HILLGROVE RESOURCES

UNCOVERING A NEW COPPER-GOLD PROVINCE AT KANMANTOO

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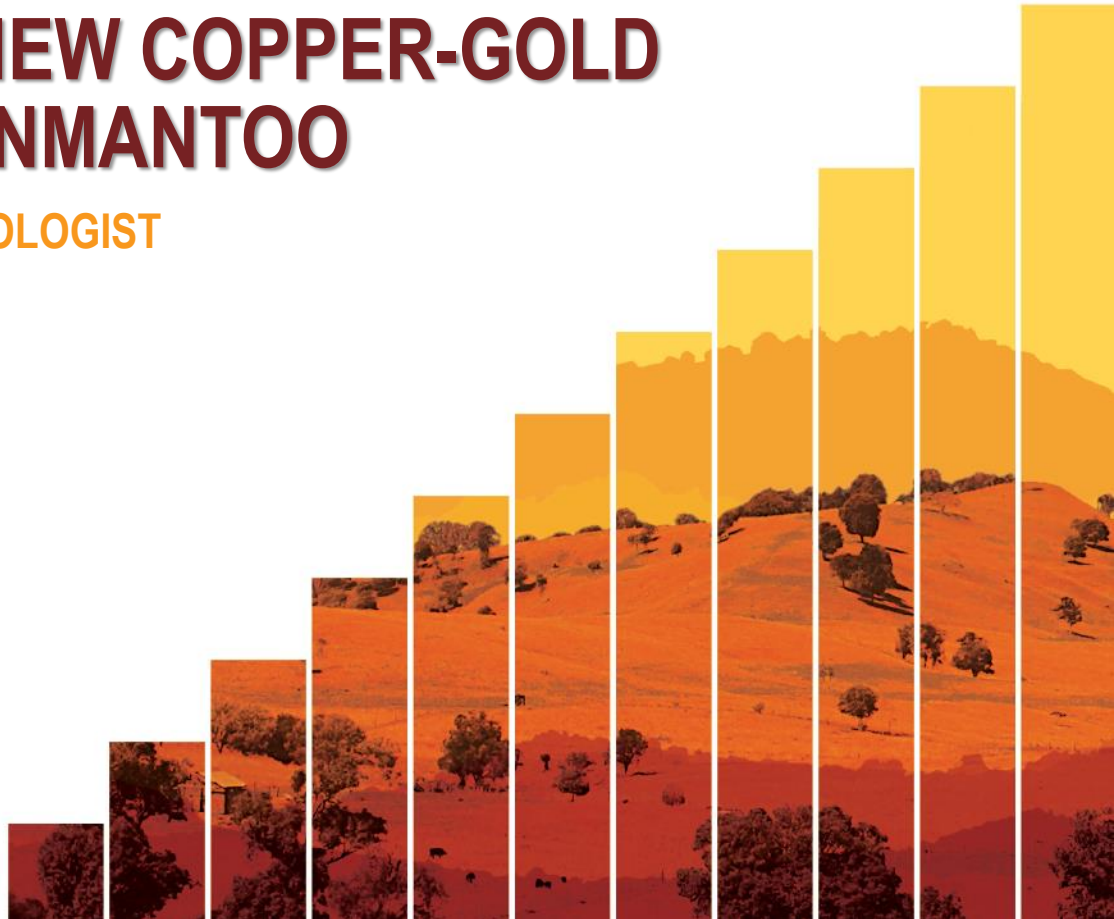
31 JULY 2018



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IMPORTANT NOTICE
COMPETENT PERSON STATEMENTS

Competent Person's Statement

The information in this release that relates to the 2016 Mineral Resource Estimate for Giant is based upon information compiled by Mr Peter Rolley, who is a Member of The Australian Institute of Geoscientists. Mr Rolley is a full-time employee of Hillgrove Resources Limited and has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration 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 (JORC Code)'. Mr Rolley has consented to the inclusion in the release of the matters based on their information in the form and context in which it appears.

The information in this release that relates to the 2013 Mineral Resource not including Giant is based upon information compiled by Ms Michaela Wright, who is a Member of The Australasian Institute of Mining and Metallurgy. Ms Wright is a former full-time employee of Hillgrove Resources Limited and has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration 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 (JORC Code)'. Ms Wright has consented to the inclusion in the release of the matters based on their information in the form and context in which it appears.

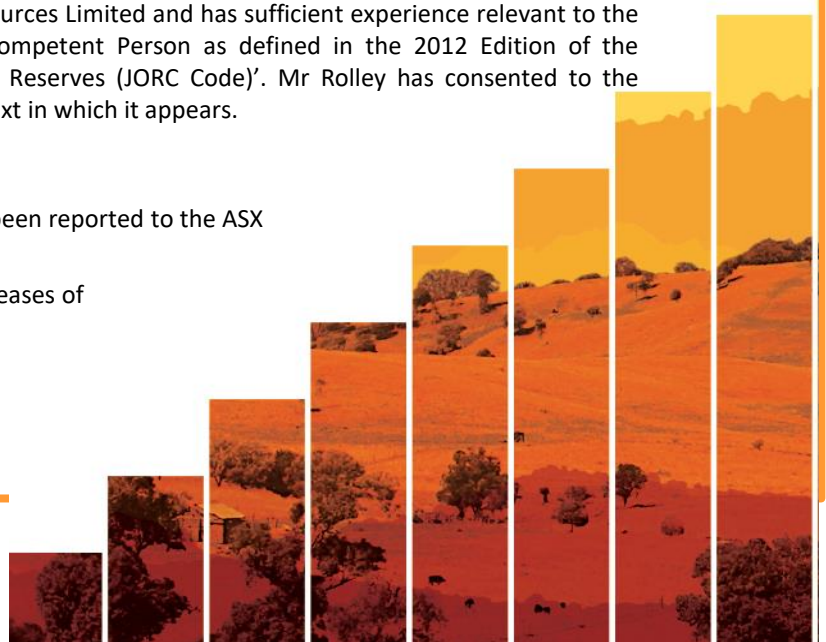
The information in this release that relates to Ore Reserves is based upon information compiled by Mr Lachlan Wallace, who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Wallace is a full-time employee of Hillgrove Resources Limited and has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration 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 (JORC Code)'. Mr Wallace has consented to the inclusion in the release of the matters based on their information in the form and context in which it appears.

The information in this release that relates to Exploration Results is based on information compiled by Mr Peter Rolley, who is a Member of The Australian Institute of Geoscientists. Mr Rolley is a full-time employee of Hillgrove Resources Limited and has sufficient experience relevant to the styles of mineralisation and type of deposit under consideration 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 (JORC Code)'. Mr Rolley has consented to the inclusion in the release of the matters based on their information in the form and context in which it appears.

Exploration Results Here-In

All exploration drill results, soil sampling images, and rock chip results have previously been reported to the ASX by Competent Person at the time.

The results reported herein are reported in the form and context of the original ASX releases of 15 May 2015, 18 Oct 2016, 25 May 2017, 20 Oct 2017.



UNCOVERING A NEW COPPER-GOLD PROVINCE

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4. EXPLORATION IN THE REGION

Utilising existing infrastructure and cash flow at Kanmantoo to create Company transforming mining projects

KANMANTOO – THE ASSET
LOCATION

Hillgrove Resources Ltd (ASX:HGO) operates the Kanmantoo Copper-Gold Open Pit in the south-east of South Australia.

Located approx. 55kms from Adelaide

Grid power, water on site

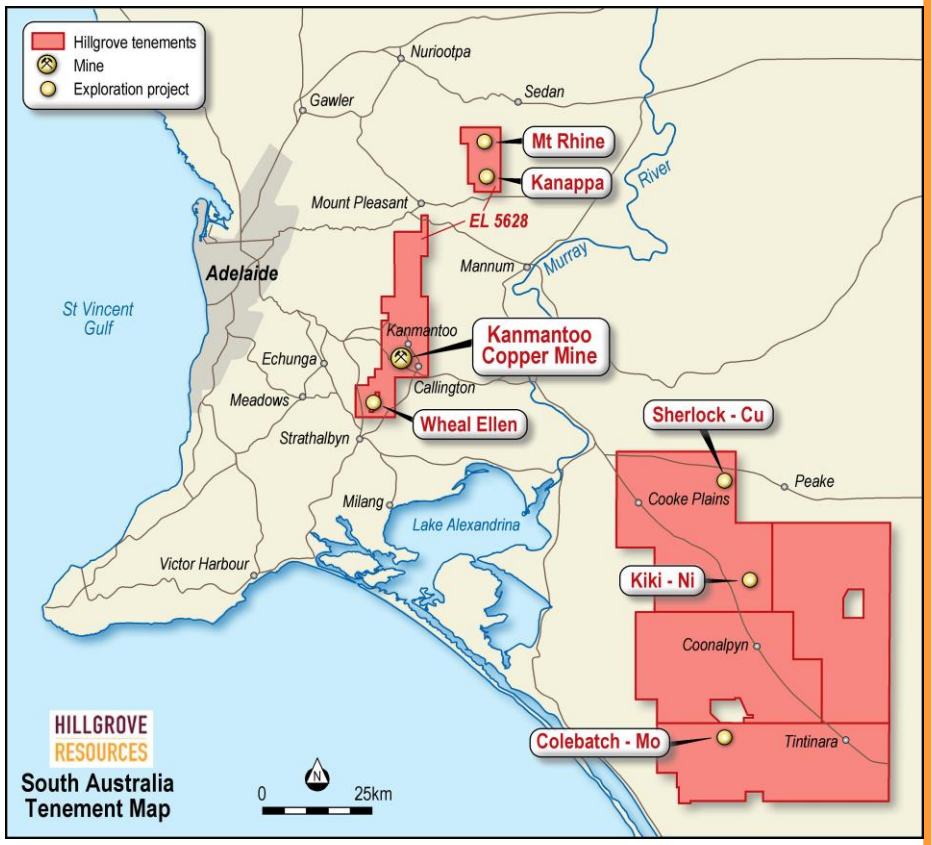
Local labour force

Awards for Community Consultation

Leader in Environmental Rehabilitation practises

Low cost mill and Tailings Facility operational

Open pit in cash generating phase



KEY TAKEAWAYS

- Infrastructure fully operational and permitted
- Ideal location for services and on-site labour

KANMANTOO – THE ASSET
MULTIPLE STRUCTURALLY CONTROLLED LODES

The Kanmantoo Mine extracts
- copper-gold-silver
- from a series of structurally controlled
- shears, lodes and breccias

Original host rocks are greywackes, siltstones, sandstones

Cu lode alteration is garnet, chlorite, staurolite

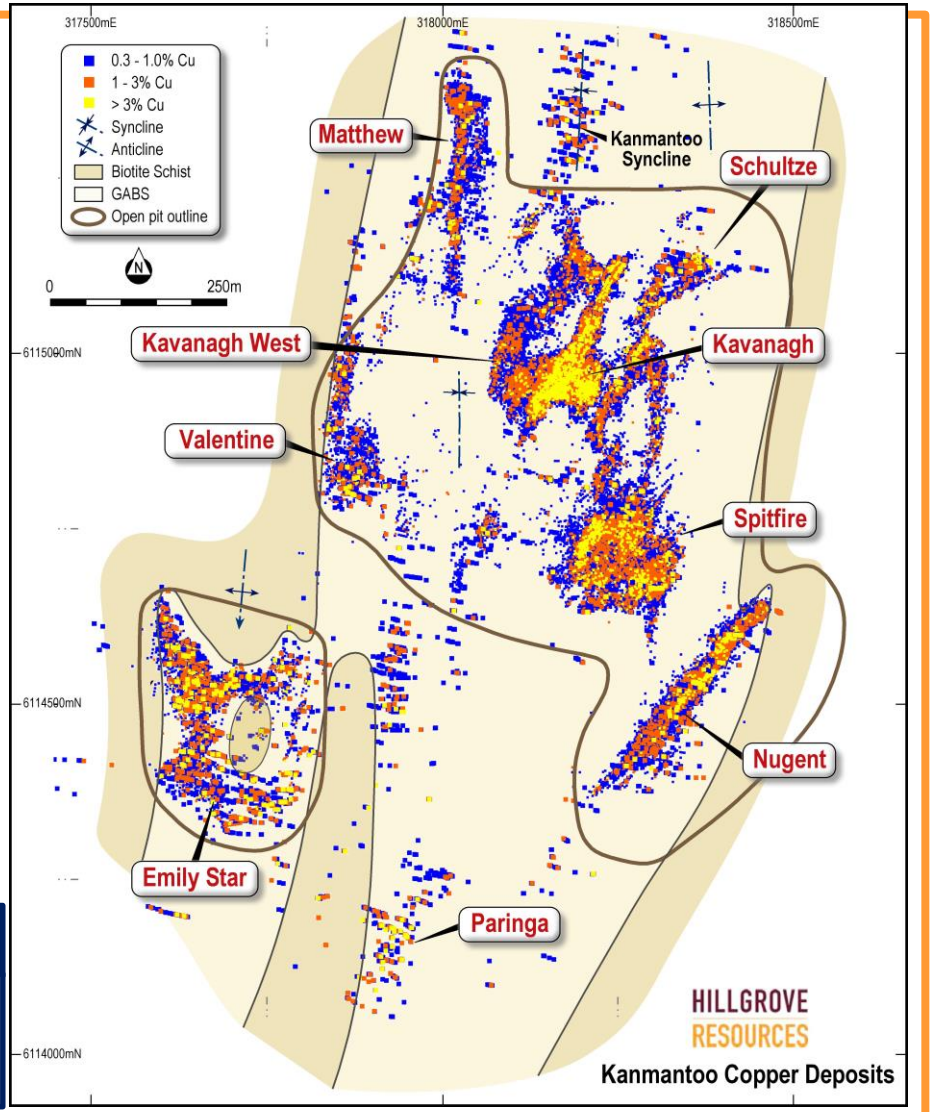
Zone alteration is chlorite, garnet, andalusite

Gold grades vary between the lodes from

- Lowest grades at West Kavanagh
- Highest grade at Spitfire (5m @ 32g/t Au)
- Most consistent grade at Nugent (12m @ 7.9g/t Au, 2.2% Cu)

KEY TAKEAWAYS

- Structural control of mineralisation



UNCOVERING A NEW COPPER-GOLD PROVINCE



2. KANMANTOO MINE – WHAT WE HAVE LEARNED

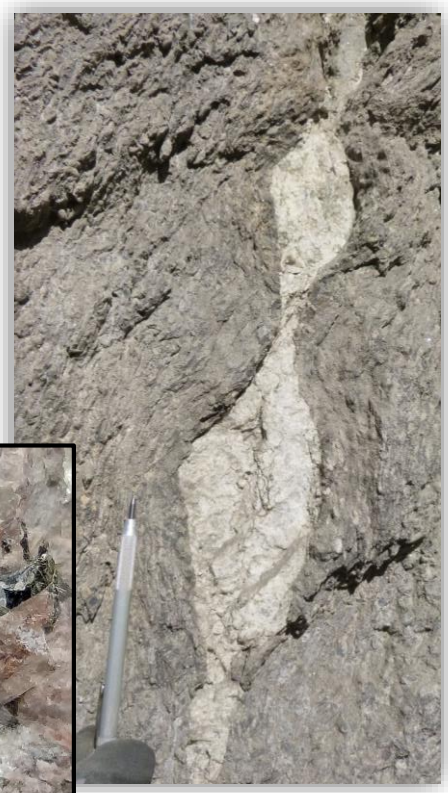
UNDERSTANDING THE EXPOSED GEOLOGY TO UNLOCK THE OPPORTUNITIES UNDER-COVER

KANMANTOO
MAGMATIC ACTIVITY IS EVIDENT DURING OROGEN

Earliest igneous activity exposed within the pit are peraluminous dykes

These are pre-D3 deformation, and pre-mineralisation – dating is in progress (Uni Adelaide – Dr R. Lilly)

Dykes of coarse grained rose andalusite, apatite, biotite, quartz, minor muscovite, rare plagioclase





KEY TAKEAWAYS

- Magmatic activity is evident during Delamerian Orogen and pre-mineralisation

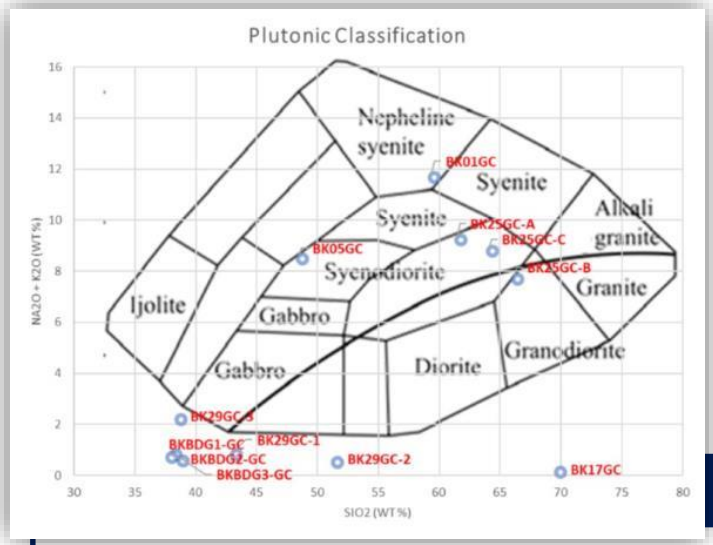
KANMANTOO
MAGMATIC ACTIVITY HAS CONTINUED THROUGH OROGEN TIME

Late, undeformed, alkali feldspar dykes at the mine site are overprinted by destructive potassic feldspar alteration (Dr Roger Taylor) with Cu & Fe sulphides

These dykes are syenites, monzonites to granodiorites and are mineralised







KEY TAKEAWAYS

- Continuing magmatic activity, with sulphides, is evident late in the Orogen

KANMANTOO
GARNETS COEVAL WITH MAGMATISM

Dating of the copper-gold lodes shows a late Cambrian – early Ordovician age

469 +/- 17 Ma – Focke, 2010 (Monazite in garnet, 1km from open pit)
498 +/- 16 Ma – Focke, 2010 (Monazite in garnet, lode extension from pit)
492 +/- 7 Ma – Wilson, 2009 (Monazite in garnet, within main mineralisation)

492 +/- 5 Ma – Uni Adelaide 2018

Same age dates as the gold mineralisation at Kitticoola
and as the granites in the Padthaway Ridge at Monarto and Coonalpyn

KEY TAKEAWAYS

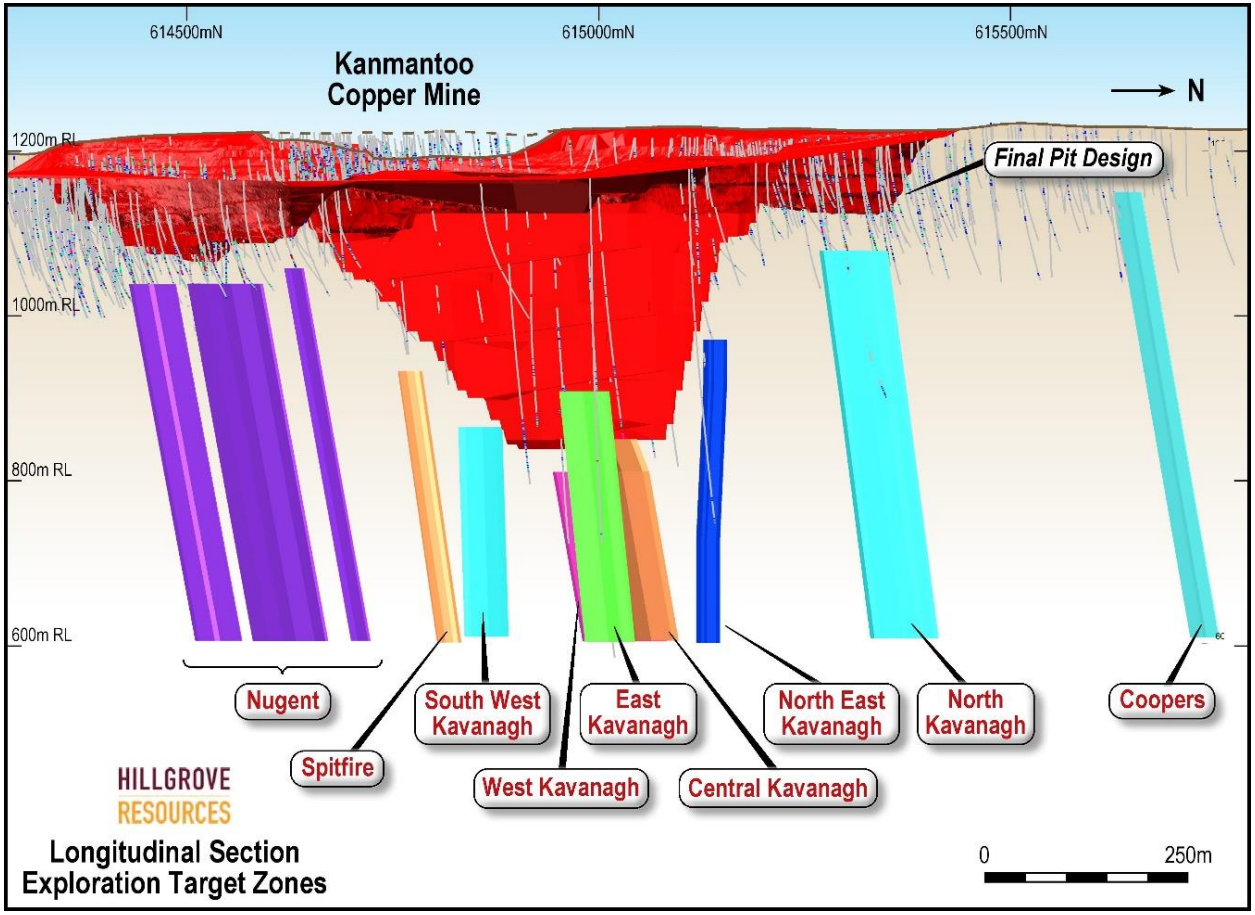
- Mineralisation is late Cambrian and related to extensional tectonics and magmatism



3. EXPLORATION UNDER & NEAR MINE

UTILISING EXISTING DATA AND KNOWLEDGE TO IDENTIFY NEW CU-AU TARGETS

UNDER MINE EXPLORATION
KANMANTOO UG – OVERALL



The Principal targets in the wall of the Giant Pit are:

East Kavanagh

Nugent

North-East Kavanagh (Schultze)

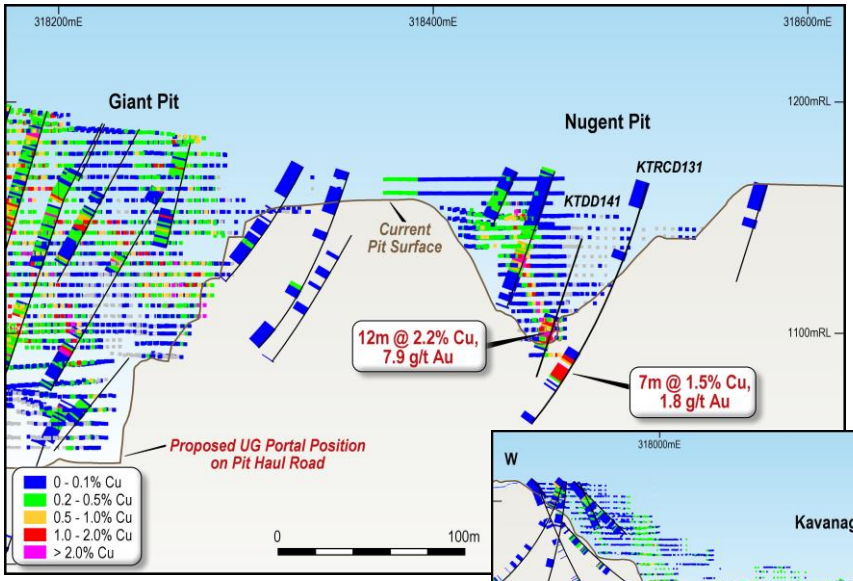
Spitfire

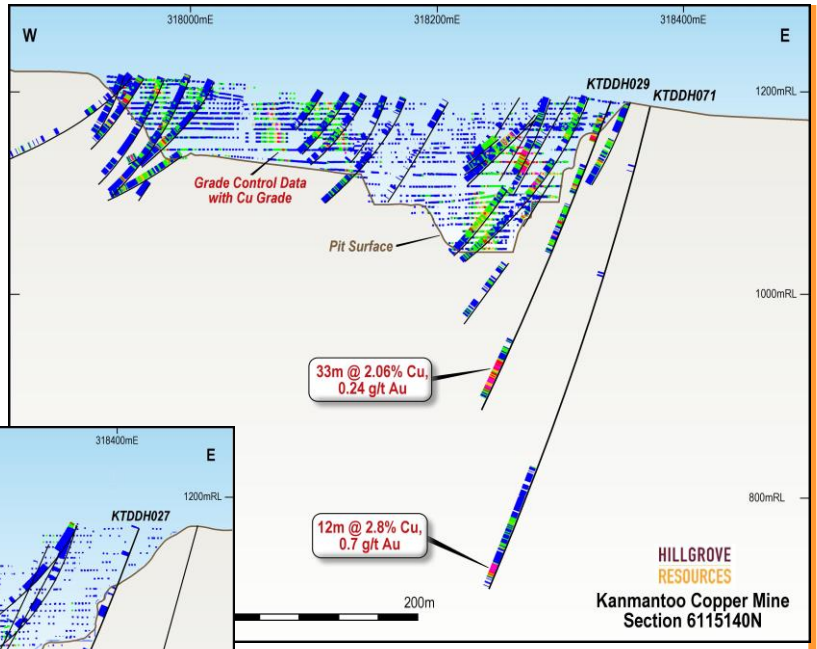
Central Kavanagh – main prize

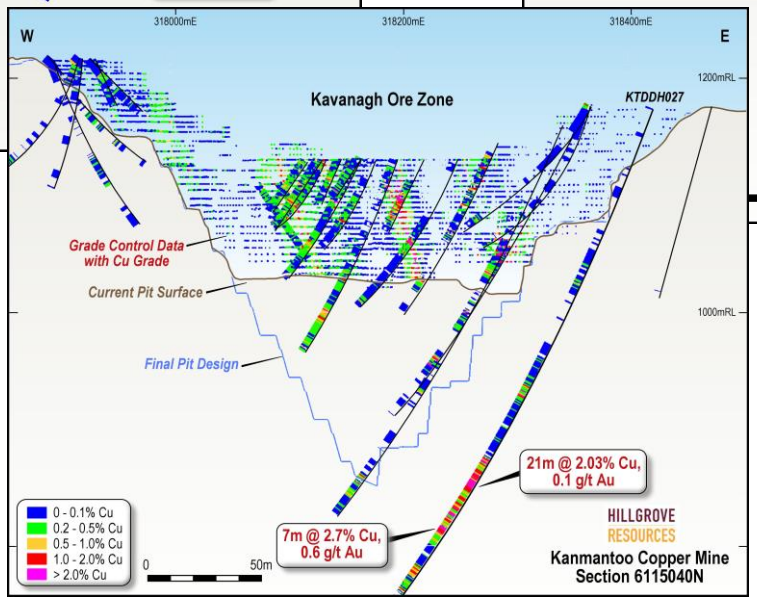
KEY TAKEAWAYS

- Significant >1.5% CuEquiv zones continue beyond open pit

UNDER MINE EXPLORATION
DRILL HOLE TARGETS



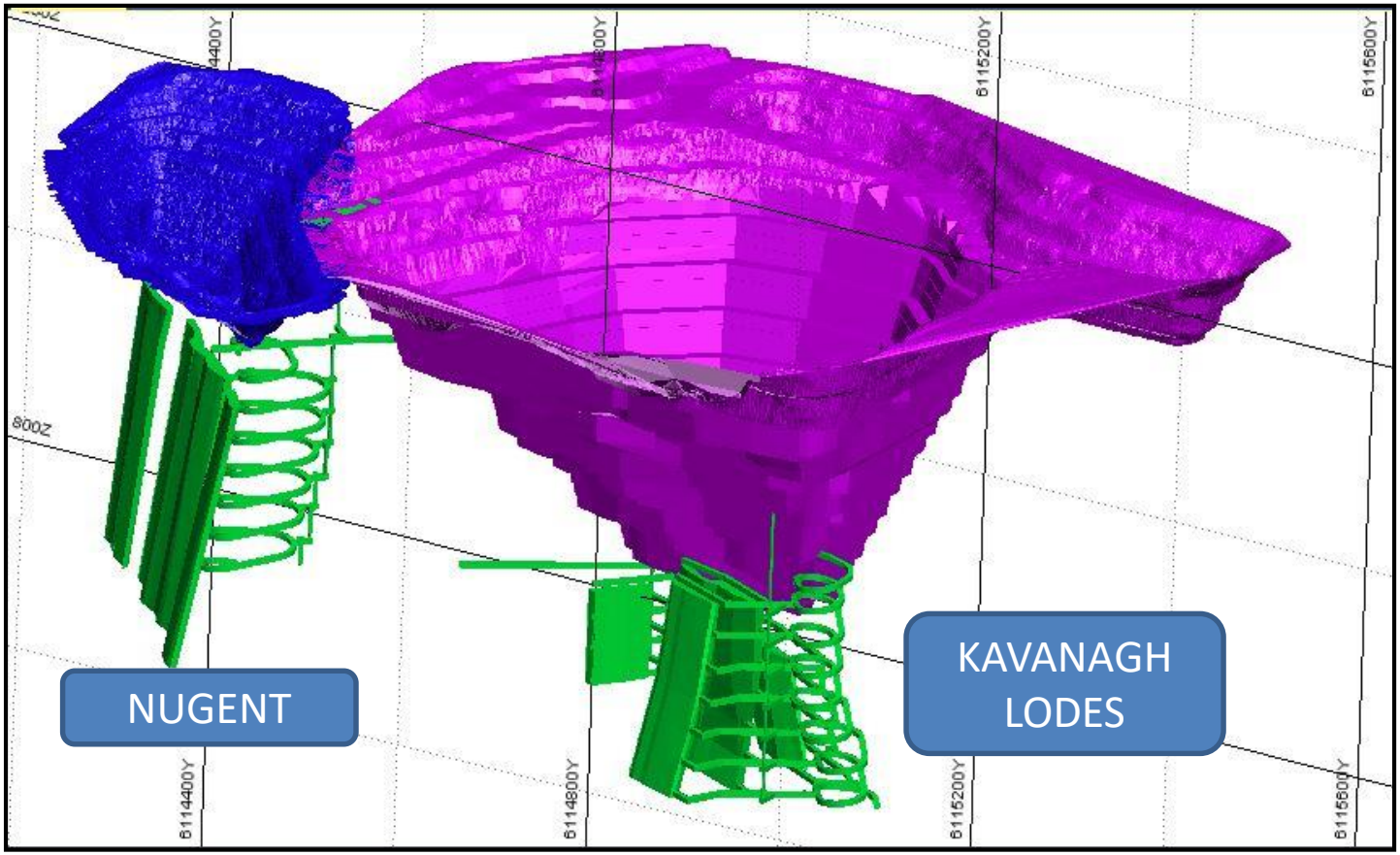




KEY TAKEAWAYS

- Past drilling confirms UG targets and ready for infill drilling

UNDER MINE EXPLORATION
CONCEPTUAL UNDERGROUND DEVELOPMENT

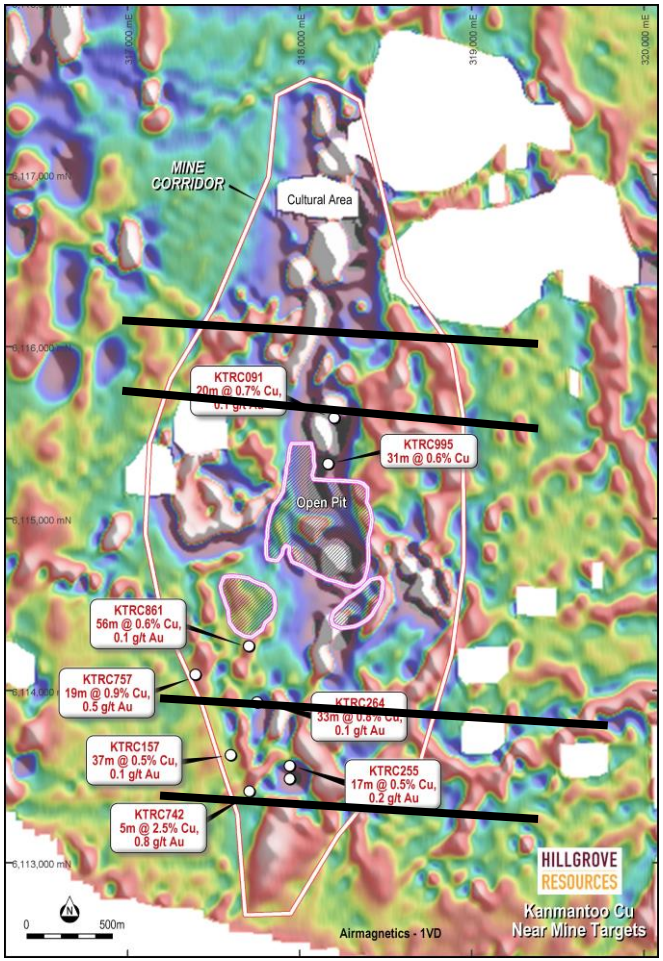


No PHES – 25m crown pillar
Only the 4 Kavanagh Lodes shown plus Nugent

KEY TAKEAWAYS

- Phase 1 of UG development now permitted and design work in progress

NEAR MINE EXPLORATION PROJECTS
NO SYSTEMATIC EXPLORATION SINCE 2008



The Mine Corridor has not seen any systematic exploration since 2008 when the focus was on permitting the Kanmantoo open pit operations

The Mine Corridor is ~5kms long

Significant drill intercepts have not been followed up, including

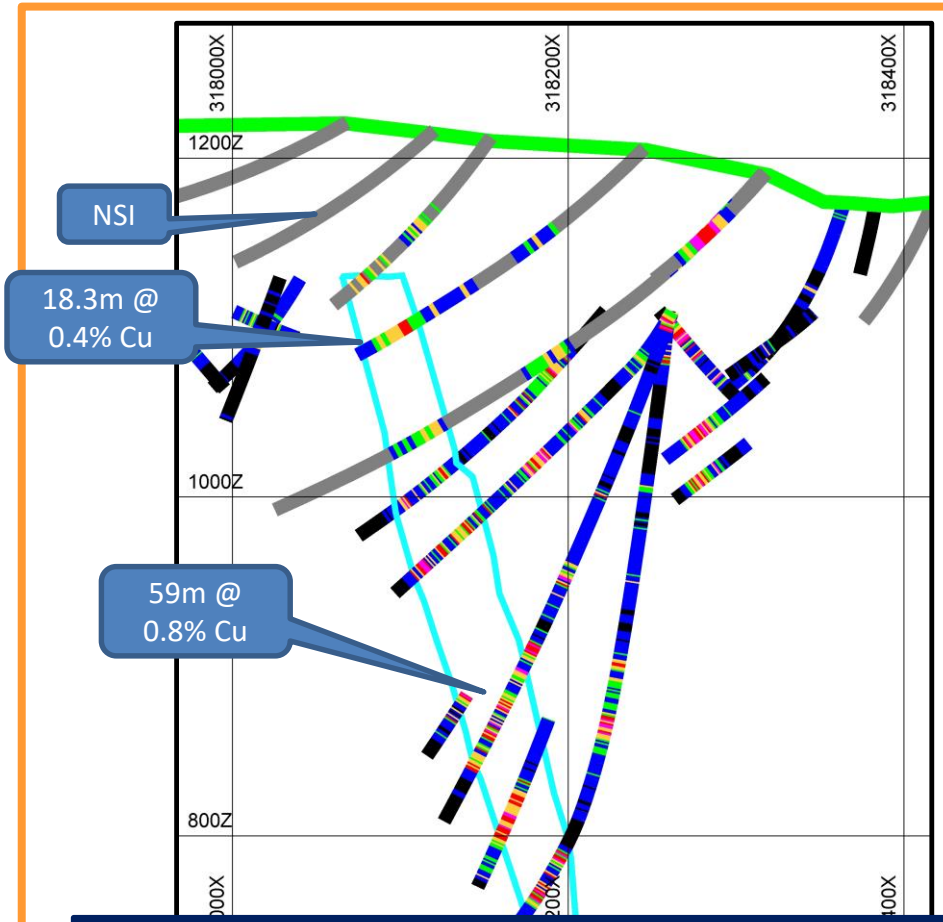
KTRC742 5m @ 2.5% Cu, 0.8g/t Au
KTRC757 19m @ 0.9% Cu, 0.5g/t Au
KTRC264 33m @ 0.8% Cu, 0.1g/t Au
KTRC255 17m @ 0.5% Cu, 0.2g/t Au

4 Lines of AMT/MT completed and modelling awaited

KEY TAKEAWAYS

- Targets are prioritised along structural corridors

NEAR MINE EXPLORATION PROJECTS
BLIND ORE ZONES?



West Kavanagh

No significant mineralisation at surface and no historical workings

At >100m below surface is first economic intersection

Compare these with the earlier near-surface exploration intercepts that have not been followed up

Not previously recognised is the strong structural control on the vertical continuity of the ore zones

KEY TAKEAWAYS

- Previous exploration has not followed up a number of strong targets



4. EXPLORATION IN THE REGION

EXTRAPOLATING KNOWLEDGE FROM KNOWN TO UNKNOWN

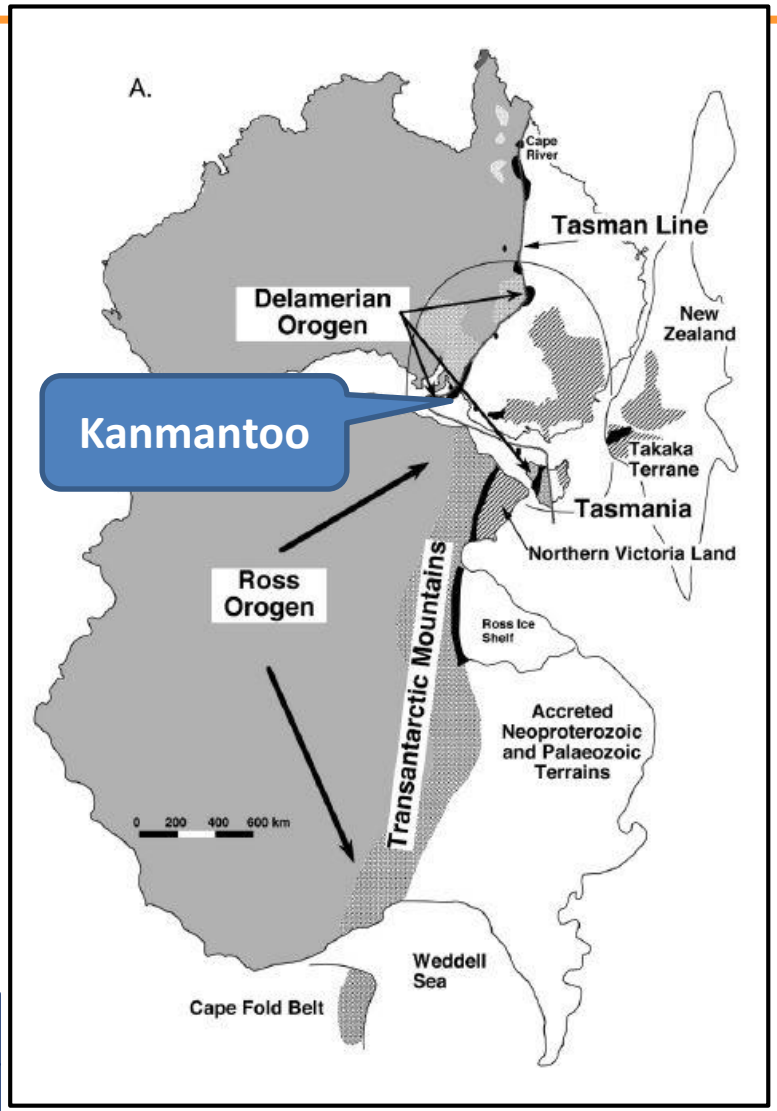
KANMANTOO – IS WHERE TECTONICALLY?
LOCATION IN THE CAMBRIAN

The Kanmantoo Copper-Gold Mine is located along the Tasman Line of the Delamerian Orogen of south-east South Australia.

The Tasman Line (Foden et al, 2006) is interpreted to represent the intercontinental scale “Andean-type” deformation zone of the mid to late Cambrian.

The magmatic arc, where exposed, in western Victoria and western Tasmania hosts Stavely, Mt Lyell, Roseberry, Hellyer and Henty copper-gold and base-metal deposits.

In mainland Australia, the Tasman Line is predominantly under-cover.



KEY TAKEAWAYS

- Continental scale structures
- Where exposed, large orebodies

DELAMERIAN OROGEN
ANDEAN TYPE?

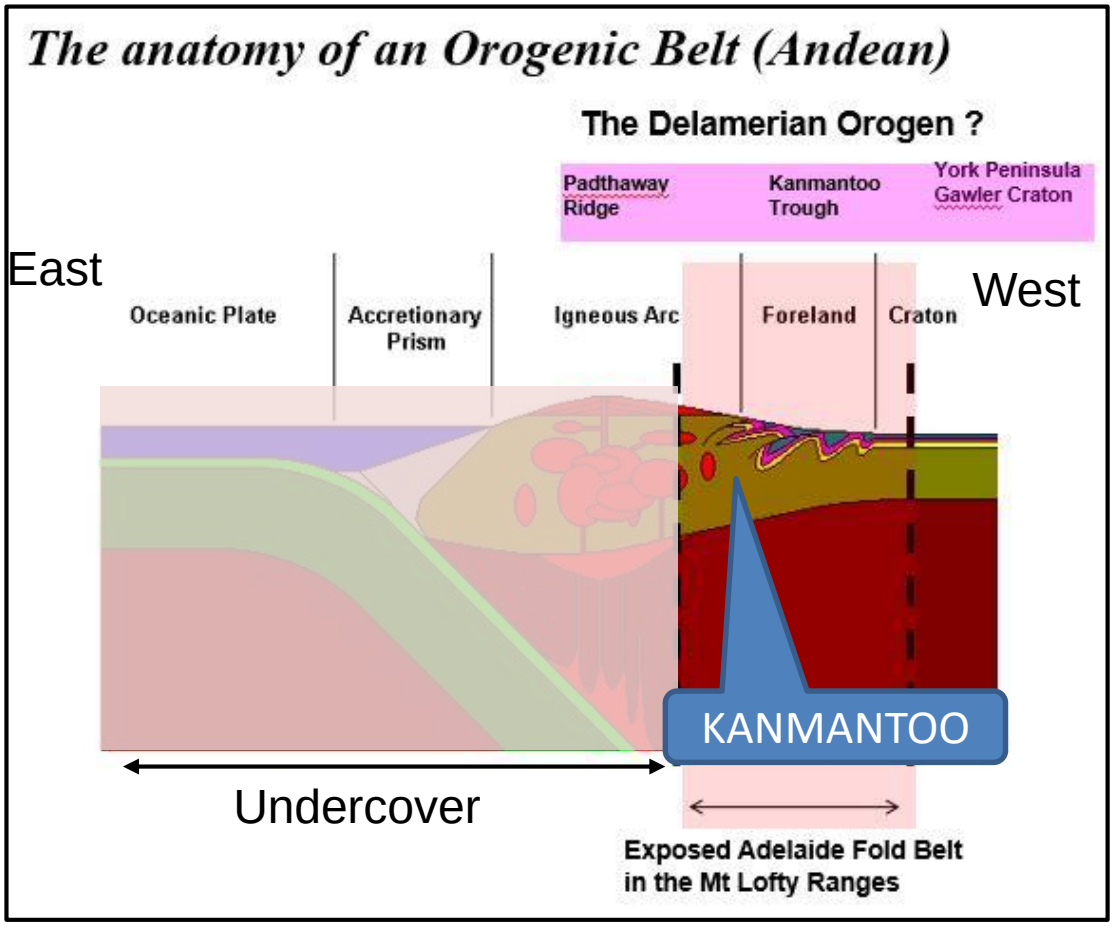
A quick re-cap

Here is an interpretation of the Delamerian Orogen in south-east South Australia (after Belperio et al, 1998 and Foden et al, 2006)

Kanmantoo is located in the rift basin – the Kanmantoo Trough

And the Kanappa – Mt Rhine projects are located at the margin of the Magmatic Arc and the Kanmantoo Trough

The age of the Magmatic Arc granites is 492.8 => 480 Ma



DELAMERIAN OROGEN AT KANMANTOO
A COPPER GOLD ENRICHED PROVINCE

The regional magnetics clearly show the Kanmantoo Trough sedimentary basin and the magmatic arc (Padthaway Ridge) to the east

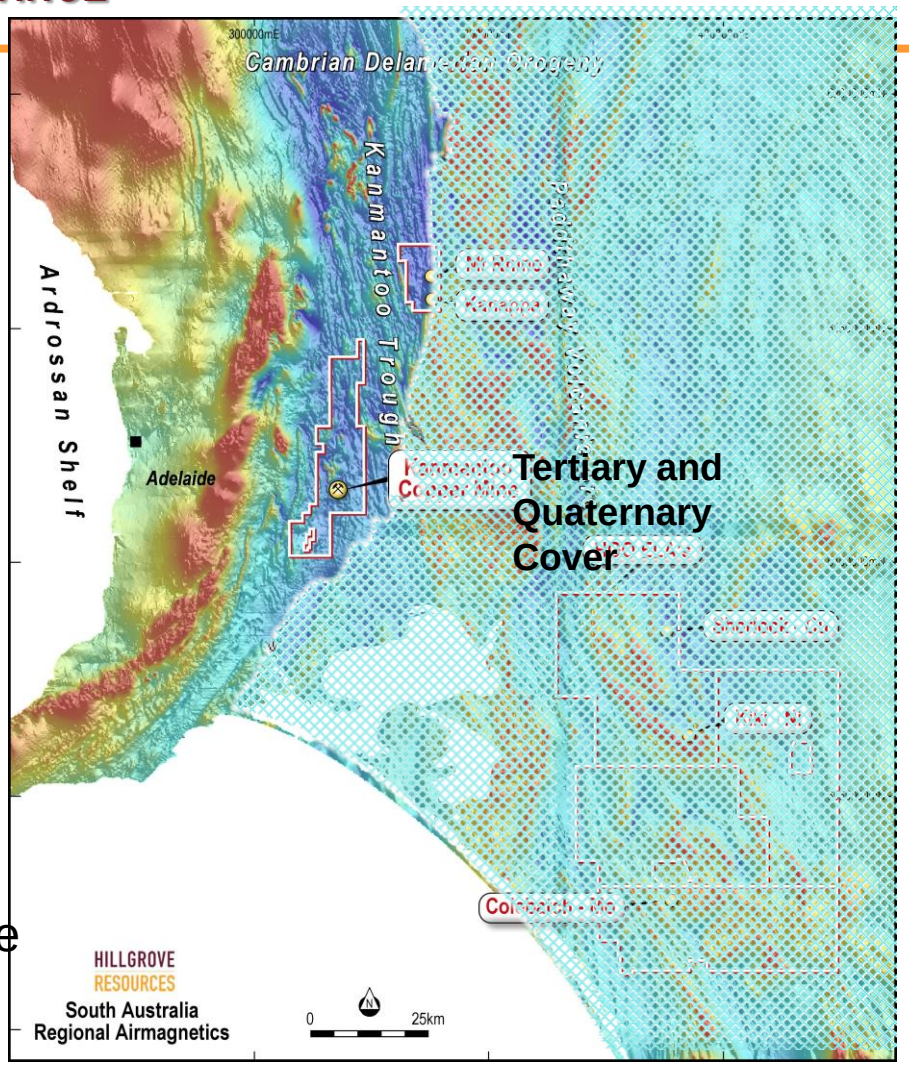
Significant projects for Hillgrove within the Delamerian Orogen include

Kanmantoo Cu - Au

Kanappa Cu - Au

Mt Rhine Cu – Au

And then there is the portion of the Magmatic Arc that is now covered by the Murray Valley sediments



KEY TAKEAWAYS

- Strong Cu-Au endowment
- Voluminous magmatic activity

REGIONAL EXPLORATION PROJECTS
KANAPPA CU-AU

The Kanappa Cu-Au zone is 50kms from Kanmantoo

A series of pegmatites and aplites intrude into a sequence of Fe and potassic altered schists and carbonates

Soil copper zone 4.4kms long

Geochem zoning from west to east

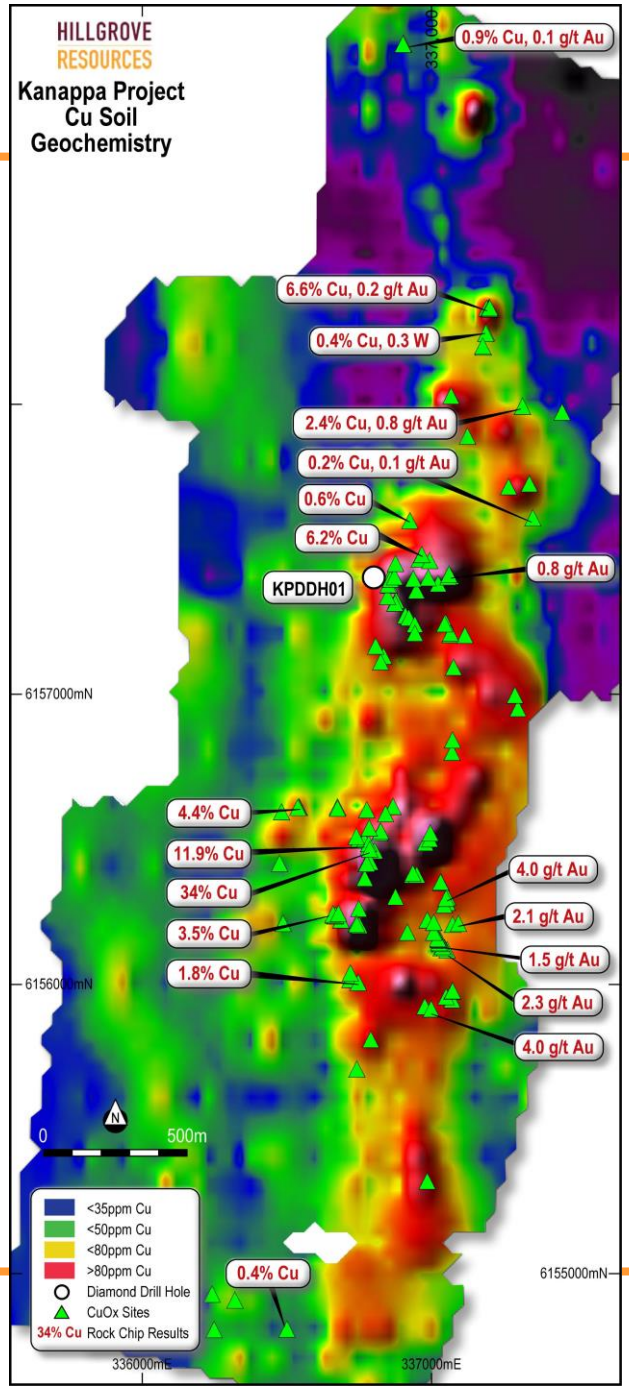
Cu-Zn => Cu-Bi => Cu-Au => Au => W

Peak rock chips of 34% Cu 4.0g/t Au (separate samples)

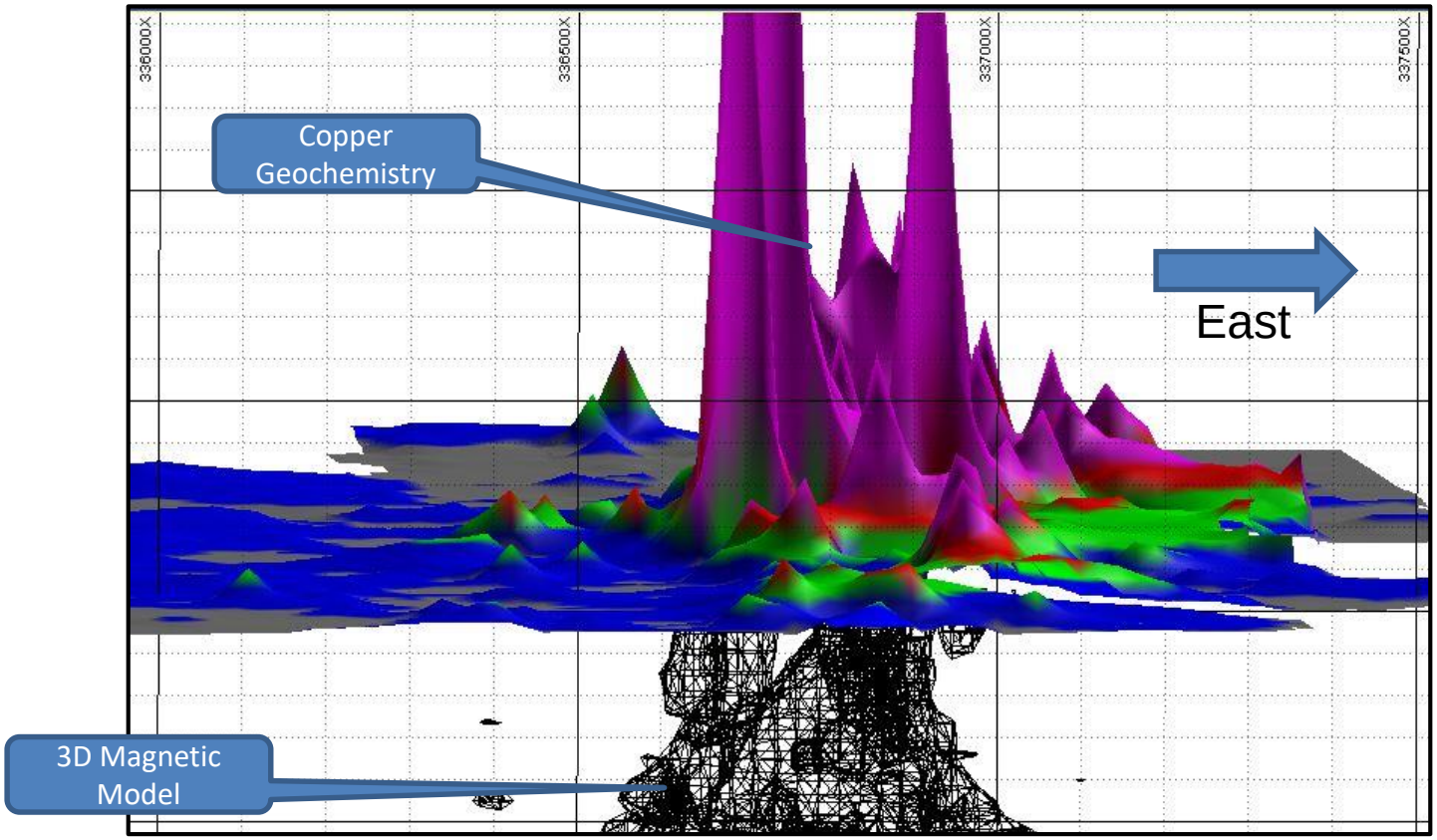
To date – Soil geochemistry
Ground magnetics
Pole-dipole IP

KEY TAKEAWAYS

- Large hydrothermal alteration and Cu-Au mineralised system



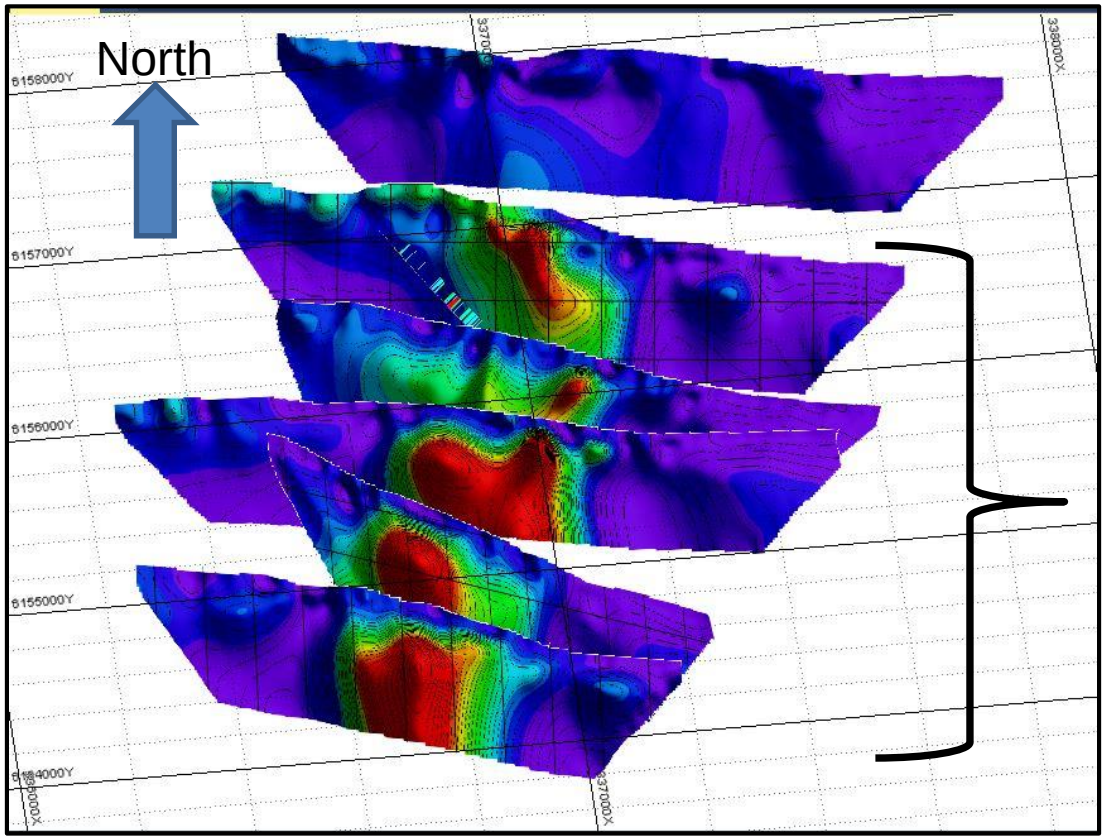
REGIONAL EXPLORATION PROJECTS
KANAPPA – ISOMETRIC VIEW OF COPPER GEOCHEMISTRY & MAGS



KEY TAKEAWAYS

- Magnetic anomalism is strong and not related to rock types, implying it is alteration related
- Best magnetic zones are correlated with the best geochemistry over 2km strike length

REGIONAL EXPLORATION PROJECTS
KANAPPA – ISOMETRIC VIEW OF ALL IP



2 km long zone of coincident Geochemistry, Magnetics, IP Chargeability

250m wide

Open to south

KEY TAKEAWAYS

- Large scale coincident Cu-Au geochem, magnetics, and IP anomaly
- Strong alteration system proximal to Igneous Arc magmatism to east

REGIONAL EXPLORATION PROJECTS
MT RHINE CU-AU

The Mt Rhine copper-gold zone is 10kms from Kanappa

Soil copper zone **1.7kms** long

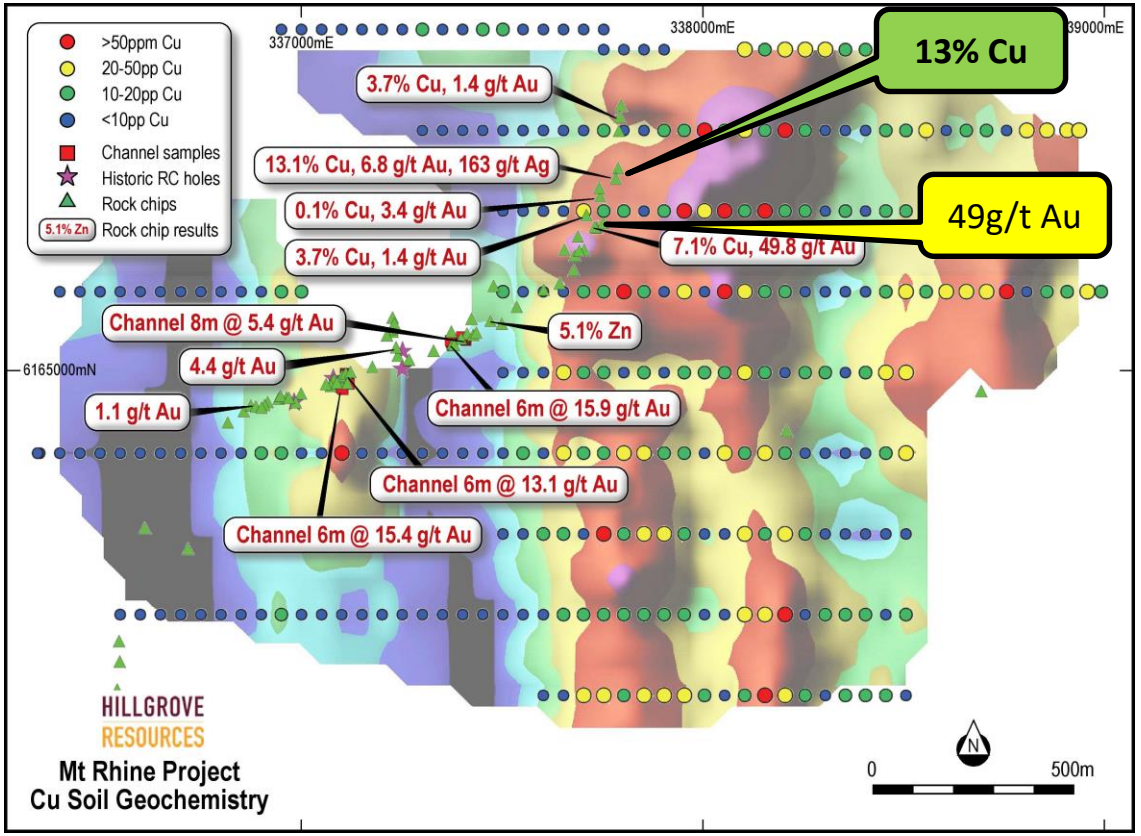
Peak rock chips of **13% Cu**

49.8g/t Au (separate samples)

Peak Channel Sampling of 6m @ 15.9g/t Au

Much higher gold tenor cf Kanappa

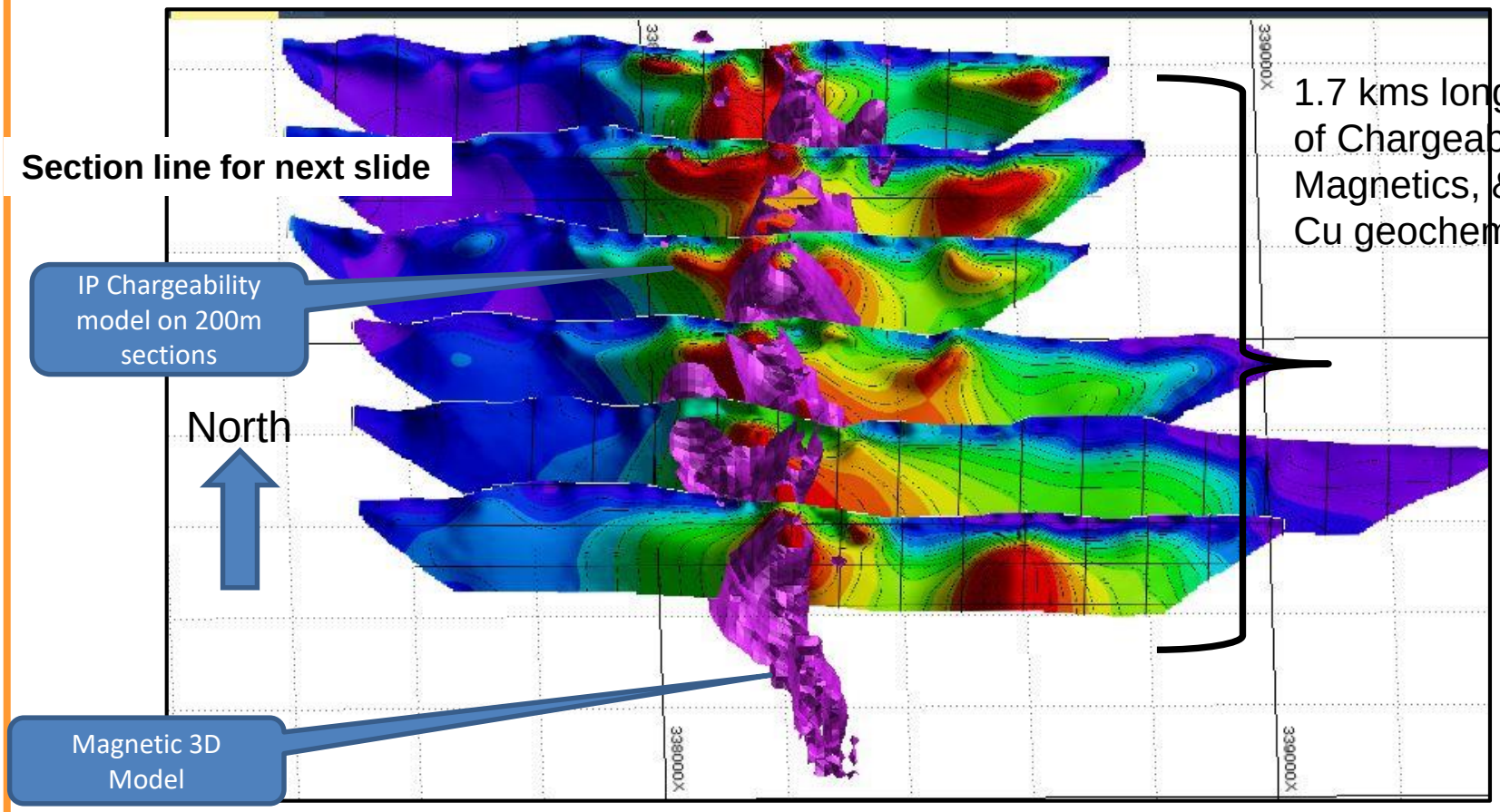
Also completed soils, mags, IP



KEY TAKEAWAYS

- Large scale alteration system with
- Zone of Cu, IP and magnetic anomalism over 1.7kms long and 500m wide

REGIONAL EXPLORATION PROJECTS
MT RHINE Cu-Au

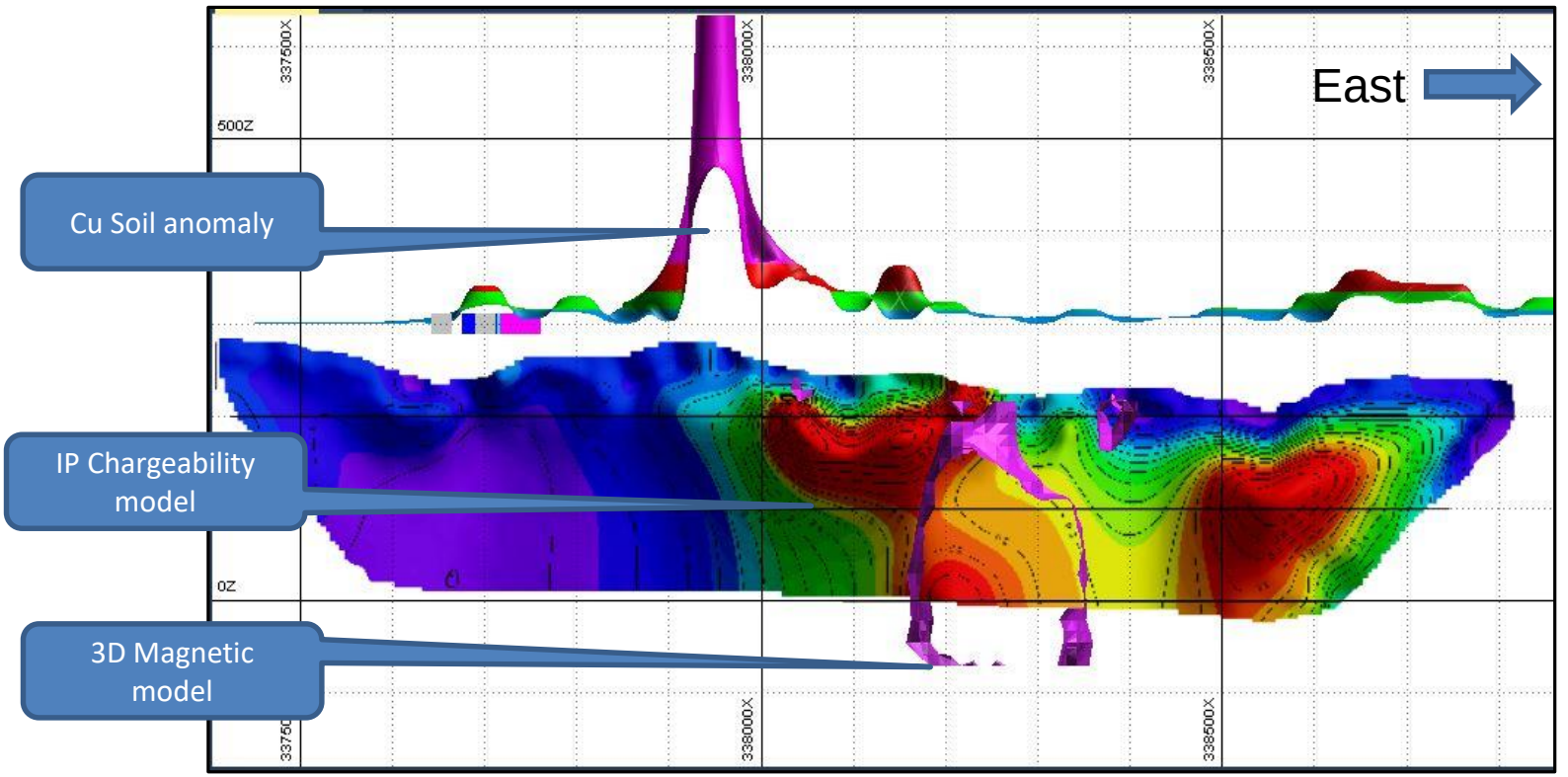


KEY TAKEAWAYS

- Stacked sections of IP chargeable model, with 3D magnetic model superimposed
- Continuous zone of IP and magnetic anomalism

REGIONAL EXPLORATION PROJECTS

MT RHINE Cu-Au – BEST CROSS SECTION



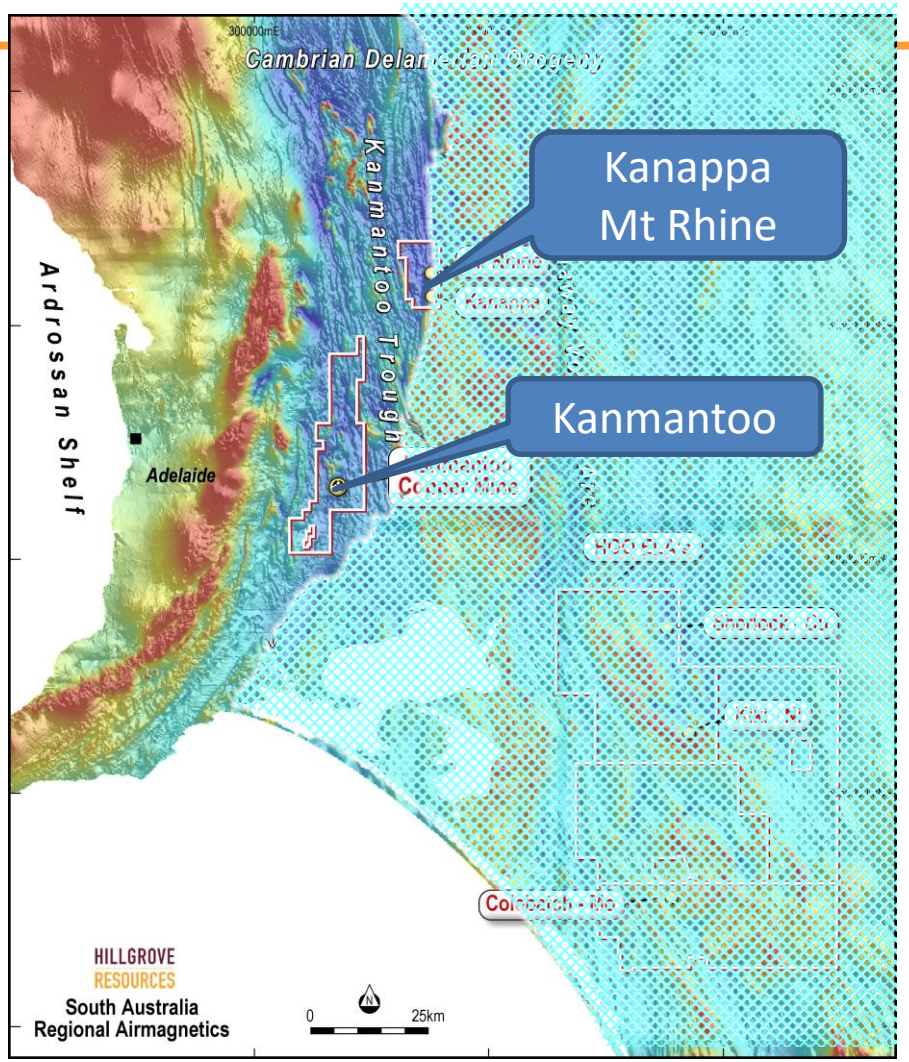
KEY TAKEAWAYS

- Mt Rhine has a strong zone of Cu geochemistry, magnetic and IP Chargeability anomalism
- Over a 1.7km long, 500m wide zone
- Proximal to Igneous Arc to east

UNCOVERING A NEW CU-AU PROVINCE
FROM KNOWN TO UNKNOWN

Significant projects for Hillgrove within the OUTCROPPING portion of the Delamerian Orogen include

Kanmantoo	**Cu - Au**
Kanappa	**Cu - Au**
Mt Rhine	**Cu – Au**



KEY TAKEAWAYS

- The geochemical footprint is large and being characterised by Hillgrove

UNCOVERING A NEW CU-AU PROVINCE
FROM KNOWN TO UNKNOWN

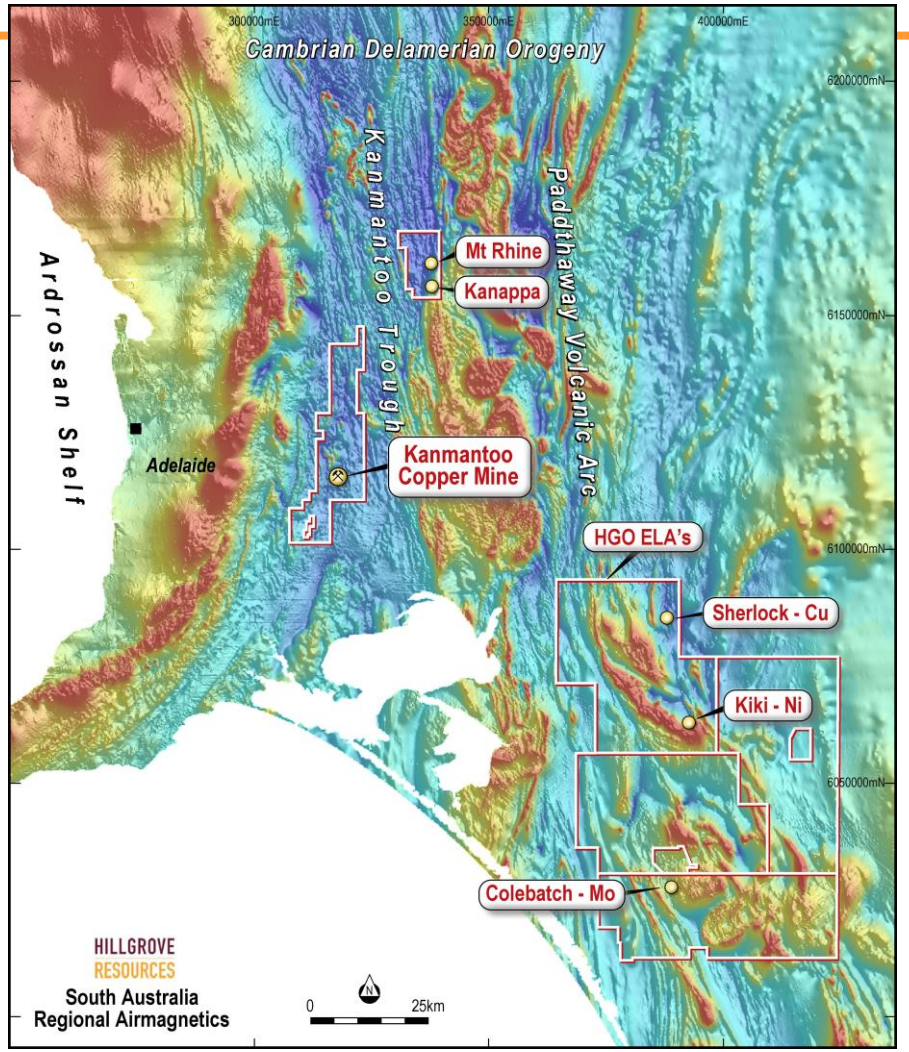
And then there is the Under-cover portion of the Magmatic Arc

The work underway at Kanmantoo is enabling Hillgrove to

- characterise the Geochemical Footprint of Cu-Au mineralisation
- develop vectors to the next Cu-Au orebody.

A geochemical footprint is a much larger target to discover (kms in size)

And thereby to identify the areas of economic potential – under cover



KEY TAKEAWAYS

- The geochemical footprint is large and being characterised by Hillgrove

UNCOVERING A NEW CU-AU PROVINCE
MOVING FORWARD

KANMANTOO DISTRICT

- It is a large Fe-Cu-Au-Bi+/-Mo system
- It is coeval with magmatic activity

GROWTH COPPER-GOLD PROJECTS

- Kanmantoo first underground project is permitted and design in progress
- Kanmantoo near mine projects under evaluation for
    - Underground extensions
    - Large magmatic Cu-Au source
- Kanappa Cu-Au 2km long zone being drilled September
- Mt Rhine Cu-Au 1.7km zone next drill target
- Commencing evaluation of under-cover Delamerian magmatic Cu-Au systems

WORKING FROM KNOWN TO THE UNKNOWN

Kanmantoo is located within a significant copper-gold province
Which is being uncovered by Hillgrove Resources