UNCOVERING A NEW COPPER-GOLD PROVINCE AT KANMANTOO

PETER ROLLEY  CHIEF GEOLOGIST

31 JULY 2018
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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 Australasian 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.

1. KANMANTOO MINE – THE ASSET

2. KANMANTOO MINE – WHAT WE HAVE LEARNED

3. EXPLORATION UNDER & NEAR MINE

4. EXPLORATION IN THE REGION

Utilising existing infrastructure and cash flow at Kanmantoo to create Company transforming mining projects
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
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
2. KANMANTOO MINE – WHAT WE HAVE LEARNED

UNDERSTANDING THE EXPOSED GEOLOGY
TO UNLOCK THE OPPORTUNITIES
UNDER-COVER
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
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

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KEY TAKEAWAYS

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

- Past drilling confirms UG targets and ready for infill drilling
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
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.
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
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
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
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
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
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.
KEY TAKEAWAYS

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

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