HILLGROVE RESOURCES

Wednesday, 11 May 2022

UPDATED KAVANAGH UNDERGROUND MINERAL RESOURCE ESTIMATE

HIGHLIGHTS

- Highlights of this updated Kavanagh Mineral Resource Estimate, that includes the drill results as reported on 1 September 2021 and 21 March 2022, include:

Deposit	JORC 2012 Classification	Tonnage (kt)	Cu (%)	Au (g/t)	Cu Metal (t)
Kavanagh (0.6% Cu COG)	Measured	780	1.28	0.10	9,900
	Indicated	3,640	1.03	0.06	38,000
	Inferred	1,300	1.0	0.1	10,000
	Total	5,750	1.10	0.10	61,000

Note: Due to appropriate rounding, numbers may not sum

- 13% increase in the estimated total copper metal compared to the 2021 Kavanagh resource.

- 77% of the Kavanagh Resources are now classified as Measured and Indicated, including 14% of the Mineral Resource now classified as Measured.

- The resource estimates are still constrained by the extent of the drilling and not by the geology, in both the along-strike and down-dip directions.

- The updated Kavanagh mineral resource continues to affirm the economic potential for an underground operation utilising the invested capital in the Kavanagh underground operations and Kanmantoo Processing Plant.

Hillgrove Resources Limited (Hillgrove, the Company) (ASX:HGO) is pleased to provide the following updated Mineral Resource Estimate for the Kavanagh deposit located at Kanmantoo 55kms southeast of Adelaide in South Australia. The resource has been estimated only for the Kavanagh mineralised zones and does not include any update for the Nugent deposit and is reported in accordance with The JORC Code 2012 Edition. This resource estimate update includes the results of the 2021-2022 diamond drilling programme at Kavanagh to 31 March 2022, the results of which were reported on 1 September 2021 and 21 March 2022.

Overall, as with all HGO's previous drill programs at Kavanagh, this drill program has again resulted in an increase in the resources at Kavanagh and a conversion of Inferred Resources to lower risk classification categories.

Commenting on the mineral resource update for the Kavanagh deposit, Hillgrove CEO and Managing Director, Lachlan Wallace said:

"The latest drilling has increased the Kavanagh Mineral Resource Estimate in both size and geological confidence. We expect the mining inventory to grow as these results are incorporated into the mine plan.

The upgrade in resource classification reflects the increased drill hole density in the upper levels of Kavanagh. Increasing the geological confidence in this area is a noteworthy achievement as these levels are mined early in the plan and determine the recommencement of processing and early cash generation.

Importantly, the resource is constrained only by the extent of the drilling and remains open along-strike and down-dip, providing an excellent opportunity to further increase the resource with further drilling."

The total mineral resource at Kanmantoo, including Kavanagh and Nugent, is now nearing 70,000 tonnes copper.

Table 1 Total Mineral Resource at Kanmantoo

Deposit	JORC 2012 Classification	Tonnage (kt)	Cu (%)	Au (g/t)	Cu Metal (t)
Kavanagh (0.6% Cu COG)	Measured	780	1.28	0.10	9,900
	Indicated	3,640	1.03	0.06	38,000
	Inferred	1,300	1.0	0.1	10,000
	Total	5,750	1.10	0.10	61,000
Nugent (0.8% Cu COG)	Indicated	202	1.4	0.47	2,800
	Inferred	457	1.3	0.7	6,000
	Sub-Total	659	**1.32**	**0.61**	8,700
Totals	**Measured**	**780**	**1.28**	**0.10**	**9,900**
	Indicated	**3,840**	**1.05**	**0.09**	**40,400**
	Inferred	**1,800**	**1.1**	**0.2**	**19,000**
	Total	**6,405**	**1.09**	**0.12**	**69,600**

Note: Due to appropriate rounding, numbers may not sum

Further details of the resource estimate are provided in Appendices A and B.

The next steps for the evaluation of the Kavanagh underground Cu-Au mineralisation are as follows:

- Complete an updated Economic Assessment based on the 2022 resource estimate,
- Update the Nugent Mineral Resource Estimate to incorporate recent drilling (24 holes), and
- Continue drilling to expand the mineral resource for continued mine growth.

Authorised for release by the Board of Hillgrove Resources Limited.

For more information contact:

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Competent Person's Statement

The information in this release that relates to the Exploration Results and Mineral Resource Estimates 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 they appear.

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.

APPENDIX A

March 2022 Kavanagh 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 2021-22 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, Critchley, Paringa and Emily Star Cu-Au deposits have not been drilled in this program. The 2021-22 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 March 2022 MRE.

The 2020 Nugent MRE reported in December 2020[1] has not been updated as the final results of the 2021-22 drilling are still awaited, and an updated Nugent MRE is expected in 2022.

Figure 1 Plan View of the location of the Kavanagh mineral resource

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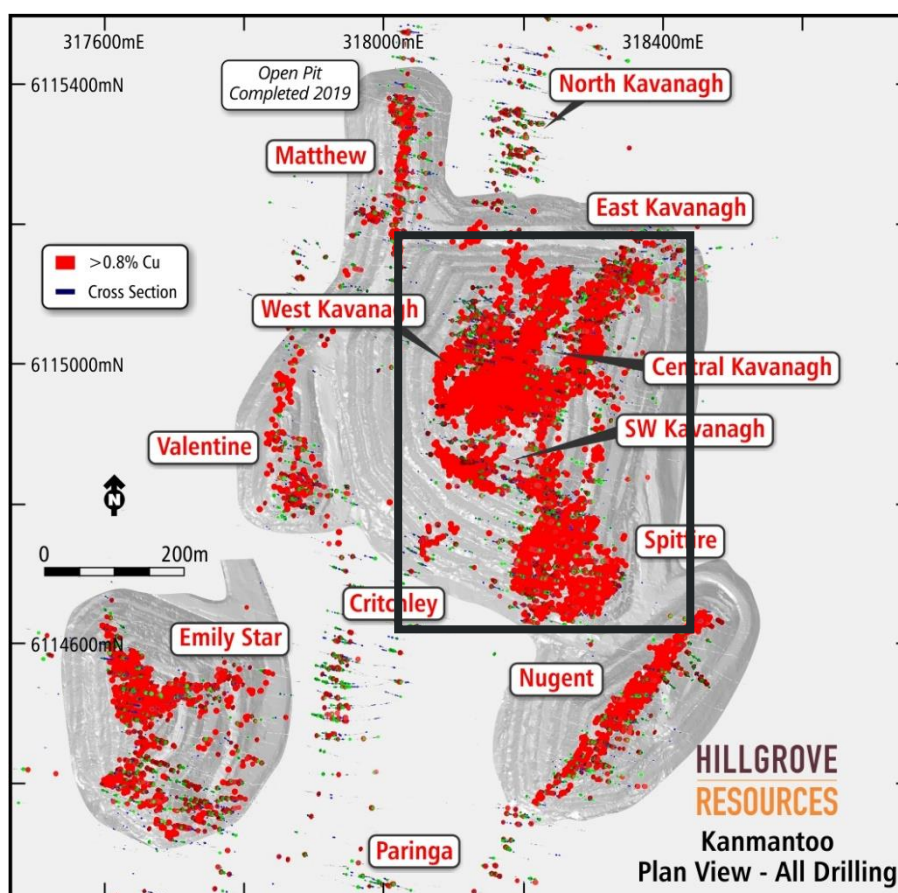
[1] Refer ASX release of 7 December 2020

The March 2022 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 drill hole data. There is no reconciliation of this 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[2].

All diamond drill holes drilled by HGO to 31 March 2022 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 >98% 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 from drill hole collar for all data analysis and estimation.

Neil Schofield of FSSI Consultants (Australia) has undertaken the variography, MIK resource estimation and initial panel risk 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 oriented at -90 deg to 112 deg (dip/dip-direction). Measured Resource panels are only located within the Central Kavanagh lode system and have been estimated from 20 composites within four quadrants within an ellipse of 5m (across-strike) by 50m along-strike and 35m down-dip. The panels identified as estimated from this first search strategy have then been reviewed by the geology team and those that are within a single area within the Central Kavanagh lode system and closely identify with the highest drill density area are classified as Measured and the remainder are re-coded as Indicated. Panels are also classified as Indicated if estimated within a search strategy 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). Inferred panels are estimated where the same search strategy only locates 10 composites within two quadrants. All estimated panels below 600mRL have been classified as Inferred.

Panels are 4m (east) by 20m (north) by 25m (elevation) and are oriented along the strike of the mineralisation at 022deg. In each panel 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 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).

Figure 2 is an example of a longitudinal 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.

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

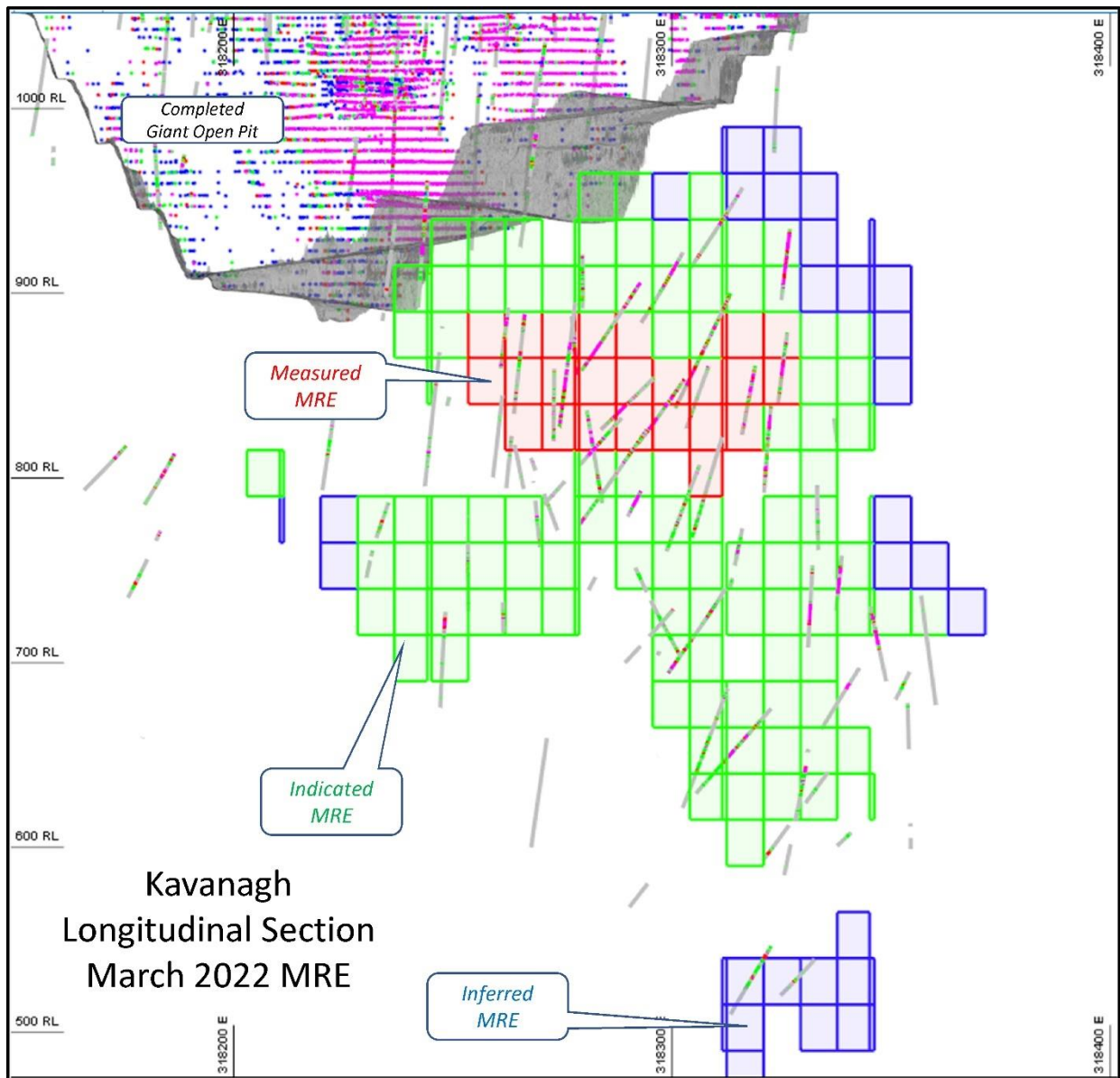**Figure 2 Long section through the 2022 MRE showing the classification**

Kavanagh
Longitudinal Section
March 2022 MRE

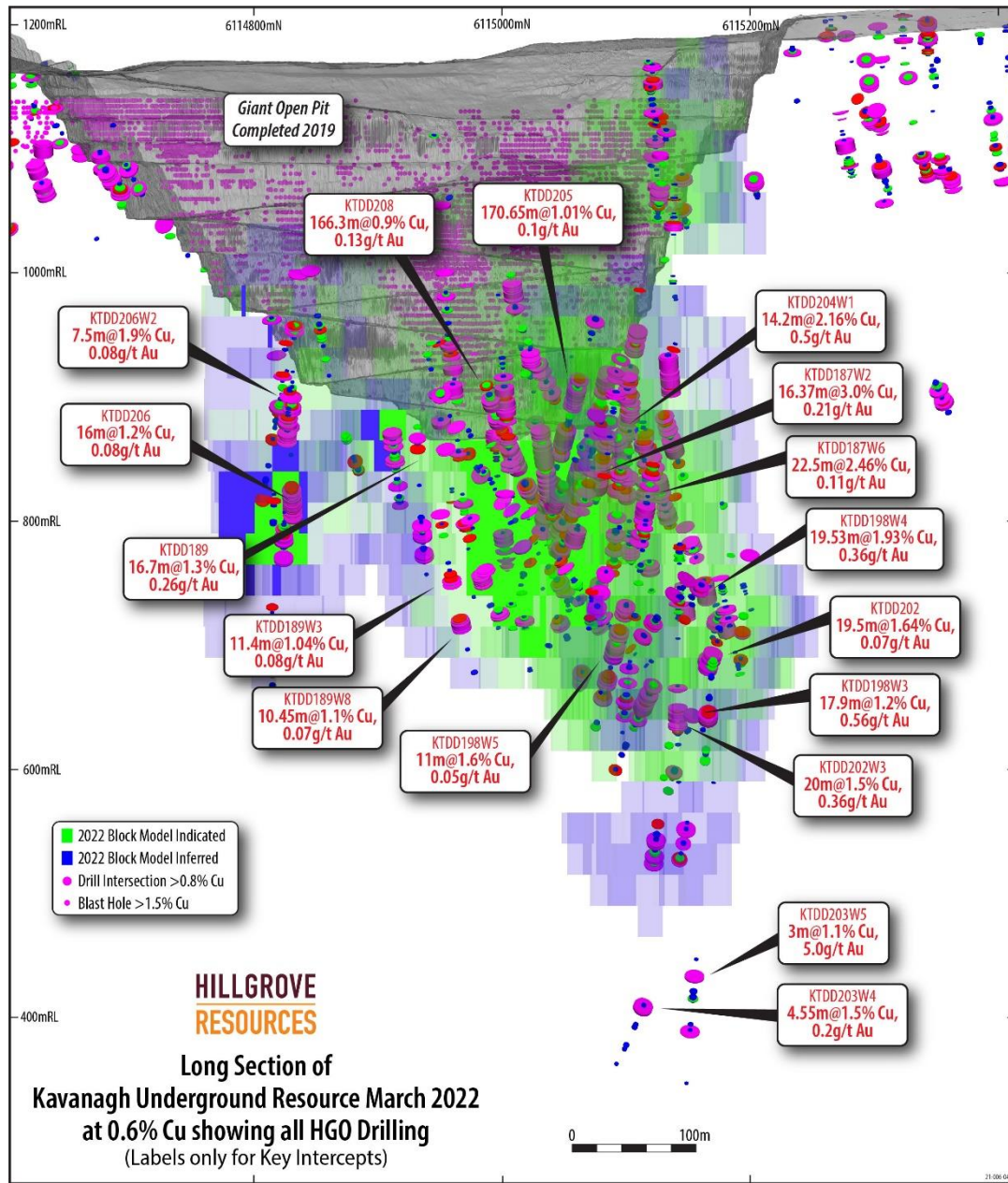**Figure 3 Long section through whole Kavanagh deposit showing extent of the 2022 MRE**

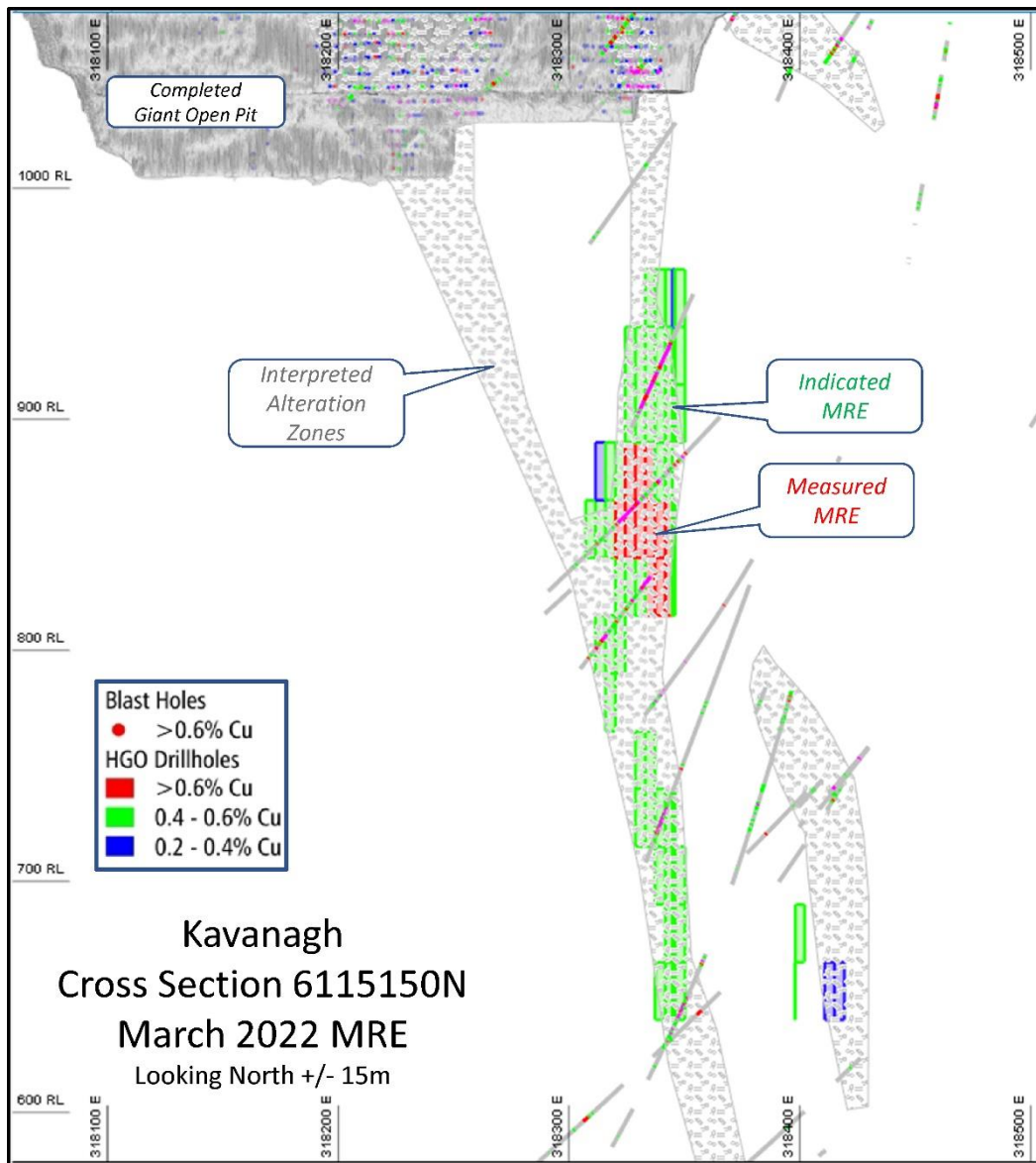**Figure 4 Cross section at 6115150 North showing classification**

Figure 5 shows the tonnes per 25 metre elevation through the entire Kavanagh mineral system and shows the significant increase in tonnes between 900 and 800 mRL as a result of the infill drilling in 2021-22. Further drilling below 800 RL is required to continue to grow the resource.

Figure 5 Cu metal by depth
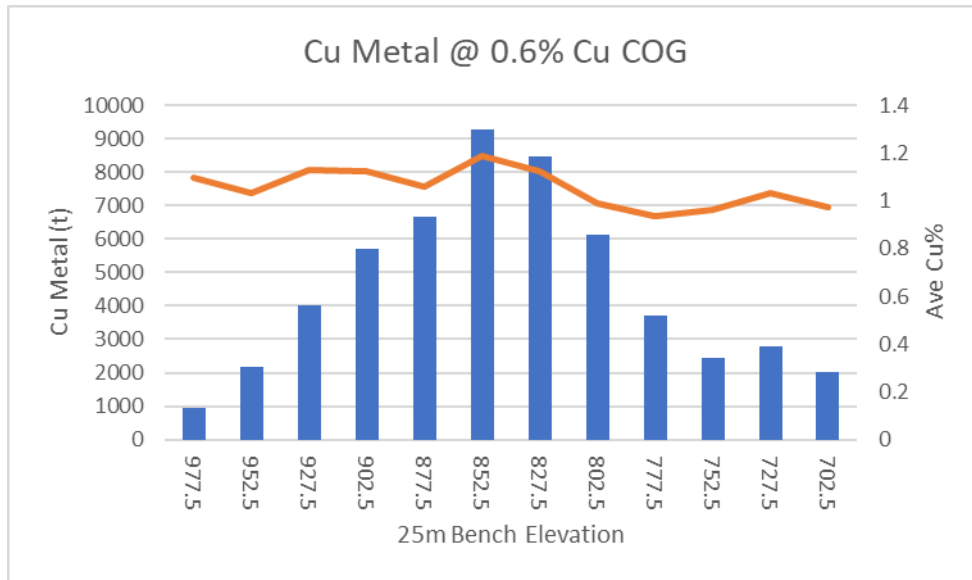
Summary

In summary, the March 2022 Mineral Resource Estimate for Kavanagh has demonstrated that the infill and extensional diamond drilling has effectively reduced the uncertainty in the resource and increased the size of the resource. This will be incorporated into an updated assessment of the economic viability of an underground mining operation at Kanmantoo.

APPENDIX B – JORC Table 1

Section 1   Sampling Techniques and Data

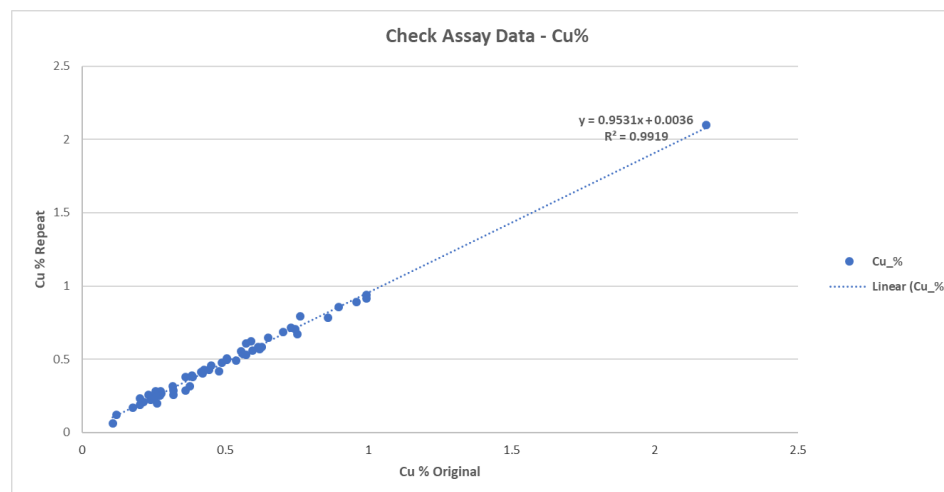| Criteria	Commentary
Sampling techniques	- Diamond drill hole (DD) samples collected by Hillgrove Resources personnel have been used for the geological interpretation and estimation. No historic pre-2004 samples or grade control samples have been used in this mineral resource estimate. - Drill hole 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 undertaken by external drilling contractors. HQ core as a precollar. Thence NQ drilling for all subsequent drilling ncluding all 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 in this DDH drill program. RQD Vs Cu% Grade chart
Logging	All drill core was logged for lithology, alteration, weathering and mineralisation by Hillgrove geologists in accordance with Hillgrove's Core Logging Procedure. Colour and any additional qualitative comments were also recorded.

Criteria	Commentary
	• High quality photographs of all drill core before being sampled were taken under controlled light at the HGO core yard at Kanmantoo. • All drill core is stored at Hillgrove's Kanmantoo core yard facility. • All geological logging is recorded into LogChief (a database product from Maxwell Geosciences) templates and visually validated before being imported into the Hillgrove drill hole database. Additional validation is conducted automatically on import. • In addition, a structural log is recorded utilising the "base of core" orientation mark collected during diamond drilling. • A geotechnical log is also recorded for all post 2018 drilling.
Sub-sampling techniques and sample preparation	• For selected intervals the core was sawn in half and the half core despatched to ALS for each sample interval and the entire sample then crushed and 1kg riffle split from the crushed mass and the 1kg sub-sample then pulverised. A sub-split of 200 grams was then split by ALS and retained, and the reject pulverised material returned to Hillgrove. From the 200 gram sub-split a 2 gram aliquot was scooped and weighed by ALS for 4-acid digestion. • Hillgrove has detailed sampling and QAQC procedures in place to ensure sample collection is carried out to maximise representivity of the samples and minimise contamination and maintain sample numbering integrity.

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).
	• All samples post 2016 were submitted to ALS for analysis. ALS code ME-MS61 using a 4-acid digest with determination by Mass Spectrometry. If the copper result was greater than 1%, the analysis was repeated using a modified acid digestion technique.
	• Gold is assayed by 30g Fire Assay. If > 10 g/t then repeated by fire assay with a gravimetric finish.
	• The QAQC of sample preparation and analysis processes were via the following samples:
	    ○ Certified reference materials (CRM's) inserted into the sample sequence at a frequency of one in 20. OREAS standard 58P has been used to provide a CRM Standard grade of 0.51% Cu, which is relevant for the expected cutoff grades used for resource estimates at Kavanagh.
	    ○ Results from all returned QAQC samples provide reasonable confidence as to the accuracy of the assay results used in the estimation. >90% of assays fall within 2SD of the expected CRM mean grade for Cu and Au.

Criteria	Commentary

Kavanagh Standard 58P – Cu
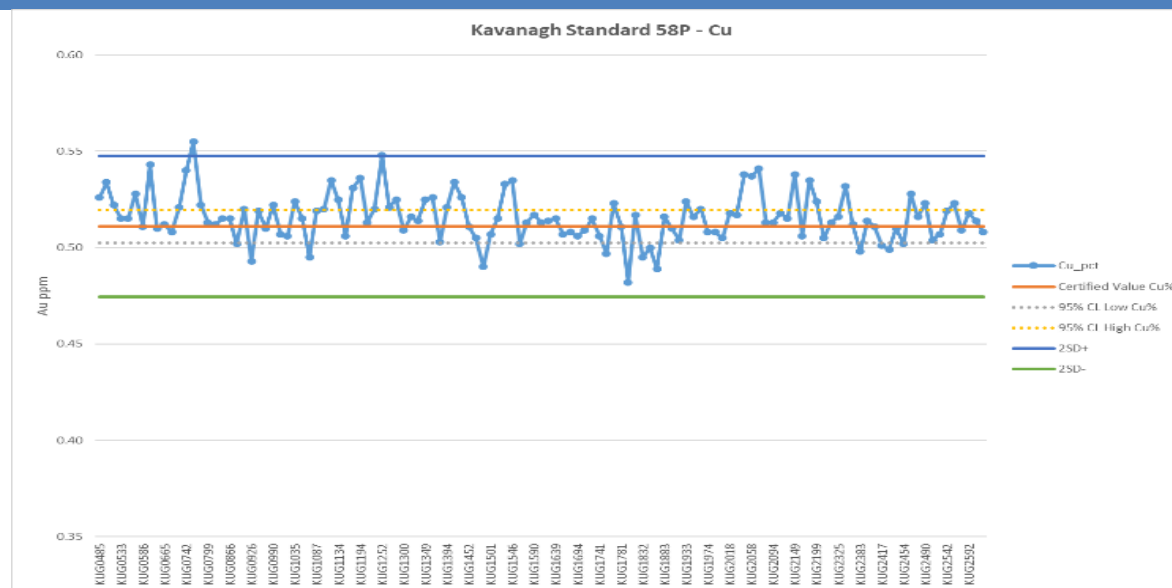
- o Laboratory inserted QAQC samples were inserted with a minimum of two standards and one blank for every batch of 40 samples.
- Repeats of coarse crush rejects also undertaken. These show excellent correlation with the original assay results.

Check Assay Data - Cu%

$y = 0.9531x + 0.0036$
$R^2 = 0.9919$

Criteria	Commentary
	• Quartz flushes are introduced to the bowl pulverisers within every high sulphide interval and the flush material assayed. These are monitored and where Cu contamination of the quartz flush occurs the batch is repeated by the assay lab. For the holes reported there are no examples of sulphides contaminating successive samples via sample preparation processes. • Quartz washes are also utilised through the Boyd crusher where high sulphides are present and identified by the logging geologist to ALS. • Hillgrove's quality policy is that at a minimum of 5% of all samples are CRM's, and 5% of samples submitted are blanks thus ensuring that as a minimum, 10% of all samples submitted for analysis are Hillgrove QAQC samples.
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. • 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	• All holes are angled drill holes, dipping at -29 to -50deg towards 250 – 280deg (true). This is approximately normal to the observed strike of the mineralisation from core logging of the mineralisation. • Dominant mineralisation trends as measured from in-pit mapping are strike 015deg and dip -75deg to east.

Criteria	Commentary
geological structure	
Sample security	- A Hillgrove employee is present for the collection of core trays from the DDH rig and is also responsible for collecting and organising the samples ready for assay. Hillgrove has a detailed sample collection/submission procedure in place to ensure 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 the half-sawn drill core samples is by dedicated road transport to the Adelaide 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. - 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	There has not been an external review of this DDH drilling program. 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). ML 6345 is granted to 6 September 2029. • The Mining Lease overlies freehold land also owned 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	• Drill collars, surveys, intercepts are reported in previous ASX releases of 10 October 2019, 3 September 2020, 3 May 2021, 6 May 2021, 24 June 2021, 1 September 2021, 21 March 2022.
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	• Insitu rock density has been measured by wet immersion method. density. The results indicate that the bulk rock density of 3.1t/m3 as used at the Kavanagh open pit is a reasonable representation of bulk density for all mineralisation.
Further work	• Underground evaluation studies.

Section 3 Estimation and Reporting of Mineral Resources

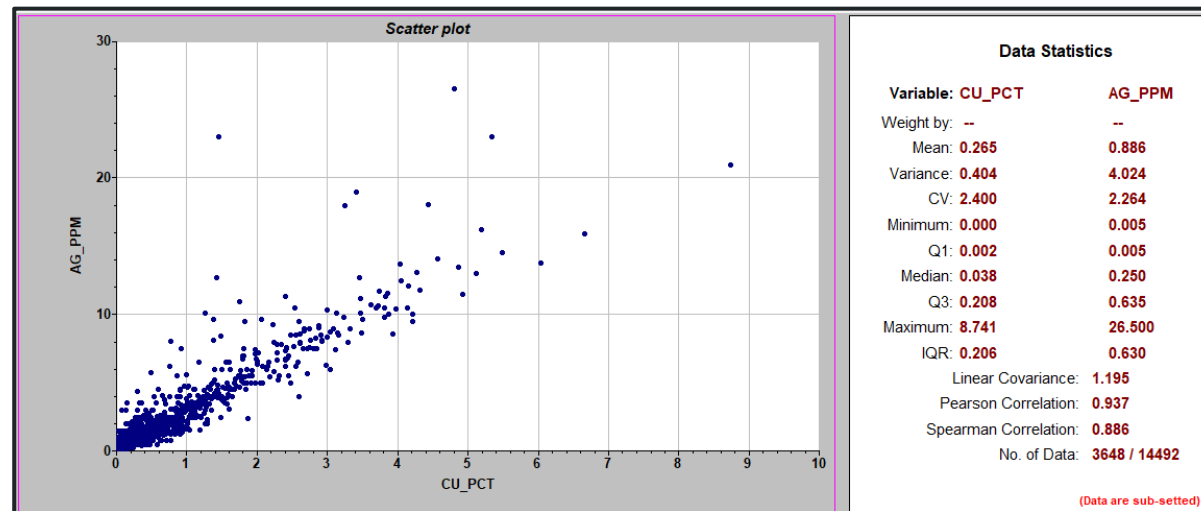| Criteria	Commentary
Database integrity	- Hillgrove Resources utilise an SQL database system (Datashed) which is managed by the Database Controller assisted by the Senior Geologist. - Primary data is collected electronically into Maxwell LogChief templates with lookup tables and fixed formatting to 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 where silver = Estimated Cu% * 2.8965. See strong correlation between Cu and Ag below.

Scatter plot

Data Statistics

Variable:	CU_PCT	AG_PPM
Weight by:	--	--
Mean:	0.265	0.886
Variance:	0.404	4.024
CV:	2.400	2.264
Minimum:	0.000	0.005
Q1:	0.002	0.005
Median:	0.038	0.250
Q3:	0.208	0.635
Maximum:	8.741	26.500
IQR:	0.206	0.630
Linear Covariance:	1.195	
Pearson Correlation:	0.937	
Spearman Correlation:	0.886	
No. of Data:	3648 / 14492	

(Data are sub-setted)

- Unsampled intervals were assigned a grade based on the average grade of waste areas.
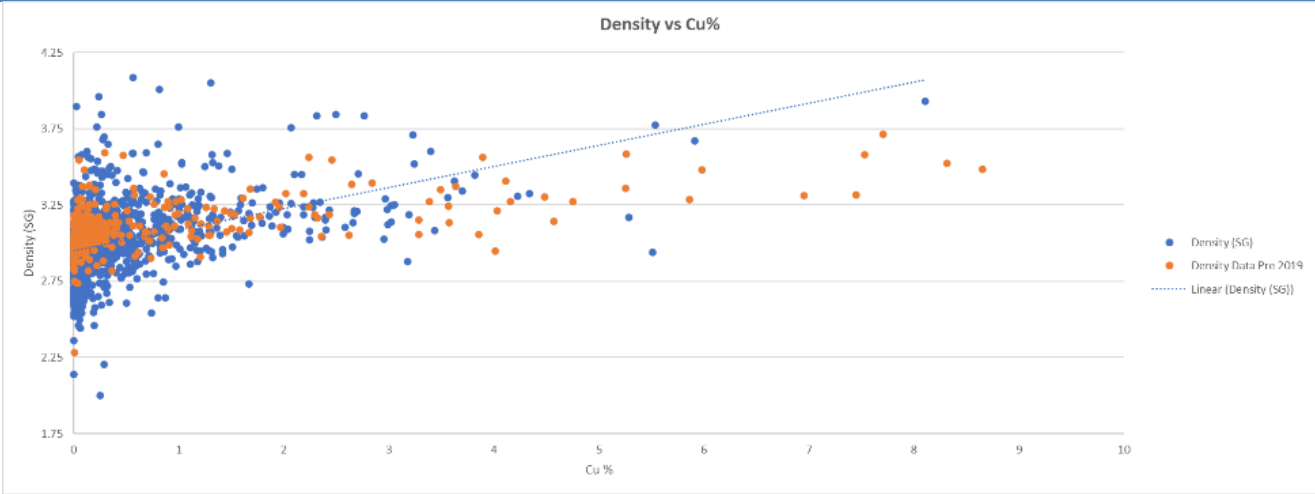
Cu%	=	0.002
Au ppm	=	0.0025
Ag ppm	=	0.005
Bi ppm	=	0.03
S%	=	0.0012

- 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.

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 Local simulation model with a variance correction ratio of 0.313 (Block/Pts) and an information effect of 0.844.

Criteria	Commentary
	• 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.
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, 2022 drilling using the wet immersion method on 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.

Criteria	Commentary
	Density vs Cu%
Classification	- The Mineral Resource has been classified into the confidence categories of Measured, 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. - Measured Resources are classified where there are several drill holes in close proximity (<25m distant) through the Central Kavanagh mineralised zone and where the panels form a cohesive mass of adjoining panels. - 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.
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.