HILLGROVE RESOURCES

ASX RELEASE

Tuesday, 14 December 2021

UPDATED KAVANAGH UNDERGROUND MINERAL RESOURCE ESTIMATE

Hillgrove Resources Limited (ASX:HGO, the "Company") advises that an updated Mineral Resource Estimate ("MRE") has been prepared for the Kavanagh mineralised zones at the Kanmantoo Copper Mine in accordance with The JORC Code 2012 Edition. This resource estimate update includes the results of the 2021 diamond drilling programme at Kavanagh to 30 June 2021, the results of which were reported on 3 May 2021, 6 May 2021 and 24 June 2021.

Highlights include:

- A total Kanmantoo resource tonnage of over 5.6 Mt at 1.1% Cu, 0.33 g/t Au for 62.5kt of Cu metal, an 82% increase in Cu Metal over the previous Kanmantoo MRE.
- A 55% increase in the total estimated Cu metal in the Kavanagh UG Resources compared to the 2020 Kavanagh MRE (at the same cut-off grade).
- 72% of the MRE is now classified as Indicated.
- The updated Kavanagh MRE now covers an area 500m long by 200m wide by 500m deep.
- The resource estimates are still constrained by the extent of the drilling and not by the geology, in both the along strike and dip directions.

Table 1 summarises the Kanmantoo MRE which includes this updated 2021 Kavanagh MRE and includes the 2020 Nugent MRE[1] below the Giant and Nugent open pits respectively.

Table 1 Mineral Resource Estimate for whole Kanmantoo underground area

Deposits	JORC 2012 Classification	Tonnage (kt)	Cu (%)	Au (g/t)	Cu Metal (kt)
Kavanagh 2021 (0.6% Cu COG)	Indicated	3,530	1.1	0.11	38.9
	Inferred	1,480	1.01	0.1	15
	Sub-Total	5,010	1.08	0.11	53.9
Nugent 2020 (0.8% Cu COG)	Indicated	202	1.4	0.47	2.8
	Inferred	457	1.3	0.7	**6**
	Sub-Total	659	1.32	0.61	8.7
Totals	**Indicated**	**3,732**	**1.12**	**0.13**	**42**
	Inferred	**1,937**	**1.08**	**0.73**	**21**
	Total	**5,669**	**1.10**	**0.33**	**62.5**

Note: Due to appropriate rounding, numbers may not sum.

[1] The Nugent deposit was not drilled in 2021 and the 2020 Nugent MRE has not been updated

Mineral Resource Estimate ("MRE")

Figure 1 shows a plan view of the general location of the different Cu-Au deposits at Kanmantoo. The five areas subjected to the 2021 drilling program are the down dip extensions of the West, Central and East Kavanagh deposits, the Spitfire deposit and the South-West Kavanagh deposit, all mined within the Giant Open Pit. The North Kavanagh, Matthew, Valentine, Nugent, Critchley, Paringa and Emily Star Cu-Au deposits have not been drilled in this program. The 2021 drill results have been merged with the HGO diamond drill hole database and used to build a single Mineral Resource Estimate for the West, Central and East Kavanagh, the Spitfire, and the South-West Kavanagh deposits, with these five deposits now collectively grouped together as the Kavanagh 2021 MRE.

The Nugent deposit was drilled in 2020 and an MRE for Nugent was reported in December 2020[2]. The 2020 Nugent MRE has not been updated in 2021 as further drilling is now in progress and an updated Nugent MRE is expected in the first half of 2022.

Figure 1 Plan view of Kanmantoo deposits

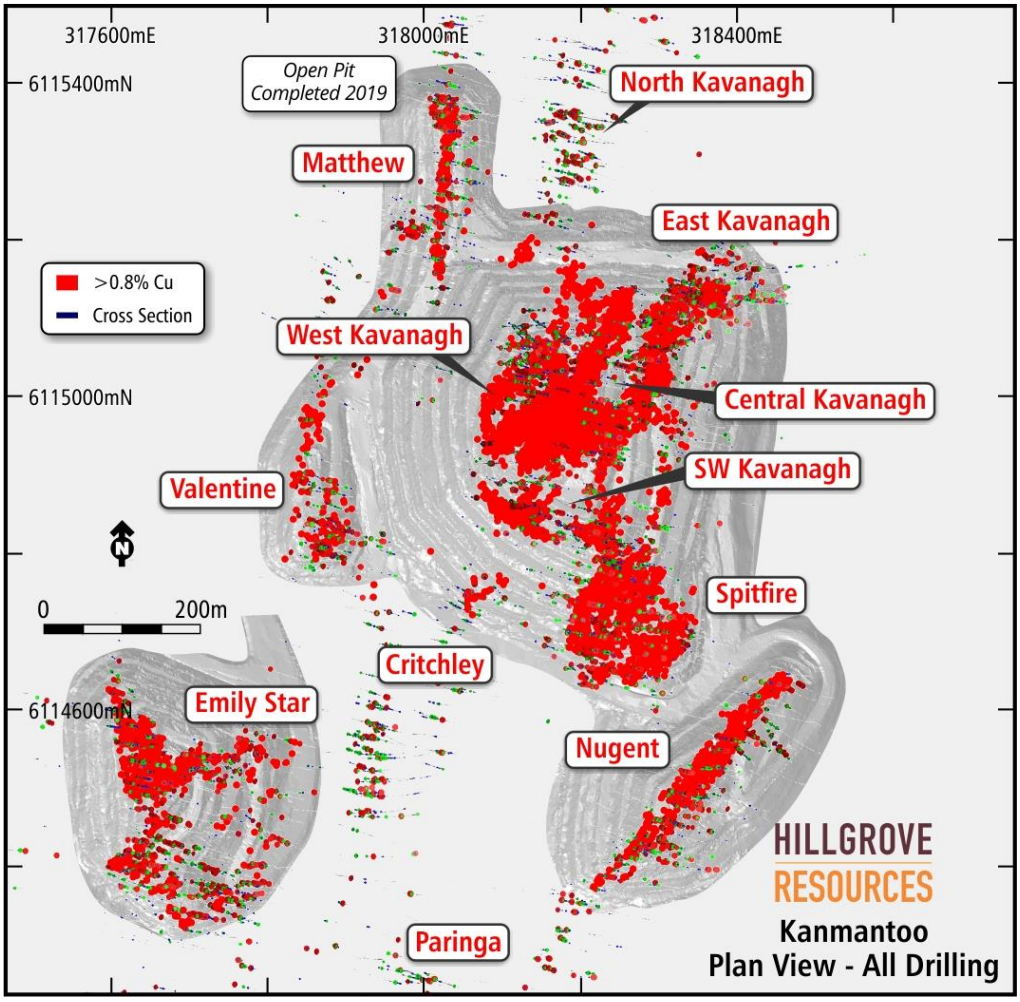
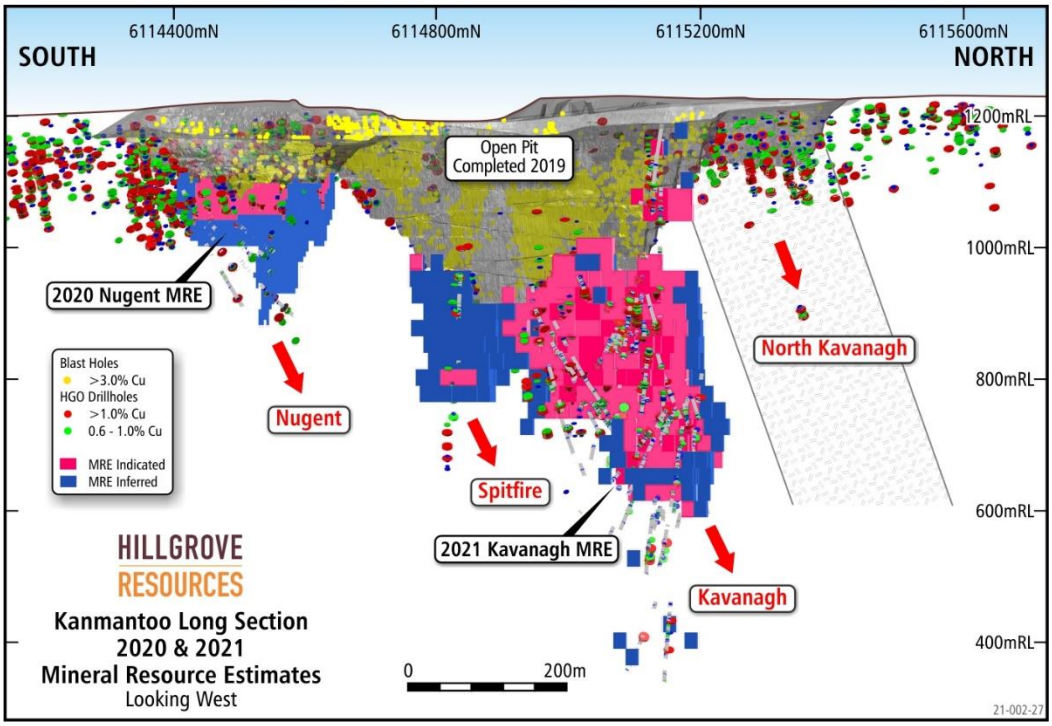


Figure 2 is a longitudinal section of all Cu-Au deposits at Kanmantoo and shows the location of the 2021 Kavanagh MRE and the location of the 2020 Nugent MRE. These two separate MRE's have been summarised and combined in Table 1.

[2] ASX release 7 December 2020

Figure 2 Long section of Kanmantoo Cu-Au deposits and location of the 2020 and 2021 MREs



The 2021 Kavanagh Mineral Resource Estimate has significantly enlarged the footprint of the Kavanagh resource area to an area over 500m long by 200m wide by 500 deep below the completed Giant Pit which has been incorporated into an initial assessment of the economic viability of an underground mining operation at Kanmantoo.

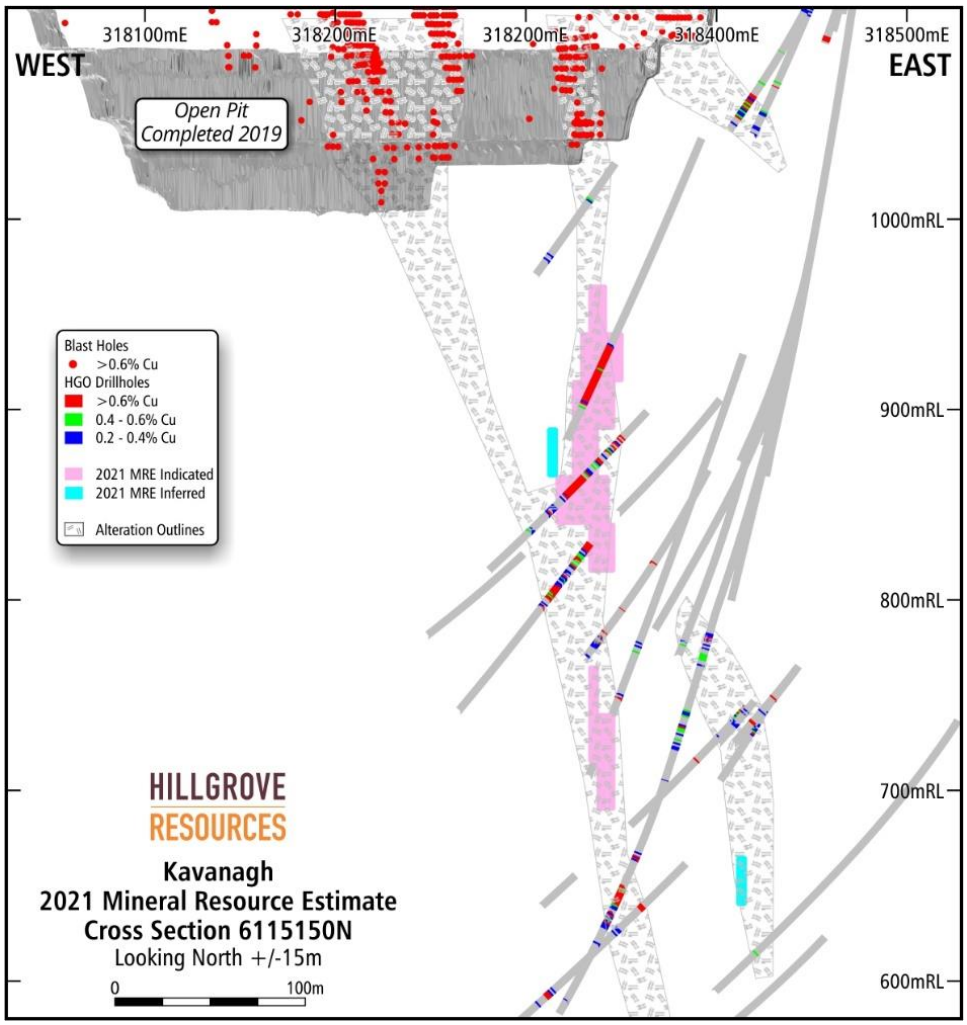
The 2021 Kavanagh MRE has been estimated by Neil Schofield of FSSI Consultants (Australia) using a Multiple Indicator Kriging (MIK) process to estimate the Cu, Au, and Bi grades of a 3D grid of panels through the Kavanagh mineralised zones below the Giant open pit from the diamond and reverse circulation (RC) drill data. There is no reconciliation of the 2021 Kavanagh MIK panel model, as these deposits have not been mined by underground mining methods by Hillgrove. However, an MIK estimate of the open pit resource has been used by Hillgrove since 2016 to model the mineralisation with great success and gives the Company reasonable assurance that the MIK method is the correct choice for modelling this style of mineralisation. The MIK modelling method has been successfully used for modelling underground copper deposits as early as 1991, for example at the Cobar underground copper mine[3].

Figure 3 is an example of a cross section through the Kavanagh mineral system showing the MIK panels coloured by classification against the HGO diamond drilling. The cross section indicates that the MIK method has modelled the copper mineralisation and its geologic uncertainty appropriately.

See Appendix 1 for a summary of the estimation process and Appendix 2 for the JORC compliant Table 1 for a description of the sampling, assaying and resource estimation processes.

[3] Carswell & Schofield, 1993; Estimation of high grade copper stope grades in QTS North, Cobar Mines, Cobar NSW, The AusIMM Proceedings, 2:19-26

Figure 3 An example of a cross section through the Kavanagh 2021 MRE



Future Activities

A further drilling program is now underway to convert the Inferred Resources at Nugent, West Kavanagh, Spitfire and South-West Kavanagh to Indicated Resources and to test drill the down-dip extension of the North Kavanagh mineralisation.

ABOUT HILLGROVE

Hillgrove is an Australian mining company listed on the Australian Securities Exchange (ASX: HGO) focused on the operation of the Kanmantoo Copper Mine in South Australia. The Kanmantoo Copper Mine is located less than 55 kilometres from Adelaide in South Australia.

Competent Person's Statement

The information in this release that relates to the 2020 and 2021 Mineral Resource Estimates for the Nugent and Kavanagh underground areas are 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.

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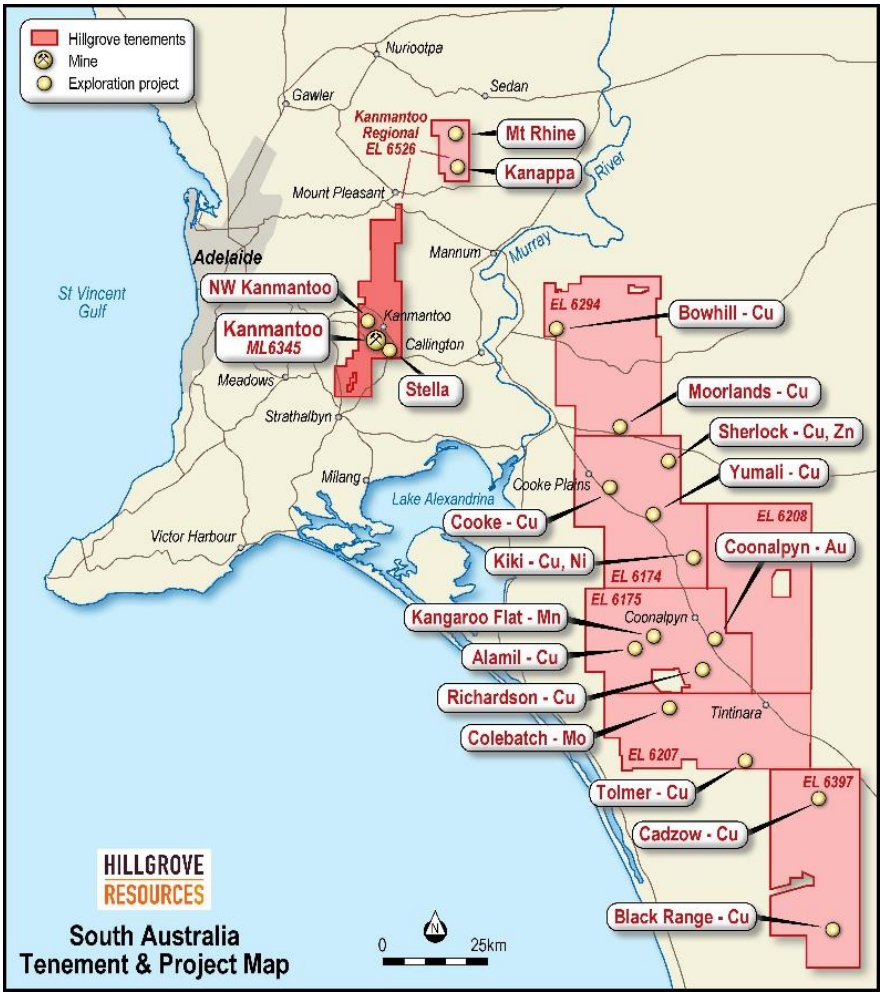

APPENDIX ONE – Kavanagh 2021 MRE

All diamond drill holes drilled by HGO to 30 June 2021 have been used to estimate the block grades in this MRE. No RC or percussion drill hole data have been included, and grade control data have not been used in the estimation of the spatial continuity or grade estimates. The grade control data have been used to assist interpreting the general trends of the mineralised zones.

Core recovery is excellent with 98% of all mineralised core intervals recording >99% core recovery.

Unsampled intervals have been assigned background Cu, Au, Bi, Ag values and then the drill hole samples composited to 2 metre downhole lengths for all data analysis and estimation.

Neil Schofield of FSSI Consultants (Australia) has undertaken the variography, MIK resource estimation and classification.

Variography of Cu, Au, Bi mineralisation has been modelled and a Multiple Indicator Kriging algorithm applied to the composited data. Silver has been estimated by regression from copper grades due to its strong correlation with copper. The search strategy is a weighted ellipse with Indicated Resource panels being based on locating the nearest 20 composites within four quadrants within a 7.5m (across-strike) by 52.5m (down-dip) by 75m (along-strike) ellipse oriented at -90 deg to 112 deg (dip/dip-direction). Inferred panels are estimated where the same search strategy only locates 10 composites. All material below 600mRL have been classified as Inferred.

Panels are 4m (east) by 20m (north) by 25m (elevation) and the proportion of the panel above a nominated Cu cut-off grade is estimated, and the Cu, Bi, Au grade above the relevant Cu COG is also estimated. In this model, the volume and grade of the proportion of each panel at 0.6% Cu and 0.8% cu COGs has been estimated.

All the mineralisation is in fresh rock and bulk densities from drill samples have been collected to assign an average bulk density of 3.1 t/m3 to all blocks (which is consistent with the bulk density when open pit mining of higher grade material).

All estimated panels at the nominated Cu Cut-off grade (COG) are reported in Table 2.

Table 2 Mineral Resource Estimate for Kavanagh

	Indicated					Inferred				
Cu COG Cu%	Tonnes (Mt)	Cu%	Au g/t	Bi ppm	Cu Metal Tonnes	Tonnes (Mt)	Cu%	Au g/t	Bi ppm	Cu Metal Tonnes
0.6	3.53	1.10	0.11	153	38,900	1.48	1.01	0.10	109	15,000
0.8	2.23	1.34	0.12	176	29,900	0.85	1.24	0.11	132	11,000

	TOTAL				
Cu COG Cu%	Tonnes (Mt)	Cu%	Au g/t	Bi ppm	Cu Metal Tonnes
0.6	5.01	1.08	0.11	140	53,900
0.8	3.08	1.31	0.12	163	40,500

(note: due to appropriate rounding, cumulative numbers may not agree)

The result of the 2021 Kavanagh MRE is a lower average copper grade compared to the 2020 resource estimate. A review of the 2021 drilling against the 2020 resource estimate shows that the infill 2021 drilling has identified additional “inter-lodes” of copper mineralisation between the dominant West and Central Kavanagh mineralisation. These lodes are not as continuous as the dominant lodes and have not previously been geometrically interpreted at the 0.8% Cu COG used in the 2020 MRE. These additional, more geometrically variable, copper zones have now been incorporated into the 2021 estimate through the MIK estimation process.

Figure 4 shows the previous 2020 block model superimposed on the new 2021 drilling, and clearly demonstrates the additional inter-lode zones identified by the additional drilling and now captured with the MIK estimation process

Figure 4 An example of the additional inter-lode zones identified by the 2021 drilling compared to the 2020 resource model.

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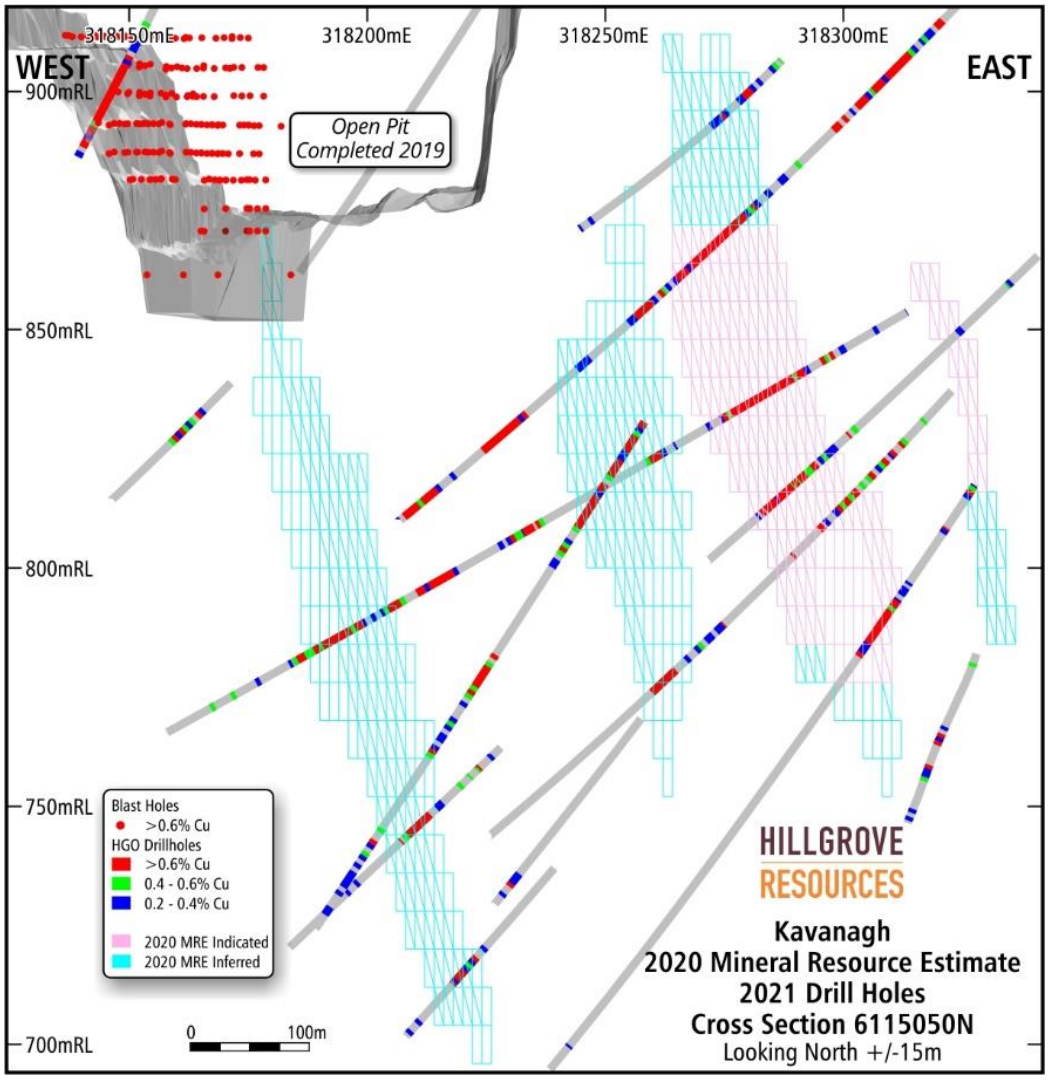
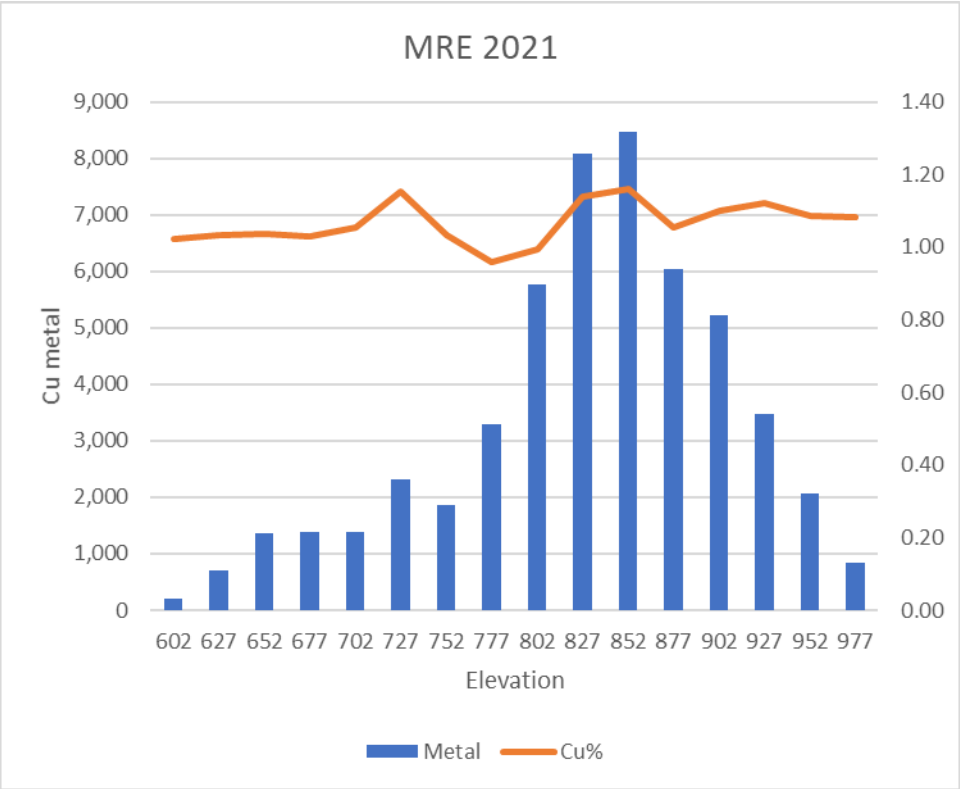


The benefit of the success of the 2021 diamond drilling in locating multiple zones of mineralisation between the dominant West, Central and East Kavanagh mineral systems is a significant increase in tonnes per vertical metre in the Indicated Resource panels. Figure 5 shows the tonnes per 25 metre elevation through the entire Kavanagh mineral system and shows the significant increase in tonnes between 765 and 940 mRL as a result of the infill drilling in 2021.

Figure 5 Tonnes of Cu metal per 25m vertical interval at Kavanagh

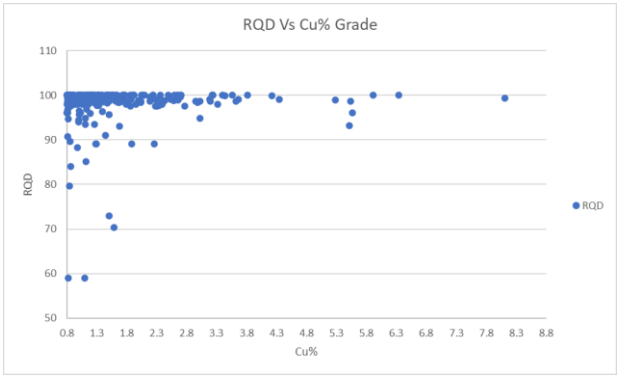


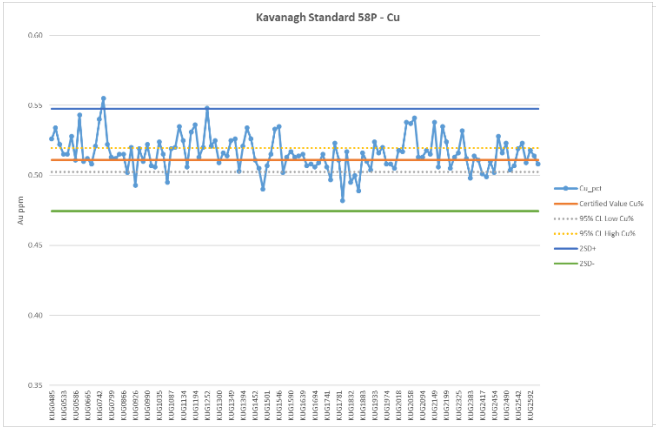
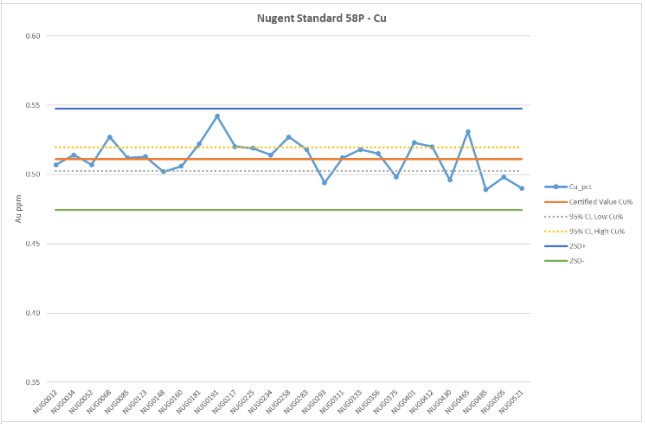
Summary

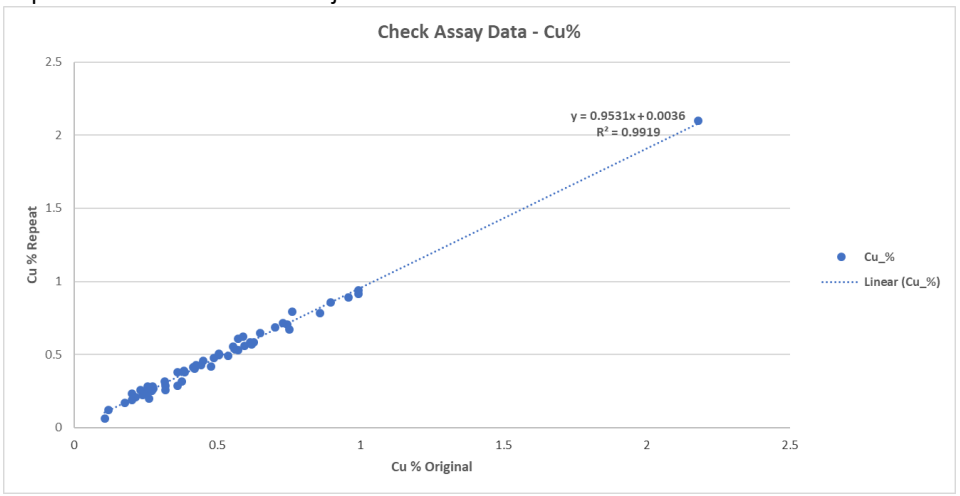
The 2021 Mineral Resource Estimate for Kavanagh has demonstrated that the infill diamond drilling has effectively reduced the uncertainty in the resource and increased the size of the resource. This has been incorporated into an initial assessment of the economic viability of an underground mining operation at Kanmantoo.

APPENDIX TWO – JORC Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Diamond drill hole (DD) samples collected by Hillgrove Resources personnel have been used for the geological interpretation and estimation. No historic pre-2004 samples or grade control samples have been used in this mineral resource estimate. • Drill hole sampling was conducted as per the Hillgrove Resources procedures and QAQC protocols. • Core samples were sawn in half using a diamond core saw. In addition, ½ core from KTDD027 was sawn into quarter and re-assayed as a QA of the previous diamond drillhole results before being utilised in this resource estimate. All core sampling was undertaken at 1m intervals or to geological boundaries as determined by the supervising geologist. Half core samples were sent for assay and the remaining core kept in core trays for future reference. • No RC drillholes were used in this resource estimate.
Drilling techniques	• All drilling was undertaken by external drilling contractors. • Core holes used HQ Diamond for the pre-collar and NQ2 through all the mineralised zones (including as wedges)
Drill sample recovery	• Diamond core recovery is recorded by Hillgrove Field Technicians during metre marking and orientation of all holes by comparing the length of drill hole advance to the recovered core metres. Results demonstrate good recoveries with an average recovery rate of >98%. There is no correlation between sample recovery and copper grades. 
Logging	• All samples are logged for lithology, alteration, weathering and mineralisation by Hillgrove geologists in accordance with Hillgrove's Core Logging Procedure. Colour and any additional qualitative comments are also recorded. • In addition, a structural log is recorded for the drill core utilising the "base of core" orientation mark collected during diamond drilling • 99% of all 2019 to 2021 diamond holes have been geotechnically logged. • All diamond core trays were photographed before sampling and these photographs are stored on the Hillgrove server. • All drill core is stored at Hillgrove's Kanmantoo core yard facility.

Criteria	Commentary
	• All geological logging is recorded into Maxwell LogChief templates and validated before being imported into the Hillgrove Datashed drillhole database. Additional validation is conducted automatically on import.
Sub-sampling techniques and sample preparation	• The core was sawn in half and the half core was despatched to ALS for each sample interval and the entire sample was then crushed and 1kg riffle split from the crushed mass and the 1kg sample then pulverised. A sub-split of 200 grams was then spilt by ALS and retained and the reject pulverised material returned to Hillgrove. From the 200 gram sub-spilt and 2 gram aliquot was scooped and weighed by ALS for 4-acid digestion. • Hillgrove have detailed sampling and QAQC procedures in place to ensure sample collection is carried out to maximise representivity of the samples and minimise contamination.
Quality of assay data and laboratory tests	• Pre 2016, all samples were submitted to Genalysis for analysis. Gold was determined by fire assay with flame AAS (FA50) and copper analysed via a mixed acid digest (method AT) with determination by Optical Emission Spectrometry (OES). If the copper result was greater than 1%, the analysis was repeated using a slightly modified mixed acid digestion technique (method AX). • Post 2016 samples were submitted to ALS Perth for assaying by four acid digest with ICP-AES analysis (ALS code ME-MS61) and gold was analysed via fire assay and Atomic Absorption Spectroscopy (AAS).   • The QAQC of sample preparation and analysis processes were via the following samples: • Certified reference materials (CRMS) from OREAS were inserted into the sample sequence at a frequency of one in 20. Standards of > 1.0% Cu were used to reflect the copper grade closer to the expected grade of any subsequent UG operation. • Blanks are inserted at a rate of one in every 20 samples, and specifically inserted in areas of high sulphides. Barren quartz washewd are used through the pulveriser bowls. • Laboratory QAQC samples were inserted with a minimum of two standards and one blank for every batch of 40 samples. • Hillgrove's Quality policy is that at a minimum of 5% of all samples are CRM's and 5% of samples submitted are blanks,10% of all samples submitted for analysis are QAQC samples. • Results from all returned QAQC samples provide reasonable confidence as to the accuracy of the assay results used in the estimation. Field duplicates show a good correlation with original sample results and in general most CRM results fall within the expected ranges.

Criteria	Commentary
	• Repeats of the coarse crush rejects was also undertaken. This shows excellent correlation with the original assay results as shown below.  •
Verification of sampling and assaying	• Umpire laboratory checks were undertaken during 2008 and 2011 with no significant issues identified. • There have been no twinned holes drilled for the Kanmantoo Copper Mineral Resource. • Primary sample and geologic data is captured in the field using Maxwell LogChief templates and imported directly into the Datashed managed SQL Database. Data was visually checked by the Geologist prior to import and additional validation was carried out by the database upon import. • Copper results were reported in ppm units from the laboratories and then converted to a % value within the database.
Location of data points	• The map projection of Map Grid of Australia 1994 - Zone 54, (MGA94-54) was used all work undertaken for this Mineral Resource. • The relative level (RL) has been calculated as RL+1000m to ensure no negative RL values within the dataset. • All drillhole collars surveyed using a Trimble survey station. The accuracy of this instrument is 10mm in the horizontal plane and 20mm in the vertical. All pick-ups were reported in MGA94-54 coordinate system. • Downhole surveys were determined using a Champ Gyro tool from Axis Mining Technology at a maximum of 12m intervals. • The Champ GYRO™ accuracy is specified at +/- 0.75° (latitude dependent) for azimuth and +/- 0.15° for inclination. It has an operating range of -20° to -90° and +20° to +90° and can operate in temperatures between -10°c to + 70°c. All of these operating specifications are within that of the drilling program.) • The azimuth data recorded by the Champ GYRO™ as True North and as such no data conversions were required. • To monitor the accuracy of the down hole surveys two holes were checked by completing multi-shot surveys on retreat. These surveys were aligned with the downhole surveys collected when drilling and as such no further multi shot check surveys were required.
Data spacing and distribution	• Drilling was completed throughout the deposit on a variable section spacing of between 15 m to 40m and an on-section down-dip spacing of between 30 m and 50m. • The variable drill spacing both along strike and on-section was considered during resource classification; mineralisation estimated on broader spaced drilling was given a lower confidence classification than mineralisation estimated using tighter spaced drilling.

Criteria	Commentary
	• All samples were composited to 2m downhole lengths from the collar of the hole prior to geostatistical analysis and Mineral Resource estimation.
Orientation of data in relation to geological structure	• The majority of holes are angled drillholes, dipping between -29º and -45º deg towards 250-280 deg (true). This is approximately normal to the observed strike of the mineralisation from in-pit mapping. • Dominant mineralisation trends as measured from in-pit Kavanagh mapping are strike 015deg and dip -75 to east.
Sample security	• A Hillgrove employee is present for the collection of the core trays from the DDH rig and is responsible for collecting and organising the samples for assay. Hillgrove has a detailed sample collection/submission procedure in place to endure sample security. • Drill core is transported in covered trays from the drill site to Hillgrove's core yard at Kanmantoo in Hillgrove vehicles under the supervision of Hillgrove staff. • Transport of core and RC samples is by dedicated road transport to the Adelaide ALS sample preparation facility. All samples are transported in sealed plastic bags and are accompanied by (either paper form or by email) a detailed sample submission form generated by the Field Technician. • On receiving a batch of samples, the receiving laboratory checks received samples against a sample dispatch sheet supplied by Hillgrove personnel. On completion of this check a sample reconciliation report is provided for each batch received.
Audits or reviews	• Core logging and sampling methods were reviewed by Runge in 2008 and were considered to be of a very high standard (report: Mineral Resource Estimate Kanmantoo Copper Deposit South Australia, Feb 2008).

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The Kanmantoo Copper Deposit is situated 55kms south-east of Adelaide on Mining Lease (ML) 6345 and is owned 100% by Hillgrove Resources Limited (HGO). • The Mining Lease overlies freehold land also held by Hillgrove Resources. • There are no Native Title interests, nor are there any historical or environmental issues considered material to this Mineral Resource.
Exploration done by other parties	• The Kanmantoo Copper Deposit has a long history of exploration and mining dating back to the mid-19th century. • In 1962, Mines Exploration Pty Ltd discovered a number of strong geophysical anomalies which were quickly followed up by a large diamond drilling program of 15,800m (KS* series drill holes). The results of this program led to a decision to begin mining in 1968. The open pit closed in 1976. • Hillgrove Resources commenced exploration drilling in 2004 and since then have completed a number of exploration drill campaigns which have resulted in extensions and additions to the known deposit. • Open pit mining and processing by Hillgrove commenced in 2011 and concluded in April 2020 • All exploration data used in this resource estimate has been collected by Hillgrove staff.
Geology	• Mineralisation occurs as a complex system of structurally controlled veins, with mineralisation typically forming pipe-like bodies and lenses of chalcopyrite, pyrrhotite, ±pyrite, ±magnetite within a quartz + biotite + andalusite ± garnet ± chlorite schist host rock. Structural studies suggest the main controls on the mineralisation are north-south striking shear zones and north-north-east/north-east striking cross-shears and tension veins.
Drill hole Information	• No exploration results have been reported in this release therefore this section is not material to this report. Exploration drilling results relevant to this resource estimate were reported 10 October 2019, 3 Sept 2020, 3 May 2021, 6 May 2021, 24 June 2021.
Data aggregation methods	• No weighting average techniques have been reported in this release. No grade cutting before length weighted 2m compositing. • No metal equivalent values have been reported.
Mineralisation widths and intercept lengths	• No exploration results have been reported in this release, therefore this section is not material to this report.
Diagrams	• Diagrams that are relevant to this release have been included in the body of the release.
Balanced reporting	• No exploration results have been reported in this release, therefore this section is not material to this report.
Other exploration data	• No exploration results have been reported in this release, therefore this section is not material to this report.
Further work	• No exploration results have been reported in this release, therefore this section is not material to this report.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• Hillgrove Resources utilise an SQL database system (Datashed) which is managed by the Database Controller assisted by the Senior Geologist. • Primary data is collected electronically into Maxwell LogChief templates with lookup tables and fixed formatting to aid validation. Data from LogChief is synchronised to Datashed managed SQL server database using detailed data entry standards and database import tools. • Data is visually checked and validated prior to being imported into the SQL database and additional validation is performed on import via a number of embedded validation rules within the SQL database system. This automatic validation is configured through the use of library tables, triggers and stored procedures designed to ensure data integrity with respect to a number of fundamental quality essentials. Any data which violates these rules is rejected and quarantined until the errors are corrected. • Data tables were exported from the SQL database as comma separated files (CSV's) using export tools embedded with the database and imported into SURPAC and Micromine software for visualisation.
Site visits	• The Competent Person works at the Kanmantoo Copper mine and is involved with the recent drilling and data collection processes. The Competent Person has also viewed all of the older diamond core and all of the recent diamond core. The Competent Person has also been involved in the open pit daily grade control processes and therefore has an understanding of the spatial continuity of the mineralised ore zones in 3D.
Geological interpretation	• Structural studies conducted by Hillgrove denote that the main controls on mineralisation are the north -south striking anastomosing shear zones and the north-east to north-north-east striking cross-shears and tension veins. This strong structural control is evident throughout the entire Kavanagh deposit. • The dip of the Kavanagh mineralisation is generally steeply dipping (70º to 80º) towards the East. • Geologic domains of the alteration envelope were predominately modelled on chlorite, sulphur and copper content with a moderate influence from structural knowledge gained during mining. • The three-dimensional alteration envelope wireframes were completed using Micromine 2020.5 and Surpac 2012 version 6.3.1 • The mineralisation being estimated is all below the depth of weathering, so no weathering surfaces were interpolated.
Dimensions	• The Kavanagh underground MRE has a north-south strike length of 500 metres, over a zone approx. 200m wide and over a depth of 500 metres below the Giant open pit. • All zones are open to depth and along strike. • The composited data was first rotated into grid north-south prior to modelling. Rotated 22deg around Z, around a centroid of 318353.5E, 6115001N, 758mRL (the strike of the mineralised zone is on average 022deg NNE). • Origin and extents of the MIK model (after the rotation of the data set) are shown below • Note that the model output from the GS3 software is in rotated space and needs to be back rotated to MGA space.

Criteria	Commentary

Entire Model (in rotated space of 022deg ENE)			
Model Min. Co-ords	318100	6114860	315
Model Max. Co-ords	318410	6115400	1190
Panel Size	4	20	25
Number of Panels	78	27	35
Discretisation points within Panel	2	5	5

Estimation and modelling techniques

- Multiple Indicator Kriging (MIK) was undertaken as the grade modelling process.
- The grade model was undertaken by Neil Schofield of FSSI Consultants (Australia).

GRADE ESTIMATION

- MIK estimation and geostatistical analysis was completed within the GS3M software package of FSSI Consultants (Australia).
- Note that the search parameters tabulated below are all in the rotated space.
- Block size was defined by the strike of the orebody and the drillhole spacing for Kavanagh 4m (east) x 20m (north) x 25m (elev)
- MIK was used to estimate copper, bismuth and gold grades. Silver calculated via regression function from copper values.
- Unsampled intervals were assigned a grade based on the average grade of waste areas.

Cu%	=	0.002
Au ppm	=	0.0025
Ag ppm	=	0.005
Bi ppm	=	0.03
S%	=	0.0012

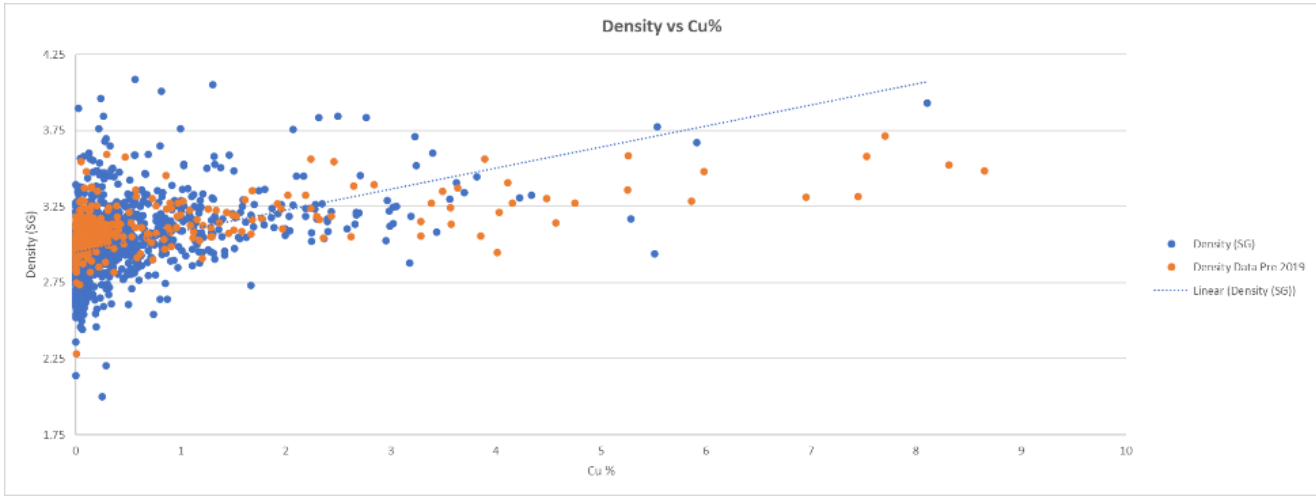
- After assigned grades to unsampled intervals, the drill holes were composited into 2m downhole lengths for interpolation
- The variography, conditional statistics for each domain for each metal were generated from the 2m composites.
- Three estimation passes were employed for all domains, each subsequent pass having an increased search size. These search parameters were determined using drill hole density and variography as a guide.

Criteria	Commentary

Estimation Parameters			
	East	**Strike**	**Down-Dip**
Search 1 (Indicated)	5m	50m	35m
Search 2 (Indicated)	7.5m	75m	52.5m
Search 3 (Inferred)	7.5m	75m	52.5m
Min data - Search 1&2	20		
Min data - Search 3	10		
Min quadrants - Search 1&2	4		
Min quadrants - Search 3	2		
Max data	48		
Ellipse dip/dip-direction	-90/112deg		

- The composite derived estimated histogram of the panel grade is transformed to a block histogram for blocks within the panel using a Direct log-normal model with a variance correction ratio of 0.313 (Block/Pts) and an information effect of 0.844.
- The model has been reviewed in both along section and in plan for consistency against the drillhole data.

Moisture	• Tonnages are estimated on a dry basis.
Cut-off parameters	• The MIK process estimated the proportion of each panel above 0.4% Cu, 0.6% Cu and 0.8% Cu and the Cu, Bi, Au grade above each Cu threshold. • The MIK estimate is reported at 0.6% Cu Cut-off grade
Mining factors or assumptions	• The MRE is within Mining Lease 6345 which is fully permitted and approved for underground mining and ore processing. • The estimated resource extends from the completed pit shells and to depth as per drilling extents. • It is assumed that the haul road to pit base at 380m below surface will be used as access to the UG development • UCS measurements were collected from 59 samples across the Kavanagh zone and waste areas to assist with developing the mining method.

Criteria	Commentary
Metallurgical factors or assumptions	• No metallurgical assumptions have been included in the resource • The Kanmantoo Copper Mine Processing Plant has been processing the Kanmantoo Ore for approximately 8 years with recoveries for copper of 90-94%, gold of 40 – 60% and silver of ~50%. Test work to enhance gold recoveries is in progress.
Environmental factors or assumptions	• Waste dumping areas and tailing storage facilities (TSFs) are already approved and constructed within the current mining lease. • Both the mine and processing plant are under full regulatory approved environmental licences and permits.
Bulk density	• Density was measured on core samples from the 2019, 2020, 2021 drilling using the wet immersion method on 2,344 NQ and NQ half core samples. • Historical 2004-2010 collected wax-coated Archimedes method density sample results were reviewed for this Mineral Resource. The density results for 444 half core samples (a mixture of NQ and HQ in size) from pre-2019 drilling were used in the density calculation. • The density data results were divided by lithology and the datasets were investigated for outliers and/or suspect values. The mean of the relevant ore type dataset was then calculated and assigned to the model once the estimation process was complete. • This density was aligned with the Bulk Density values that were used during mining of the pit and reconciled against mine production and milling • Bulk density for Kavanagh zones is 3.1 t/m3 
Classification	• The Mineral Resource has been classified into the confidence categories of Indicated and Inferred according to geological confidence and reflect the Competent Person's view on the deposit. This confidence is based on the density of copper assay data, continuity of mineralisation and knowledge of the orebody gained during past mining activities. Other factors considered were the estimation pass associated with the block estimation. • Indicated resources have an average drillhole intercept spacing of between 20 and 40m and are not based on a single drill hole or single drill section. • Inferred resources have an average drillhole intercept spacing over 40m. • If a panel was initially classified as Indicated by the MIK process, but was located deeper than 600mRL, it was reclassified as Inferred.

Criteria	Commentary
Audits or reviews	• An internal audit of the spatial continuity of the copper grades was undertaken and the estimate considered to be an appropriate estimate of the copper, gold and silver mineralisation suitable for undertaking a scoping study to evaluate the viability of an underground mining operation.
Discussion of relative accuracy/ confidence	• The model has been reviewed in both section and plan for consistency against the drill hole data. • There is no reconciliation of the underground Mineral Resource against Mill production as no underground mining has been undertaken.