

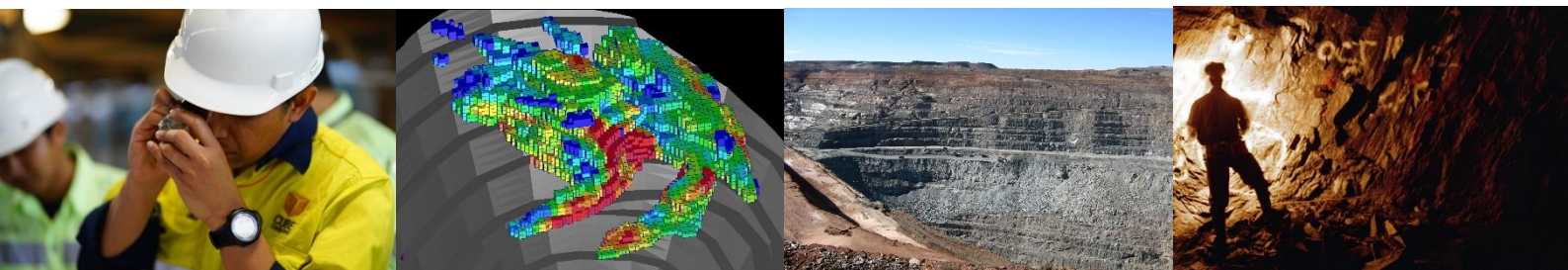
# Technical Report

Maiden Mineral Resource Estimate

Thursdays Gossan Project, Victoria

Effective Date: 1/06/2022

Prepared for: Stavely Minerals Limited

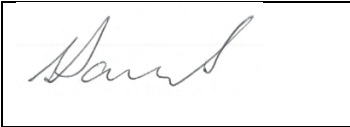
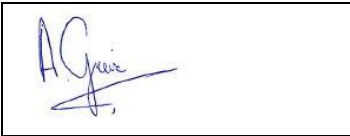


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## 1. Introduction

Cube Consulting (“**Cube**”) was tasked with producing a maiden Mineral Resource Estimate (“**MRE**”) for the Thursday’s Gossan Project, located in western Victoria, for Stavely Minerals Limited (“**Stavely**”). Previous ‘in-house’ estimates were completed by Cube in November 2020 and March 2021.

The release of a maiden MRE is the result of further infill drilling and drilling along strike to the north and south since the in-house estimates were completed.

The mineralisation, geology and weathering domaining was completed in Leapfrog by Stavely, with assistance from Mitchell River Group. Cube has used these largely ‘as is’ with some minor recommended adjustments.

This technical report details the work undertaken by Cube to prepare the MRE and documents the results of the work.

### 1.1. Sources of Information

This technical report for the Thursdays Gossan Project is based on information provided by Stavely, which includes third party technical reports and relevant published and unpublished third-party information.

### 1.2. Site Visits and Scope of Personal Inspection

Mr. Andrew Grieve visited the Thursdays Gossan Project in February 2020, principally to conduct a drilling and sampling audit. Mr. Grieve observed drilling in progress at the time (diamond and sonic), reviewed logging and sampling procedures and data capture. Mr. Grieve also visited the ALS sample preparation laboratory in Adelaide. A Technical Note pertaining to this review was supplied to Stavely on 28 February 2022 (Cube Consulting, 2020).

No subsequent visits could be undertaken due to COVID-19 travel restrictions.

## 2. Domains, Exploratory Data Analysis and Geostatistics

### 2.1. Data Used for Estimation

The drill hole data used for the estimate represented a subset of the total drilling with a series of holes being excluded for various reasons including:

- nature of sampling (RAB)
- unassayed or incomplete sampling
- outside of the area of interest for the resource estimate

Details of the estimation dataset are presented in Table 2-1, while the locations of the excluded holes are shown in Figure 2-1.

**Table 2-1: Thursday's Gossan Estimation Dataset**

Drill Type	Excluded Holes		Included Holes	
	No. Holes	Drill Metres	No. Holes	Drill Metres
AC	72	2,613.9	462	24,461.1
DD	26	5,529.7	200	78,863.05
RAB	340	7,715.5	-	-
RC	75	3,239	25	1,692
RC/DD	-	-	9	1,900.7
Sonic	-	-	12	960.5
<b>Grand Total</b>	<b>513</b>	<b>19,098.1</b>	<b>708</b>	<b>107,877.35</b>



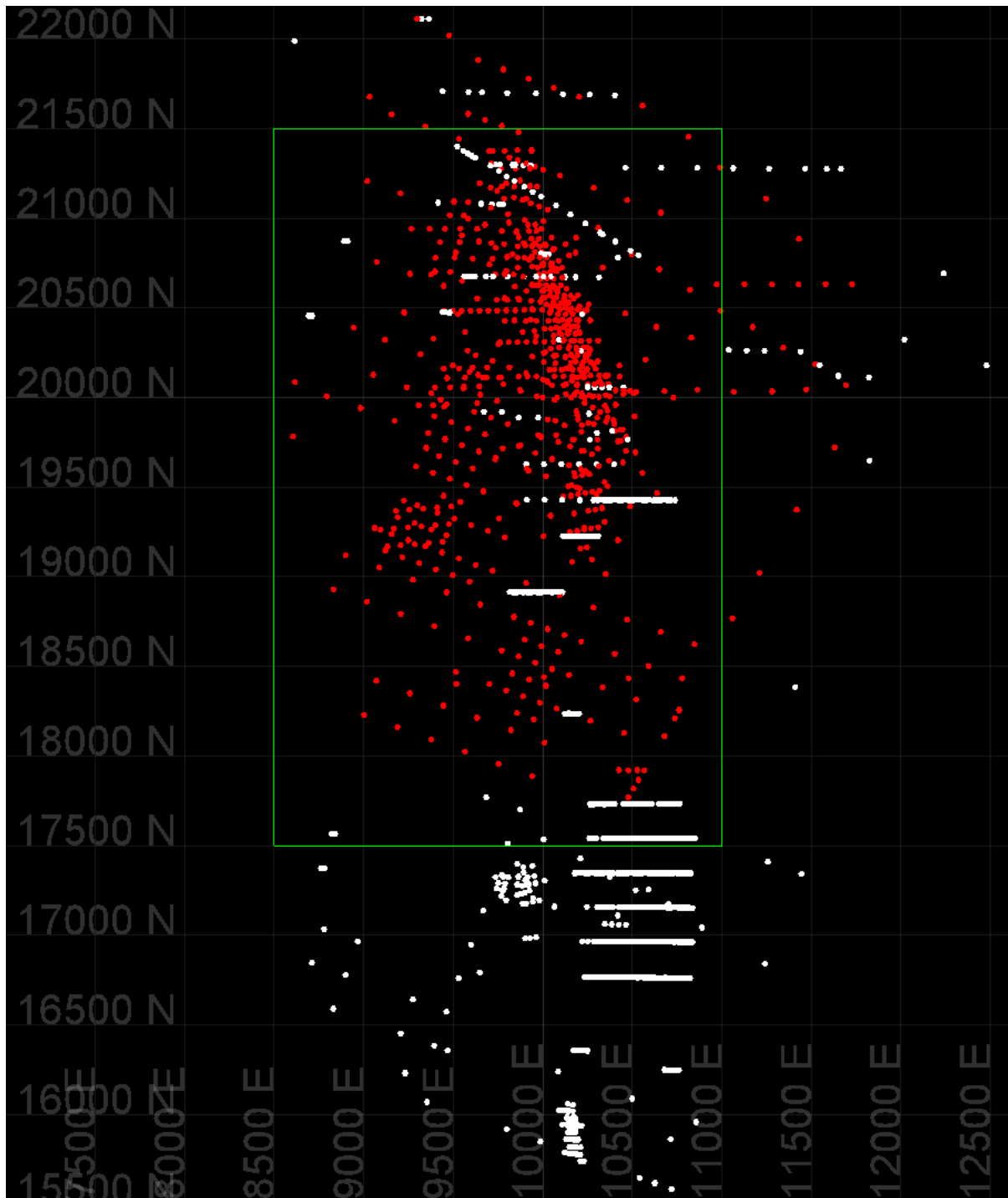


Figure 2-1: Plan showing Resource Holes (red) and excluded holes (white) against the block model limits

## 2.2. Actions on Undefined/Null and Below Detection Limit Samples

The final database included numerous negative assay values for the elements of interest (i.e. Cu, Ag, Au and S). New tables were created with a “\_Cube” suffix and the negative values replaced with half the reported detection limit. A breakdown of the numbers of samples affected and the total sample data is presented in Table 2-2.

**Table 2-2: Thursday's Gossan Below Detection Values**

Cu (ppm)		Au (ppm)		Ag (ppm)		S (%)	
Assay Value	No. Samples	Assay Value	No. Samples	Assay Value	No. Samples	Assay Value	No. Samples
-100	19	-0.2	207	-2	4,245	-0.02	693
-5	86	-0.1	40	-1	2,666	-0.01	483
-2	51	-0.02	4,130	-0.5	41,918	-0.005	172
-1	535	-0.01	3,691	<b>Sub-Total</b>	<b>48,829</b>	<b>Sub-Total</b>	<b>1,348</b>
<b>Sub-Total</b>	<b>691</b>	-0.005	25,736	<b>Total Assays</b>	<b>84,834</b>	<b>Total Assays</b>	<b>78,496</b>
<b>Total Assays</b>	<b>87,767</b>	-0.001	856				
		<b>Sub-Total</b>	<b>34,660</b>				
		<b>Total Assays</b>	<b>89,682</b>				

Review of the assay data showed unsampled intervals within the modelled mineralisation domains. This reasons for these unsampled intervals were investigated by Stavely and almost exclusively found to be related to core loss. As such these unsampled intervals were ignored for the estimation process, rather than being assigned a default waste grade.

## 2.3. Geology and Mineralisation Domains

The development of the geology and mineralisation domains was completed by Stavely, with the relevant solids and surfaces provided to Cube for review prior to commencing estimation. This process identified some minor issues which were subsequently refined, and a final set of wireframes provided.

Leapfrog was used for all the three-dimensional modelling of the Thursday's Gossan project using a combination of vein models and intrusions, with the final shapes imported to Vulcan for use in the composite and block model flagging.

### 2.3.1. Oxidation/Weathering Surfaces

Cube were provided with weathering surfaces representing the top of fresh and the base of complete oxidation. These were used as provided and coded into the model for use in subsequent density assignment and reporting conditions.

### 2.3.2. Geological Interpretations

Flagging of the various lithologies modelled at Thursday's Gossan utilised the geological shapes provided by Stavely, together with a list of relative priorities to ensure the cross-cutting structures and post-mineralisation intrusions were correctly flagged. Where necessary, separate shapes were provided for the units both above and below the LKD dyke. The assignment order applied to the model, together with the lithology coding is presented in Table 2-3, with the higher priority numbers overprinting lower numbers.

**Table 2-3: Thursday's Gossan Lithology Assignment Priorities**

Item	Priority	Lithology Code	
		Above LKD	Below LKD
Sediments	1 (Background)	1000	1000
Alfa Breccia	2	2100	2200
Microdiorite	3	3100	3200
Ti and P Microdiorite	4	3300	3400
Quartz Diorite Porphyry	5	4000	4000
Dacite	6	5100	5200
Ultramafic	7	6100	6200
Mineralisation Domains (Primary)	8	NA	NA
Microdacite with Xenoliths	9	6300	6300
North South Structure	10	6400	6400
Late Mineral Dacite	11	7100	7200
Xclay Faults	12	8200, 8400	8200, 8400
Mineralisation Domains (Chalcocite)	13	NA	NA
LKD Dyke	14	9000	9000

### 2.3.3. Mineralisation/Estimation Domains

Cube were provided the mineralisation domains for use in the model and included the primary lode-style mineralisation and the chalcocite blanket. In addition, Cube were provided a halo domain representing the mineralised corridor associated with the main Cayley mineralisation, within which the primary mineralisation has been domained. The intent for the halo domain was to capture any mineralisation outside of the explicit lodes modelled, and to generate block estimates in this area. Details of the domain coding is presented in Table 2-4.

**Table 2-4: Thursday's Gossan Mineralisation Domains**

Domain Type	Domain Wireframe	Domain Code	Relationship to LKD
<b>Primary</b>	D26.00t	26	Above
	D26_below.00t	26	Below
	D27.00t	27	Above
	D27_below.00t	27	Below
	D31.00t	31	Above
	D32.00t	32	Above
	D33.00t	33	Above
	D45.00t	45	Above
	D47.00t	47	Above
	D48.00t	48	Above
	D49.00t	49	Above
	D57.00t	57	Above
	D61.00t	61	Below
	D65.00t	65	Below
D87.00t	87	Below	
<b>Halo</b>	Indicator_Zone_Model.00t	1000	Above
<b>Chalcocite</b>	Resource_Chalcocite_Zones_D3000.00t	3000	Above
	Resource_Chalcocite_Zones_D3001.00t		
	Resource_Chalcocite_Zones_D3002.00t		

## 2.4. Domain Coding and Compositing

### 2.4.1. Sample Coding

As described above, the assignment of lithology and mineralisation domains is subject to various post-mineralisation features which effectively “stope out” the mineralisation. To ensure this priority was accounted for in the sample flagging the following process was employed.

- Separate sample databases were generated for the primary mineralisation (5000), halo mineralisation (1000) and the chalcocite (3000)
- The zonecode tables developed as part of the interpretation (res\_1000, res\_3000 and res\_5000) were used to code the first pass sample data
- Each database then used the cross-cutting mineralisation wireframes to backflag samples, with a script used to recode those intervals within cross-cutting features to remove or include for subsequent use, depending on the respective databases

### 2.4.2. Compositing

The compositing process for Thursday’s Gossan utilised the sample flagging process described above to remove composites not to be used for the estimate. Selection of the composite length considered the distribution of samples within the mineralisation domains. The raw sample data was imported to Supervisor and distribution plots for sample length assessed. For the primary domains approximately 85% of samples were collected a one-metre interval, with ~10% sampled at intervals of less than one metre (Figure 2-2). Review of the chalcocite sampling shows a similar trend with ~ 80% of samples collected at one-metre intervals (Figure 2-3).

Based on this assessment a composite length of one metre was selected for all mineralisation domains. Compositing used the distribute function in Vulcan whereby the length of composites within each domain are adjusted to avoid the generation of residual samples.

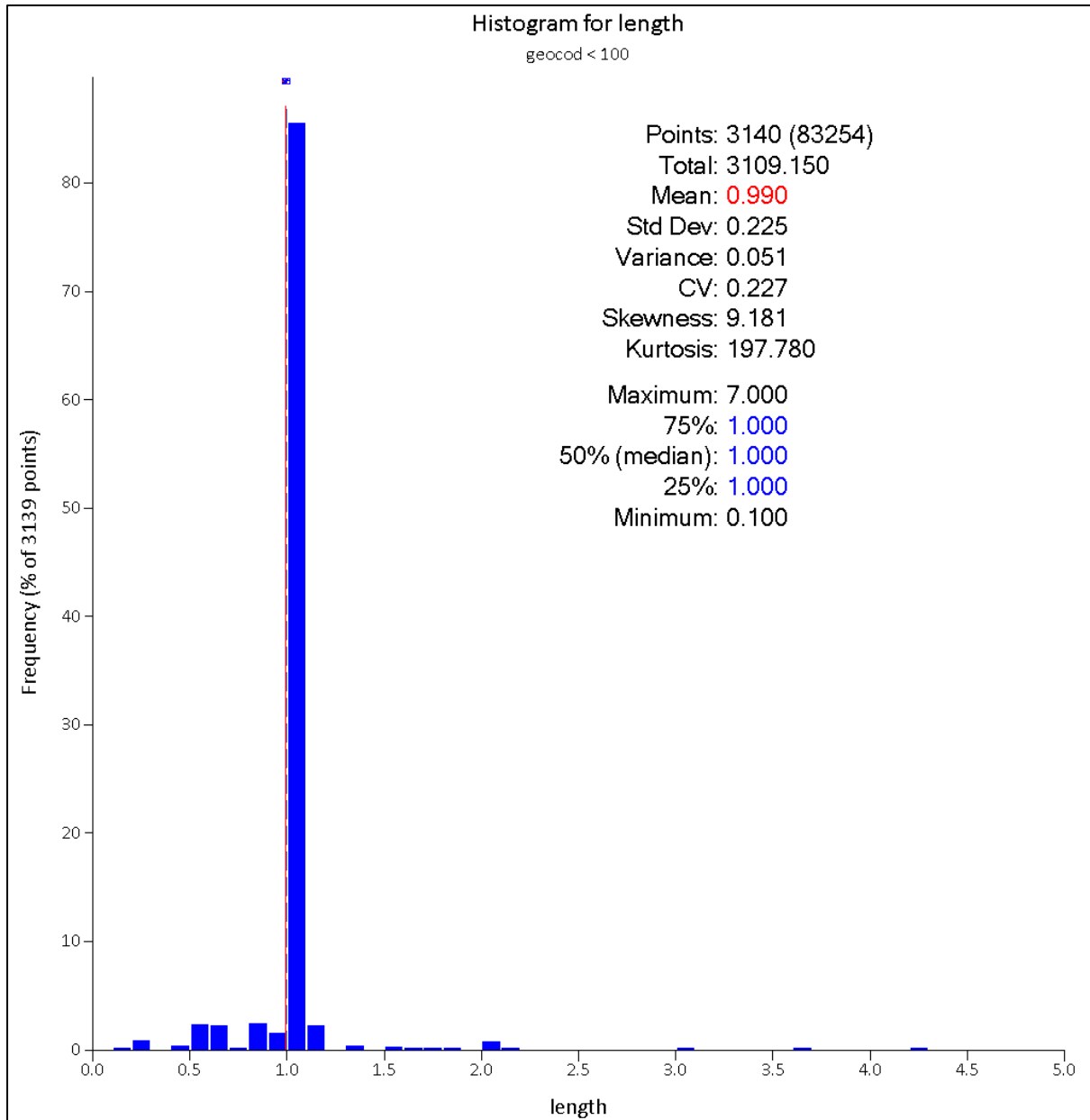
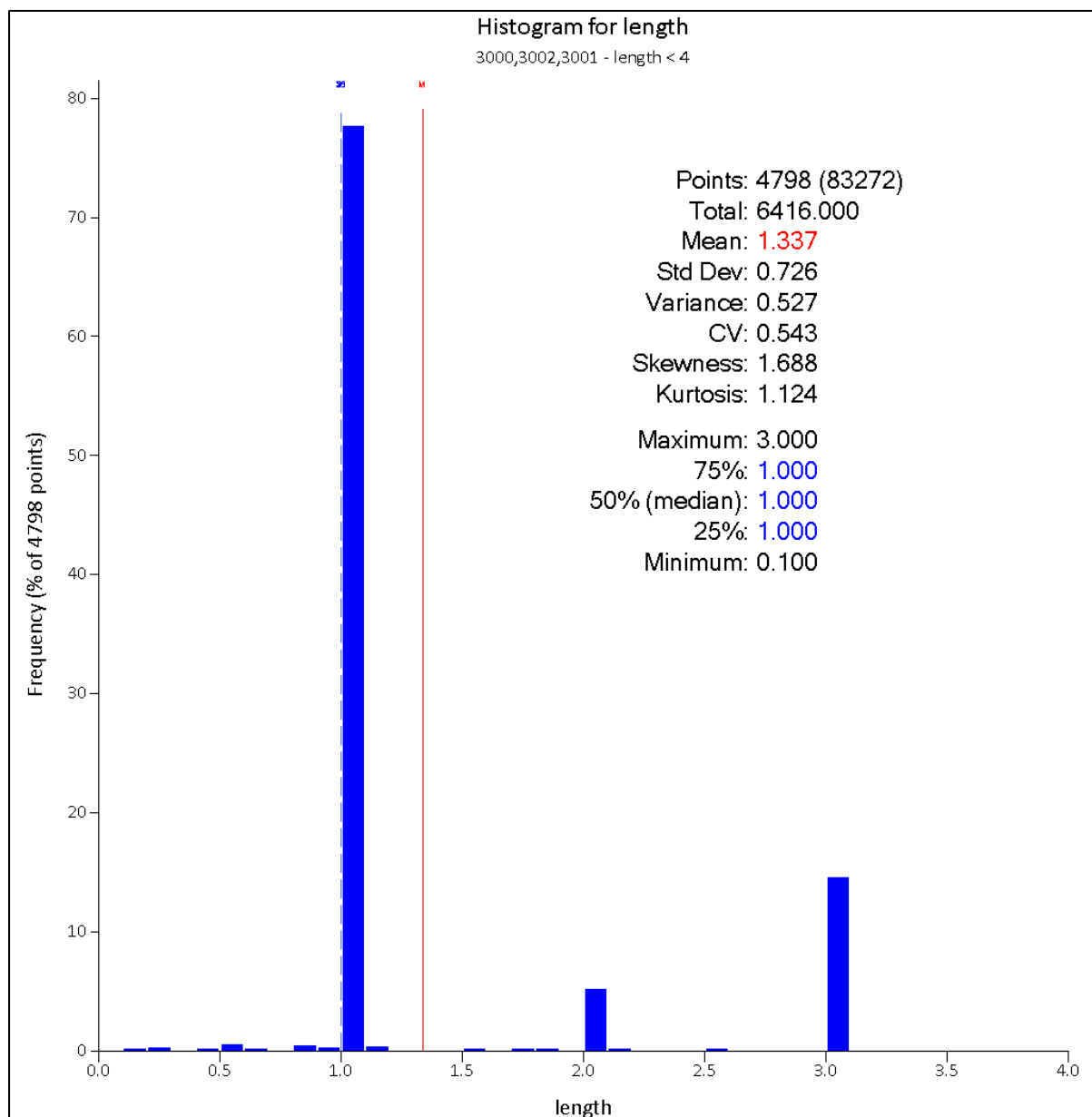


Figure 2-2: Frequency Histogram for Sample Lengths – Primary Domains only



**Figure 2-3: Frequency Histogram for Sample Lengths – Chalcocite Domain**

The composite data were reviewed statistically and graphically. It was observed that there existed numerous composites with very high-grade values. Further, these were associated with very short composite lengths (typically less than 0.1 m). Investigation of the source of these short, high-grade composites showed they were generated due to slight mismatches in the drill hole and wireframe locations, with the high-grade assay typically captured within an adjacent primary domain, and therefore not part of the halo domain. These small differences relate to the slightly different desurveying processes applied between Leapfrog (the source of the wireframes) and Vulcan (the source of the composites) of the resulting composites for the halo mineralisation.

To address these short composites, and ensure the grades in the halo were not overstated in the resulting estimate, a restriction on the minimum composite length was employed, specifically 0.5 m.

This excluded just 26 of the more than 7,000 composites available for the halo domain, representing ~0.4% of the data.

The final statistics by domain for each variable are presented in Table 2-5 for the primary domains, and in Table 2-6 for the halo and chalcocite domains.

**Table 2-5: Composite Statistics by Variable – Primary Domains**

Variable	Domain	No. Samps.	Mean	Min.	Median	Max.	Std. Dev.	CoV
<b>Cu (ppm)</b>	26	138	11,455.06	119	5,495.47	228,000	22,713.94	1.98
	27	178	11,631.94	382	3,930	175,000	23,098.5	1.99
	31	656	13,433.17	187	6,100.64	403,000	25,154.17	1.87
	32	329	95,63.39	31	5,500.19	104,500	13,118.53	1.37
	33	108	5,134.2	671	3,000	72,906.77	7,678.73	1.50
	45	184	21,305.08	61	10,057.02	192,500	27,216.37	1.28
	47	192	5,368.84	46	4,320	25,900	4,111.09	0.77
	48	168	7,338.97	68	4,470	50,600	8,816.45	1.20
	49	620	9,322.12	70	4,397.07	123,000	13,650.43	1.46
	57	152	23,297.42	104	13,631.27	152,106.71	25,182.97	1.08
	61	105	13,200.47	22	5,855.8	196,500	22,419.5	1.70
	65	17	9,656.78	29	7,278.8	40,100	10,087.5	1.04
	87	237	13,939.9	44	7,601.16	104,741.63	16,963.21	1.22
	<b>Au (ppm)</b>	26	138	0.2	0	0.11	1.85	0.28
27		178	0.2	0.01	0.12	1.86	0.26	1.25
31		652	0.63	0	0.15	166.69	6.1	9.66
32		329	0.3	0.01	0.13	25.2	1.22	4.14
33		108	0.15	0.01	0.08	2.12	0.24	1.62
45		184	0.34	0	0.13	10.05	0.92	2.69
47		192	0.24	0.01	0.08	3.64	0.54	2.23
48		168	0.24	0	0.07	6.26	0.72	3.03
49		603	0.21	0	0.05	9.56	0.56	2.73
57		152	0.45	0	0.28	7.88	0.76	1.71
61		105	0.31	0	0.09	8.29	0.93	2.99
65		17	0.24	0.05	0.14	0.98	0.25	1.06
87		237	0.33	0	0.1	14.13	1.28	3.88
<b>Ag (ppm)</b>		26	138	5.35	0.25	3.5	57.2	7.18
	27	178	7.02	0.25	3.1	92.72	12.21	1.74
	31	651	15.95	0.25	5.6	530	32.46	2.03
	32	328	18.52	0.25	5.1	2540	140.96	7.61
	33	108	4.56	0.25	2.3	65.2	8.23	1.81
	45	184	10.84	0.25	5.49	122.19	16.87	1.56
	47	191	6.73	0.25	4	91.7	9.36	1.39
	48	166	8.04	0.25	4.5	80	10.66	1.33
	49	613	6.67	0.25	2.6	139.94	13.04	1.95
	57	152	15.88	0.25	7.6	137	20.56	1.29
	61	105	6.96	0.25	2.75	202	20.23	2.90
	65	17	23.9	2.8	14.05	62.6	18.94	0.79
	87	237	11.52	0.25	3	1225	80.29	6.97
	<b>S (%)</b>	26	138	7.08	1.5	6.98	18.5	3.2

Variable	Domain	No. Sampls.	Mean	Min.	Median	Max.	Std. Dev.	CoV
	27	178	7.05	0.27	7.22	21.51	3.29	0.47
	31	647	14.3	0.01	10	49.63	12.91	0.90
	32	315	11.61	0.33	7.41	50	11.26	0.97
	33	108	8.84	1.09	5.66	39.68	9.02	1.02
	45	184	11.97	0.03	9.72	49.92	11.45	0.96
	47	192	6.21	0.11	4.28	50	6.7	1.08
	48	166	6.75	0.33	4.16	34.2	7.63	1.13
	49	608	7.93	0.12	5.19	47.9	8.4	1.06
	57	152	19.24	0.48	18.98	44.13	12.57	0.65
	61	105	7.79	0.02	4	45	9.43	1.21
	65	14	11.19	2.23	10	35.49	8.19	0.73
	87	237	9.4	0.01	5.82	44.5	9.55	1.02

**Table 2-6: Composite Statistics by Variable – Halo and Chalcocite Domains**

Variable	Domain	No. Sampls.	Mean	Min.	Median	Max.	Std. Dev.	CoV
<b>Cu (ppm)</b>	1000	7,190	1,023.19	1	665.92	45,468.21	1,522.54	1.49
	3000	5,656	3,252.15	12	2,700	45,900	2,560.32	0.79
	3001	14	6,089.29	2,080	3,650	15,400	3,860.69	0.63
	3002	316	2,982.22	37	2,550	16,800	2,154.63	0.72
<b>Au (ppm)</b>	1000	7,069	0.04	0	0.01	5.05	0.12	2.91
	3000	5,166	0.03	0	0.01	1.8	0.1	3.01
	3001	14	0.02	0.01	0.01	0.05	0.01	0.78
	3002	316	0.02	0	0.01	0.11	0.02	1.05
<b>Ag (ppm)</b>	1000	6,972	1.62	0.25	0.86	559.01	7.45	4.6
	3000	4,618	1.56	0.25	0.9	107	3.29	2.11
	3001	14	7.47	2.1	4.1	13.8	4.9	0.66
	3002	282	4.08	0.25	1	55	9.3	2.28
<b>S (%)</b>	1000	6,941	3.46	0.01	1.58	49.6	5.87	1.7
	3000	4,099	2.7	0.01	1.67	45.2	3.32	1.23
	3001	14	2.55	0.53	1.68	4.53	1.64	0.64
	3002	150	1.38	0.1	1.28	4.06	0.89	0.64

## 2.5. Grade Capping

Following compositing each domain was assessed for high grade outliers by review of frequency histograms and log-probability plots. Additionally, appropriate thresholds for application of distance restrictions were considered. The application of distance restrictions was considered necessary given the sometimes-irregular drill density, large modelled volumes (particularly outside of the defined primary mineralisation domains), and the presence of extreme grades in some domains. The objective of the distance restriction is to limit the influence of these isolated grades by restricting the distance outside of which they can have no influence.

Details of the grade caps applied by domain are presented in Table 2-7 for the primary domains, while the halo and chalcocite grade caps are listed in Table 2-8.



**Table 2-7: Grade Capping by Domain and Variable – Primary Only**

Variable	Domain	Raw Mean	Raw CV	Cap Value	No. Capped	Cap Mean	Cap CoV
<b>Cu (ppm)</b>	26	11,455.06	1.98	80,000	2	10,211.66	1.32
	27	11,631.94	1.99	80,000	4	10,428.97	1.60
	31	13,433.17	1.87	220,000	2	13,269.68	1.74
	32	95,63.39	1.37	-	-	-	-
	33	5,134.2	1.50	25,000	1	4,690.62	0.94
	45	21,305.08	1.28	130,000	2	20,837.69	1.19
	47	5,368.84	0.77	-	-	-	-
	48	7,338.97	1.20	35,000	3	7,075.28	1.09
	49	9,322.12	1.46	100,000	3	9,266.19	1.43
	57	23,297.42	1.08	90,000	3	22,441.26	0.97
	61	13,200.47	1.70	95,000	2	12,249.36	1.31
	65	9,656.78	1.04	-	-	-	-
	87	13,939.9	1.22	75,000	2	13,718.21	1.16
	<b>Au (ppm)</b>	26	0.2	1.38	-	-	-
27		0.2	1.25	-	-	-	-
31		0.63	9.66	7	5	0.36	2.07
32		0.3	4.14	3.5	1	0.25	1.64
33		0.15	1.62	1	1	0.14	1.23
45		0.34	2.69	2	2	0.27	1.23
47		0.24	2.23	3	2	0.24	2.13
48		0.24	3.03	2.2	2	0.19	1.96
49		0.21	2.73	3	2	0.19	2.05
57		0.45	1.71	3	1	0.41	1.22
61		0.31	2.99	1.5	3	0.21	1.51
65		0.24	1.06	-	-	-	-
87		0.33	3.88	3	2	0.24	1.77
<b>Ag (ppm)</b>		26	5.35	1.34	22	2	4.90
	27	7.02	1.74	45	4	6.47	1.46
	31	15.95	2.03	120	13	14.84	1.67
	32	18.52	7.61	180	1	11.32	1.88
	33	4.56	1.81	20	3	3.78	1.03
	45	10.84	1.56	80	2	10.46	1.41
	47	6.73	1.39	60	1	6.57	1.22
	48	8.04	1.33	55	1	7.89	1.24
	49	6.67	1.95	100	2	6.62	1.91
	57	15.88	1.29	95	1	15.61	1.23
	61	6.96	2.90	40	1	5.42	1.32
	65	23.9	0.79	-	-	-	-
	87	11.52	6.97	60	3	6.01	1.54

**Table 2-8: Grade Capping by Domain and Variable – Halo and Chalcocite**

Variable	Domain	Raw Mean	Raw CV	Cap Value	No. Capped	Cap Mean	Cap CoV
<b>Cu (ppm)</b>	1000	1,023.19	1.49	25000	2	1,015.49	1.32
	3000	3,252.15	0.79	30000	11	3241.74	0.75
	3001	6,089.29	0.63	-	-	-	-
	3002	2,982.22	0.72	-	-	-	-
<b>Au (ppm)</b>	1000	0.04	2.91	2	2	0.04	2.75
	3000	0.03	3.01	-	-	-	-
	3001	0.02	0.78	-	-	-	-
	3002	0.02	1.05	-	-	-	-
<b>Ag (ppm)</b>	1000	1.62	4.6	45	5	1.51	1.82
	3000	1.56	2.11	30	9	1.52	1.54
	3001	7.47	0.66	-	-	-	-
	3002	4.08	2.28	20	12	3.08	1.62

Distance restrictions were applied where necessary, with the applied distance restriction equivalent to one parent cell dimension (i.e. 20 m × 20 m × 5 m), although rotated to align with the domain search directions. A summary of the distance restrictions applied for each domain and variable are presented in Table 2-9.

**Table 2-9: Distance Restrictions by Domain and Variable**

Domain Type	Domain	Cu Threshold (ppm)	Au Threshold (ppm)	Ag Threshold (ppm)	S Threshold (%)
<b>Primary</b>	26	-	-	-	-
	27	-	-	20	12
	31	150,000	4	-	-
	32	60,000	2	70	-
	33	-	-	-	-
	45	90,000	-	30	-
	47	-	1.5	30	20
	48	-	1	30	-
	49	70,000	-	40	-
	57	-	1.5	50	-
	61	-	-	20	-
	65	-	-	-	-
	87	-	2	-	-
<b>Halo</b>	1000	15,000	1.2	-	-
<b>Chalcocite</b>	3000 (combined)	20,000	-	15	-

## 2.6. Variography

The composite data was imported into Supervisor for continuity analysis and variogram modelling. Data for each of the primary, halo, and chalcocite composites was imported separately and assessed. Experimental semi-variograms were generated using a normal scores transform, with the final variogram models back-transformed before being exported for use in estimation.

The primary domain with the greater number of composites (domain 31) was assessed as the first domain. Subsequent domains with lesser data used the domain 31 variogram as a base, however adjusted to reflect local changes in orientation and with recalculated sills based on the domain variance. Example variogram models for copper for the main domains are presented in Figure 2-4 to Figure 2-6, while a summary for all domains and variables is presented in Table 2-10.

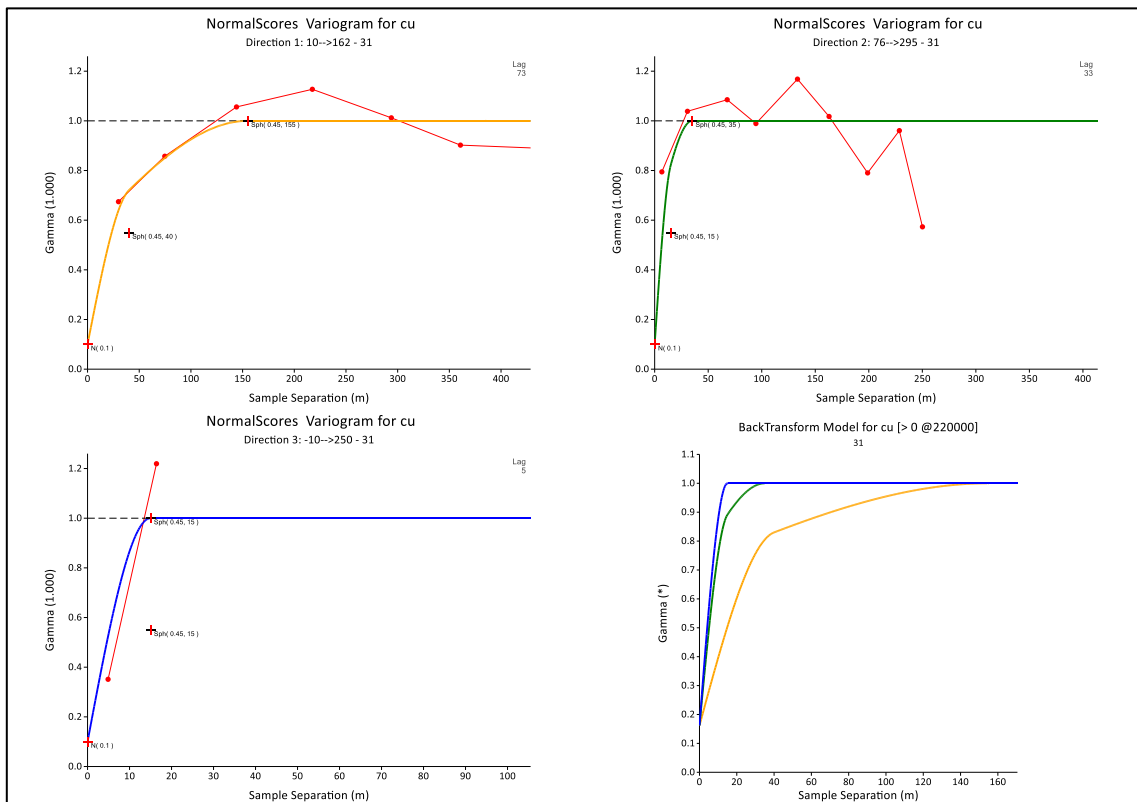


Figure 2-4: Variogram Model – Domain 31 – Cu

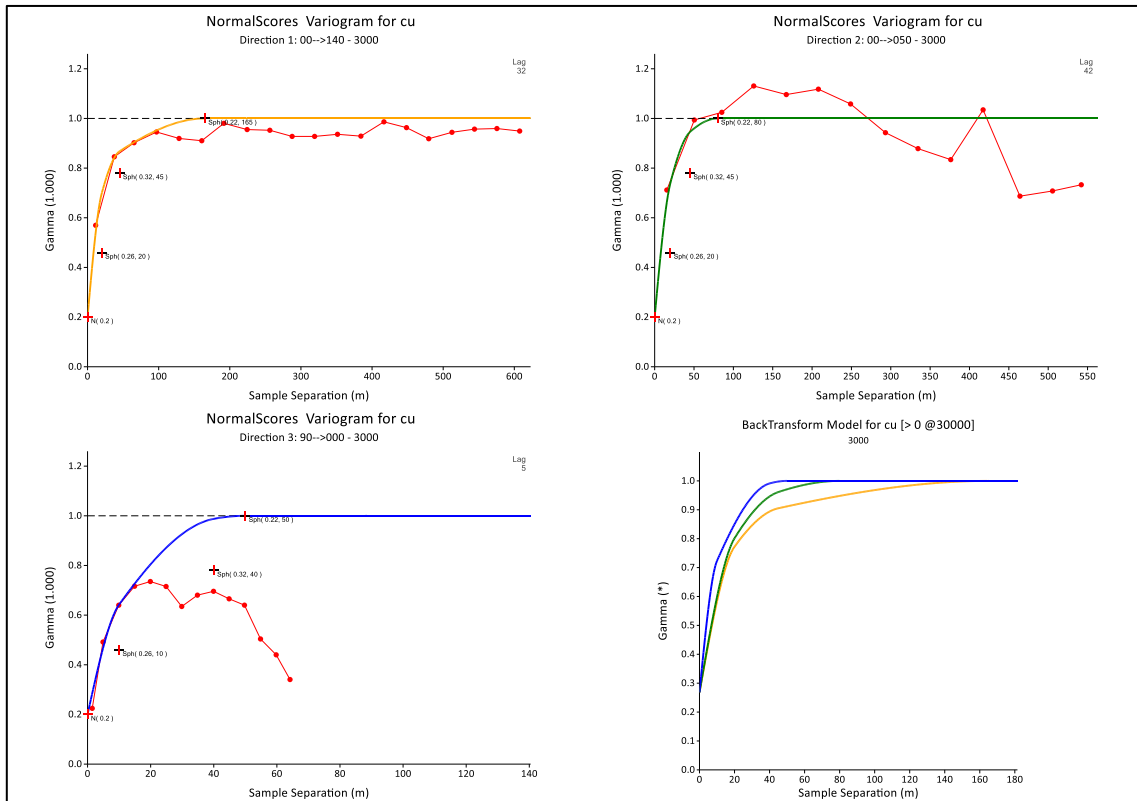


Figure 2-5: Variogram Model – Domain 3000 (Chalcocite) – Cu

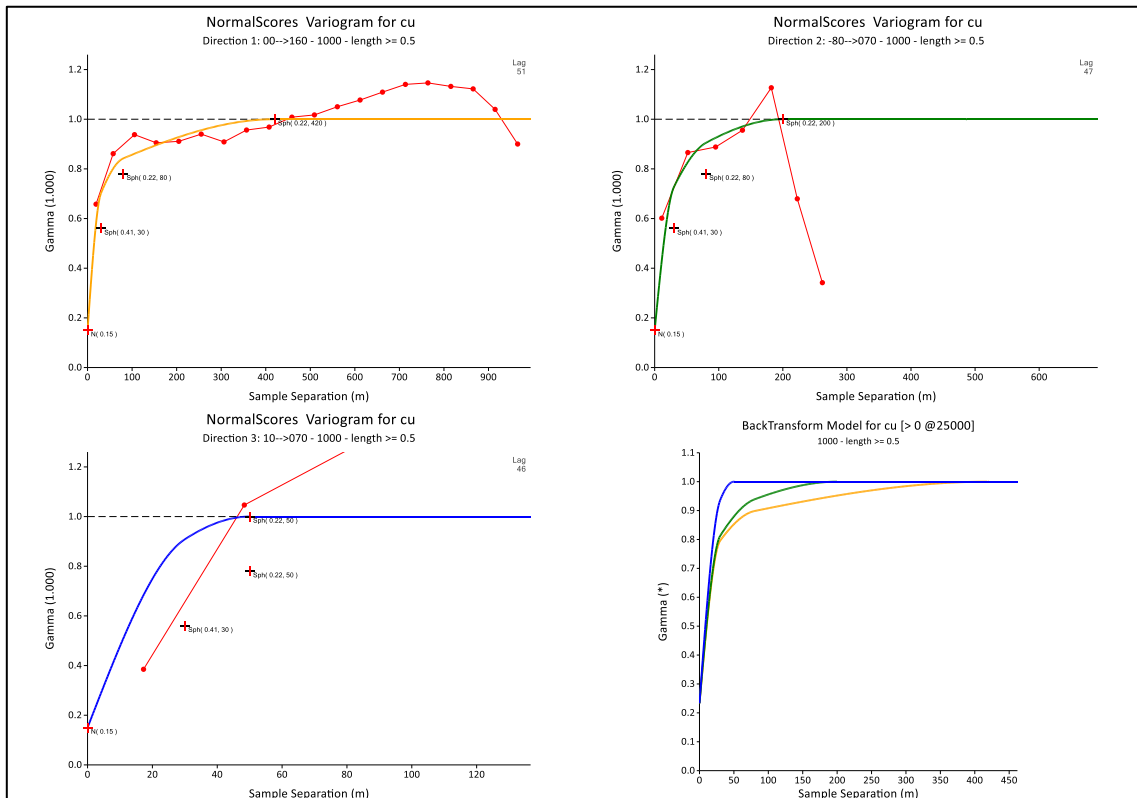


Figure 2-6: Variogram Model – Domain 1000 (Halo) – Cu

**Table 2-10: Variogram Model Parameter Summary**

Variable	Domain	Bearing	Plunge	Dip	Nugget	Structure 1				Structure 2				Structure 3			
						Sill	Maj.	Semi	Min.	Sill	Maj.	Semi	Min.	Sill	Maj.	Semi	Min.
Cu	26	62.2	46.0	-119.5	0.20	0.57	40	15	15	0.23	155	35	15	-	-	-	-
	27	62.2	46.0	-119.5	0.16	0.56	40	15	15	0.27	155	35	15	-	-	-	-
	31	161.8	9.8	-100.2	0.16	0.57	40	15	15	0.27	155	35	15	-	-	-	-
	32	160	-20	-90	0.35	0.39	20	20	20	0.17	75	60	20	0.09	130	60	20
	33	171.8	-19.9	-84.7	0.39	0.27	40	15	15	0.34	155	35	15	-	-	-	-
	45	161.8	9.8	-100.2	0.13	0.46	40	15	15	0.40	155	50	15	-	-	-	-
	47	151.7	-39.3	-103.0	0.56	0.19	20	70	15	0.25	120	80	15	-	-	-	-
	48	161.8	9.8	-100.2	0.27	0.39	40	15	15	0.33	155	35	15	-	-	-	-
	49	185.5	67.7	62.7	0.28	0.29	15	15	15	0.43	105	50	15	-	-	-	-
	57	137.8	46.0	-60.5	0.24	0.38	70	70	15	0.38	120	70	15	-	-	-	-
	61	160	0	90	0.26	0.27	15	15	15	0.47	105	50	15	-	-	-	-
	65	160	0	90	0.26	0.25	15	15	15	0.48	105	50	15	-	-	-	-
	87	171.2	-28.0	-67.2	0.26	0.74	160	30	15	-	-	-	-	-	-	-	-
	1000	160	0	80	0.32	0.48	30	30	30	0.12	80	80	50	0.09	420	200	50
3000	140	0	0	0.26	0.31	20	20	10	0.27	45	45	40	0.16	165	80	50	
Au	26	73.9	54.5	30.6	0.27	0.73	90	30	15	-	-	-	-	-	-	-	
	27	73.9	54.5	30.6	0.49	0.51	90	30	15	-	-	-	-	-	-	-	
	31	160	20	-90	0.35	0.65	90	30	15	-	-	-	-	-	-	-	
	32	160	-10	-90	0.64	0.27	50	40	15	0.09	170	50	30	-	-	-	-
	33	170	20	-90	0.32	0.68	90	30	15	-	-	-	-	-	-	-	
	45	160	20	-90	0.43	0.57	110	45	30	-	-	-	-	-	-	-	
	47	160	0	-90	0.47	0.32	85	75	15	0.21	120	90	30	-	-	-	-
	48	163.5	9.4	69.7	0.53	0.33	55	55	15	0.13	90	90	30	-	-	-	-
	49	160	-60	-90	0.38	0.42	95	45	15	0.20	170	75	30	-	-	-	-
	57	160	0	-70	0.34	0.35	50	20	15	0.31	200	60	30	-	-	-	-
	61	160	0	-90	0.39	0.61	90	30	15	-	-	-	-	-	-	-	-
	65	160	0	-90	0.28	0.72	90	30	15	-	-	-	-	-	-	-	-
	87	165.0	-8.6	-59.6	0.46	0.54	250	80	30	-	-	-	-	-	-	-	-
	1000	157.1	18.7	68.8	0.29	0.46	55	15	10	0.16	70	110	20	0.10	430	120	50
3000	140	0	0	0.42	0.49	20	20	20	0.09	350	150	80	-	-	-	-	
Ag	26	100.6	58.5	16.7	0.30	0.29	20	20	15	0.18	100	60	30	0.23	260	80	30
	27	90.6	58.5	16.7	0.31	0.30	20	20	15	0.19	100	60	30	0.20	260	80	30
	31	160	0	-90	0.16	0.54	50	20	15	0.29	160	40	30	-	-	-	-
	32	160	10	-90	0.32	0.49	65	40	20	0.19	190	130	40	-	-	-	-
	33	160	10	-90	0.39	0.36	40	40	20	0.25	90	40	20	-	-	-	-

Variable	Domain	Bearing	Plunge	Dip	Nugget	Structure 1			Structure 2				Structure 3				
						Sill	Maj.	Semi	Min.	Sill	Maj.	Semi	Min.	Sill	Maj.	Semi	Min.
	<b>45</b>	160	10	-90	0.27	0.73	190	65	30	-	-	-	-	-	-	-	-
	<b>47</b>	160	-10	90	0.42	0.58	110	50	30	-	-	-	-	-	-	-	-
	<b>48</b>	163.6	19.7	79.4	0.39	0.42	70	70	20	0.19	210	100	40	-	-	-	-
	<b>49</b>	154.3	-29.5	78.5	0.32	0.39	45	45	20	0.29	125	90	40	-	-	-	-
	<b>57</b>	152.9	18.7	-68.8	0.25	0.34	45	45	20	0.41	125	90	40	-	-	-	-
	<b>61</b>	150	0	-80	0.27	0.35	45	45	20	0.39	125	90	40	-	-	-	-
	<b>65</b>	160	0	-80	0.23	0.31	45	45	20	0.46	125	90	40	-	-	-	-
	<b>87</b>	160	0	-70	0.31	0.28	65	65	20	0.41	290	160	40	-	-	-	-
	<b>1000</b>	171.2	28.0	67.2	0.25	0.40	20	20	20	0.21	65	65	65	0.14	410	410	100
	<b>3000</b>	140	0	0	0.30	0.51	20	20	20	0.19	280	140	40	-	-	-	-
<b>S</b>	<b>26</b>	63.2	62.0	43.2	0.12	0.52	15	15	15	0.36	110	75	30	-	-	-	-
	<b>27</b>	63.2	62.0	43.2	0.25	0.41	15	15	15	0.35	110	75	30	-	-	-	-
	<b>31</b>	160	10	90	0.12	0.41	60	35	15	0.47	150	60	30	-	-	-	-
	<b>32</b>	160	0	90	0.12	0.59	65	65	20	0.28	140	80	40	-	-	-	-
	<b>33</b>	160	10	90	0.14	0.46	60	35	15	0.40	115	60	30	-	-	-	-
	<b>45</b>	160	10	90	0.12	0.42	60	35	15	0.46	150	60	30	-	-	-	-
	<b>47</b>	160	0	90	0.51	0.18	60	35	15	0.31	130	60	30	-	-	-	-
	<b>48</b>	161.8	9.8	79.8	0.25	0.34	80	35	15	0.41	120	60	30	-	-	-	-
	<b>49</b>	160	-20	90	0.19	0.30	70	60	15	0.52	120	60	30	-	-	-	-
	<b>57</b>	171.2	-28.0	-67.2	0.11	0.39	60	35	15	0.51	110	60	30	-	-	-	-
	<b>61</b>	160	0	90	0.13	0.44	60	35	15	0.44	150	60	30	-	-	-	-
	<b>65</b>	160	0	90	0.15	0.42	60	35	15	0.43	150	60	30	-	-	-	-
	<b>87</b>	153.5	-9.4	-69.7	0.12	0.32	140	60	15	0.56	260	100	30	-	-	-	-
	<b>1000</b>	163.5	9.4	69.7	0.23	0.44	40	30	30	0.15	100	80	40	0.18	490	150	40
	<b>3000</b>	160	0	0	0.21	0.53	50	30	30	0.26	460	110	50	-	-	-	-

### 3. Block Modelling

#### 3.1. Estimation Methodology

Estimation for Cu, Au, Ag and S was completed using ordinary kriging (OK) for all domains using the listed variogram parameters. Search parameters were defined by a KNA process conducted on the halo domain (1000), with parameters applied to the estimation of all other domains. Search details are provided in Table 3-2.

Estimation of all primary domains utilised local rotations. The footwall surfaces defining each applicable domain were exported from Leapfrog and used as the trend surface for local rotations during interpolation.

A two-pass strategy was employed for all domains, with the second pass reducing the minimum samples from eight to four, with all other parameters unchanged. A breakdown of the fill percentages for copper by domain for each estimation pass is presented in Figure 3-1.

Blocks within mineralisation domains had the domain average estimated grades assigned to unfilled blocks (Table 3-1), while background cells were assigned a nominal background grade of 1 ppm for Cu, 0.005 ppm for Au and Ag, and 0.1% for S.

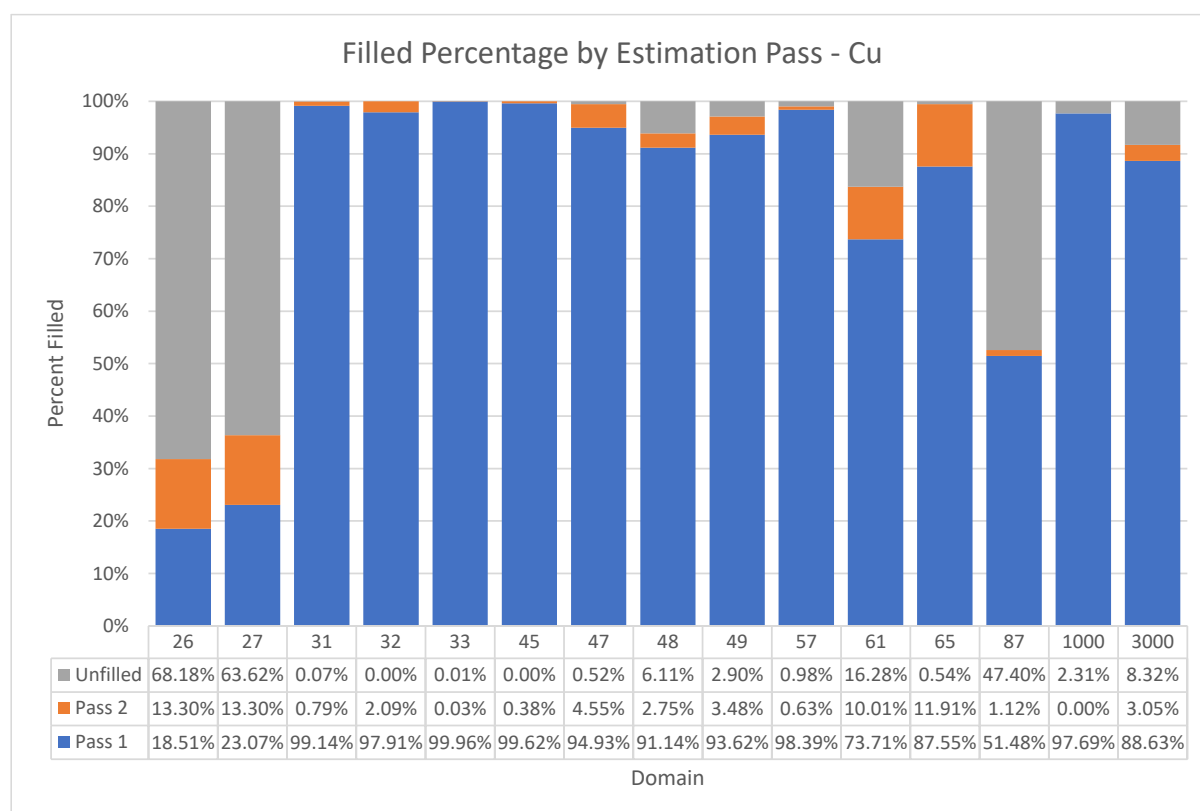


Figure 3-1: Filled Proportions by Estimation Pass and Domain – Cu

**Table 3-1: Domain Averages assigned to Unfilled Blocks**

<b>Variable</b>	<b>Cu (ppm)</b>	<b>Au (ppm)</b>	<b>Ag (ppm)</b>	<b>S (%)</b>
<b>31</b>	14,100	0.4	13.6	14.5
<b>32</b>	8,931	0.2	10.3	10.0
<b>33</b>	5,194	0.2	3.9	9.0
<b>45</b>	17,020	0.3	7.6	12.2
<b>47</b>	5,739	0.1	6.0	5.8
<b>48</b>	7,123	0.2	6.7	8.4
<b>49</b>	9,180	0.2	5.3	7.6
<b>57</b>	23,065	0.3	12.3	17.8
<b>61</b>	16,437	0.2	4.7	7.8
<b>65</b>	10,827	0.3	22.4	13.2
<b>87</b>	12,438	0.2	5.7	7.6
<b>1000</b>	1,024	0.04	1.6	3.4
<b>3000</b>	3,473	0.03	1.5	2.3
<b>26 (lower)</b>	16,175	0.3	6.1	8.1
<b>26 (upper)</b>	9,701	0.2	5.4	7.1
<b>27 (lower)</b>	11,677	0.2	4.1	7.5
<b>27 (upper)</b>	6,441	0.2	3.9	5.0



**Table 3-2: Estimation Search Parameters**

Variable	Domain	Bearing	Plunge	Dip	Search (m)			Samples			Discretisation
					Major	Semi	Minor	Min	Max	Max/Octant	
Cu	26	62	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	27	62	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	31	162	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	32	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	33	172	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	45	162	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	47	152	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	48	162	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	49	185	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	57	138	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	61	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	65	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	87	171	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	1000	160	0	80	120	60	30	8	20	NA	4,5,5
3000	140	0	0	120	60	30	8	20	NA	4,5,5	
Au	26	74	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	27	62	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	31	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	32	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	33	170	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	45	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	47	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	48	164	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	49	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	57	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	61	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	65	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	87	165	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	1000	171	28	67	120	60	30	8	20	NA	4,5,5
3000	140	0	0	120	60	30	8	20	NA	4,5,5	
Ag	26	100	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	27	90	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	31	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	32	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	33	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	45	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	47	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5

Variable	Domain	Bearing	Plunge	Dip	Search (m)			Samples			Discretisation
					Major	Semi	Minor	Min	Max	Max/Octant	
	48	164	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	49	155	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	57	153	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	61	150	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	65	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	87	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	1000	157	19	69	120	60	30	8	20	NA	4,5,5
	3000	140	0	0	120	60	30	8	20	NA	4,5,5
<b>S</b>	26	63	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	27	63	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	31	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	32	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	33	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	45	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	47	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	48	162	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	49	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	57	171	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	61	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	65	160	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	87	153	Dynamic	Dynamic	120	60	30	8	20	NA	4,5,5
	1000	163	9	70	120	60	30	8	20	NA	4,5,5
	3000	140	0	0	120	60	30	8	20	NA	4,5,5

## 3.2. Block Model Definition

The 2022 Thursday's Gossan MRE was generated using a local grid developed from a 2D shift and rotation of the MGA recorded coordinates. Details of the original and local rotated coordinates are presented in Table 3-3. The block model details are presented in Table 3-4 while the included attributes are listed in Table 3-5.

**Table 3-3 Local Rotation Parameters**

Local SVY TG&CL		MGA54 GDA94	
X	Y	E	N
10000.000	20000.000	642054.880	5836182.520
10155.726	20395.692	642065.880	5836607.610

**Table 3-4 Block Model Parameters**

Parameter	Easting	Northing	Elevation
Origin	8500	17500	-700
Extents	2500	4000	1100
Parent Block Size	5	20	20
Subblock Size	1.25	2.5	2.5
Rotation	0	0	0

**Table 3-5 Block Model Attributes**

Attribute Name	Type	Background	Description
cu_ppm_ok	double	-99	Copper ppm - OK Estimate
ag_ppm_ok	double	-99	Silver ppm - OK Estimate
au_ppm_ok	double	-99	Gold ppm - OK Estimate
s_pct_ok	double	-99	Sulphur percent - OK Estimate
density	double	-99	Bulk Density (g/cm <sup>3</sup> )
ok_avd	double	-99	Cu_ppm - Ave distance for OK estimate
ok_dns	double	-99	Cu_ppm - Distance to nearest sample for OK estimate
ok_ns	integer	-99	Cu_ppm - Number of samples for OK estimate
ok_sor	double	-99	Cu_ppm - Slope of Regression for OK estimate
ok_kv	double	-99	Cu_ppm - Kriging variance for OK estimate
ok_ke	double	-99	Cu_ppm - Kriging efficiency for OK estimate
domain	integer	0	Min Domains - 26-87 Primary, 1000 Halo, 3000 Chalcocite
lithology	integer	0	
oxidation	integer	-99	Weathering Code - 0=Air; 1=ox; 2=trans; 3 = fresh
avg_grade_flag	integer	-99	flag for average grade assignment of blocks not estimated
est_pass_cu	integer	-99	Estimation pass flag Cu
est_pass_au	integer	-99	Estimation pass flag Au
est_pass_ag	integer	-99	Estimation pass flag Ag
est_pass_s	integer	-99	Estimation pass flag S
fault_block	name	lower	upper-above LKD, lower-below LKD
class	integer	-99	1-measured; 2-indicated; 3-inferred; 4-unclassified

Attribute Name	Type	Background	Description
res_op	integer	-99	Flag for reporting resources within RPEEE shell
res_ug	integer	-99	Flag for reporting underground resources

### 3.3. Density

Cube employed the base of complete oxidation (BOCO) and the top of fresh rock (TOFR) surfaces provided by Stavely to code the block model. The density measurements in the drill hole database were flagged by both the lithology and mineralisation domains, and against each of the respective weathering surfaces. Review of the density sample data identified a number of questionable results. These principally related to low or very high calculated density values, and sample intervals much longer than would be expected. A breakdown of these values is presented in Table 3-6.

**Table 3-6 Thursdays Gossan Bulk Density Measurements**

Description	No. Samples	Data Percentage
All measurements	13,765	100%
Values below 1.5g/cm <sup>3</sup>	6	0.04%
Values above 5 g/cm <sup>3</sup>	39	0.3%
Intervals > 0.5 m	319	2.3%
Outside model limits	527	3.8%
<b>Final Data</b>	<b>12,874</b>	<b>93.5%</b>

Domain statistics and assigned bulk density values for the mineralised domains and background lithologies are presented in Table 3-7. The halo domain was coded with the respective underlying lithology densities.

**Table 3-7 Thursdays Gossan Assigned Bulk Density Values**

Domain Type	Domain	Weathering	No Samples	Avg. Density (g/cm <sup>3</sup> )	Min. (g/cm <sup>3</sup> )	Max. (g/cm <sup>3</sup> )	Assigned Value (g/cm <sup>3</sup> )
<b>Mineralisation</b>	<b>Primary</b>	Oxide/Trans	18	2.73	2.41	4.32	(1)
		Fresh	1,048	2.98	1.68	4.83	3.0
	<b>Chalcocite</b>	NA	86	2.54	2	4.6	2.5
<b>Lithology</b>	<b>Sediments</b>	Oxide/Trans	108	2.49	1.57	3.8	2.5
		Fresh	2,343	2.63	1.56	4.54	2.6
	<b>Alfa Breccia</b>	Oxide/Trans	8	2.46	2.09	2.6	2.5
		Fresh	595	2.70	2.09	4.47	2.7
	<b>Microdiorite</b>	Oxide/Trans	58	2.36	1.85	2.8	2.4
		Fresh	3,330	2.63	1.51	4.95	2.6
	<b>Quartz Diorite</b>	Oxide/Trans	-	-	-	-	2.5
		Fresh	227	2.51	2.04	4.57	2.5
	<b>Dacite</b>	Oxide/Trans	17	2.48	2.11	2.69	2.5
		Fresh	592	2.57	1.95	4.53	2.6
<b>Ultramafic</b>	Oxide/Trans	1	2.23	2.23	2.23	2.5	
	Fresh	4,346	2.67	1.59	4.99	2.7	
<b>Xclay Faults</b>	Oxide/Trans	-	-	-	-	2.5	
	Fresh	40	2.49	1.9	3.82	2.5	

	<b>LKD Dyke</b>	Oxide/Trans Fresh	1 142	1.96 2.68	1.96 2.13	1.96 3.99	2.5 2.7
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(1) – Assigned underlying lithology density

### 3.4. Mineral Resource Estimate Validation

#### 3.4.1. Global Statistical Comparisons

Initial validation of the Thursday's Gossan resource estimate involved comparison of global composite values against the block estimates by domain (Table 3-8). Review of the results shows acceptable correlation between average composite and block grades for the majority of domains and variables. Domains with differences greater than  $\pm 10\%$  typically relate to domains with distance restrictions applied to those domains with limited numbers of composites informing relatively large volumes, or reflect relatively small absolute differences against low grades.

**Table 3-8 Thursday's Gossan Cut Composites vs. Estimated Blocks**

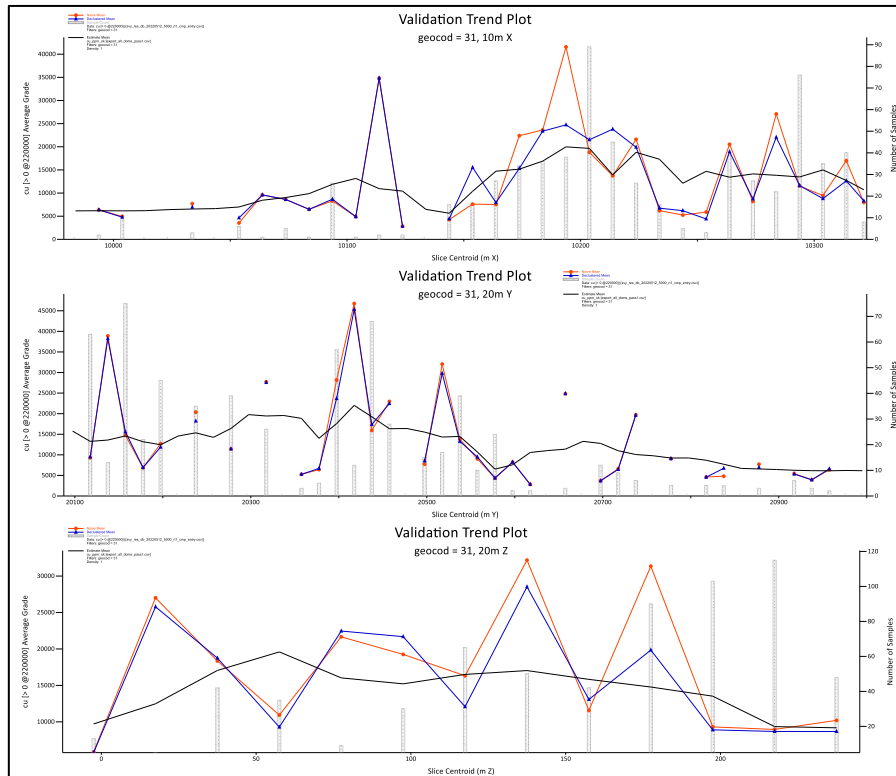
Variable	Domain	No. Comps	Block Avg.	Comp. Avg.	Difference	% Difference
<b>Cu (ppm)</b>	<b>26</b>	138	12,938	10,212	2,726.2	-21.07%
	<b>27</b>	178	9,059	10,429	-1,370.0	15.12%
	<b>31</b>	656	14,100	13,270	830.3	-5.89%
	<b>32</b>	329	8,931	9,563	-632.6	7.08%
	<b>33</b>	108	5,194	4,691	503.3	-9.69%
	<b>45</b>	184	17,020	20,838	-3,817.7	22.43%
	<b>47</b>	192	5,739	5,369	370.0	-6.45%
	<b>48</b>	168	7,123	7,075	47.8	-0.67%
	<b>49</b>	620	9,180	9,266	-86.0	0.94%
	<b>57</b>	152	23,065	22,441	623.7	-2.70%
	<b>61</b>	105	16,437	12,249	4,187.4	-25.48%
	<b>65</b>	17	10,827	9,657	1,170.1	-10.81%
	<b>87</b>	237	12,438	13,718	-1,280.0	10.29%
	<b>1000</b>	7,190	1,024	1,015	8.7	-0.85%
<b>3000</b>	5,986	3,473	4,104	-631.4	18.18%	
<b>Ag (ppm)</b>	<b>26</b>	138	5.79	4.90	0.89	-15.42%
	<b>27</b>	178	4.01	6.47	-2.46	61.31%
	<b>31</b>	651	13.64	14.84	-1.20	8.82%
	<b>32</b>	328	10.29	11.32	-1.03	10.05%
	<b>33</b>	108	3.93	3.78	0.15	-3.77%
	<b>45</b>	184	7.64	10.46	-2.82	36.90%
	<b>47</b>	191	5.97	6.57	-0.60	10.13%
	<b>48</b>	166	6.72	7.89	-1.17	17.42%
	<b>49</b>	613	5.33	6.62	-1.29	24.24%
	<b>57</b>	152	12.32	15.61	-3.29	26.70%
	<b>61</b>	105	4.74	5.42	-0.68	14.41%
	<b>65</b>	17	22.40	23.90	-1.50	6.71%
	<b>87</b>	237	5.70	6.01	-0.31	5.50%
	<b>1000</b>	6,948	1.62	1.51	0.11	-6.57%

Variable	Domain	No. Comps	Block Avg.	Comp. Avg.	Difference	% Difference
	<b>3000</b>	4,914	1.55	4.02	-2.48	160.06%
<b>Au (ppm)</b>	<b>26</b>	138	0.24	0.20	0.04	-17.66%
	<b>27</b>	178	0.22	0.20	0.02	-7.04%
	<b>31</b>	652	0.35	0.36	-0.01	2.59%
	<b>32</b>	329	0.24	0.25	-0.01	5.94%
	<b>33</b>	108	0.16	0.14	0.02	-11.12%
	<b>45</b>	184	0.29	0.27	0.02	-5.77%
	<b>47</b>	192	0.15	0.24	-0.09	61.45%
	<b>48</b>	168	0.15	0.19	-0.04	24.88%
	<b>49</b>	603	0.20	0.19	0.01	-6.74%
	<b>57</b>	152	0.33	0.41	-0.08	25.81%
	<b>61</b>	105	0.23	0.21	0.02	-7.48%
	<b>65</b>	17	0.31	0.24	0.07	-22.17%
	<b>87</b>	237	0.18	0.24	-0.06	35.65%
	<b>1000</b>	7,043	0.04	0.04	0.00	-0.60%
<b>3000</b>	5,496	0.03	0.02	0.01	-30.26%	
<b>S (%)</b>	<b>26</b>	138	7.6	7.1	0.6	-7.24%
	<b>27</b>	178	6.3	7.1	-0.8	12.55%
	<b>31</b>	647	14.5	14.3	0.2	-1.23%
	<b>32</b>	315	10.0	11.6	-1.6	16.16%
	<b>33</b>	108	9.0	8.8	0.2	-2.30%
	<b>45</b>	184	12.2	12.0	0.2	-1.97%
	<b>47</b>	192	5.8	6.2	-0.4	6.96%
	<b>48</b>	166	8.4	6.8	1.7	-19.92%
	<b>49</b>	608	7.6	7.9	-0.3	4.18%
	<b>57</b>	152	17.8	19.2	-1.4	7.86%
	<b>61</b>	105	7.8	7.8	0.0	-0.63%
	<b>65</b>	14	13.2	11.2	2.0	-15.38%
	<b>87</b>	237	7.6	9.4	-1.8	22.98%
	<b>1000</b>	6,918	3.4	3.1	0.3	-9.82%
<b>3000</b>	4,263	2.3	2.2	0.1	-5.61%	

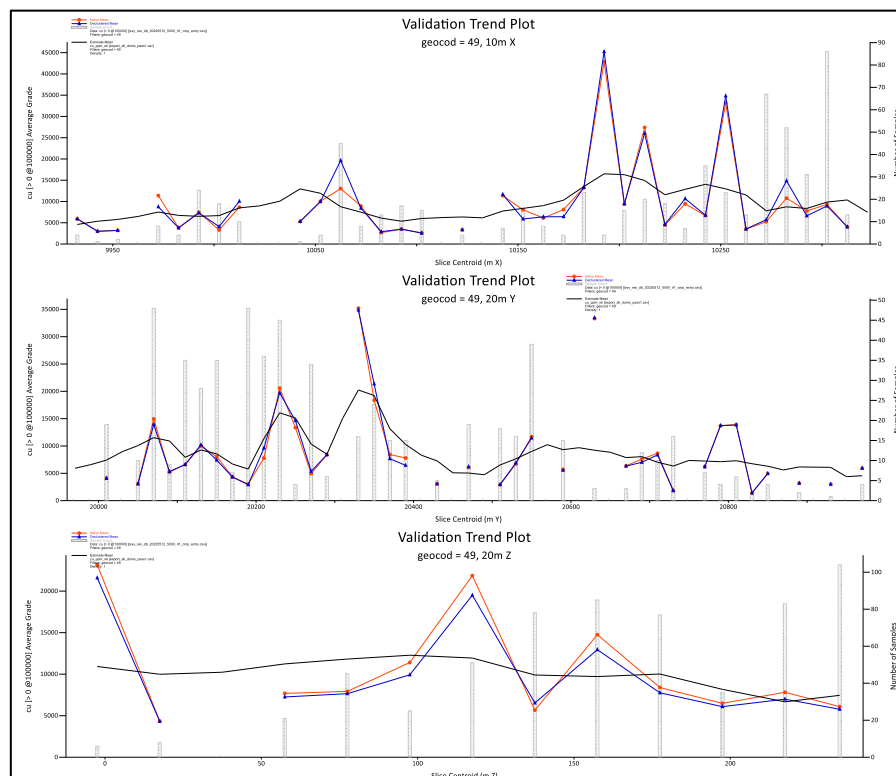
### 3.4.2. Swath Plots

Trend plots were generated for all variables on easting, northing, and elevation slices across all domains. Results for selected variables and domains are presented in Figure 3-2 to Figure 3-5 below.

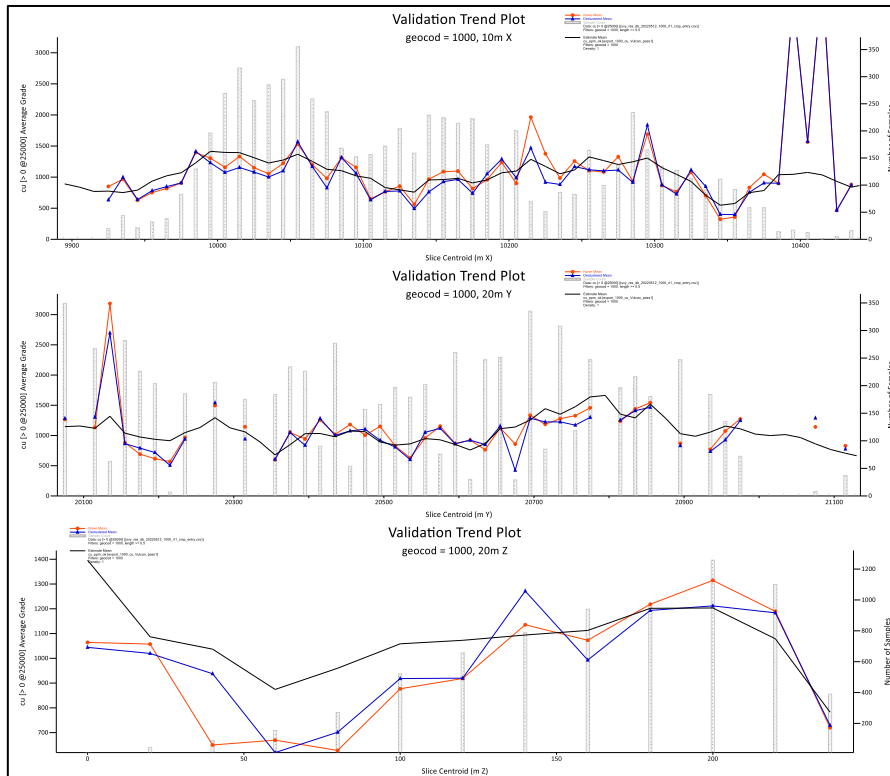
In general block grades reflect the underlying composite grades however they typically trend lower. This reflects the impact of distance restrictions on local high-grade assays and the smoothed nature of the block estimates.



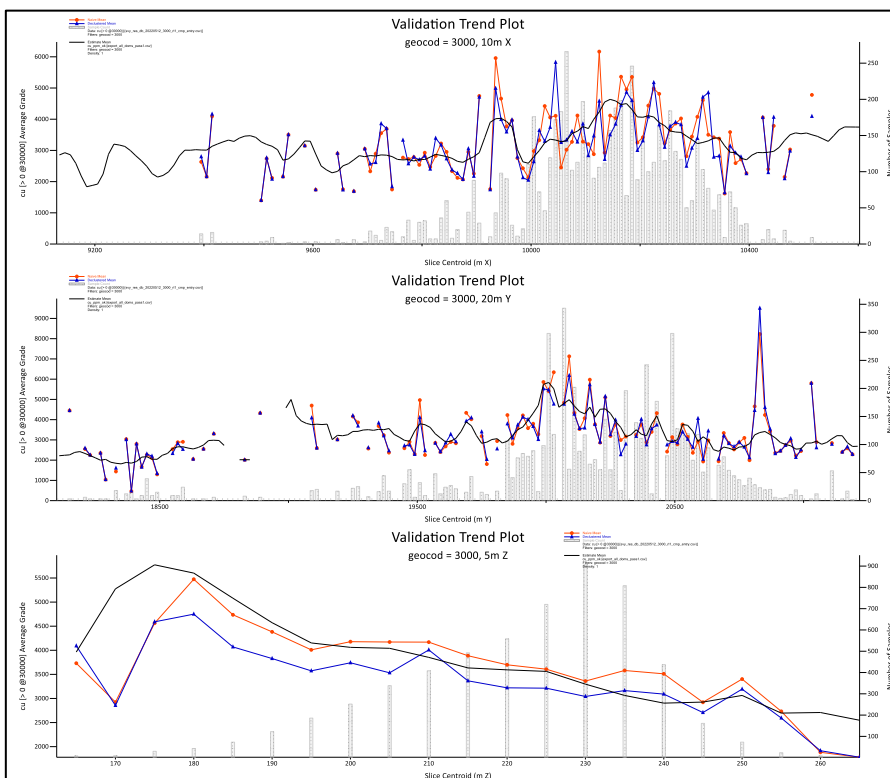
**Figure 3-2: Trend Plots for Easting (top), Northing (middle) and RL (bottom) - Composites (red) vs. Declustered Comps (blue) vs. Blocks (black) – Cu Domain 31**



**Figure 3-3: Trend Plots for Easting (top), Northing (middle) and RL (bottom) - Composites (red) vs. Declustered Comps (blue) vs. Blocks (black) – Cu Domain 49**



**Figure 3-4: Trend Plots for Easting (top), Northing (middle) and RL (bottom) - Composites (red) vs. Declustered Comps (blue) vs. Blocks (black) – Cu Domain 1000**



**Figure 3-5: Trend Plots for Easting (top), Northing (middle) and RL (bottom) - Composites (red) vs. Declustered Comps (blue) vs. Blocks (black) – Cu Domain 3000**



### 3.4.3. Visual Validation

The estimated blocks were reviewed against the underlying composite data graphically via sectional review. Blocks typically reflected the composite data, with the impacts of the distance restrictions on grade sometimes evident in local high-grade values within close proximity to the composite data.

Example sections for copper for each of the primary, halo, and chalcocite domains are presented in Figure 3-6 to Figure 3-8 respectively.

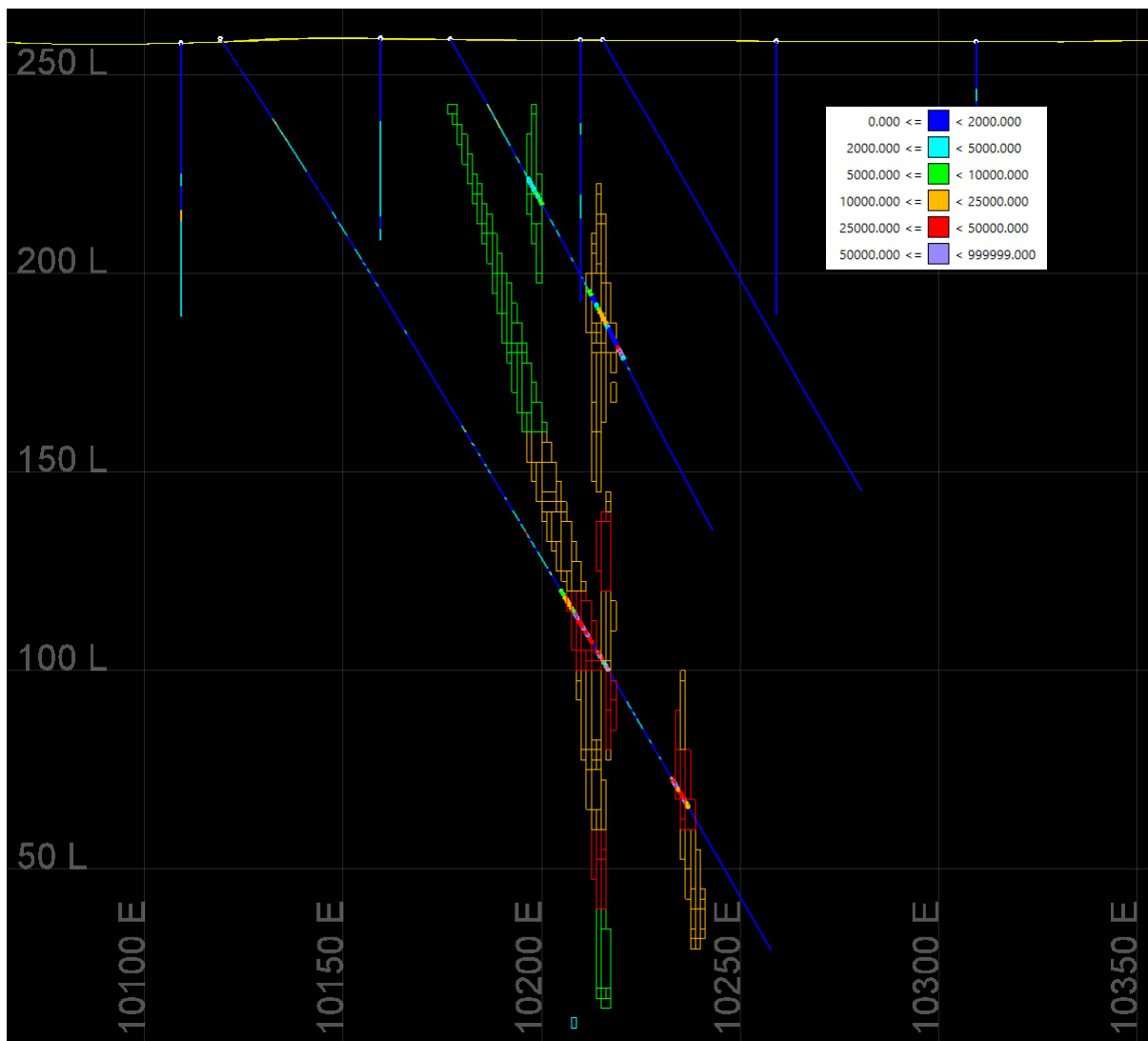


Figure 3-6: Cross Section 20,320mN – Primary Mineralisation Only – Cu (ppm)

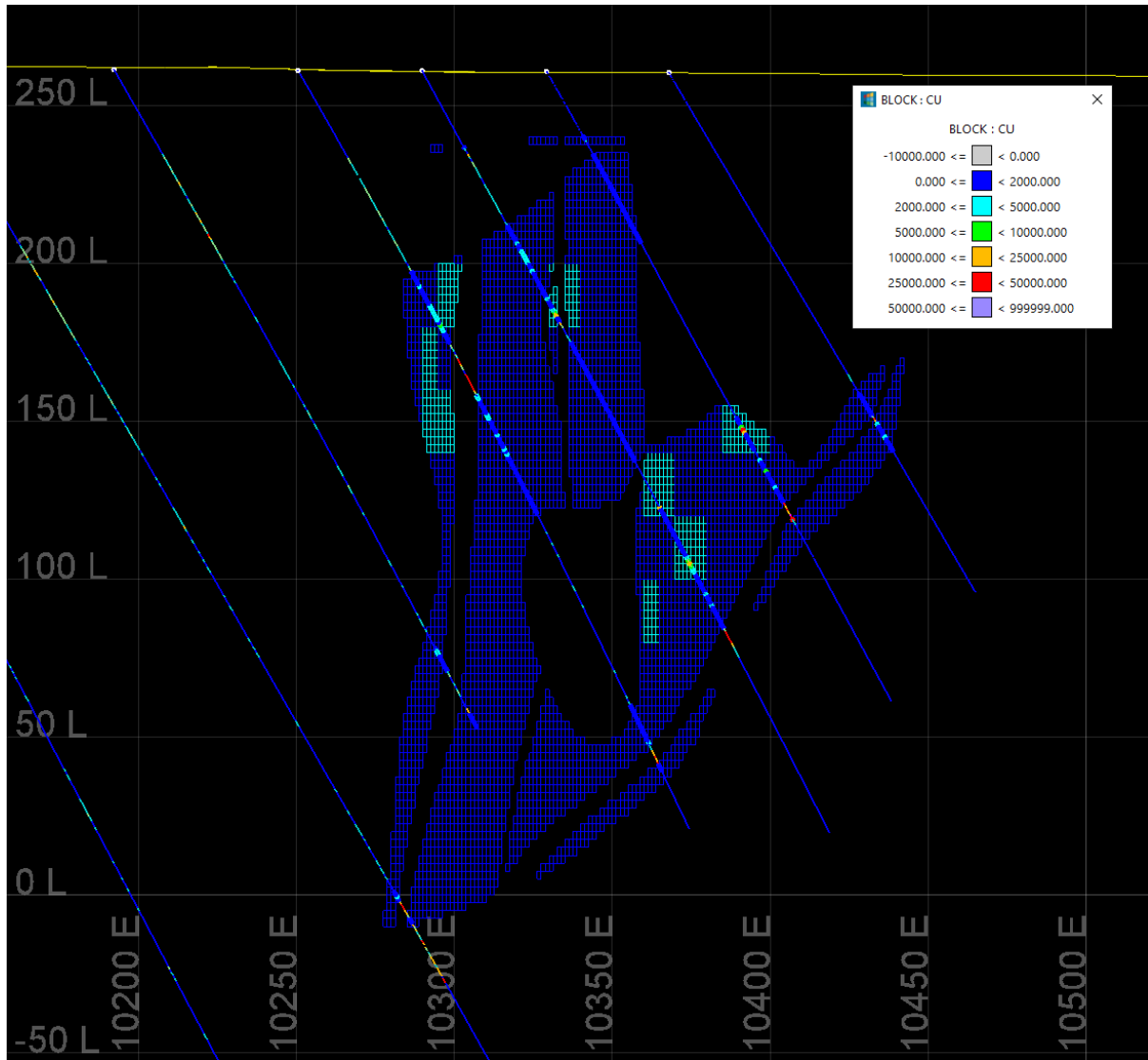


Figure 3-7: Cross Section 20,080mN – Halo Mineralisation Only – Cu (ppm)

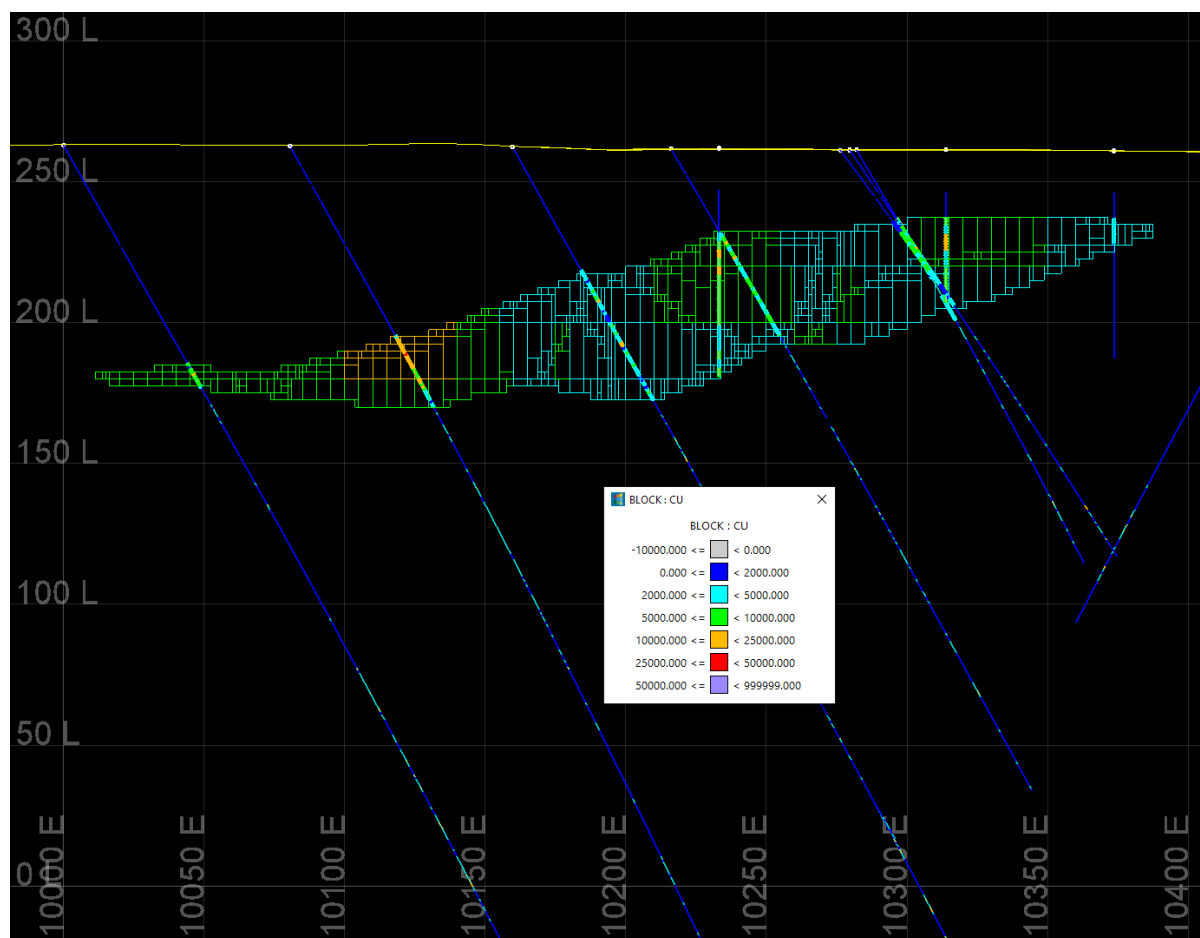


Figure 3-8: Cross Section 20,000mN – Chalcocite Mineralisation Only – Cu (ppm)

### 3.5. Mineral Resource Estimate Classification

Classification of the Thursday's Gossan mineral resource was completed with consideration of the following criteria.

- Resource drilling – the confidence in the interpretation boundaries and related mineralisation volumes related to the number, spacing, and orientation of the available drilling.
- Continuity modelling – the spatial continuity of respective domains based on variogram analysis.
- Estimation quality – the assessment of key estimation output statistics.
- Validation results – the consideration of how well the underlying domain data is reflected in the estimated blocks as assessed by statistics globally and trend plots locally.

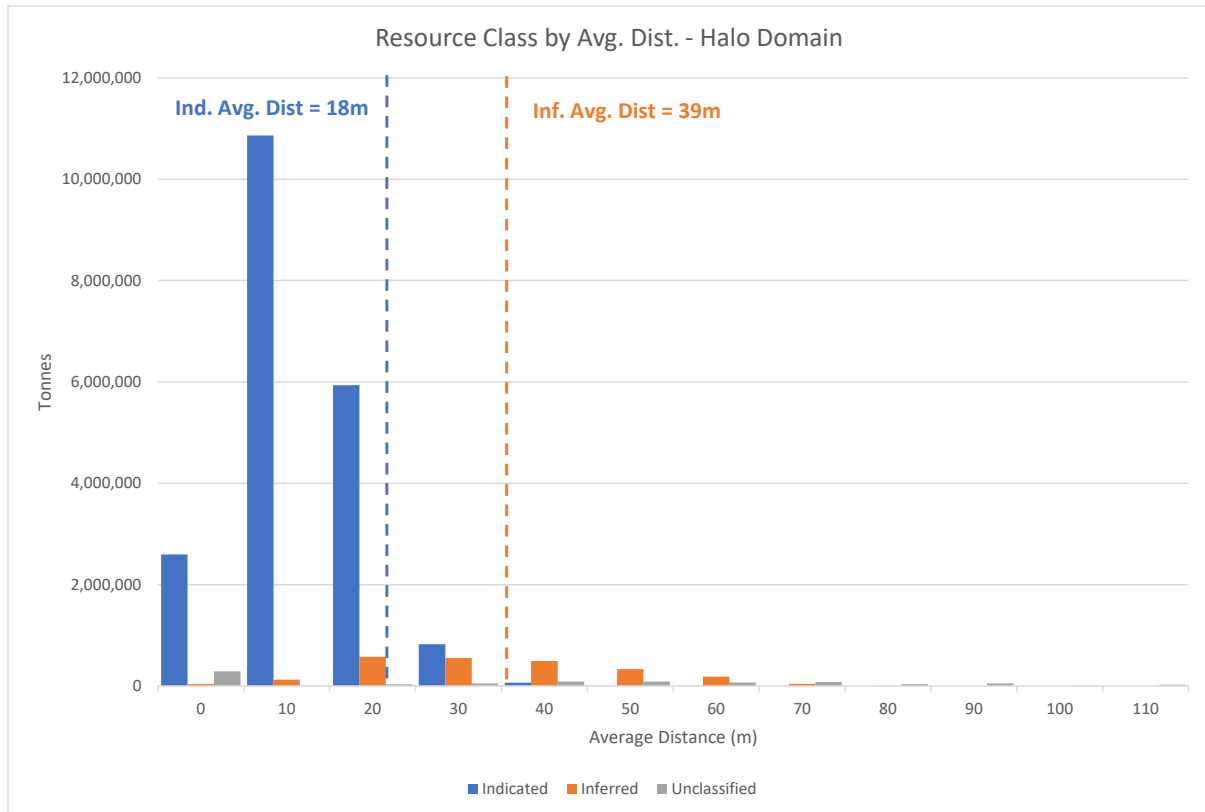
Classification was completed by assessing each of the primary, halo, and chalcocite domains independently against the drill data defining them. A series of polygons were developed for the assignment of the applicable resource classification. In general, the classification criteria applied can be summarised as follows:

- Indicated Resources
  - Areas with drilling at approximately 40 metre centres and with average distance to samples generally less than 40 metres
- Inferred Resources
  - Areas within drilling at greater than 80 metre spacing with average distance to samples generally less than 80 metres
  - Maximum extrapolation of 80 metres
  - Discrete model volumes defined by three or more drill holes
  - Maximum classification criteria for blocks estimated in a second pass
- Unclassified
  - Remaining estimated blocks within mineralisation domains
  - All blocks assigned average grades

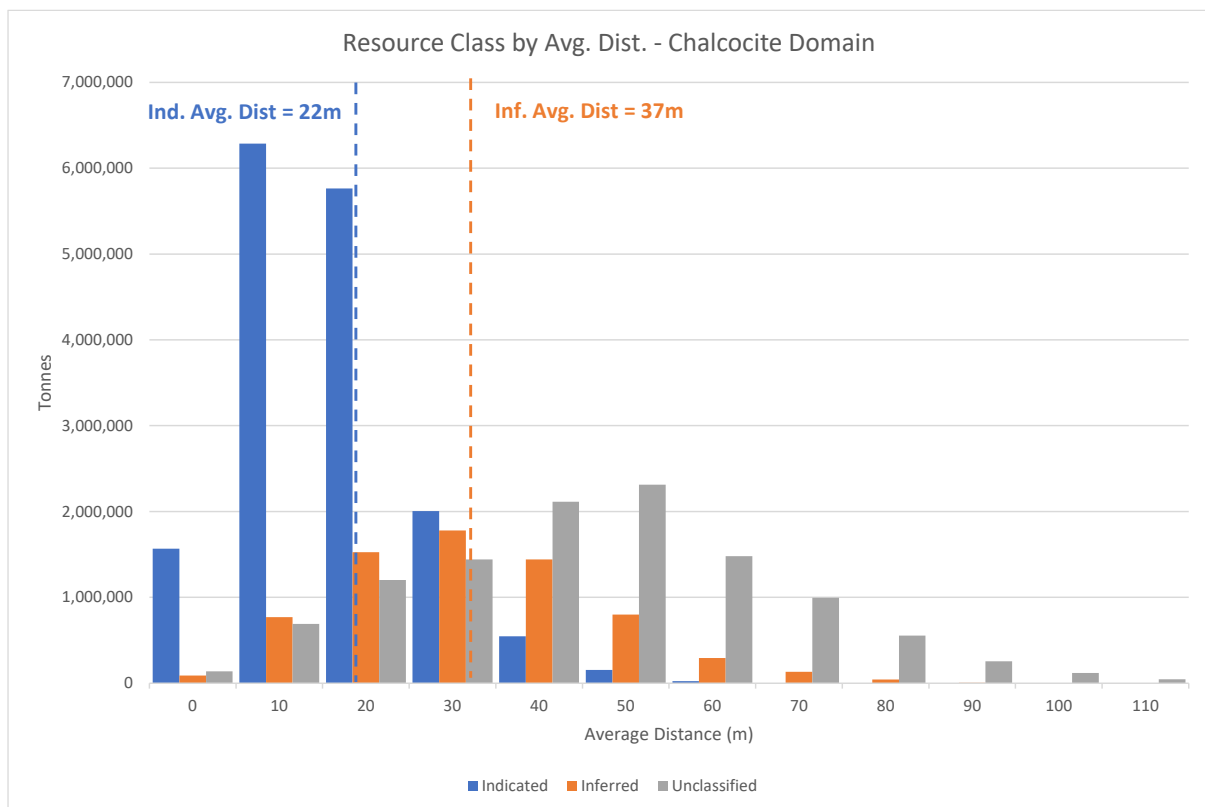
This general classification approach was adjusted to ensure consistent zones of equivalent classified resources were generated. The distribution of average sample distances by classification is presented in Figure 3-9 to Figure 3-11 for the primary, halo, and chalcocite domains respectively, while images for the primary and chalcocite classification are presented in Figure 3-12 and Figure 3-13 respectively.



Figure 3-9: Average Distance to Samples by Classification – Primary Domains



**Figure 3-10: Average Distance to Samples by Classification – Halo Domain**



**Figure 3-11: Average Distance to Samples by Classification – Chalcocite Domain**

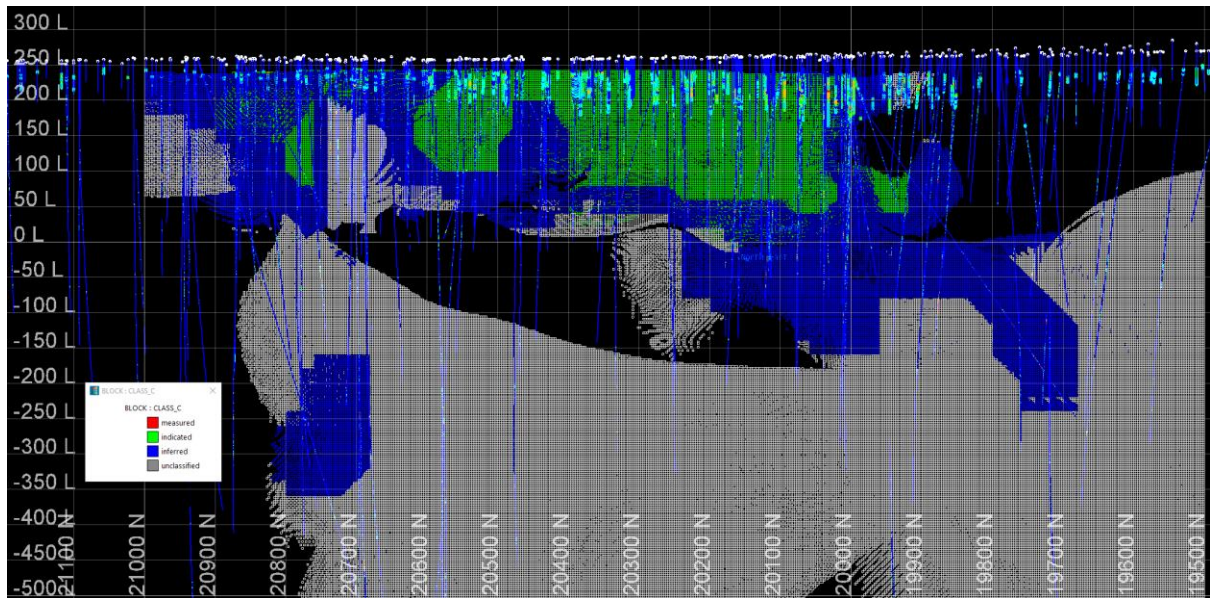


Figure 3-12: Longsection view looking east of blocks by Classification – Primary Domains

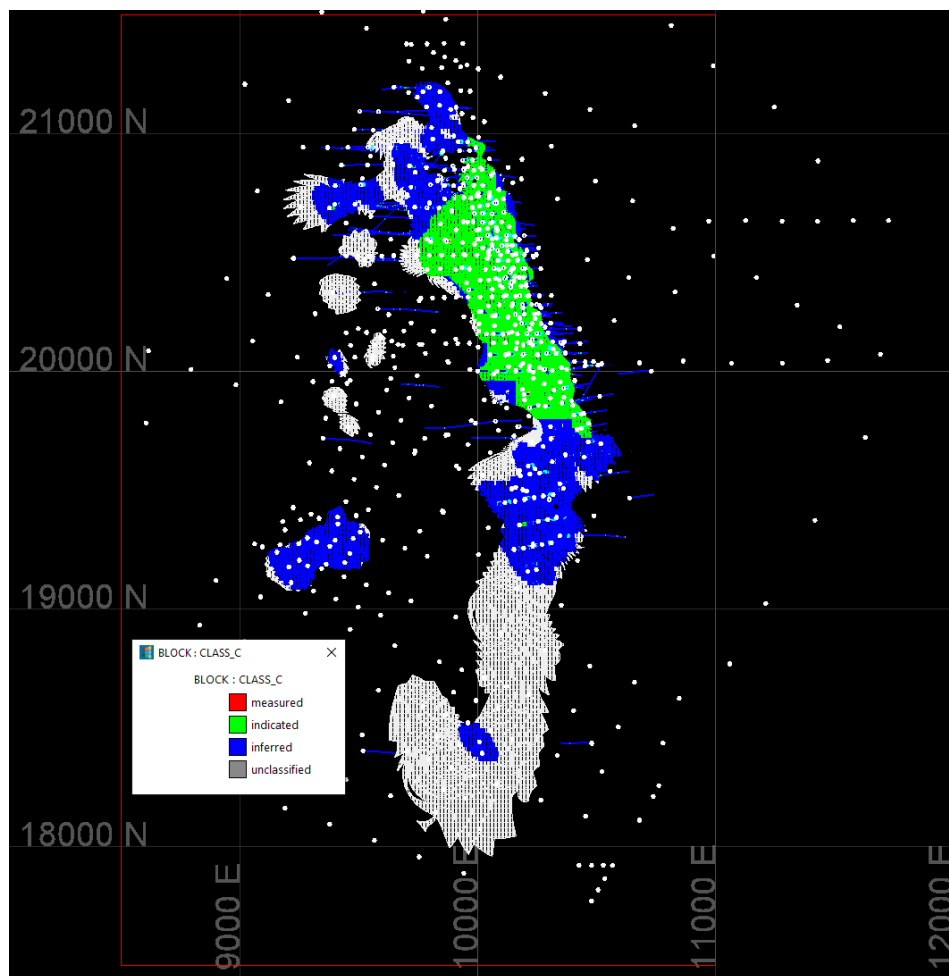


Figure 3-13: Plan view of blocks by Classification – Chalcocite Domain

### 3.6. Mineral Resource Statement

The Thursday's Gossan Mineral Resource Statement is presented in Table 3-9 for the total classified resource, utilising variable cut-offs depending on the mineralisation type

**Table 3-9 Thursday's Gossan Mineral Resource Statement (as at 1 June 2022)**

Resource Material	Resource Category	Cut-off (Cu %)	Tonnes (Mt)	Grade (Cu %)	Contained Metal (Mlbs Cu)	Grade (Au g/t)	Grade (Ag g/t)
Primary Mineralisation (OP)	Indicated	0.2	5.87	1.04	134.4	0.23	7.0
	Inferred	0.2	1.7	1.3	49	0.2	9
<b>Sub-Total Primary OP</b>			<b>7.6</b>	<b>1.1</b>	<b>183</b>	<b>0.2</b>	<b>7.4</b>
Primary Mineralisation (UG)	Indicated	1.0	-	-	-	-	-
	Inferred	1.0	1.7	1.8	69	0.2	6
<b>Sub-Total Primary UG</b>			<b>1.7</b>	<b>1.8</b>	<b>69</b>	<b>0.2</b>	<b>6.0</b>
<b>Sub-Total Primary</b>			<b>9.3</b>	<b>1.2</b>	<b>252</b>	<b>0.2</b>	<b>7.1</b>
Chalcocite	Indicated	0.2	15.33	0.42	141.6	0.04	1.6
	Inferred	0.2	2.7	0.4	22	0.02	1
<b>Sub-Total Chalcocite</b>			<b>18.0</b>	<b>0.4</b>	<b>164.0</b>	<b>0.04</b>	<b>1.5</b>
<b>Total</b>			<b>27.3</b>	<b>0.7</b>	<b>416</b>	<b>0.1</b>	<b>3.4</b>

**Notes:**

- Mineral Resources that are not Mineral Reserves have not demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
- Mineral Resources are reported at a block cut-off grade of 0.2% Cu for the open pit chalcocite and primary mineralisation
- Mineral Resources are reported at a block cut-off grade of 1% Cu for the underground primary mineralisation
- The average bulk density is 2.6 t/m<sup>3</sup>
- Mineral Resources are reported inside of a US\$6/lb optimisation shell using various cost and recovery factors
- Figures may not add up due to rounding

#### 3.6.1. Cut-off Grade Parameters and Reasonable Prospects Assessment

The reporting cut-off grade for the open pit component of the Thursday's Gossan Mineral Resource was defined during development of an optimisation shell by Cube. Inputs to the optimisation process are summarised in Table 3-10.

**Table 3-10 Thursday's Gossan Resource Limiting Shell Economic Parameters (AUD unless stated)**

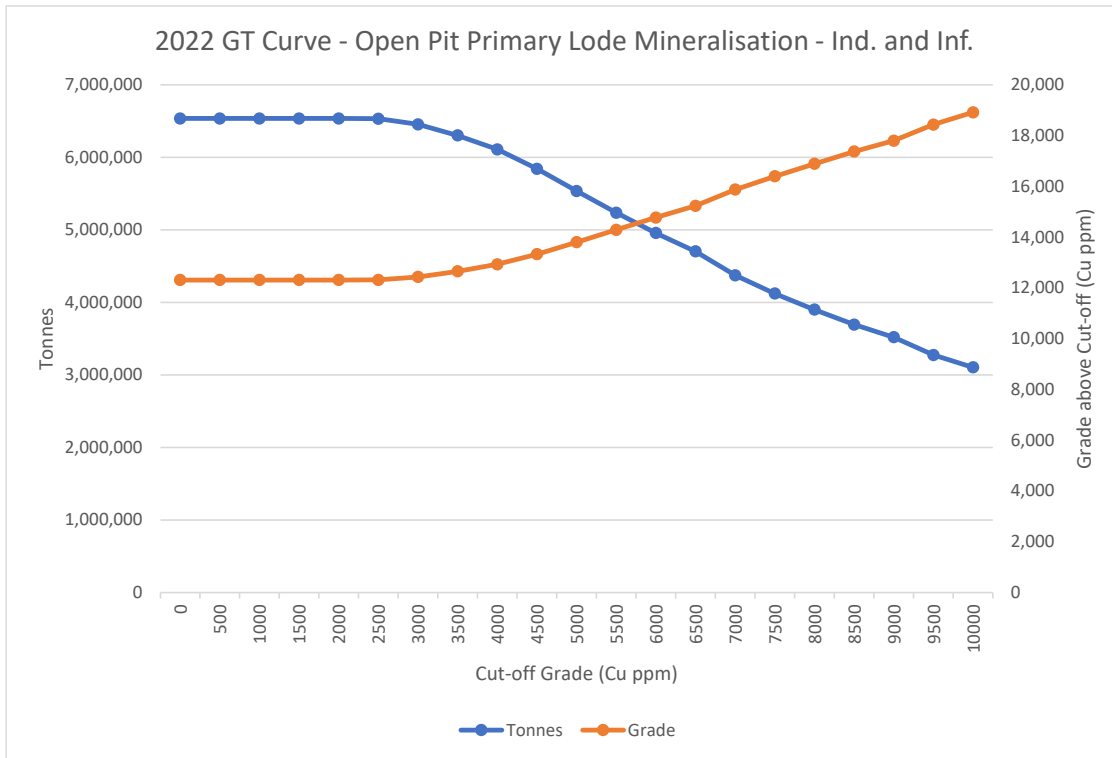
Item	Units	Value	Justification
Average Mining Cost	\$/t mined	3.18	Based on previous costs estimates database
Mining Dilution	%	10	
Mining Recovery	%	95	
Exchange Rate	(USD:AUD)	0.72	
Copper price	US\$ per lb	6	
Gold price	US\$ per oz	1,800	
Silver price	US\$ per oz	25	
<i>Recovery (Chalcocite)</i>			Based on preliminary metallurgical testwork
Cu	%	83	
Au	%	32	
Ag	%	77	
<i>Recovery (Primary)</i>			Based on preliminary metallurgical testwork
Cu	%	86	
Au	%	60	
Ag	%	73	
Processing cost	\$/t milled	28.30	Variable costs from primary feed to production of final product. Based on previous costs estimates database
<i>Selling Costs</i>			Royalty for gold doesn't apply to the first 2,500 ounces per year
Moisture in concentrate	%		
Concentrate haulage	\$/wt conc.	36	
Port fees	\$/wt conc.	29	
Government Royalty	%	2.75	
General and Administration	\$/t milled	3.50	Based on previous costs estimates database
<i>Overall slope angle</i>			
Oxide	Degree	32	
Transitional	Degree	42	
Fresh	Degree	49	

From these assumptions a marginal cut-off of approximately 0.2% Cu was reported, supporting the reporting cut-off used for the resources. The optimised shell formed the basis for limiting the reported MRE, satisfying the reasonable prospects for eventual economic extraction (RPEEE) reporting condition.

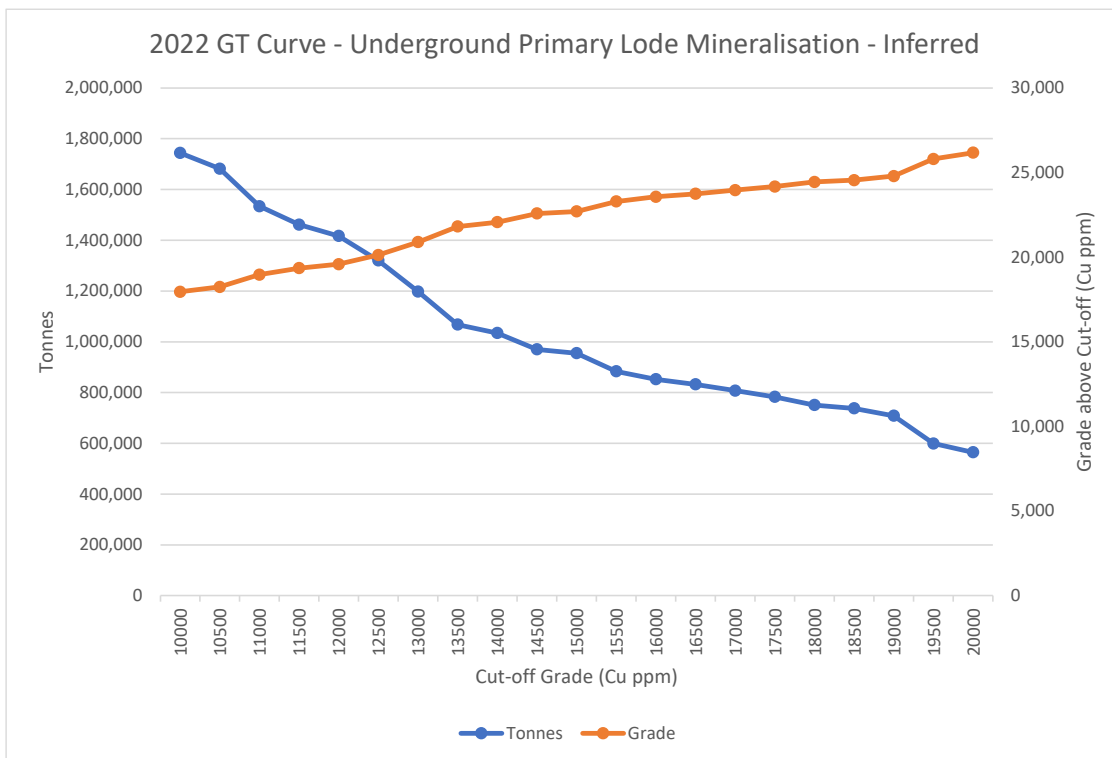
### 3.6.2. Grade-Tonnage Curves

A series of grade tonnage reports for the classified open pit and underground Mineral Resources were created for assessment. The chart for Indicated and Inferred resources associated with the open pit primary lode mineralisation is presented in Figure 3-14, with the equivalent for the underground resources presented in Figure 3-15. The Indicated and Inferred chalcocite resources are presented in Figure 3-16.

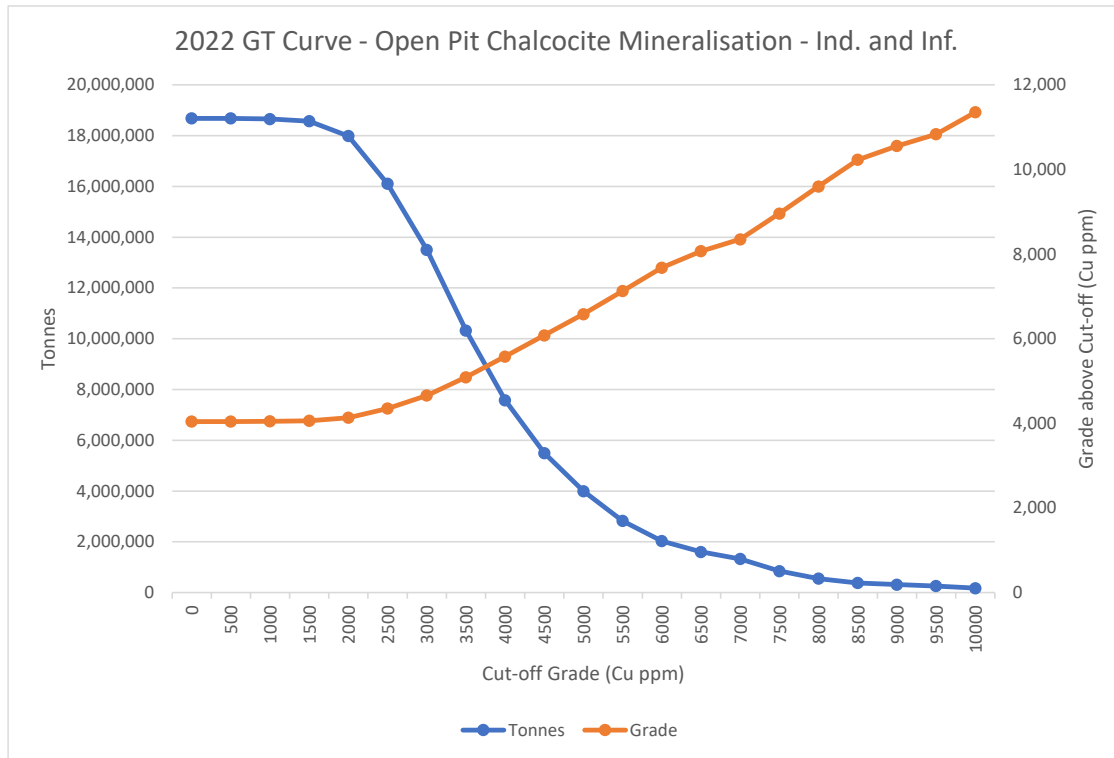




**Figure 3-14: Grade Tonnage Curve – Open Pit Mineral Resources – Indicated and Inferred Primary Domains**



**Figure 3-15: Grade Tonnage Curve – Underground Mineral Resources – Inferred Primary Domains**



**Figure 3-16: Grade Tonnage Curve – Open Pit Mineral Resources – Indicated and Inferred Chalcocite**

## 4. Conclusions and Recommendations

Following assessment of the geological, statistical and spatial data available, it is the view of the Competent Person that there is sufficient confidence in the nature, volume, and continuity of mineralisation at the Thursday's Gossan project to support the reporting of Mineral Resources. This confidence is supported by the following:

- The geological setting is relatively well understood and validated by new drilling intersecting features and mineralised horizons in expected locations down hole
- Continuity of grade is demonstrated by variograms with moderate relative nugget and ranges for the variograms generally at double the typical drill spacing
- Performance of QAQC samples demonstrate acceptable accuracy and precision (see recommendation below) to provide confidence in the reported assay data
- Validation of the block model estimate shows acceptable alignment between input data and estimated blocks
- Assessment of reasonable prospects of eventual economic extraction and associated reporting cut-off grade is defined using an optimised pit shell

As part of the mineral resource process Cube makes the following recommendations:

- The earlier findings from the QAQC review should be implemented to further ensure the drill hole data on which the Mineral Resource is based is free from bias or errors
- Further work to support the assigned bulk density values, particularly for the chalcocite mineralisation and the weathered portions of the deposit, is required
- Assumptions on potential modifying factors for the reported underground resources require further refinement to support future reporting in higher confidence categories

## 5. References

- Cairns, C., Forgan, H., Agnew, M., Johnson, S., Murphy, J., & Corbett, G. (2019). *Unravelling the Gordain Knot at Thursdays Gossan (paper presented to the Mines and Wines Conference Sept 2019, Wagga Wagga)*.
- Corbett, G. (2021). *Comments on the Alfa Breccia and some other aspects of the Stavely Cu-Au Exploration Project, Western Victoria, Australia (sourced from [www.stavely.com.au/technical-data](http://www.stavely.com.au/technical-data))*.
- Cube Consulting. (2020). *Drilling and Sampling Review - Thursdays Gossan*.
- Stavely Minerals. (2021). *The Cayley Lode Discovery - A new style of mineralisation for Australia (AIG Queensland Technical Talk - September 2021)*.