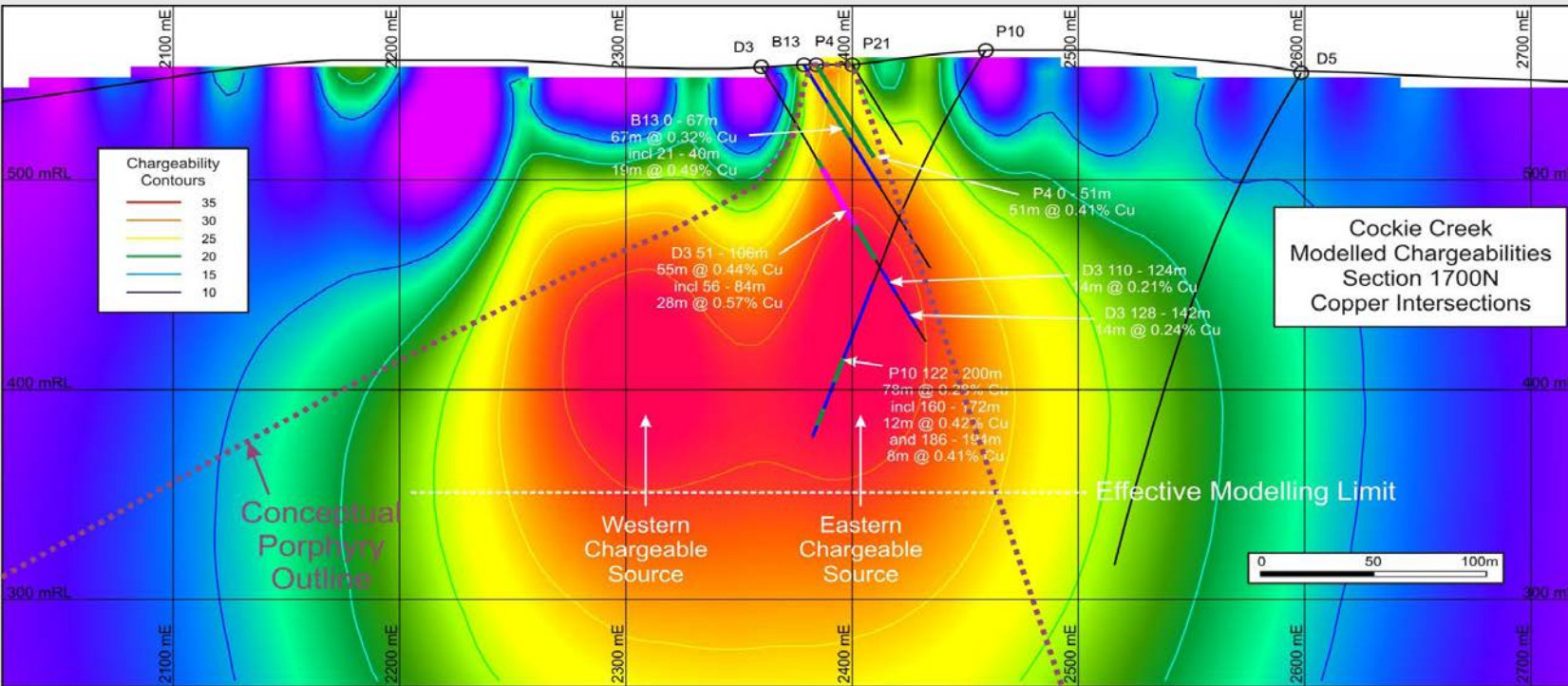
# Bottletree – Large-scale Cu-Au interpreted porphyry system





# Cockie Creek – Cu-Au

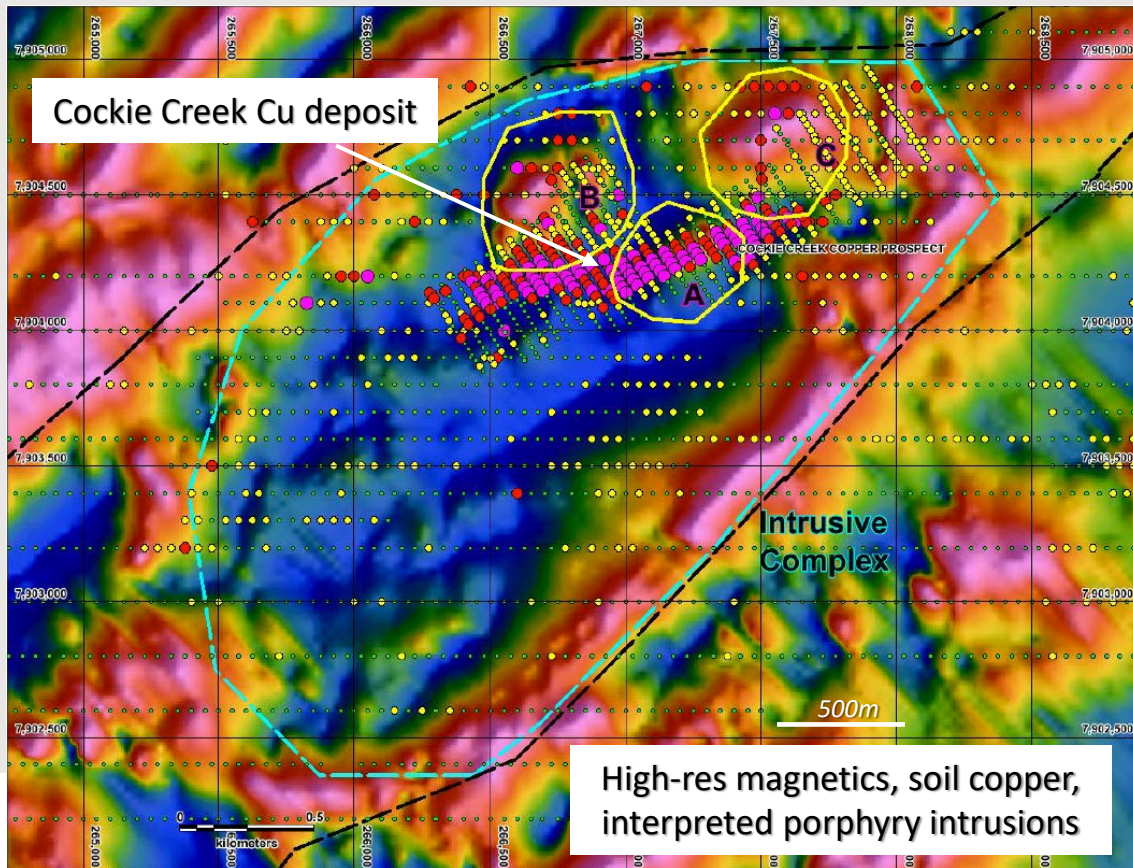
- Potential for a significant porphyry Cu-Au deposit
- Current Mineral Resource estimate: **13Mt @ 0.42% Cu<sup>8</sup>** (JORC 2004), based on strike length of 1.2kms and down to approx. 300m depth
- Significant Au mineralisation with the copper
- Two large, intense IP chargeability targets at depth beneath the defined mineralisation





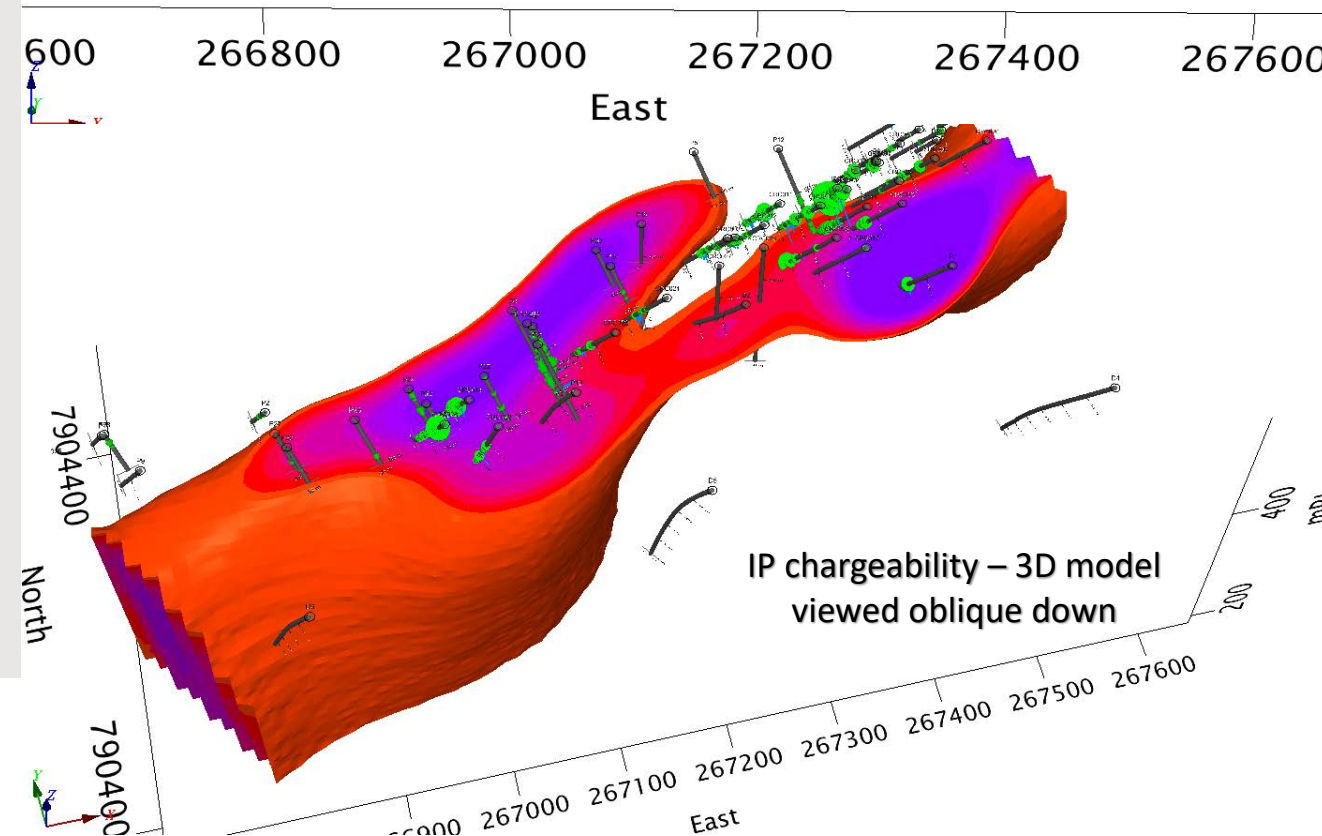
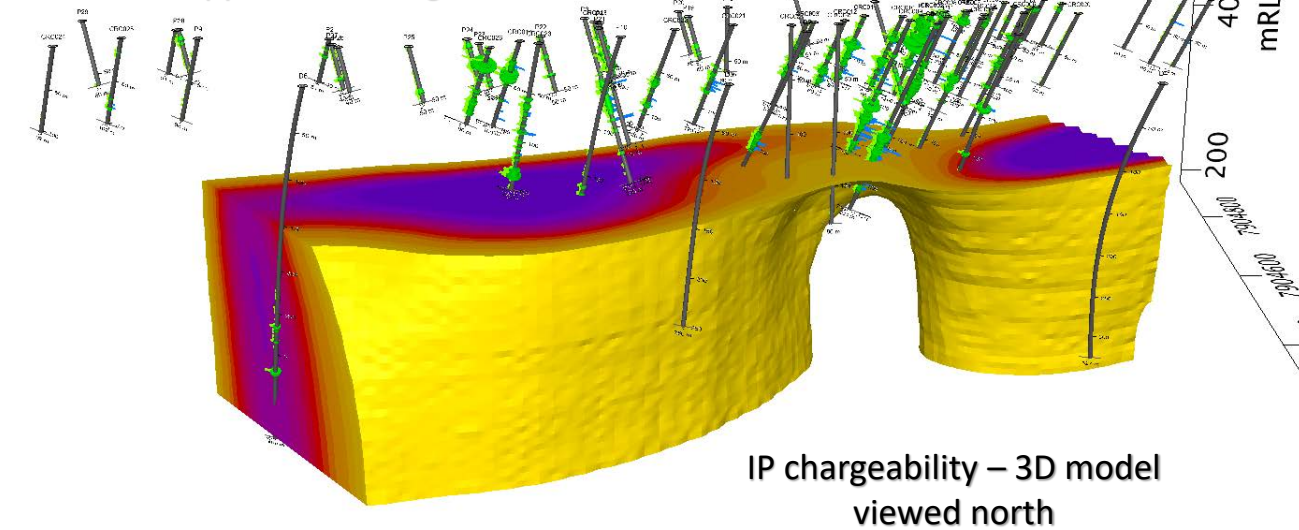
# Cockie Creek – Cu-Au

- Potential for a significant porphyry Cu-Au deposit
- Current Mineral Resource estimate: **13Mt @ 0.42% Cu<sup>9</sup>** (JORC 2004), based on strike length of 1.2kms and down to approx. 300m depth
- Two large, intense IP chargeability targets at depth beneath the defined mineralisation

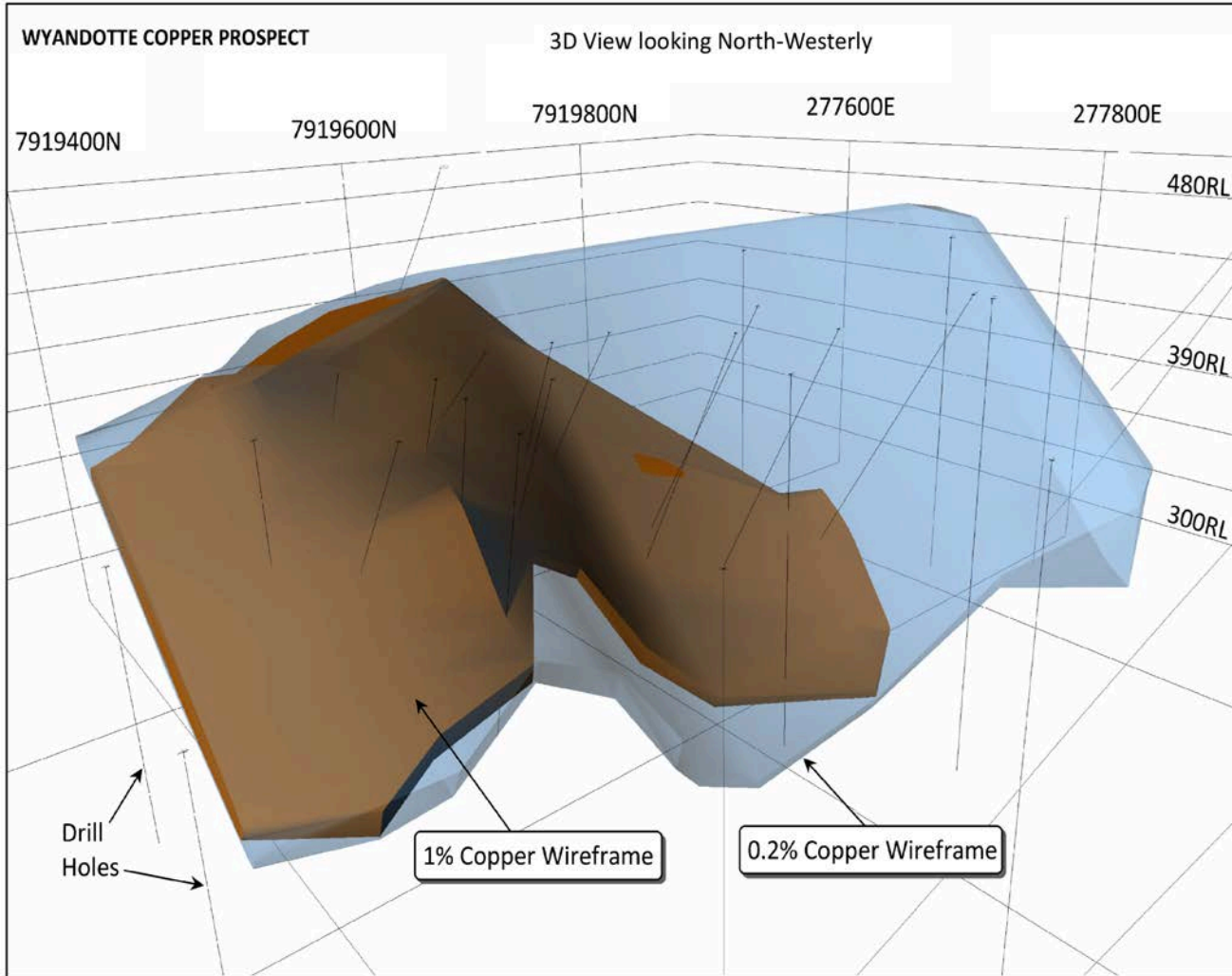


9: Refer ASX announcement dated 27 March 2013

## Drill hole copper values in green



# Wyandotte – High grade copper deposit



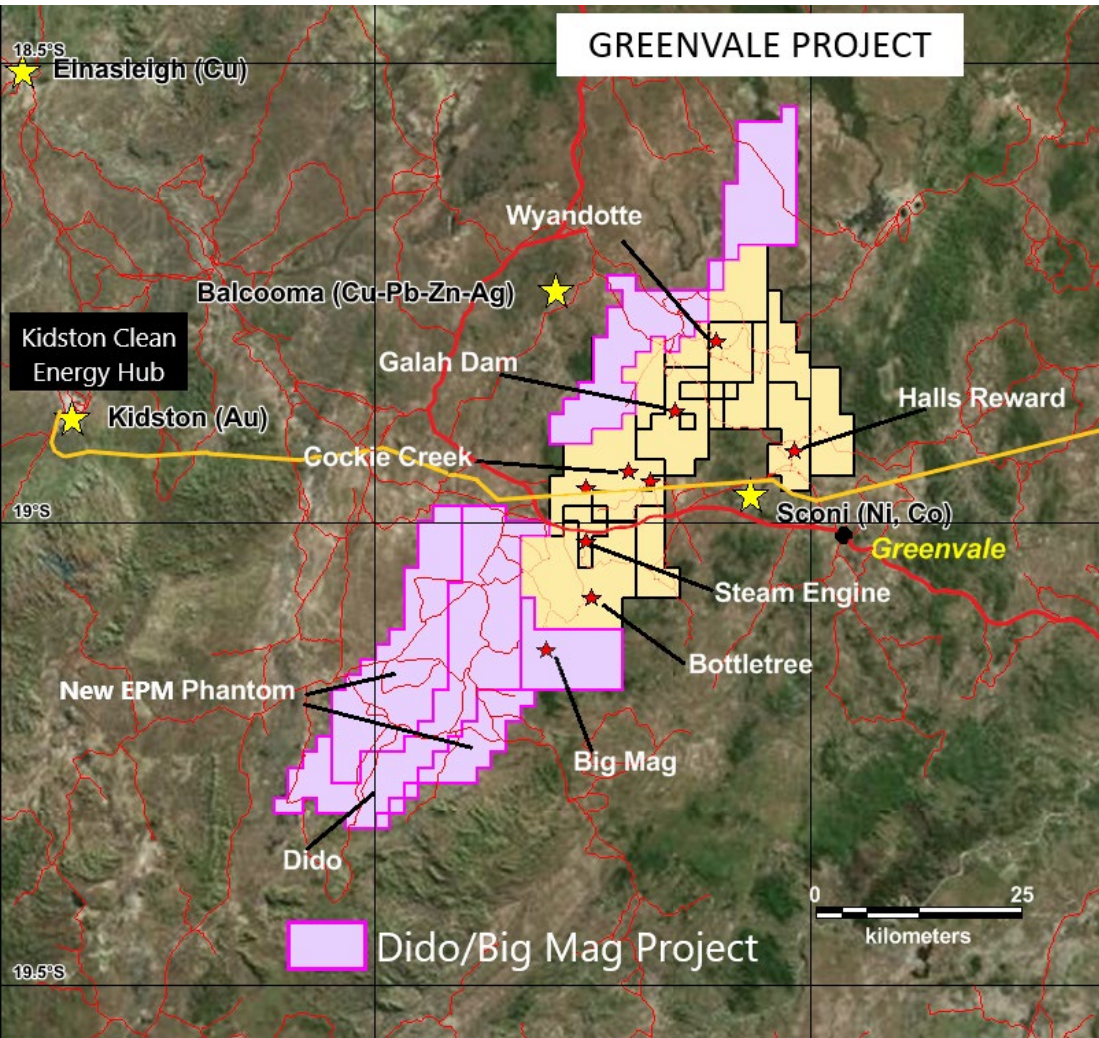
## Exploration Target<sup>10</sup>

Tonnes	SG	Cu %	Cu tonnes	Range
400,000	2.7	2.2%	8,800	Lower
1,000,000	3.0	1.9%	19,000	Upper

- Maiden Mineral Resource estimate to be established
- No exploration conducted since 1975
- Potential for down-dip extension of mineralisation
- Ground geophysical surveys to identify larger source of mineralisation



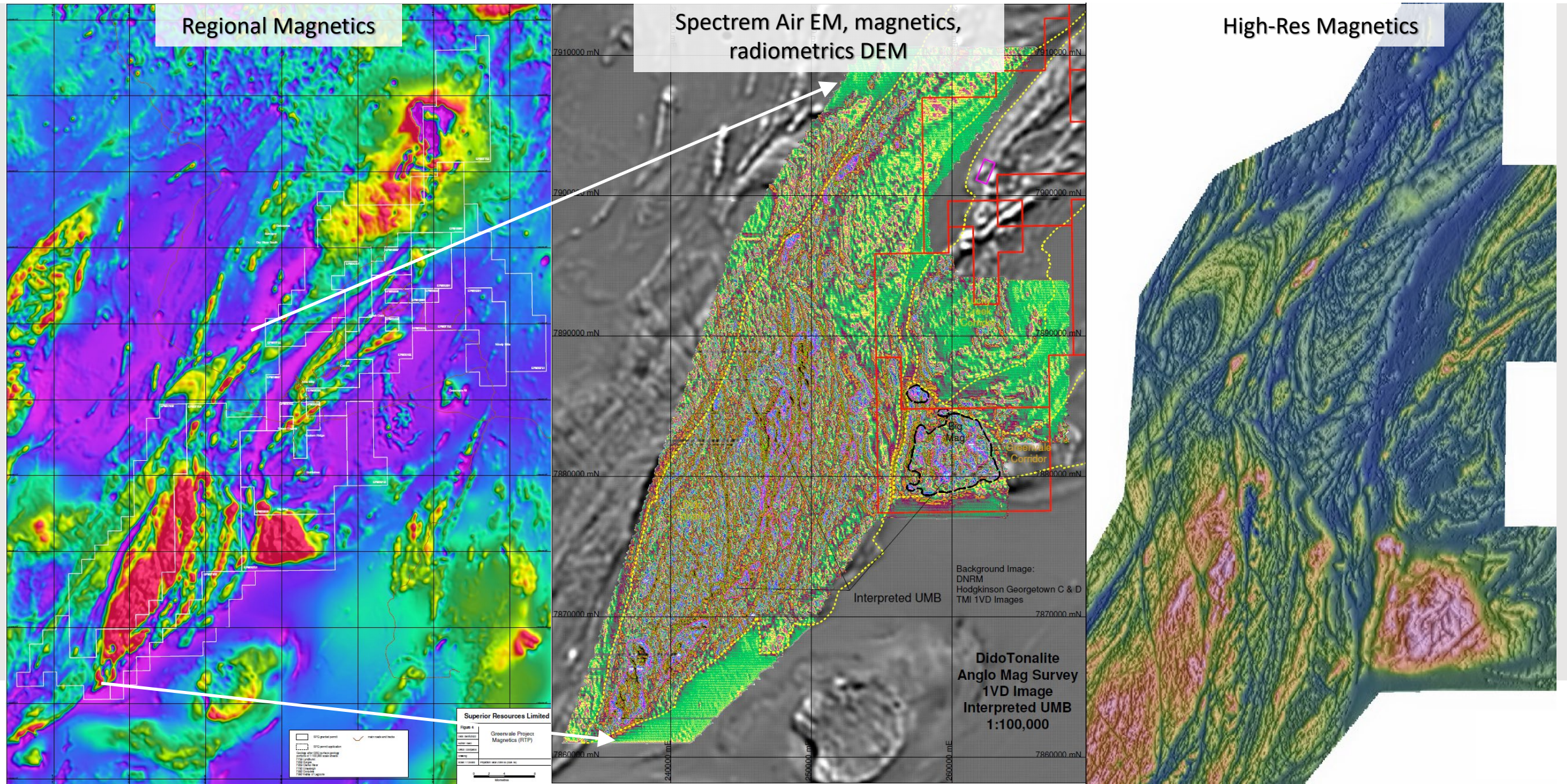
# Dido, Phantom & Big Mag – Ni-Cu-Co-PGE



## Proven Voisey's Bay style magmatic sulphide Ni-Cu-PGE deposit systems

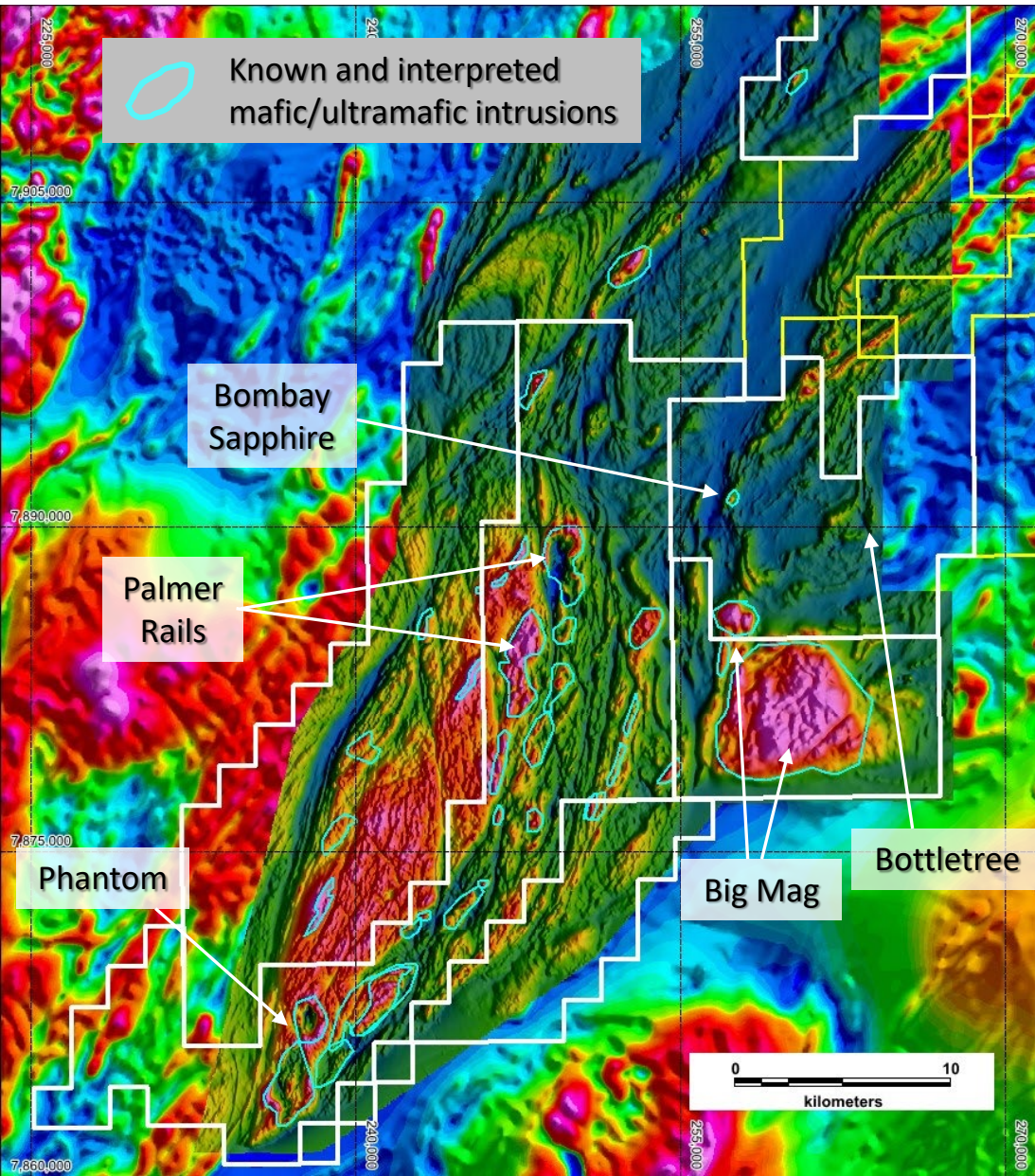
- Previous exploration by Anglo American (2007-2012) confirmed presence of Voisey's Bay-style geological system
- Troctolites, pyroxenites and gabbro-norites indicative of large-scale Ni-Cu-PGE magmatic sulphide ore bodies
- Evidence of wall rock contamination and multiple phases of magma intrusion are key features of Ni-Cu-PGE ore systems
- Initial drill results considered by Anglo to be very significant
- Numerous fertile troctolite intrusions not followed up or inadequately followed up
- Localised areas of differentiated mafic and ultramafic intrusions (Ovoids and feeder dykes) with high potential for **magmatic Ni-Cu-Co-PGE** mineralisation identified in high resolution airborne magnetics
- largely **unexplored**
- Rio Tinto recent pegging







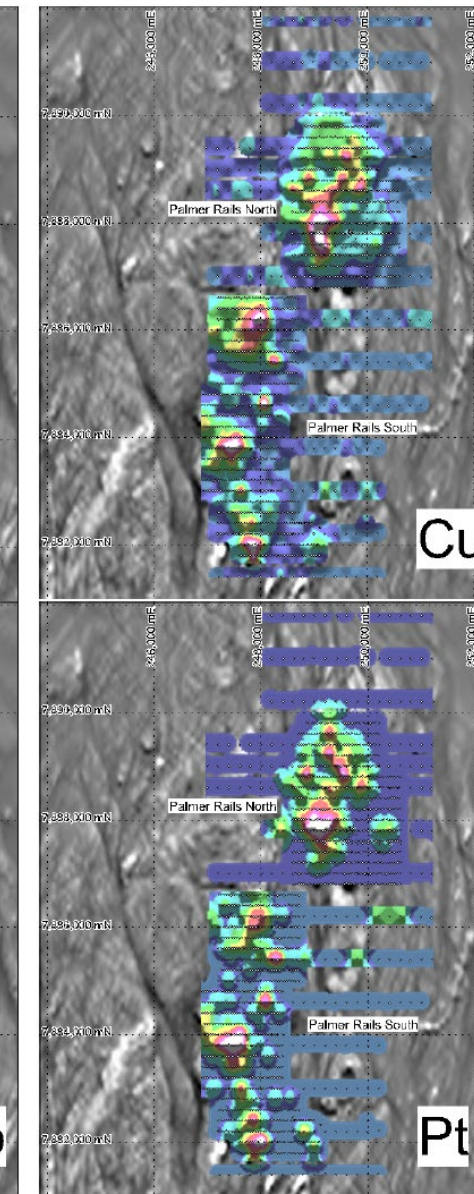
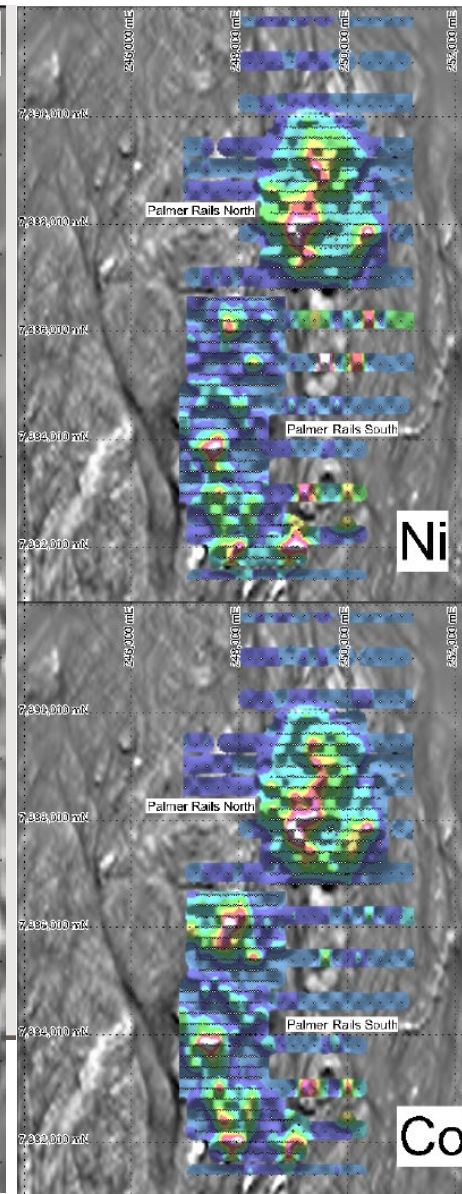
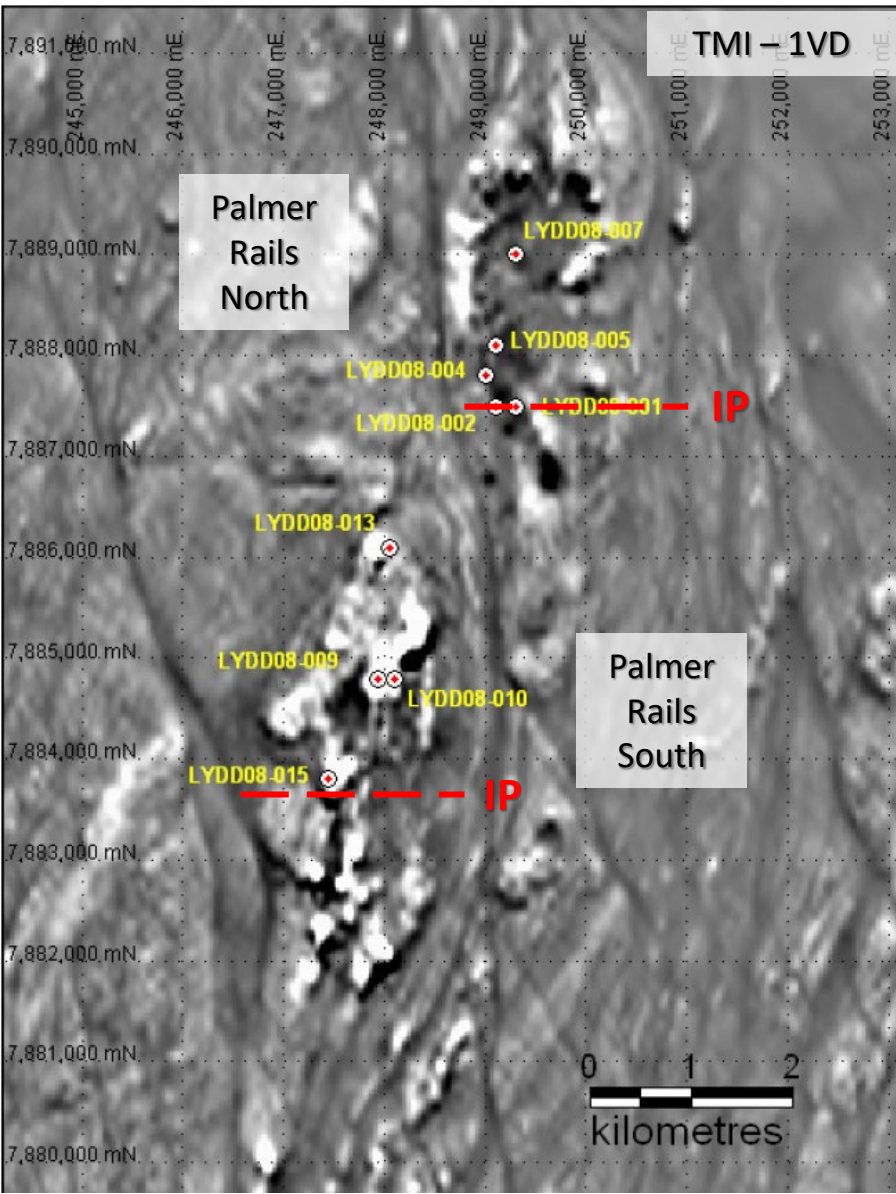
# Dido, Phantom & Big Mag – Ni-Cu-Co-PGE systems at Dido



- Numerous troctolite, pyroxenite and gabbro-norite intrusions across entire project area indicative of large-scale Ni-Cu-PGE magmatic sulphide ore bodies
- Microprobe analyses of olivine from intrusions (Fo72-Fo85) consistent with Voisey's Bay – significant Ni vs MgO depletion – indicates Ni sulphide deposit likely to exist in the project area
- Hornblende geobarometry indicates intrusions were emplaced @ 5.5kbars (15-20km depth) – ideal for mineralised mafic intrusions
- Evidence of wall rock contamination and multiple phases of magma intrusion are key features of Ni-Cu-PGE ore systems
- SHRIMP and U-Pb geochronology indicate 460-470Ma age (mafic/ultramafic intrusions) and 430Ma age (Dido Tonalite)
- Initial 9-hole diamond drill program intersected multiple >15m thick disseminated Ni-Cu-PGE sulphide mineralisation (up to 0.58% Ni, 0.28% Cu) in Voisey's Bay type intrusions
- Numerous fertile troctolite intrusions not followed up or inadequately followed up
- largely **unexplored**



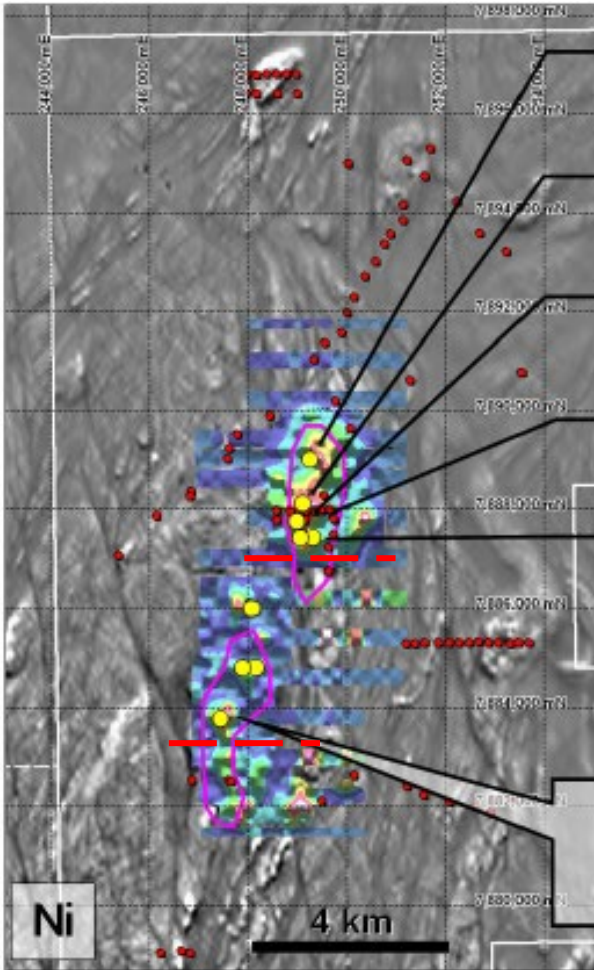
# Dido, Phantom & Big Mag – Palmer Rails



- 9 diamond drill holes (2,700m)
- Targeted IP and soil anomalies
- Intersected mafic/ultramafic intrusions incl gabbro-norite, troctolite, pyroxenite
- “Extremely encouraging”: Intrusions show substantial wall rock contamination and magma mixing
- Palmer Rails North geochemically distinct from PR South
- Magmatic sulphides present in most drill holes (both mafic and ultramafic)
- Intergrown pyrrhotite-chalcopyrite-pentlandite grains intercumulus to silicate grains
- Palmer Rails North is Ni-rich, Palmer Rails South PGE-rich



# Dido, Phantom & Big Mag – Palmer Rails



LYDD08-007  
133m @ 0.12% Ni

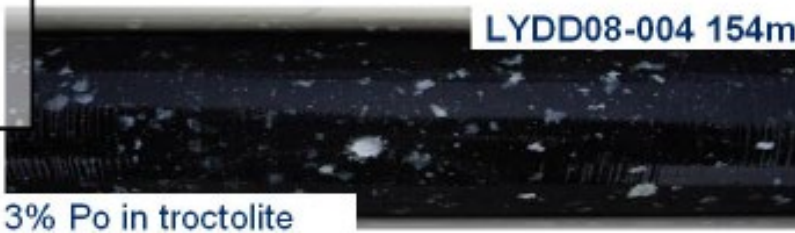
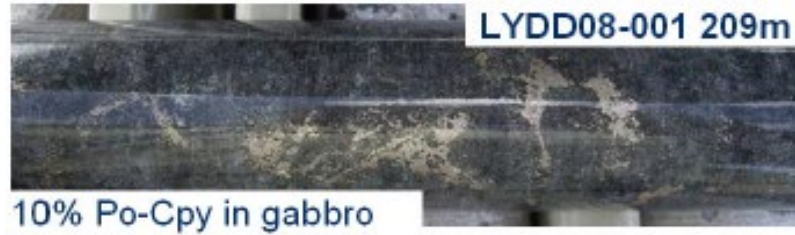
LYDD08-005  
28.2m @ 0.14% Ni

LYDD08-004  
105m @ 0.14% Ni

LYAC015  
24m @ 0.15% Ni

LYDD08-001  
74.5m @ 0.10% Ni

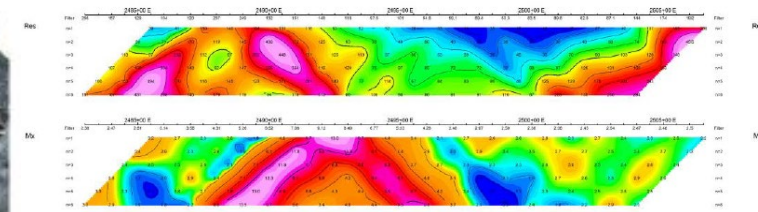
**Suite 2 Magma  
Ni Depleted!**



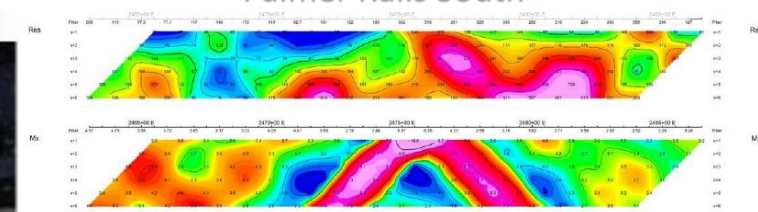
E.g., LYDD08-005:

- 0.37% Ni, 0.13% Cu, 0.01g/t Pt, 0.03g/t Pd (27-29m)
- 0.23% Ni, 0.07% Cu, 0.12g/t Pt, 0.37g/t Pd 0.3g/t Au (29-31m)
- 0.38% Ni, 0.22% Cu, 0.01g/t Pt, 0.12g/t Pd (31-33m)
- 0.15% Ni, 0.14% Cu, 0.01g/t Pt, 0.01g/t Pd (317-319m)

Palmer Rails North

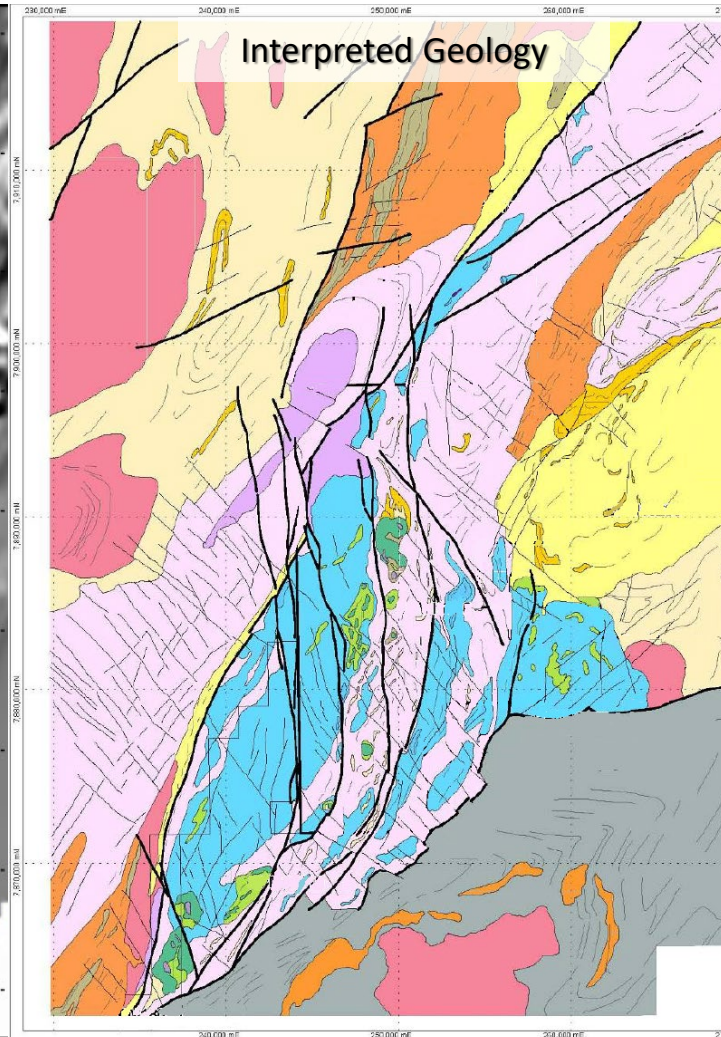
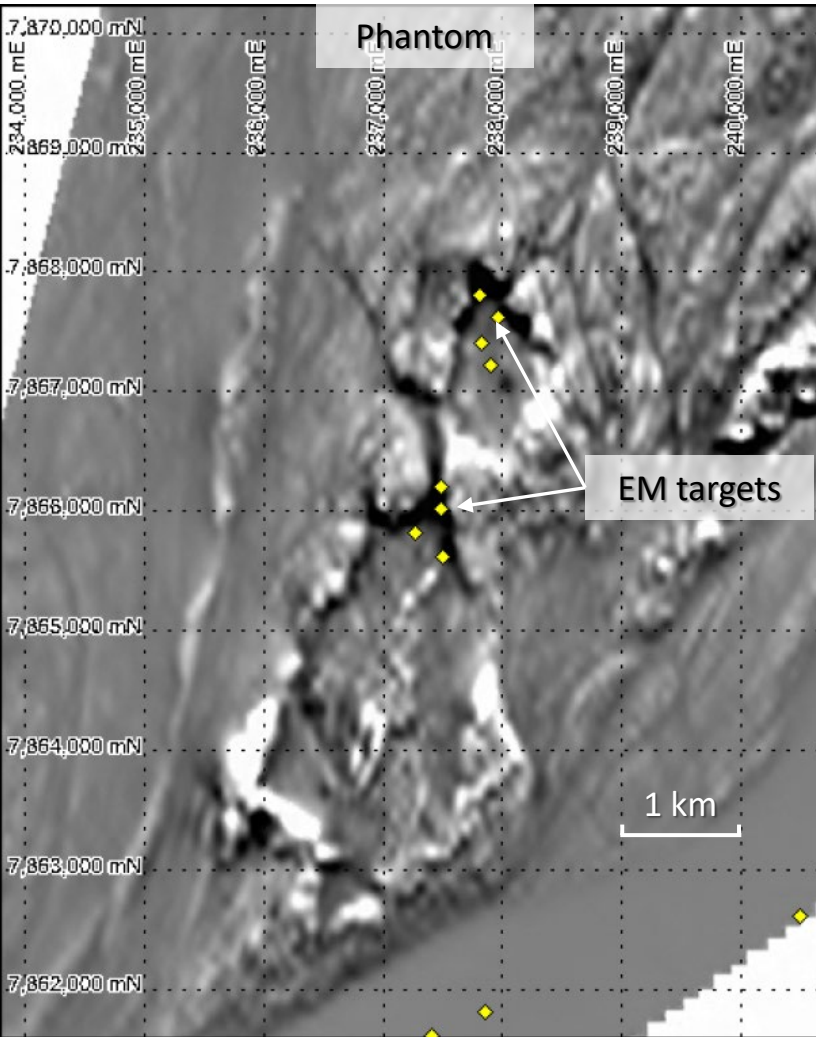


Palmer Rails South





# Dido, Phantom & Big Mag – *Phantom*



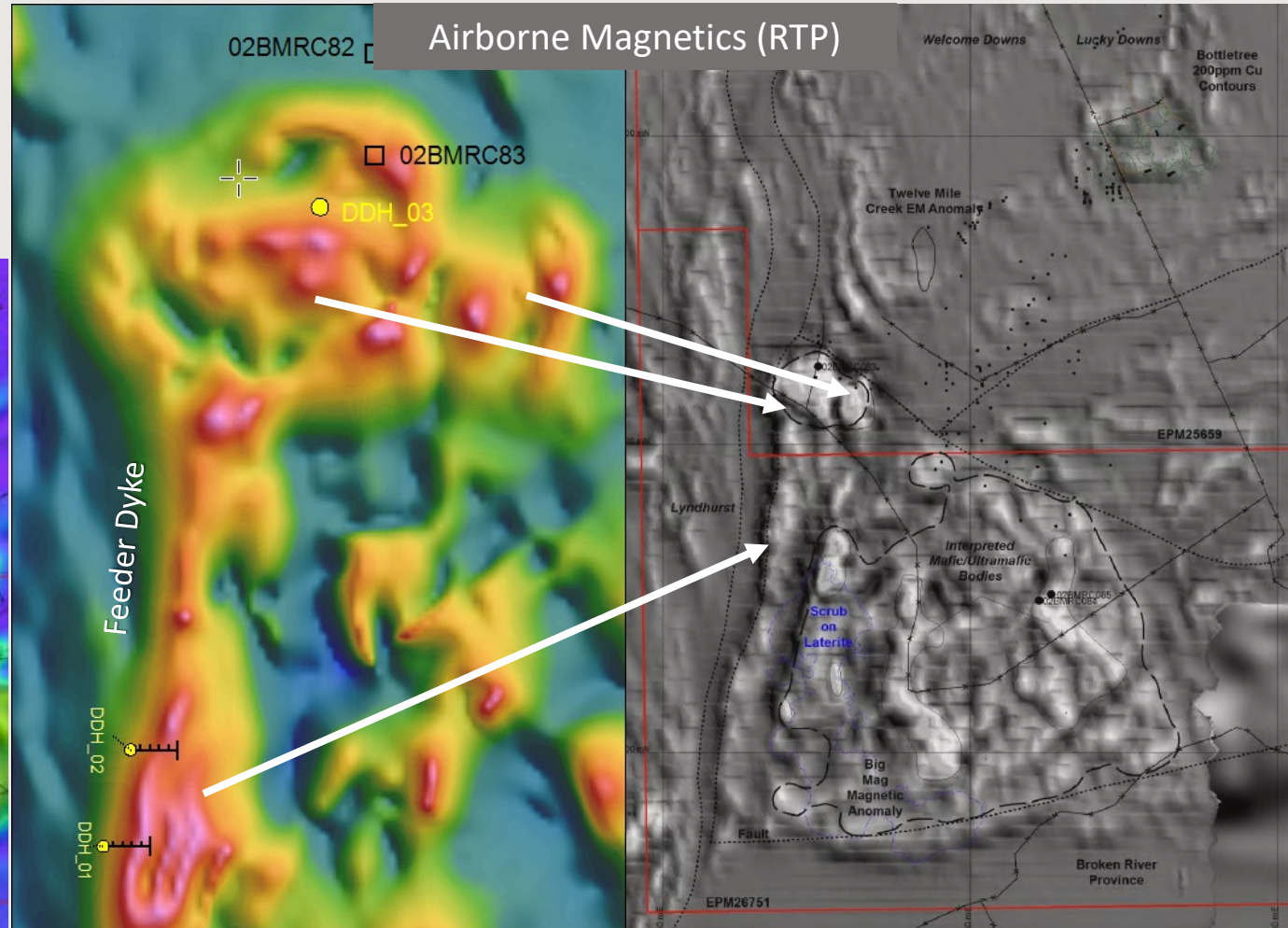
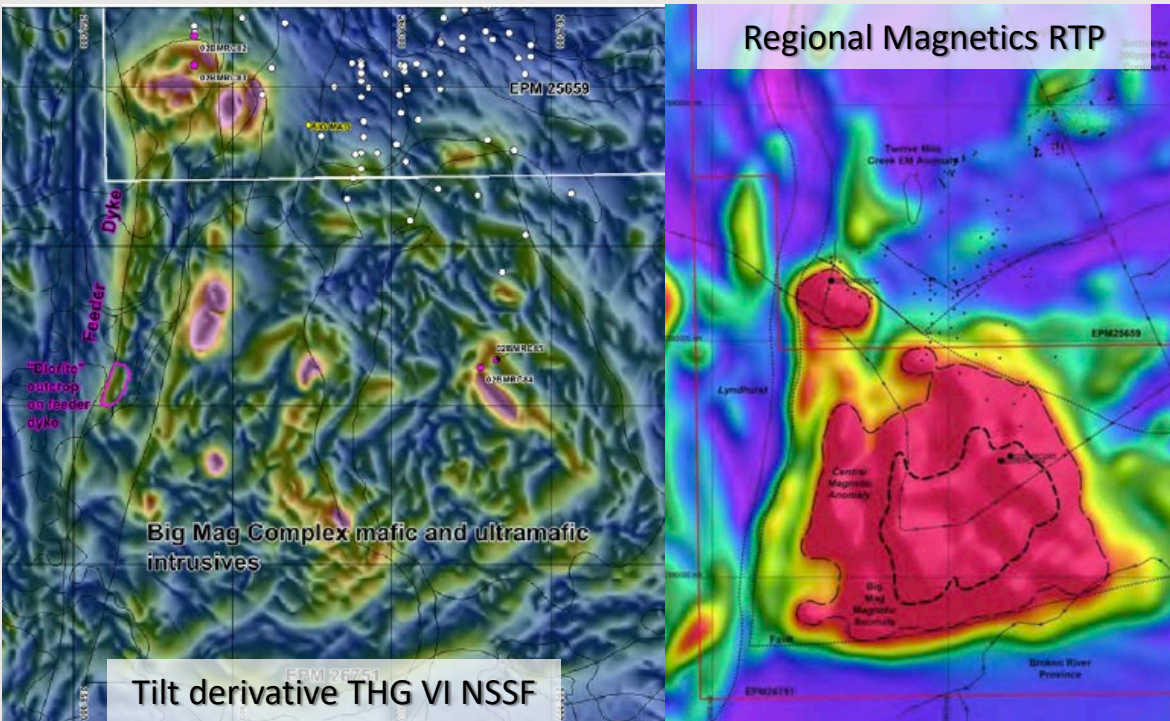
- 2 connected intrusives comprising gabbro, olivine gabbro and troctolite
- Extensive disseminated Ni-Cu sulphide mineralisation in outcrop
- Spectrem EM conductor targets drill-ready
- No exploration work conducted by Anglo





# Dido, Phantom & Big Mag – *Big Mag*

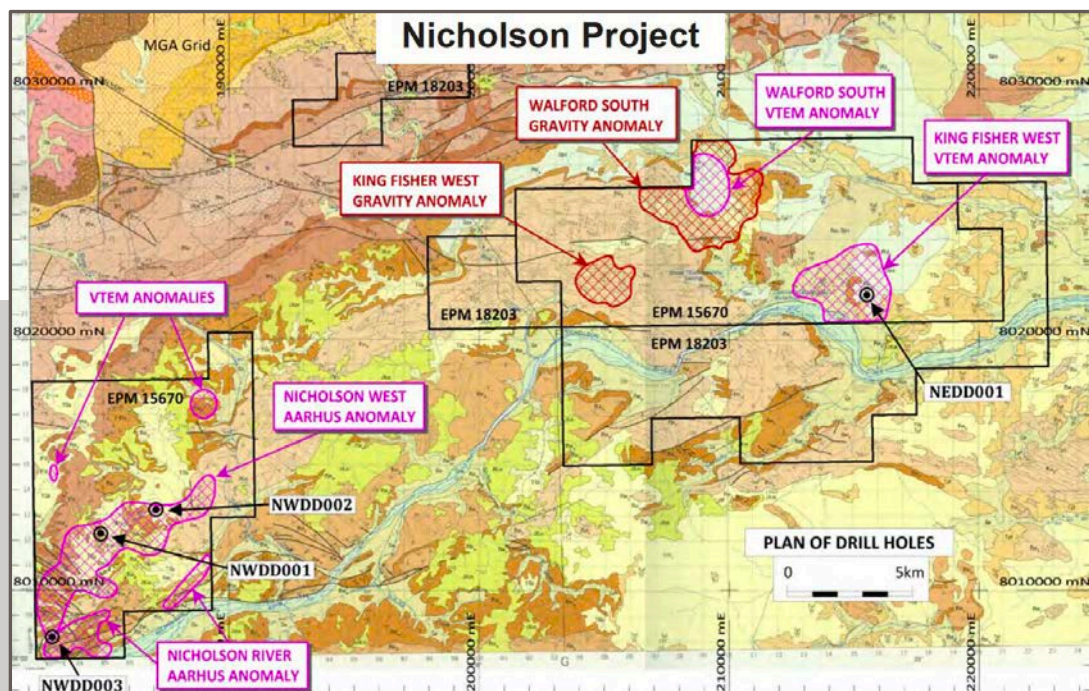
- A series of mafic and differentiated ultramafic intrusions
- Drill-ready potential Ovoids and Feeder Dykes
- Intense magnetic anomaly targets at depth
- Differentiated / layered intrusion appears within potential Feeder Dyke





# Mt Isa-style Zn-Pb-Ag-Cu targets

- Located within Carpentaria Zinc Province, which contains 20% of the world's zinc inventory
- Underexplored – the most likely area to make the next Mount Isa discovery



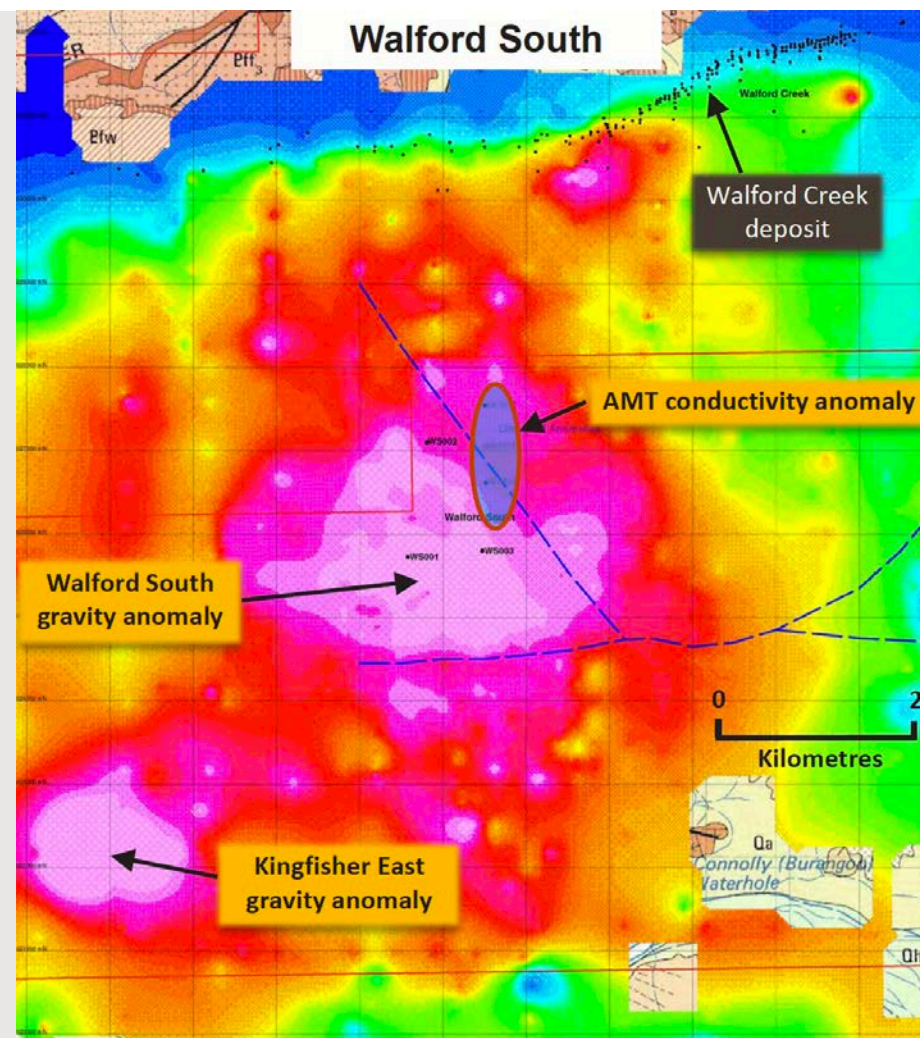
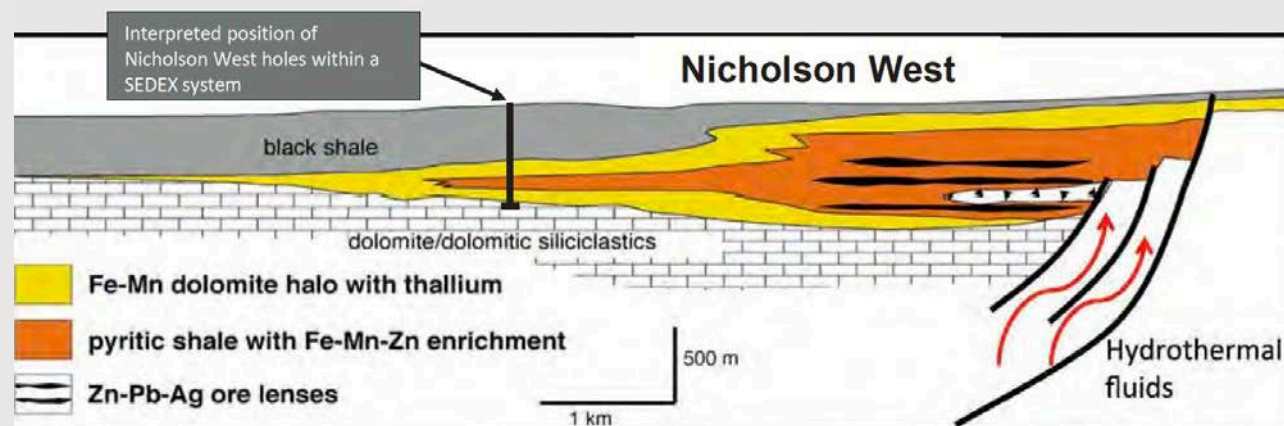


# Nicholson West and Walford South targets

## Walford South: Tier 1-potential VTEM, gravity and AMT target

- Coincident VTEM, gravity and associated AMT anomalies
- Anomalies adjacent to at least two major fault structures
- Previous SPQ drilling (3 holes) intersected “classic” well-developed stratiform pyritic shale, typical of McArthur River style mineralisation

**Nicholson West: 2019 drilling confirmed presence of SEDEX mineralisation systems (McArthur River and Mt Isa) developed within thick (up to 340 m) Mount Les Siltstone**



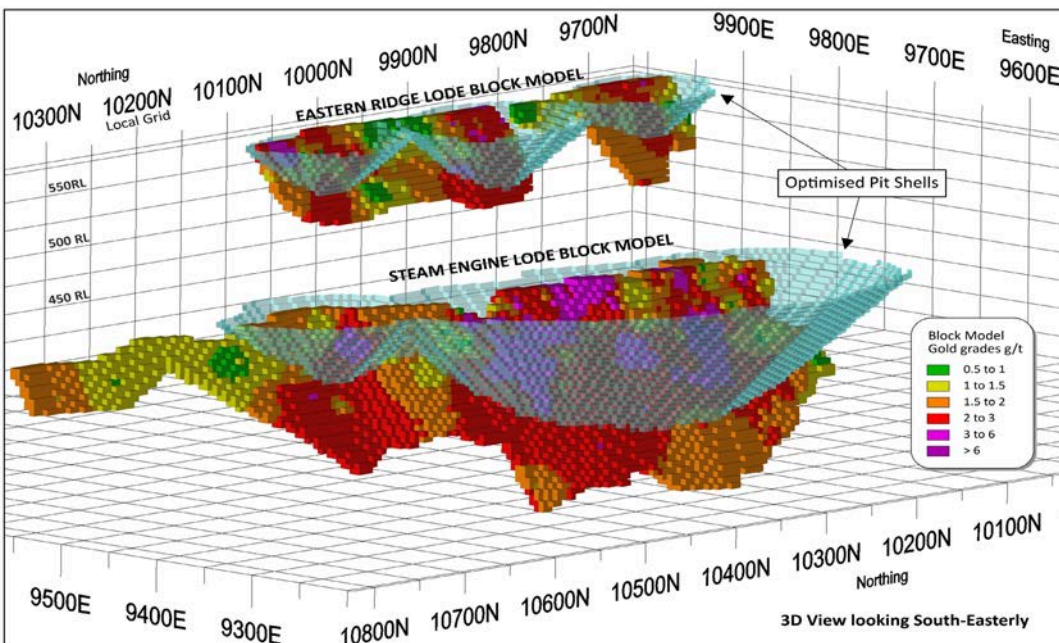


# Appendices





# Steam Engine – Highly positive Scoping Study

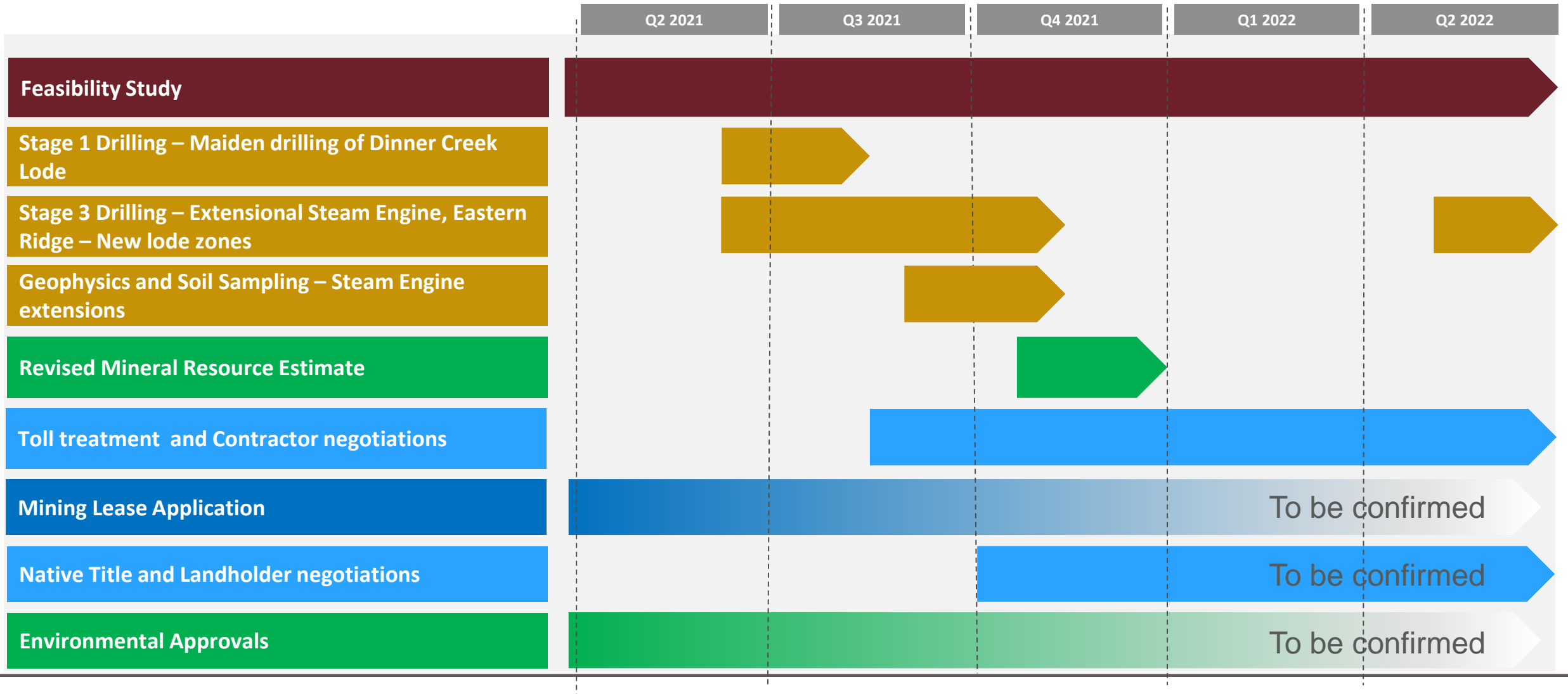


Parameter	Breakeven Value
Gold Price	A\$1,709 (US\$1,299 @ 0.76 AUD/USD)
Gold Grade	1.79 g/t
Gold Recovery Steam Engine Lode Ore	60%

Parameter	Base Case @ A\$2,200 /oz	Upside Case @ A\$2,500 /oz
<b>Financial Summary</b>		
Overall Cash Flow (post-tax)	A\$24.2M	A\$41.0M
NPV <sub>7%</sub> (post-tax)	A\$21.2M	A\$35.9M
Internal Rate of Return (IRR) (post-tax)	242%	410%
All-in Sustaining Costs (AISC) <sup>12</sup>	A\$1,673 /oz	A\$1,725 /oz
Payback Period	11 months	9 months
<b>Funding</b>		
CAPEX (Pre-Production and Closure)	A\$5.1M	A\$5.1M
Funding Required <sup>13</sup>	A\$10.0M	A\$9.0M
Return on Capital (post-tax)	475%	806%
<b>Physical Outputs</b>		
Life of Mine (LOM) (Construction to Closure)	~2.5 years	~2.9 years
Total Ore	1.131 Mt	1.305 Mt
Ore Grade	2.31 g/t	2.24 g/t
Overall Gold Recovery	84%	84%
Gold Produced and Sold	70,000 oz	79,000 oz



# Steam Engine – Current program timeline

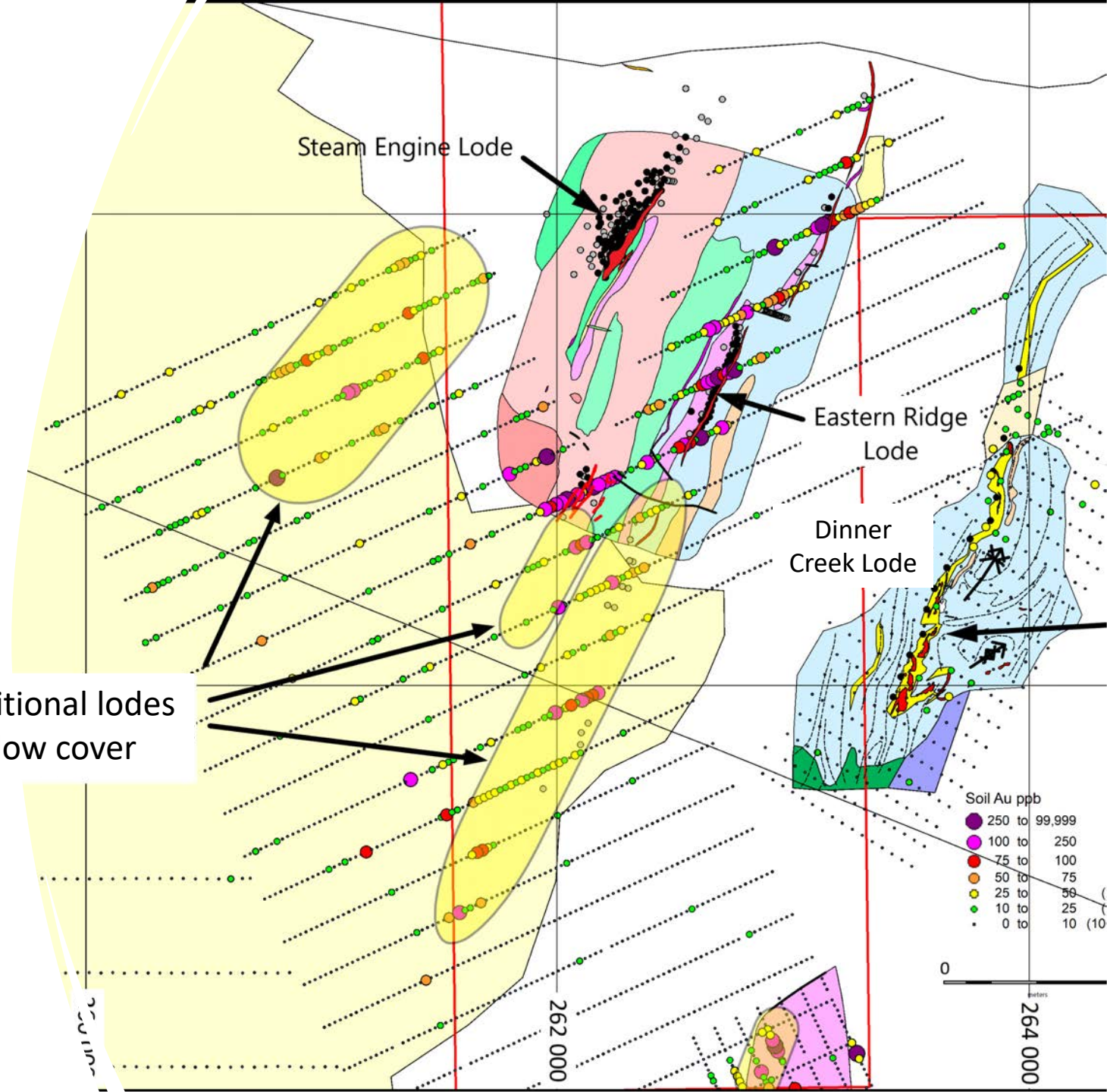




# Steam Engine Project – Potential new lodes

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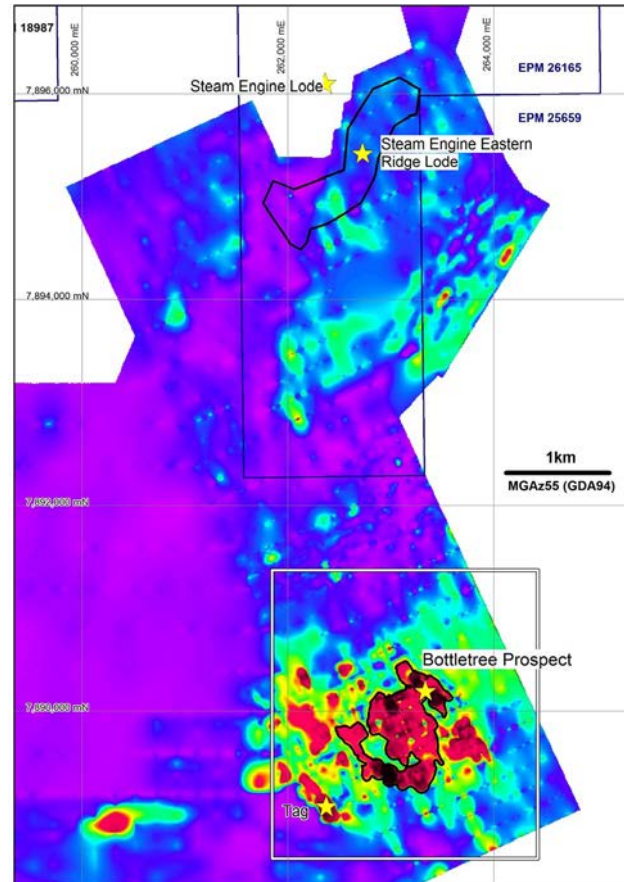
Potential additional lodes under shallow cover



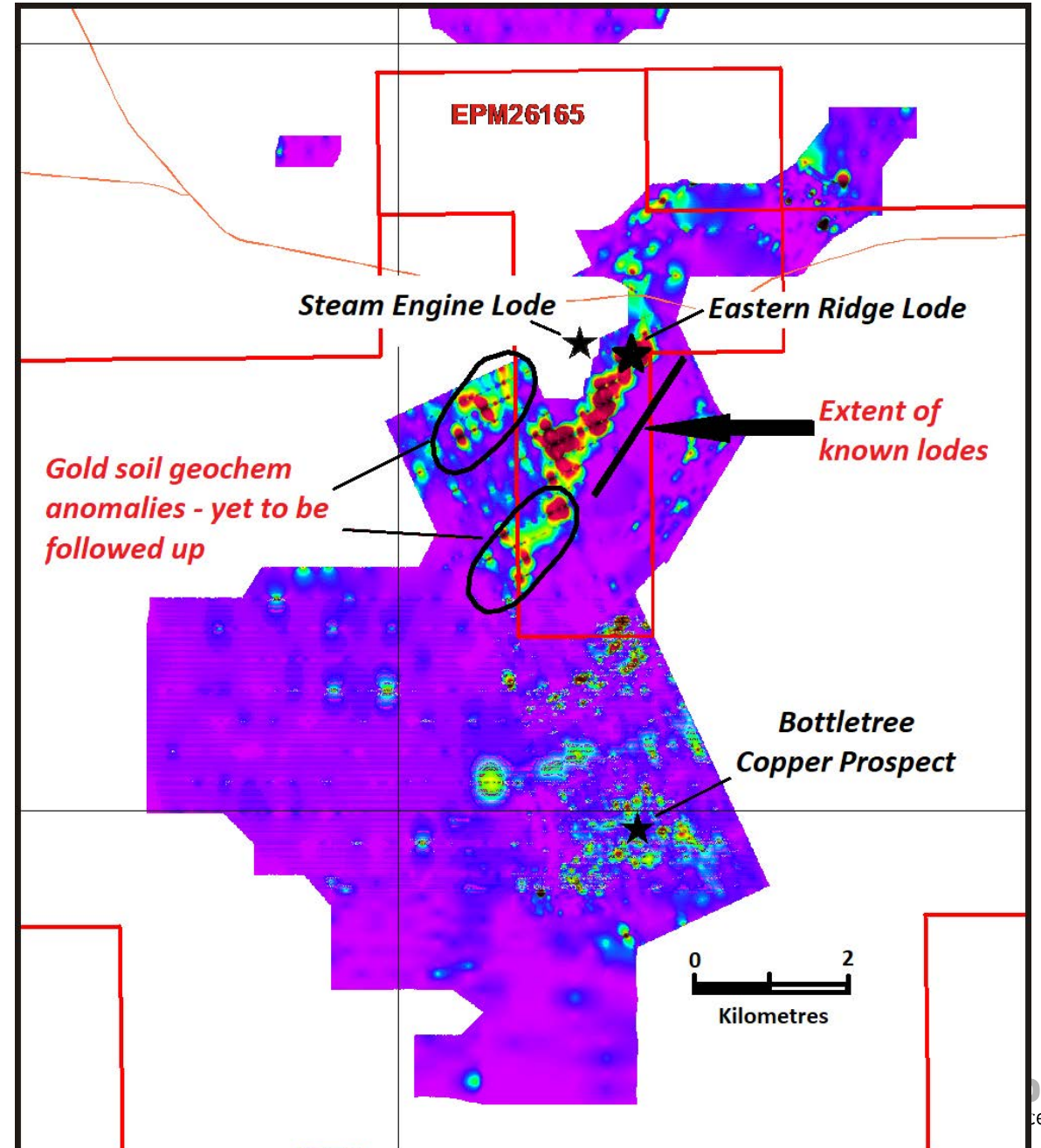


# Steam Engine Project – Potential new lodes

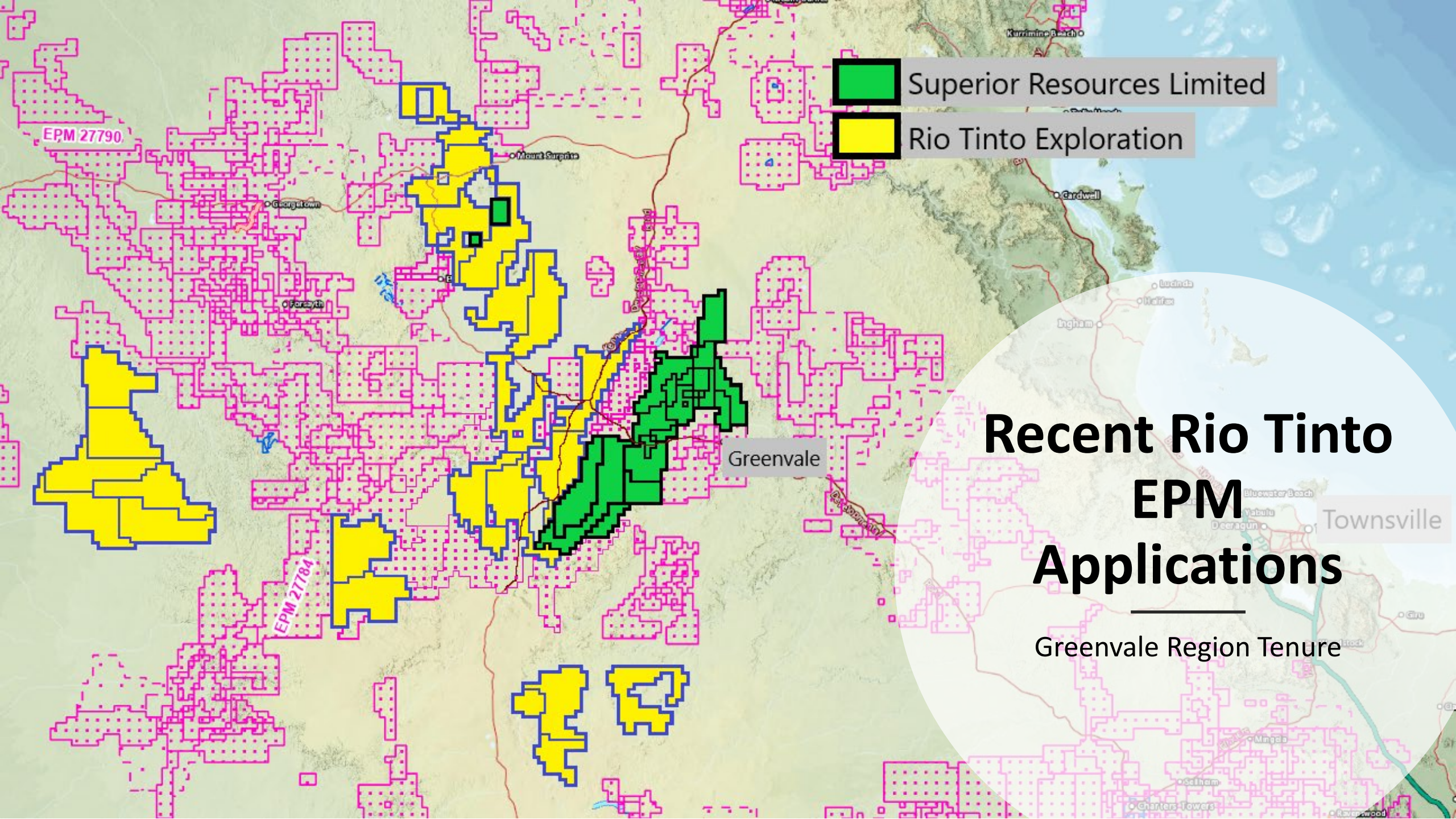
Soil geochemistry (Copper)



Soil geochemistry  
(Gold)







- Superior Resources Limited
- Rio Tinto Exploration

# Recent Rio Tinto EPM Applications

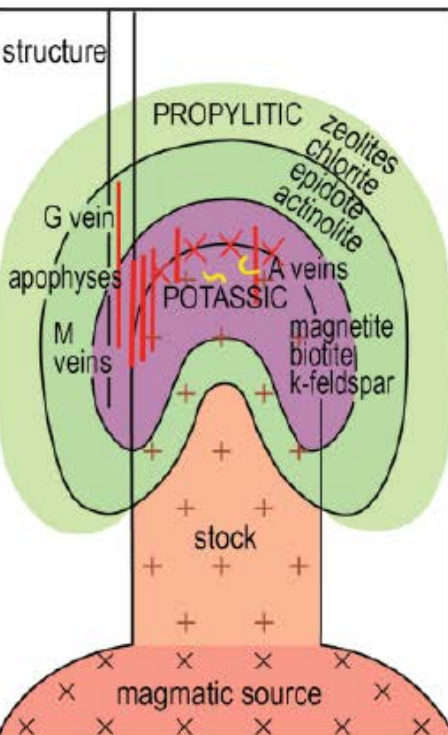
Greenvale Region Tenure



# STAGED PORPHYRY Cu-Au EVOLUTION

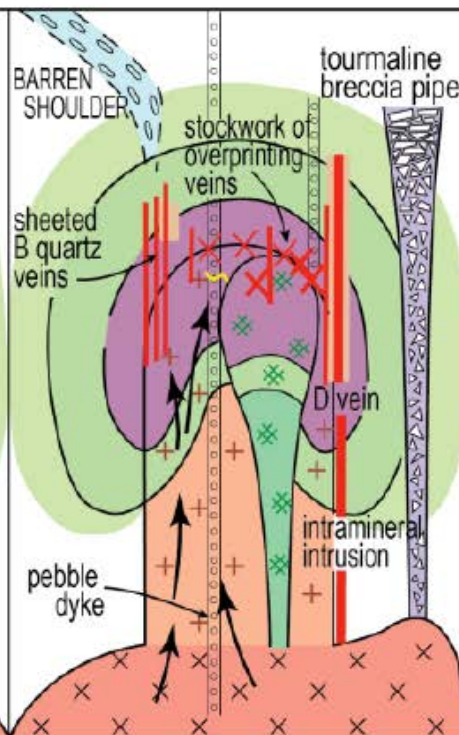
EARLY

EMPLACEMENT, PROGRADE  
ALTERATION  
& EARLY MINERALISATION



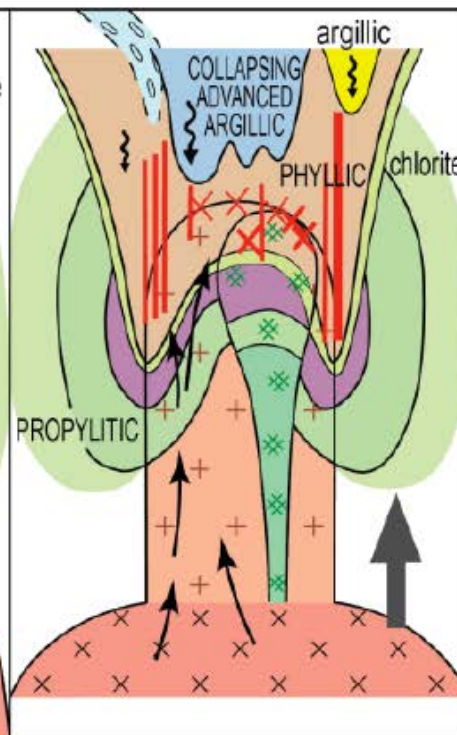
Zoned potassic to inner & outer propylitic alteration by heat transfer.  
Initiation of prograde A, M & G veins.  
Early mineralisation.

PROGRESSIVE COOLING &  
CONTINUED MINERALISATION



Exsolution of volatiles to form barren shoulders.  
Tourmaline breccia pipes.  
Metals from the magma source as B C & D veins  
Pebble dykes.  
Initiation of phyllic alteration.

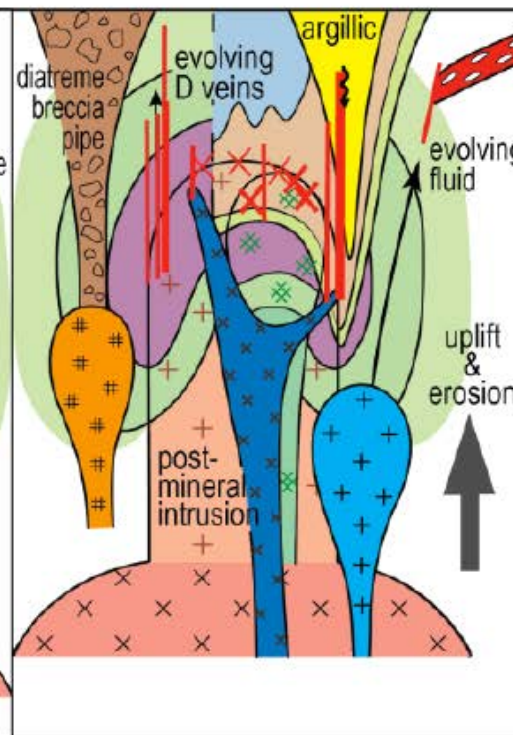
DRAW DOWN,  
RETROGRADE ALTERATION  
& LATE MINERALISATION



Draw down of low pH waters onto cooling apophysis & phyllic-argillic alteration.  
Degassing of magma source at depth & late mineralisation.  
Collapsing advanced argillic contributes to lithocaps.

LATE

SHUT DOWN &  
POST-MINERAL

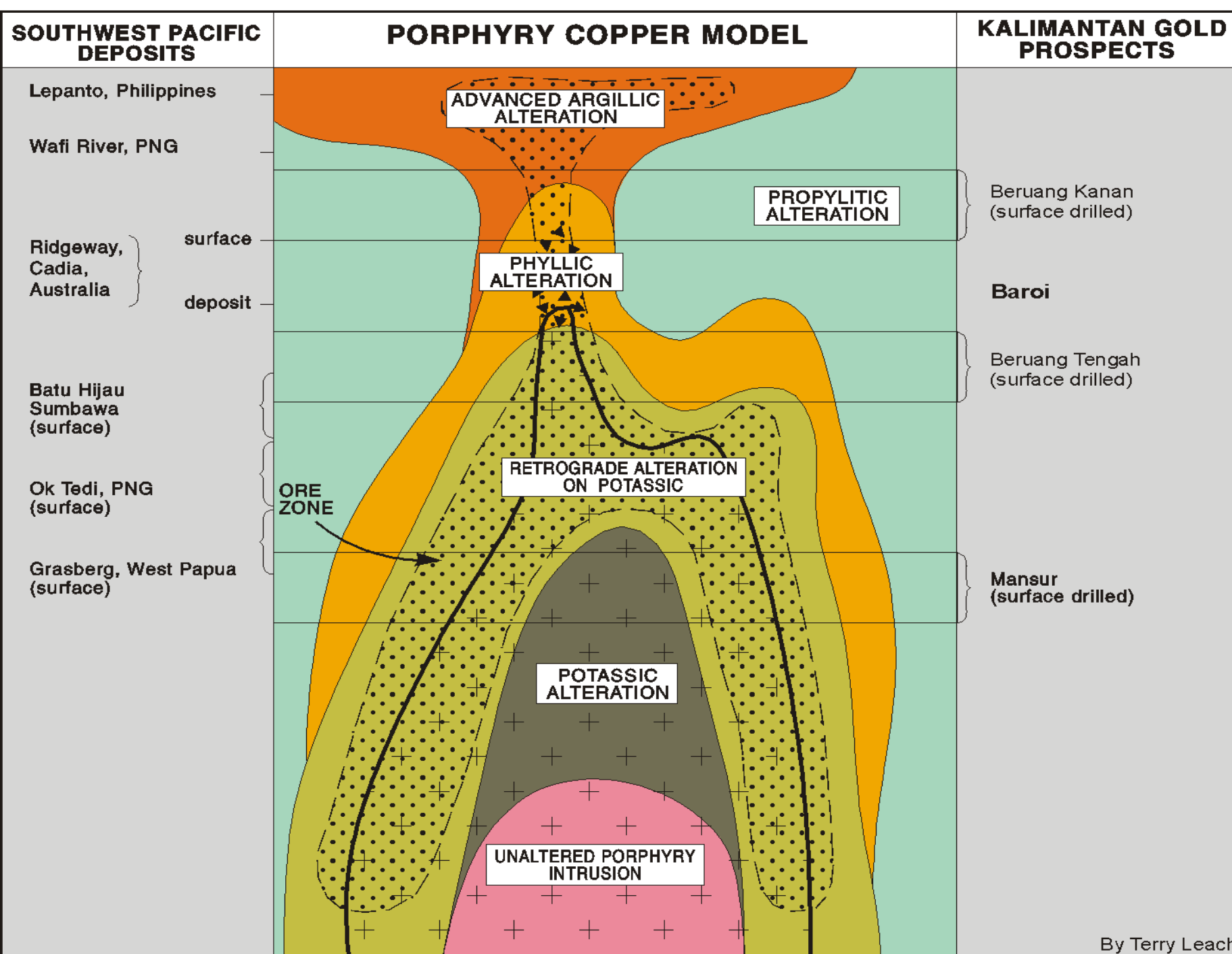


Uplift & erosion.  
Continued collapse of low pH and meteoric waters  
Evolution of alteration & mineralisation.  
Post-mineral intrusions & breccias stope out ore.  
Epithermal overprint.

CORBETT et al. 1984c

Porphyry  
Cu-Au system





# Porphyry Cu-Au system





## Contact Us

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