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ASX RELEASE

HILLGROVE RESOURCES

Tuesday, 26 July 2022

UPDATED NUGENT UNDERGROUND MINERAL RESOURCE ESTIMATE

HIGHLIGHTS

- Highlights of this updated Nugent Mineral Resource Estimate, that includes the drill results as reported on 6 May 2022, include:

Deposit	JORC 2012 Classification	Tonnage (kt)	Cu (%)	Au (g/t)	Cu Metal (kt)
Nugent 2022 (0.7% Cu COG)	Indicated	865	1.19	0.64	10.3
	Inferred	400	1.1	0.3	5
	Total	1,270	1.18	0.54	15

Note: Due to appropriate rounding, numbers may not sum

- 70% increase in the total copper metal compared to the 2020 Nugent resource of 8.7k tonnes Cu.
- 69% of the Nugent Resources are now classified as Indicated compared to 30% Indicated in the 2020 Nugent MRE.
- 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 Nugent mineral resource continues to affirm the potential for an underground operation utilising the invested capital in the Kanmantoo Mining Lease and Processing Plant.

Hillgrove Resources Limited (Hillgrove, the Company) (ASX:HGO) is pleased to provide the following updated Mineral Resource Estimate for the Nugent Cu-Au deposit located on ML6345 at Kanmantoo 55kms southeast of Adelaide in South Australia. The resource has been estimated only for the Nugent mineralised zone 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 Nugent to 31 March 2022, the results of which were reported on 6 May 2022.

Overall, as with all HGO's previous drill programs at Nugent and Kavanagh, the 2021-22 Nugent drilling program has resulted in an increase in total resources and a conversion of Inferred Resources to lower risk classification categories.

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

> *"The latest drilling has increased the Nugent Mineral Resource Estimate in both size and geological confidence. I expect the mining inventory to grow as these results are incorporated into the mine plan.*
>
> *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 over 75,000 tonnes copper.

Table 1 Total Mineral Resource at Kanmantoo

Deposit	JORC 2012 Classification	Tonnage (kt)	Cu (%)	Au (g/t)	Cu Metal (kt)
Kavanagh 2022 (0.6% Cu COG)	Measured	780	1.28	0.1	9.9
	Indicated	3,640	1.03	0.06	38
	Inferred	1,300	1	0.1	13
	Sub-Total	5,750	1.1	0.1	61
Nugent 2022 (0.7% Cu COG)	Indicated	865	1.19	0.64	10.3
	Inferred	400	1.1	0.3	5
	Total	1,270	1.18	0.54	15
Totals	**Measured**	**780**	**1.28**	**0.1**	**9.9**
	Indicated	**4,505**	**1.06**	**0.2**	**48**
	Inferred	**1,700**	**1**	**0.1**	**15**
	Total	**6,985**	**1.08**	**0.16**	**75.9**

Note: Due to appropriate rounding, numbers may not sum

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

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Authorised for release by the Board of Hillgrove Resources Limited.

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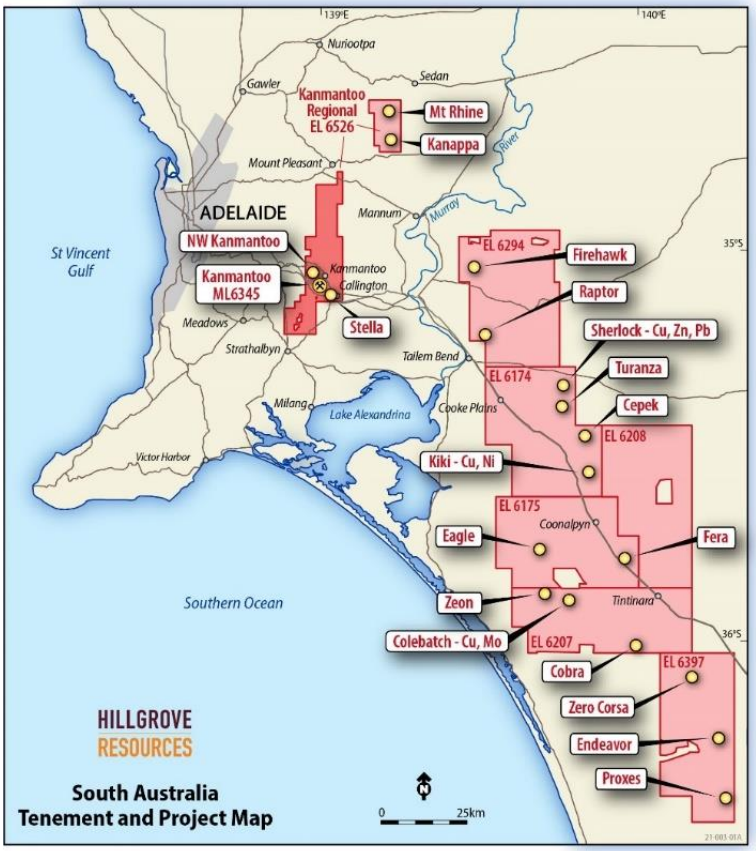
Competent Person's Statement

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 and Nugent Copper deposits are located less than 55 kilometres from Adelaide in South Australia.



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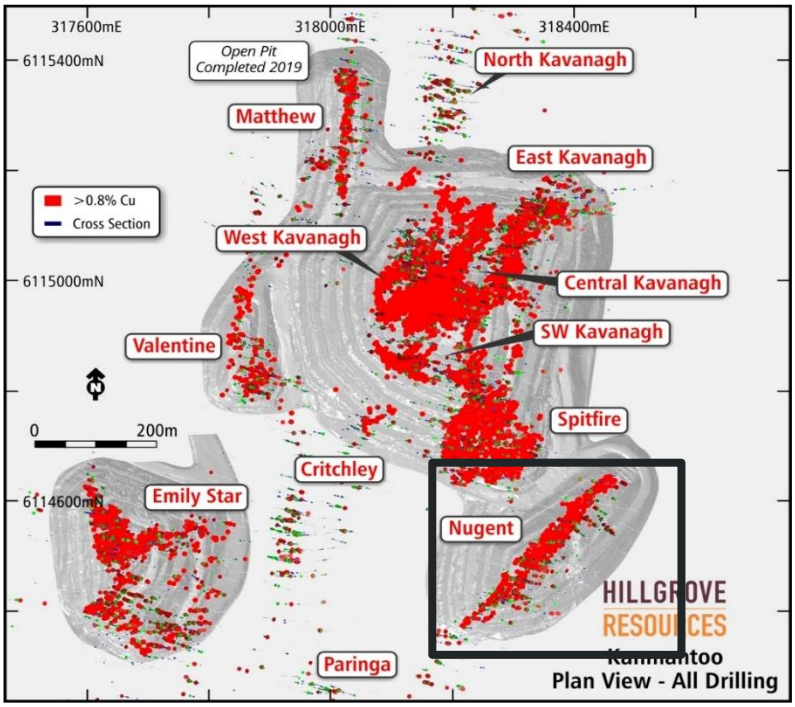
APPENDIX A

July 2022 Nugent Mineral Resource Estimate ("MRE")

Figure 1 shows a plan view of the general location of the different Cu-Au deposits at Kanmantoo. The Nugent deposit is located at the southern end of the Mine Lease and is able to be accessed from the Giant Pit haul road approximately 180m north of the Nugent deposit.

The 2021-22 Nugent drill results (reported on 6 May 2022) have been merged with Hillgrove's previously drilled diamond and RC drill hole database and used to build this updated Mineral Resource Estimate.

Figure 1 Plan view of the location of the Nugent mineral resource



The July 2022 Nugent MRE has been estimated using a Multiple Indicator Kriging (MIK) process to estimate the Cu grades of a 3D grid of panels through the Nugent mineralised zone below the Nugent open pit from the diamond and RC drill hole data. There is no reconciliation of this MIK panel model, as the deposit has 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[1].

All diamond drill holes drilled by HGO to 31 March 2022 have been used to estimate the block grades in this MRE. Grade control data have not been used in the estimation of the spatial continuity or grade estimates. The open pit grade control data have been used to assist the interpretation of the general trends of the mineralised zone.

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

Unsampled intervals have been assigned zero Cu, Au, Bi, Ag values and then the drill hole samples composited to 1 metre downhole lengths from drill hole collar for all data analysis and estimation.

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

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The drill hole data and geology therefrom have been used to interpret a wireframe of the Nugent Lode system. The Nugent lode system is a single lode system within which two Cu zones occur. There are additional Cu, Cu-Au and Au only vein sets in both the Hangingwall and Footwall of the wireframed Nugent lode (for example, KTDD230 14.5m @ 1.6% Cu, 0.34 g/t Au from 252.2m downhole), but these have not been wireframed due to a lack of drilling data and geological understanding of their continuity.

Variography of the Cu mineralisation has been modelled and a Multiple Indicator Kriging algorithm applied to the composited data using the wireframe of the Nugent Lode as a hard boundary for the kriging search algorithm. The search strategy is a weighted ellipse oriented at -72 deg to 130 deg (dip/dip-direction). Panels are 2m (east) by 15m (north) by 20m (elevation) and are oriented along the strike of the mineralisation at 040deg. In each panel the proportion of the panel above the 0.7% Cu cut-off grade is estimated, and the Ag, Bi, Au grade above the relevant Cu COG is also estimated.

Indicated Resource panels are only located within the wireframed main Nugent Lode and have been estimated from 20 composites within four quadrants within an ellipse of 7m (across-strike) by 60m along-strike and 85m down-dip. Inferred panels are estimated where the same search strategy only locates 10 composites within two quadrants.

Gold, silver and bismuth have been estimated assuming a reasonably strong correlation with copper.

All the mineralisation is in fresh rock and an average bulk density has been estimated from 341 drill samples. The average bulk density of the Nugent Lode samples of 3.0 t/m3 has been assigned to all blocks (which is consistent with the bulk density when open pit mining of higher-grade material).

Figure 2 is a longitudinal section and Figure 3 is a set of three cross-sections through the Nugent mineral system showing the MIK panels coloured by classification against the HGO diamond and RC drilling used in the estimate. The sections indicate that the MIK method has appropriately modelled the copper mineralisation and its geologic uncertainty.

Figure 2 Long section through the 2022 MRE showing the classification

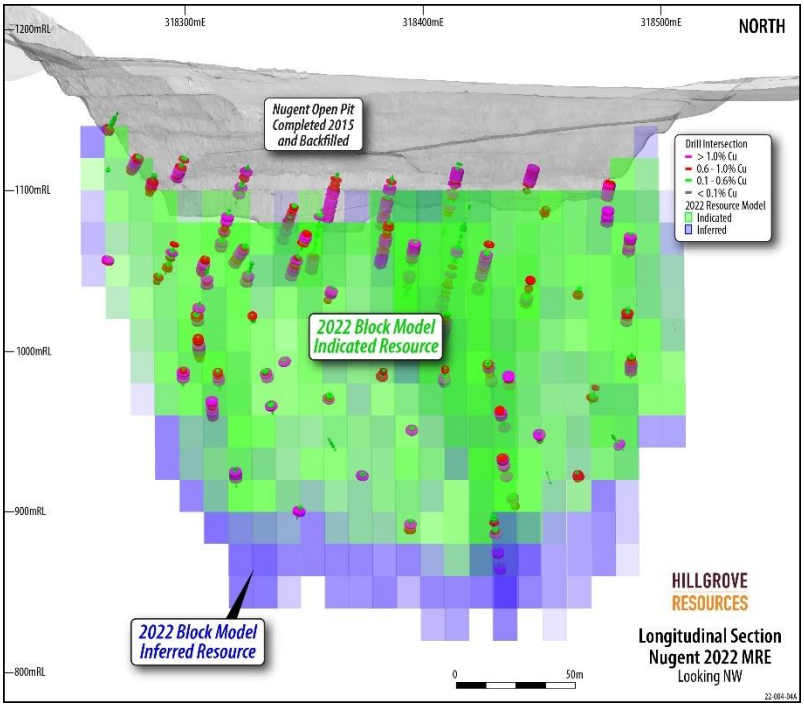
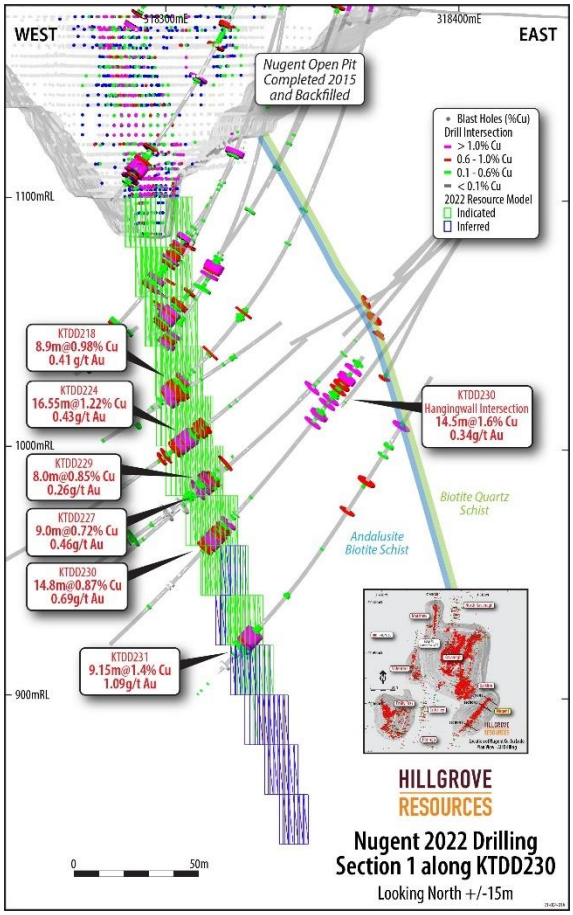
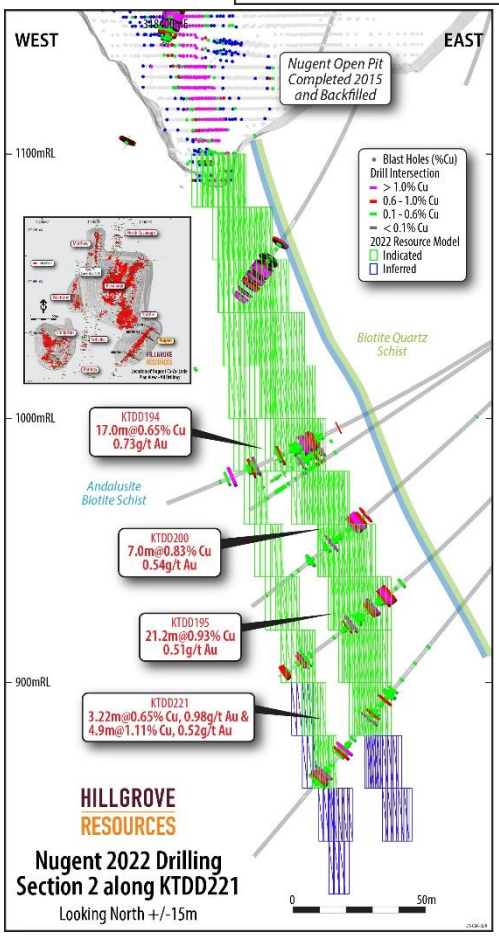


Figure 3 Cross sections of 2022 MRE showing classification





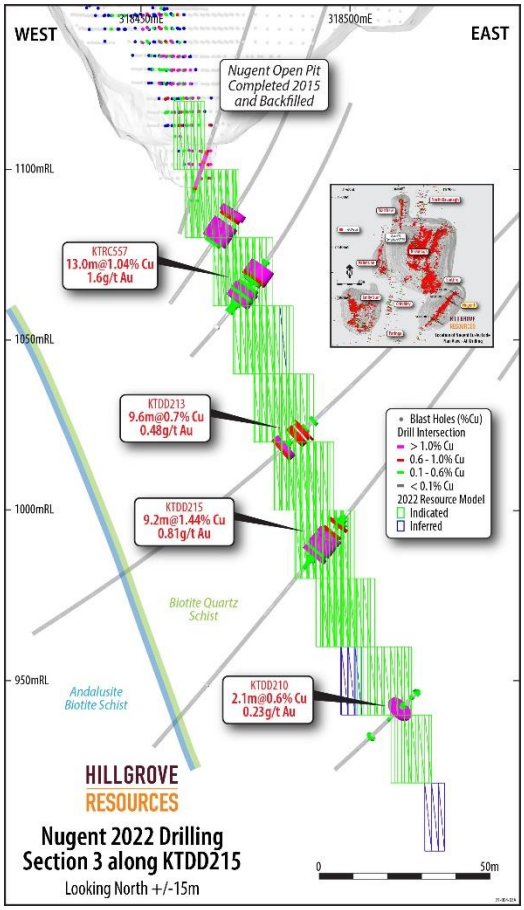


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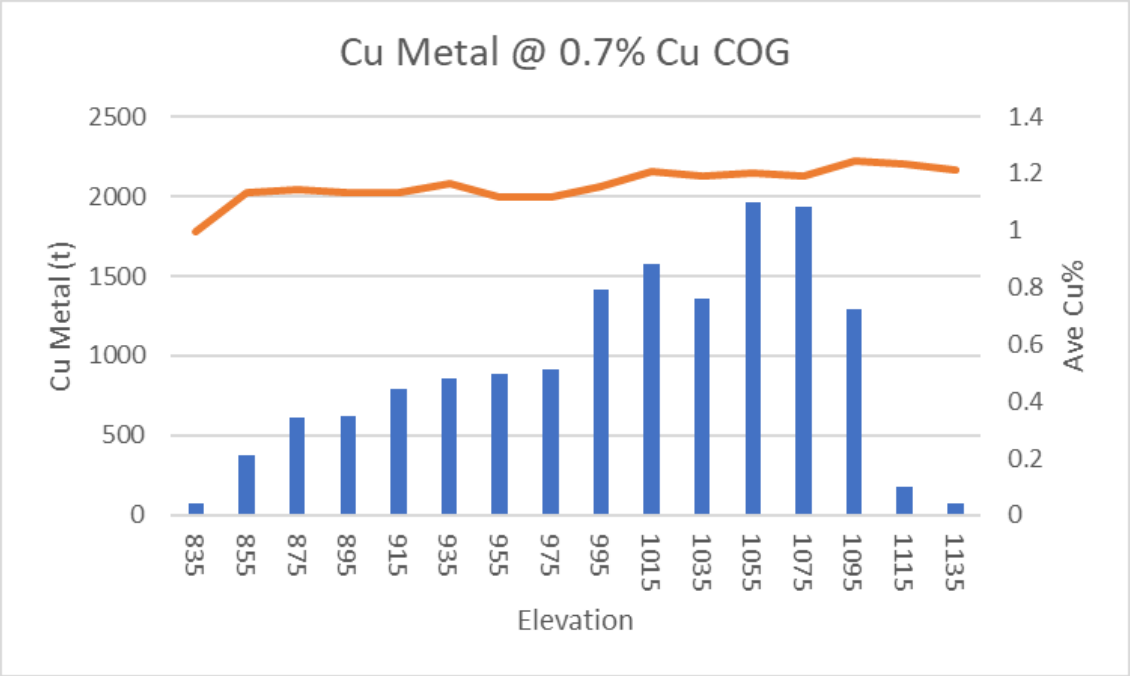
Figure 4 shows the tonnes per 20 metre elevation through the entire Nugent mineral system and shows that further drilling below 980 RL is required to continue to grow the resource.

Figure 4 Cu metal by depth



Summary

In summary, the July 2022 Mineral Resource Estimate for Nugent has demonstrated that the infill and extensional diamond drilling undertaken from 2020 to 2022 has significantly increased the size of the total resource and effectively reduced the uncertainty in the resource.

The updated Nugent resource will now be able to be incorporated into an updated assessment of the economic viability of an underground mining operation at Kanmantoo.

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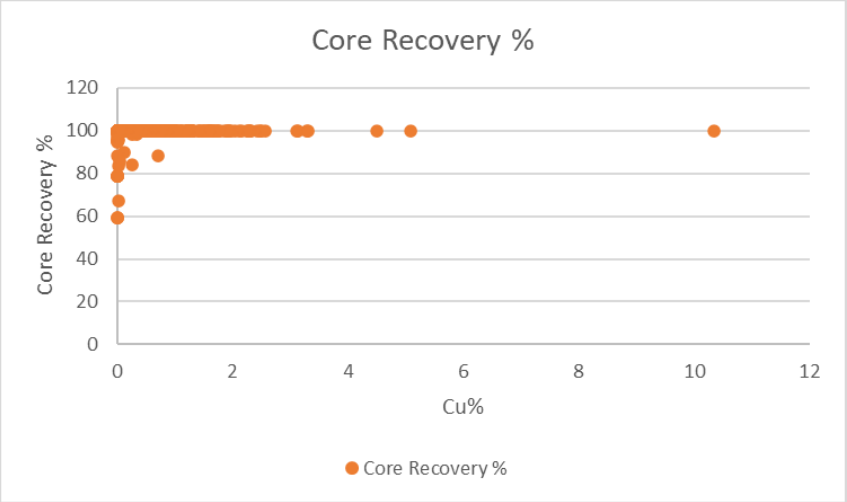
APPENDIX B – JORC Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Diamond drill hole (DD) and Reverse Circulation (RC) 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. 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. • Previous RC and DD drillholes, drilled by HGO and previously reported, were used in this resource estimate where located at or below the base of the previously mined Nugent open pit. • See ASX release 26 May 2016 for a description of the pre-2019 Nugent drilling and sampling.
Drilling techniques	• All drilling undertaken by external drilling contractors. • Diamond drilling as HQ core as a precollar and thence NQ drilling for all subsequent diamond drilling including all wedges. • Pre 2020 RC drilling was undertaken with 5inch bits and 4.5inch drill rods with face sampling bits.
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 a recovery rate of >98.7 of core samples having > 99% core recovery. There is no correlation between sample recovery and copper grades in this DDH drill program. 

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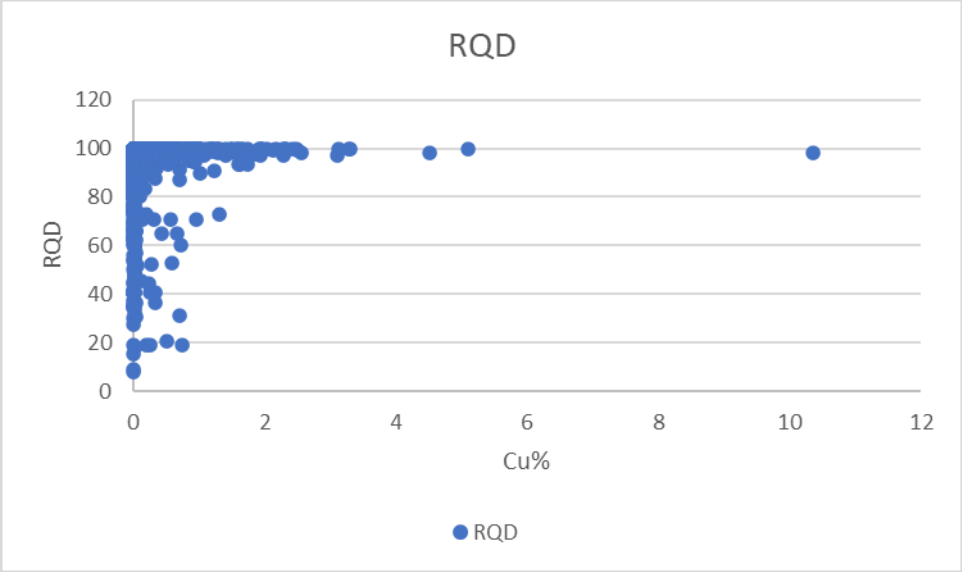
Criteria	Commentary
Logging	• All drill core was logged for lithology, alteration, weathering and mineralisation by Hillgrove geologists in accordance with Hillgrove's Core Logging Procedure. Colour and any additional qualitative comments were also recorded. • High quality photographs of all drill core 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. • There is no correlation between RQD and Cu grade • For core intervals > 0.1% Cu, 92% have an RQD > 95 • For core intervals < 0.1% Cu, 80% have an RQD > 95 
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.

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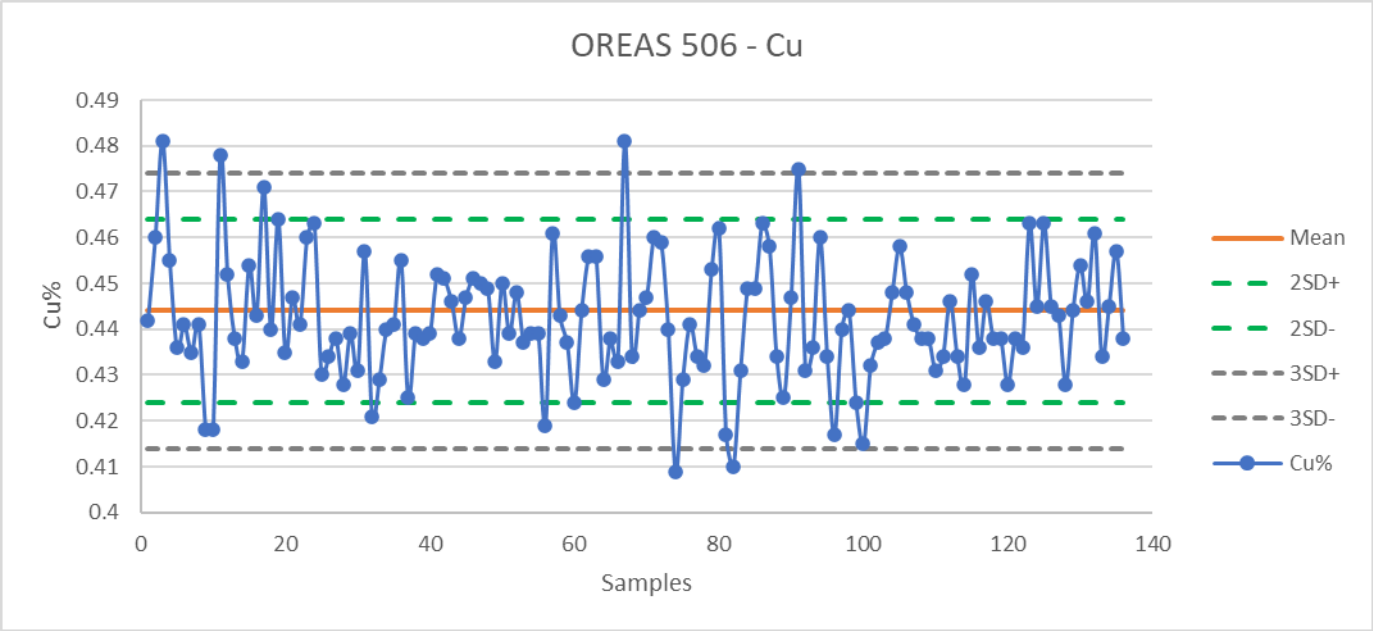
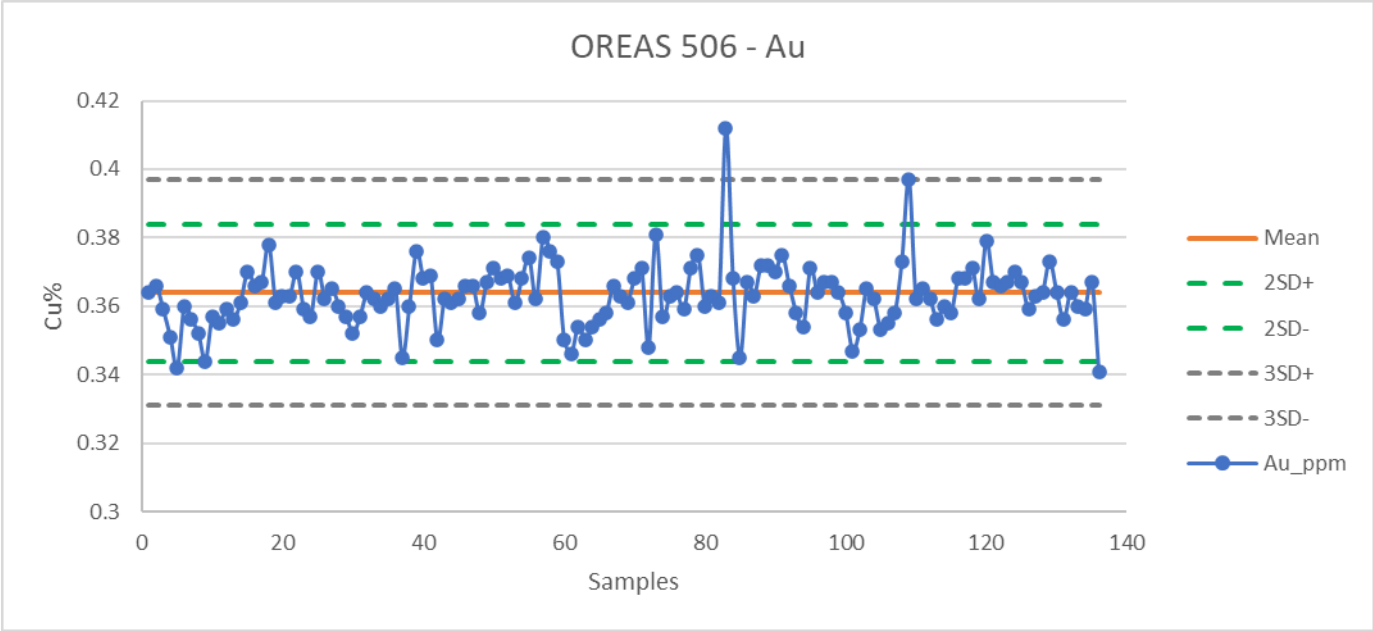
Criteria	Commentary
	• For sampling pre-2020 see the ASX release of 16 May 2016.

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). See ASX release 26 May 2016
	• 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 506 and standard 58P have been used to provide a CRM Standard grade of 0.44% Cu, 0.36 g/t Au and 0.511% Cu, 0.523 g/t Au respectively, which are relevant for the expected cutoff grades used for resource estimates at Nugent.
	  ○ 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.
	  ○ Laboratory inserted QAQC samples were inserted with a minimum of two standards and one blank for every batch of 40 samples.
	 

Criteria	Commentary



- Duplicates of pulverised pulps were also re-assayed. These show excellent Cu correlation with the original Cu assay results.

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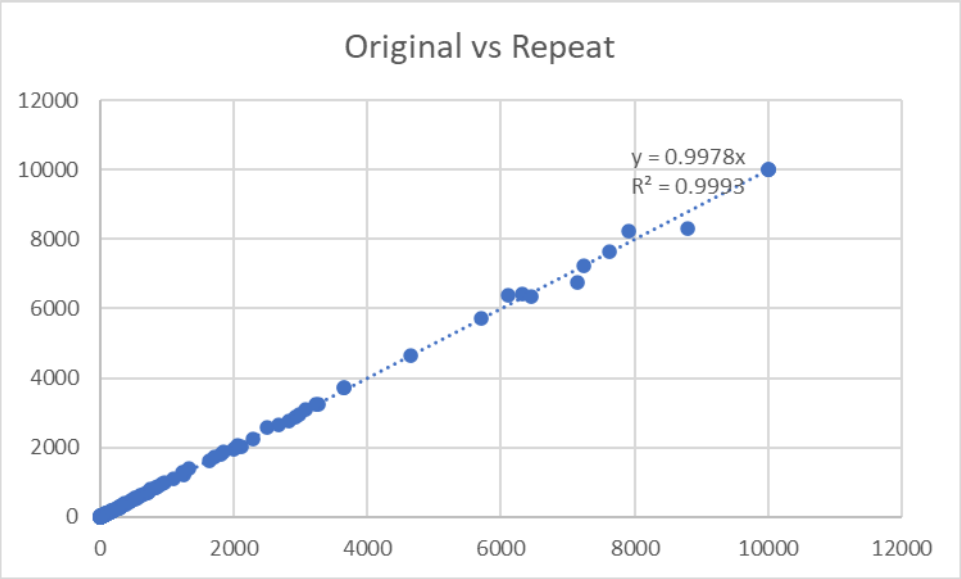
Criteria	Commentary
	 • Quartz flushes are introduced to the bowl pulverisers within every high sulphide interval and the flush material assayed. These are monitored and where Cu contamination of the quartz flush occurs the batch is repeated by the assay lab. For the holes reported there are no examples 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	• 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 ASL+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 Reflex Gyro tool at a maximum of 24m intervals. • The Reflex GYRO™ accuracy is specified at +/- 0.5° for azimuth and +/- 0.2° for inclination and 1% for positional accuracy. It has an operating range of -20° to -90° and +20° to +90° and can operate in temperatures between 0°c to + 70°c. All of these operating specifications are within

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Criteria	Commentary
	that of the drilling program. • The azimuth data recorded by the Reflex GYRO™ are True North and as such the data was converted within Datashed to MGA 94.
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 1m downhole lengths from the collar of the hole prior to geostatistical analysis and Mineral Resource estimation.
Orientation of data in relation to geological structure	• All holes are angled drill holes, dipping at -35 to -70deg towards 280 – 340deg (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 040deg and dip -75deg to southeast.
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).

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Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The Kanmantoo Copper Deposit including the Nugent 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	• The Nugent deposit is part of the Kanmantoo Cu-Au mineral system. It is hosted within Cambrian turbiditic sediments (the Kanmantoo Group) that have been regionally Buchan-metamorphosed to upper amphibolite facies. The sediments have been deformed by the Delamerian orogeny and mineralisation is epigenetic at peak to post-peak deformation. • 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 Nugent mineralisation is an 040deg striking shear zone 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 3 September 2020 and 21 March 2022.
Data aggregation methods	• No weighting average techniques have been reported in this release. No grade cutting before length weighted 1m 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	• All exploration results have been previously reported.
Other exploration data	• Insitu rock density has been measured by wet immersion method on diamond core only drilled in 2020 and 2022. The results from 341 samples indicate that the length weighted mean of the mineralised samples bulk rock density of 3.0 t/m3 is a reasonable representation of

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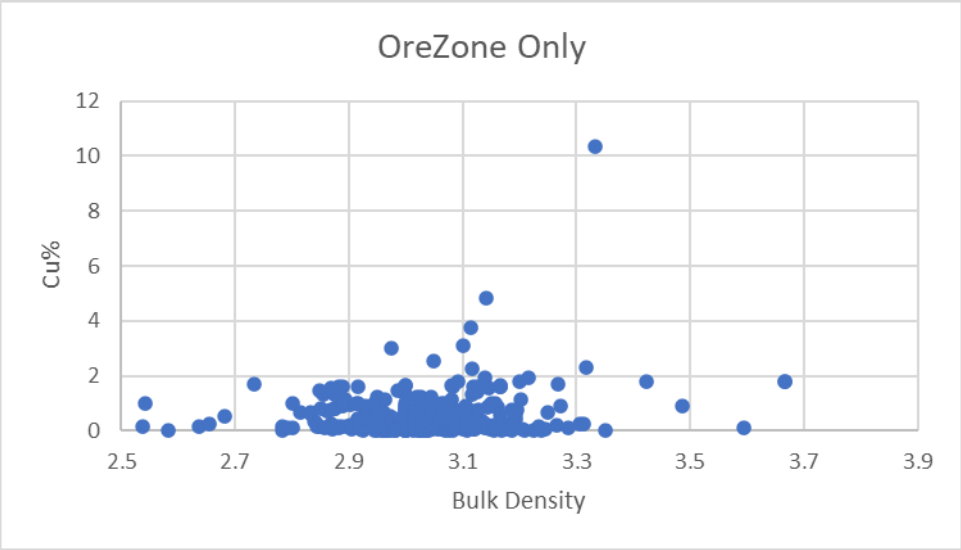
Criteria	Commentary
	bulk rock density. 
Further work	• Underground evaluation studies.

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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 northeast -southwest (040deg) 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 Nugent deposit. • The dip of the Nugent mineralisation is generally steeply dipping (70º to 80º) towards the South East. • Geologic domain of the Nugent zone is predominately modelled on 0.1% Cu plus geologic characteristics representative of strong alteration including garnet, chlorite, and sulphide veining with a moderate influence from structural knowledge gained during mining. • The three-dimensional alteration envelope wireframe was 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. • The wireframe was used to code the composited drill hole data within the domain and this data used for kriging with a hard boundary to data located outside the wireframe, and vice versa. • The proportion of each panel that is Domain 1 zone is estimated from kriging of the domained data, and not determined by the intersection of the panel with the wireframe.
Dimensions	• The Nugent underground MRE has a northeast-southwest strike length of 400 metres, over a zone upto 20m wide and over a depth of 200 metres below the Nugent open pit. • The Nugent zone is open to depth and along strike. • The composited data was first rotated into grid north-south prior to modelling. Rotated 40deg around Z, around a centroid of 318413E, 6114491N, 1022.5mRL (the strike of the mineralised zone is on average 040deg NE). • Origin and extents of the MIK model (after the rotation of the data set) are shown below

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Criteria	Commentary
	• Note that the model output from the GS3 software is in rotated space and needs to be back rotated to MGA space.

Entire Model (in rotated space of 040deg NE)			
Model Min. Co-ords	318320	6114300	800
Model Max. Co-ords	318470	6114705	1180
Panel Size	2	15	20
Number of Panels	75	27	19
Discretisation points within Panel	2	5	5

Estimation and modelling techniques

- Unsampled intervals were assigned a zero grade based on the assumption that the intervals are unmineralised and therefore not sampled for assaying
- After assigned grades to unsampled intervals, the drill holes were composited into 1m downhole lengths for interpolation. After 1m compositing the
- Au grades cut to 4 g/t Au
- Cu grades cut to 4% Cu
- Ag cut to 12 g/t Ag
- Bi grades are uncut to preserve a conservative view of penalty of bismuth content in the copper concentrate
- The grade model was undertaken by Peter Rolley of Hillgrove Resources.

GRADE ESTIMATION

- Multiple Indicator Kriging (MIK) was used to estimate copper grades.
- 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 Nugent 2m (east) x 15m (north) x 20m (elev)
- The Cu variography and conditional statistics for the Nugent domain were generated from the 1m Cu composites.
- Three estimation passes were employed for the Nugent Cu domain and for the waste domain, each subsequent pass having an increased search size. These search parameters were determined using drill hole density and variography as a guide.

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Criteria	Commentary

Estimation Parameters

	East	Strike	Down-Dip
Search 1 (Indicated)	4m	35m	50m
Search 2 (Indicated)	6.8m	59.5m	85m
Search 3 (Inferred)	6.8m	59.5m	85m
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 0.138 (Block/Pts) and an information effect of 0.58 based on an underground sample spacing of 1m x 10m x 10m.
- Au, Ag, and Bi were estimated by a moving window average with the same panel dimensions and search strategy as the MIK method. The estimated local mean and local variance for each panel, and assuming a gaussian distribution, are used to calculate the local Au, Ag, Bi grade at the relevant Cu COG threshold quantiles.
- 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 0.2% Cu to 1.0% Cu at 0.1% Cu increments. Au, Ag, Bi are reported at the same Cu grade increments.
- The MIK estimate is reported at 0.7% Cu Cut-off grade.

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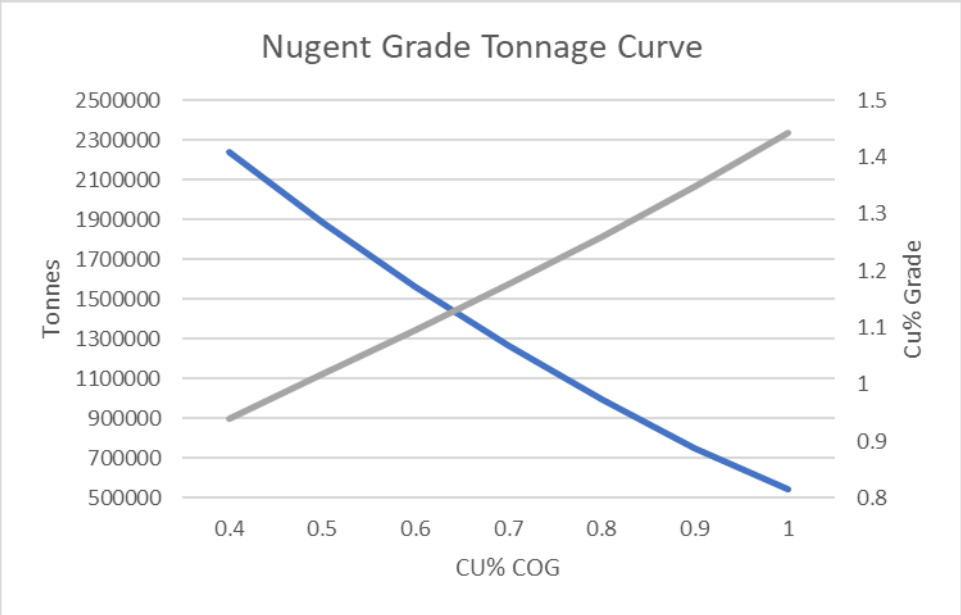
Criteria	Commentary
	
Mining factors or assumptions	• The MRE is within Mining Lease 6345 which is fully permitted and approved for underground mining and ore processing. • The estimated resource extends from the completed Nugent pit shell and to depth as per drilling extents. • It is assumed that the Giant Pit haul road from 1040RL and located approx. 180m north of the Nugent Lode will be used as access to the UG development. • UCS measurements were collected from 24 samples and triaxial test from 9 samples, from seven core holes across the Nugent zone and waste areas. Average UCS of >0.2% Cu samples is 68 MPa and for waste areas is 38 MPa. These results will be used to assist with developing the mining method. • The fully installed, operational and permitted Tailings Storage facility and processing plant at Kanmantoo will be utilised to process the Nugent ore
Metallurgical factors or assumptions	• No metallurgical assumptions have been included in the resource. • The Kanmantoo Copper Mine Processing Plant has been processing the Kanmantoo and Nugent Ore for approximately 8 years with recoveries for copper of 90-94%, gold of 40 – 60% and silver of ~50%.
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.

Criteria	Commentary
Bulk density	• Density was measured on core samples from the 2020 and 2022 drilling using the wet immersion method on NQ and NQ half core samples. • No historical density sample results were used for this Mineral Resource. • The density data results were coded by domain and the dataset investigated for outliers and/or suspect values. The mean of the Bulk Density data 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 Nugent zone is 3.0 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 outside of the wireframed Nugent domain then it was re-classified 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.

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