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CONSULTANTS

Meya River Diamond Resource Estimate as at 29th March 2024

Z* report produced for Meya Mining

Meya River Kimberlite Dyke Diamond Resource Estimate (as at 29th March 2024)

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Executive Summary

In recent years Meya Mining Ltd (Meya) has overseen exploration and mining activities of the Meya dykes located to the west of the Koidu Mine in Eastern Sierra Leone. Meya recently engaged Z Star Mineral Resource Consultants (Pty) Ltd (Z*) to conduct a review of the 3D geology wireframe models and to estimate the diamond resource associated with the Meya River Dyke. The Meya River Dyke is part of a cluster of kimberlite intrusions within the Eastern Sierra Leone kimberlite province and is characterised by a narrow width, sub-vertical orientation with an extensive east-west strike length.

In addition to bulk sampling programmes, Meya have undertaken micro diamond sampling programmes and have carried out density measurements across the deposits. More recently Meya have started underground development on the Meya River Dyke and are planning increased production in the future.

As part of reviewing the 3D wireframe modelling process, Z* and Meya geologists have collaborated to establish a method for estimating the Meya River Mineral Resource. The agreed approach prioritizes accurate volume modelling, followed by density estimation, grade and revenue modelling and mineral resource classification. As part of finalising the Meya River 3D volume model Meya provided Z* with dyke drillhole intersections, including a mineral resource width based on percentages of kimberlite and internal waste. The Meya River Mineral Resource Width is restricted to 4m.

The 2024 Meya River 3D model includes a Main Dyke and a North Dyke that are subdivided along strike based on the presence of faulting. Six fault block domains were modelled each of which is regarded as an estimation domain: FB1 Main, FB1 North, FB2 Main, FB2 North, FB3 Main and FB4 Main. As part of assessing the uncertainty associated with estimating these domains the FB1 Main and FB1 North Domains were subdivided into an Upper and Lower sub domain using the 250mamsl elevation.

The Meya River Dyke has both micro and macro diamond data that were used to estimate grade. The macro diamond data are concentrated in the FB1 domain while the micro diamond data are spatially representative of all domains and display a regional continuity. A micro macro grade size diamond relationship was established for the FB1 domains and zonal grade estimates were made at a bottom cut-off of 1.6mm. In domains without macro diamond data the micro diamond data was translated to a macro scale by applying factors established for the Main and North dykes. A variogram was modelled for the combined FB1 micro diamond grade. The diamond assortment was modelled for the bulk sample data and a "pricebook" over the last five years was applied to estimate the revenue.

Meya have modelled the underground development that predominantly impacts the FB1 Main and FB1 North domains and these volumes were used to obtain a depleted volume. Z* reviewed the Meya River volume model and, aside from a few minor recommendations for improvement in future models, agree that the estimated volume model is sufficiently accurate to use as the framework for the Meya River Mineral Resource.

The classification of the Meya River Mineral Resource considered confidence associated with the geological and volume model, density estimation, grade estimation and the associated revenue estimates.

The estimated undepleted volume of the modelled Meya River Dyke as at end March 2024 is 2.20Mm^3 with a depleted volume of 2.14Mm^3. The depleted mineral resource including dilution is estimated to contain a total of 2.00M carats in 6.05M tonnes at an average grade of 33cpht at a 1.6mm bottom cut-off. The value of the Meya River Mineral Resource is US$763M.

Meya River Dyke Indicated Mineral Resource

Domain	Volume (m^3)	Waste				Kimberlite						Mineral Resource					US$/ct	Value (M)
		%	Volume (m^3)	Density (t/m^3)	Tonnes	%	Volume (m^3)	Density (t/m^3)	Tonnes	Grade (cpht)	Carats	Volume (m^3)	Tonnes	Density (t/m^3)	Carats	Grade (cpht)		
FB1 Main Upper	170 200	43%	73 186	2.75	201 260	57%	97 010	2.81	272 600	64	174 500	170 196	473 860	2.78	174 500	37	$383	$66.8
FB1 North Upper	99 400	43%	42 742	2.84	121 390	57%	56 660	2.65	150 150	65	97 600	99 402	271 540	2.73	97 600	36	$381	$37.2
Total Indicated	**269 600**	**43%**	**115 928**	**2.78**	**322 650**	**57%**	**153 670**	**2.75**	**422 750**	**64**	**272 100**	**269 598**	**745 400**	**2.76**	**272 100**	**37**	**$382**	**$104.0**

Meya River Dyke Inferred Mineral Resource

Domain	Volume (m^3)	Waste				Kimberlite						Mineral Resource					US$/ct	Value (M)
		%	Volume (m^3)	Density (t/m^3)	Tonnes	%	Volume (m^3)	Density (t/m^3)	Tonnes	Grade (cpht)	Carats	Volume (m^3)	Tonnes	Density (t/m^3)	Carats	Grade (cpht)		
FB1 Main Lower	352 800	27%	95 256	2.76	262 910	73%	257 540	2.83	728 840	64	466 500	352 800	991 750	2.81	466 500	47	$383	$178.7
FB1 North Lower	256 600	32%	82 112	2.83	232 380	68%	174 490	2.82	492 060	65	319 800	256 600	724 440	2.82	319 800	44	$381	$121.8
FB2_Main	649 500	26%	168 870	2.78	469 460	74%	480 630	2.86	1 374 600	41	563 600	649 500	1 844 060	2.84	563 600	31	$383	$215.9
FB2_North	96 400	17%	16 388	2.77	45 390	83%	80 010	2.68	214 430	41	87 900	96 400	259 820	2.70	87 900	34	$381	$33.5
FB3_Main	216 400	15%	32 460	2.69	87 320	85%	183 940	2.80	515 030	21	108 200	216 400	602 350	2.78	108 200	18	$383	$41.4
FB4_Main	300 500	17%	51 085	2.77	141 510	83%	249 420	2.95	735 790	24	176 600	300 500	877 300	2.92	176 600	20	$383	$67.6
Total Inferred	**1 872 200**	**24%**	**446 171**	**2.78**	**1 238 970**	**76%**	**1 426 030**	**2.85**	**4 060 750**	**42**	**1 722 600**	**1 872 200**	**5 299 720**	**2.83**	**1 722 600**	**33**	**$383**	**$658.9**
Total	**2 141 800**	**26%**	**562 099**	**2.78**	**1 561 620**	**74%**	**1 579 700**	**2.84**	**4 483 500**	**44**	**1 994 700**	**2 141 798**	**6 045 120**	**2.82**	**1 994 700**	**33**	**$382**	**$763.0**

Declared mineral resource figures are at a 1.6mm bottom cut-off

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1. Introduction

The Meya River Dyke represents a significant geological feature within the Eastern Sierra Leone kimberlite province, characterised by its sub-vertical orientation and east-west alignment. This dyke is part of a cluster of kimberlite intrusions in the region, closely associated with the Archean Man Craton, which has been a focal point for diamond exploration and mining since the 1930s. The Meya kimberlite dykes are characterised by narrow widths (typically <1m) and extensive strike lengths as shown by the main dykes listed in Table 1-1.

Table 1-1: Major dykes at Meya (source: Meya presentation)

Dyke	Strike Length (km)
Meya River	2.88
Bardu	3.75
Waterloo	3.25
Simbakoro	6.71
Koakoyima	1.85

Since 2017, Meya Mining Ltd (Meya) has overseen the exploration and mining activities at the site and have recently engaged Z Star Mineral Resource Consultants (Pty) Ltd (Z*) to conduct a review of the 3D geology models and to estimate the diamond resource associated with the Meya River Dyke. In addition to bulk sampling programmes, Meya have undertaken a micro diamond sampling programme and have carried out density measurements across the deposits. More recently Meya have started mine underground development in the Meya River Dyke and have drafted an initial five year mine plan that targets annual production of 200 000cts per annum by 2026.

1.1. Scope of Work

Meya Mining initially requested Z* to produce an estimate of the Meya River Kimberlite Dyke Diamond Resource, a portion of the Meya deposit. The Scope of Work (SoW) included an update of the 3D model in Datamine which would then be used as the framework for zonal density and grade estimates and an associated revenue estimate. The SoW included the compilation and classification of the Meya River Mineral Resource in keeping with international reporting codes and the completion of an associated technical report.

However, due to other commitments Z* were only able to do the modelling work in early June and following subsequent deliberations Meya decided to update the 3D model during April and requested Z* to review the model by the end of that month prior to updating the mineral resource estimate in May 2024.

1.2. Competent Persons

This update of the resource model and estimates was undertaken by Sean Duggan David Bush and Cuan Lohrentz with inputs from Andy Grills, three of whom are Principal Mineral Resource Analysts employed by Z Star Mineral Resource Consultants (Pty) Ltd. All Z* analysts have sufficient experience relevant to the type of mineralisation and of the activities being undertaken and qualify as Competent Persons as defined in the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (Australia) and as Qualified Persons as defined in NI43-101 (Canada). All Z* Analysts are registered with the South African Council for Natural Scientific Professionals, a Recognised Overseas Professional Organisation (ROPO) for JORC purposes.

1.3. 2018 SRK Report

Z* were provided with a copy of the 2018 SRK report on Meya[1] but not any more recent technical reports related to the Meya Mineral Resource. However, it is understood that SRK were in the process of an update in 2023. The 2018 SRK report "presents exploration results and estimates" but was intended for internal use only and not disclosure in the public domain, and, is regarded as a "preliminary assessment of the project". The 2018 report excludes a classified mineral resource, however, the following statement was made in this regard:

> *"Based on exploration and evaluation work completed at the Meya Project to 29 June 2018, as well as historic work conducted within the License area, SRK has estimated at a Scoping Study level that the Meya River, Meya River North, Bardu, Waterloo and Simbakoro Dyke Zones potentially contain 6.36 million carats of diamonds with a potential value of approximately US$1.5 billion."*

A number of quotes from the SRK 2108 report are pertinent to the current project:

- "The morphology of the dykes is variable in that there are zones of pinching and swelling, bifurcation and dyke offsets. Internal dilution is variable and multiple phases of kimberlite are present";

- "The Meya River Dyke Zone is presently modelled at ~2,800 m in strike length to a depth of 550 m below surface and has an average width of 0.68m. Total widths are based on an assumed mining width of 5m and represent multiple kimberlite segments within 5m. Based on the treatment of 13,581 survey tonnes of kimberlite, a grade of 0.74ct/t has been established. A macro diamond parcel of 7,399.59ct was recovered from the primary processing and the retreatment of tailings. Following the sale of the diamonds, the average value has been determined as US$337/ct. The sale of the 476ct Meya Prosperity diamond has not been included in this price calculation, but has been included in the grade calculation.";

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[1] Independent Technical Report for the Meya Project, Sierra Leone. Prepared by SRK Consulting in June 2018.

- "Two areas of geological uncertainty have been identified based on the work completed to date: dilution and potential variations in the continuity of geology between drill holes. The 3D geological model generated using these data assumes that the geology between pierce points in each dyke zone is consistent with respect to the general kimberlite width, grade and diamond value. It is possible that there are areas where the dykes may be thinner than expected or may not exist and where the dyke zones may be characterized by higher dilution or lower grade"; and

- SRK declared "preliminary Exploration Results and Estimates" for the Meya River Dyke Zone where the average estimated thickness is 0.68m, the estimated volume is 1.047Mm^3, the estimated density is 2.77, the estimated grade is 0.74ct/t, the estimated average value is US$337/ct. They estimated the "potential carats" to be 2.039M and the "potential value" is US$687M.

1.4. Technical Report and Responsibilities

The Meya Mineral Resource detailed in this report is a collaborative effort between Meya geologists and Z* analysts. Meya geologists aided by sub-contractors have delineated the Meya River Dyke and collated the data required for the estimation of the Meya River Mineral resource.

The following responsibilities apply for this estimation study:

1. Ensuring the accuracy of the 3D wireframe model and the associated volume model: Gerrit Viviers (Meya);
2. Ensuring that appropriate governance is in place related to drilling and sampling programmes and ensuring procedures are in place and have been followed: Gerrit Viviers (Meya);
3. Ensuring a correct data handover to Z*: Gerrit Viviers (Meya);
4. Review of Meya River 3D model and confirmation of volumes: Cuan Lohrentz and Sean Duggan (Z*);
5. The decision regarding what data is accepted for use in the diamond resource estimate: David Bush and Sean Duggan (Z*) in conjunction with Gerrit Viviers (Meya);
6. Exploratory Data Analysis (EDA), density and grade: Sean Duggan and David Bush (Z*);
7. Examination of diamond data and grade and revenue estimation including SFD and assortment models: David Bush (Z*);
8. The validation of results, mineral resource classification and the declaration of the Meya River Mineral Resource: Sean Duggan, David Bush and Andy Grills (Z*); and
9. Internal Z* review of the estimation process, the results and the final report: Andy Grills (Z*).

Sean Duggan holds the overall responsibility for this report and the associated diamond resource figures.

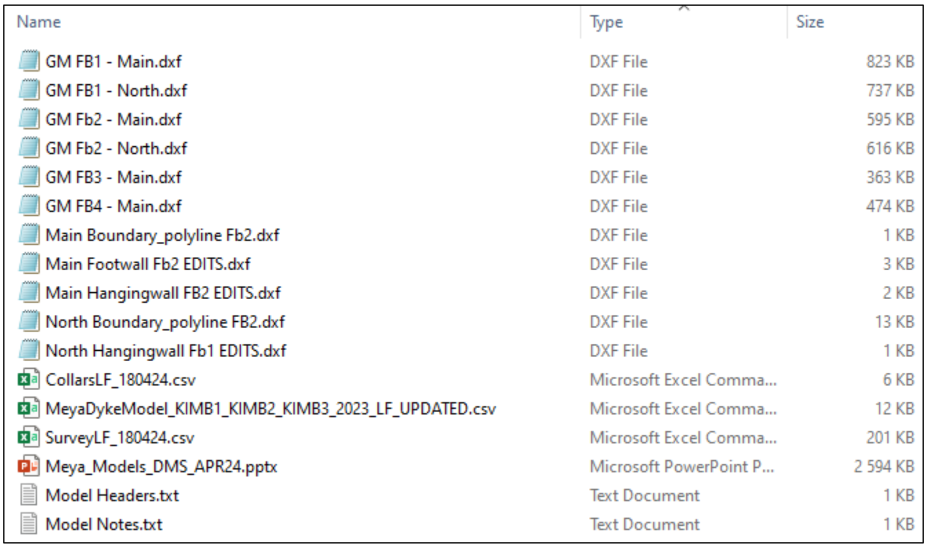
2. Preparation and Analysis of Meya Data

During March 2024 Meya provided Z* with numerous data files including spreadsheets, pdf files and dxf files that were assigned to two major categories: Geology and Resource Information. Importantly, some information relates to the period leading up to 2018 when the initial evaluation was undertaken by Meya (SRK) and other information and data that includes results from later drilling and the associated modelling during 2022 and 2023.

On the 15th April 2024 Meya provided Z* with a set of files for estimation following the update of the 3D model and associated data validation. These included five dxf files (FB1_Main.dxf, FB1_North.dxf, FB2_Main.dxf, FB2_NBorth.dxf and FB3_Main.dxf) and five spreadsheet files containing collar, survey and geology data as well as a spreadsheet containing updated intersection information.

Following a high-level review of these data by Z* and associated discussions with Meya, Z* were provided with updated files for further evaluation on the 17th and 19th April 2024 as shown in Table 2-1.

Table 2-1: Data files provided by Meya on the 19th April 2024



Name	Type	Size
GM FB1 - Main.dxf	DXF File	823 KB
GM FB1 - North.dxf	DXF File	737 KB
GM Fb2 - Main.dxf	DXF File	595 KB
GM Fb2 - North.dxf	DXF File	616 KB
GM FB3 - Main.dxf	DXF File	363 KB
GM FB4 - Main.dxf	DXF File	474 KB
Main Boundary_polyline Fb2.dxf	DXF File	1 KB
Main Footwall Fb2 EDITS.dxf	DXF File	3 KB
Main Hangingwall FB2 EDITS.dxf	DXF File	2 KB
North Boundary_polyline FB2.dxf	DXF File	13 KB
North Hangingwall Fb1 EDITS.dxf	DXF File	1 KB
CollarsLF_180424.csv	Microsoft Excel Comma...	6 KB
MeyaDykeModel_KIMB1_KIMB2_KIMB3_2023_LF_UPDATED.csv	Microsoft Excel Comma...	12 KB
SurveyLF_180424.csv	Microsoft Excel Comma...	201 KB
Meya_Models_DMS_APR24.pptx	Microsoft PowerPoint P...	2 594 KB
Model Headers.txt	Text Document	1 KB
Model Notes.txt	Text Document	1 KB

2.1. Drilling and Sampling

Drilling and sampling data was provided in a number of csv and spreadsheet files:

- CollarsLF_180424.csv: the data provided by Meya included collars for 115 holes.
- SurveyLF_180424.csv: there are 6 756 survey records from 111 holes including two wedges all of which have a dip and azimuth measurement.

- MeyaDyleModel KIMB1 KIMB 2, KIMB3 2023 UPDATEd.csv: this file includes 87 records that include intersection lengths and thickness measurements with a percentage internal waste and a percentage of KIMB1, KIMB2 and KIMB3 in each intersection. These data have been de-surveyed and an x, y and z start and end coordinate is provided. Only Main and North records are considered for the current study and North 1 and South dyke data are ignored. There are 59 intersections in Main and 22 in the North Dyke and the average kimberlite thickness is greater in Main (Table 2-2). The Main dyke is dominated by Kimb1 (92%) whereas the North dyke has a more even distribution of all three kimberlite types.

Table 2-2: Meya River Mineral Resource average widths

Dyke	Count	Average Widths				
		True (m)	Kimberlite	Kimb1 (%)	Kimb2 (%)	Kimb3 (%)
Main	59	3.26	1.87	92%	4%	4%
North	22	0.76	1.01	26%	39%	35%

- GEOLOGY MASTER 202404 GV Cleaned.xlsx: a total of 5 036 hole log records associated with 114 drillholes including three wedges with a from and to field with the associated intersection thickness. There are 28 different rock types included in these data with 6 blank records. Those rock-types that comprise >1% of the total records are summarised in Table 2-3. Only five of the rock-types contain >5% of the records and Granite is frequently intersected (42%).

Table 2-3: Count of lithological types

Lithology	Count	%
GR	2132	42%
AM	859	17%
DO	478	9%
PE	427	8%
KD	274	5%
WG	161	3%
GS	155	3%
AG	129	3%
SA	122	2%
LA	104	2%
GN	58	1%
LG	55	1%
KDM	27	1%

2.2. Estimation Methodology

Following discussions between Z* and Meya geologists a general approach to estimating a mineral resource was agreed as explained in a Z* technical note[2]. The primary focus is to ensure an accurate volume model followed by the grade and revenue modelling, density modelling and the mineral resource classification.

The volume model required Meya to measure the start and end point for each dyke drillhole intersection with the length between these points being referred to as the mineral resource width. The width comprises a measurement of the percentages of kimberlite and internal waste with an additional subdivision of the kimberlite percentage into Kimb1, Kimb2 and Kimb3. The waste outside the resource width is designated external waste which, where possible will not be mined. These data were provided to Z* in a spreadsheet format: MeyaDyleModel_KIMB1_KIMB_2, KIMB3_2023_UPDATEd.csv.

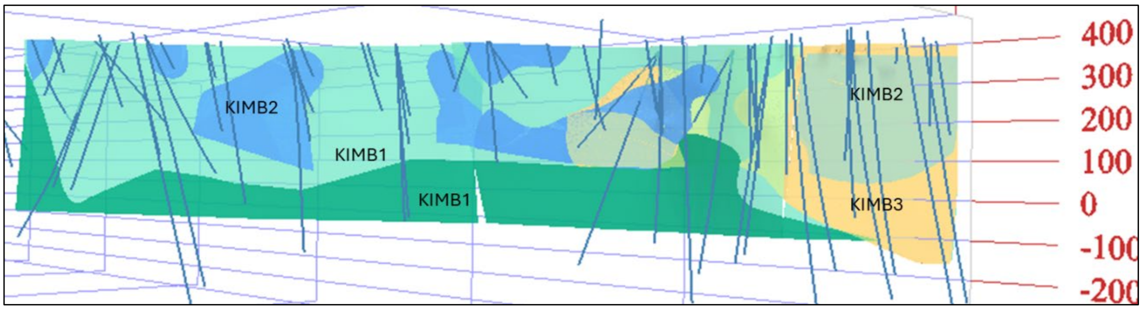
In terms of grade and revenue modelling the initial step is to analyse the micro diamond and macro diamond data (grade, assortment and SFD) to determine if there is sufficient data for individual grade and revenue modelling of the Kim1, Kim2 and Kim3 intrusions, thereby finalising an estimation methodology. A spatial analysis of the grade variable at a macro block level will be considered.

The Z* technical note indicated that density will be estimated based on a single value per Resource Width which may need to be calculated where internal waste is present. As for the grade variable, variography will be analysed for density to see if kriging can be applied.

The Z* technical note indicated that classification of the Meya River Dyke will consider the confidence in the geological model, the constructed volume that is used as the framework for estimation and the grade, density, and revenue estimates.

2.3. Kimberlite Geology and 3D Models

Meya provided Z* with copies of dxf files of the SRK 3D wireframe models of the Meya River Dyke (Figure 2-1) where the focus was on the delineation of KIMB1, KIMB2 and KIMB3.



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[2] Grills, A. Meya Dyke Mineral Resource Estimation Process. Z* Technical Note, 20/03/24

Figure 2-1: SRK model of Meya River Dyke (viewed from the southeast)

Following agreement on the estimation method, Meya compiled the thickness data and contracted DMS Mining Consulting (Paul Ehlers) to produce a revised 3D model using the mineral resource thickness explained in the previous section. Modelling was undertaken using Leapfrog^{TM} and resulted in the definition of five fault blocks in two dykes (Main and North): FB1 Main, FB1 North, FB2 Main, FB2 North and FB3 Main as illustrated in Figure 2-2.

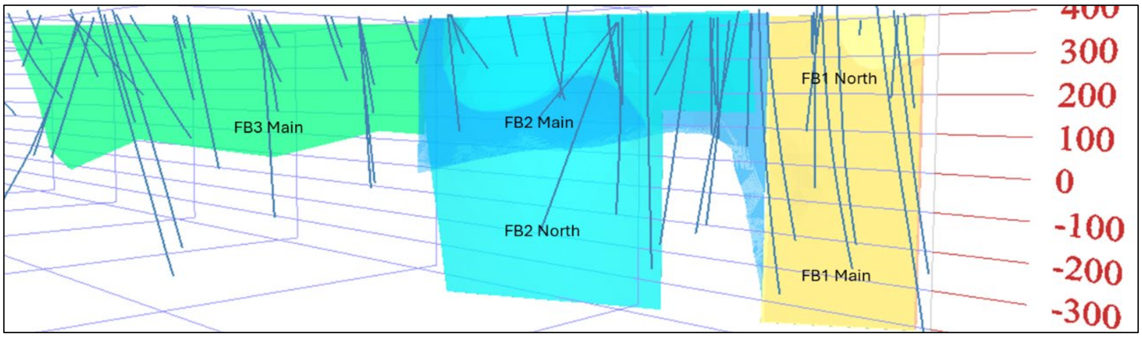

Figure 2-2: Initial Meya model of Meya River Dyke (viewed from the southeast)

Z* reviewed the 3D model and made suggestions for an update. Meya then finalised the 3D model which included an additional fault block, the original FB3 Main domain was subdivided into FB3 Main and FB4 Main (Figure 2-3) and the FB2 Main zone was extended to the same depth as FB1 Main. Z* reviewed the final Meya 3D model and comments and recommendations for future iterations are included in a later section of this report.

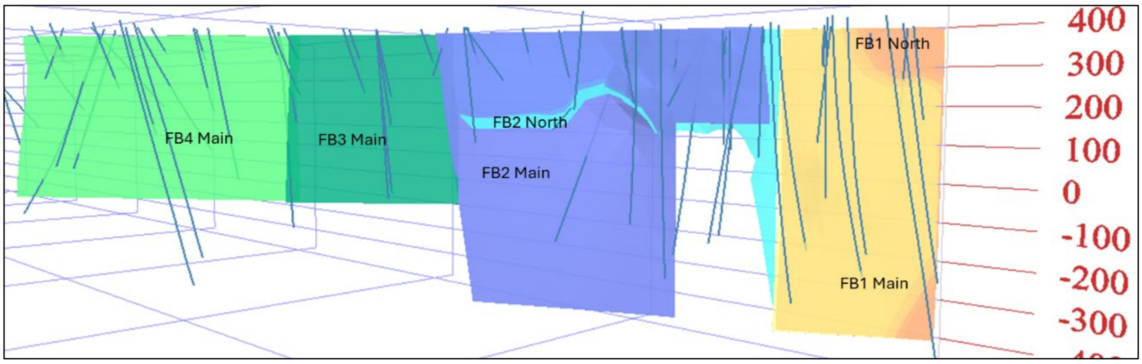

Figure 2-3: Final Meya model of Meya River Dyke (viewed from the southeast)

2.4. Density

The density data used for this project was provided to Z* in a spreadsheet format with 2 304 wet and dry density measurements in 81 boreholes (Density_230421_GV Cleaned.xlsx). The statistics for dry density (Table 2-3) vary from a minimum of 1.68t/m^3 (Leached Granite) to a maximum of 3.30t/m^3 with a mean value of 2.73t/m^3 for all lithological types. The relative change in average density and associated moisture content by lithology is evident from the plots in Figure 2-4.

By exception checking was undertaken with 14 records identified as problematic (eight records without “from” and “to” fields were deleted and six records where fields were swapped were amended).

.Table 2-4: Dry density statistics by lithology

Lithology	**SG_Dry**					
	Count	**%**	**Min**	**Max**	**Mean**	**Variance**
Amphibolite	277	12.0%	2.63	3.30	2.94	0.0104
Dolerite	161	7.0%	2.65	3.17	2.92	0.0079
Kimberlite	49	2.1%	2.45	3.16	2.83	0.0211
Kimberlite Dyke	58	2.5%	2.53	3.06	2.77	0.0123
Granite	49	2.1%	2.62	2.97	2.74	0.0074
Gneiss	28	1.2%	2.63	3.00	2.70	0.0072
Granite	1506	65.4%	2.31	3.30	2.68	0.0036
Altered Granite	49	2.1%	2.19	2.90	2.65	0.0107
Mylonite	6	0.3%	2.56	2.73	2.63	0.0046
Pegmatite	94	4.1%	2.57	2.77	2.63	0.0008
Leached Granite	26	1.1%	1.68	2.53	2.33	0.0373
Total	**2303**		**1.68**	**3.30**	**2.73**	**0.0179**

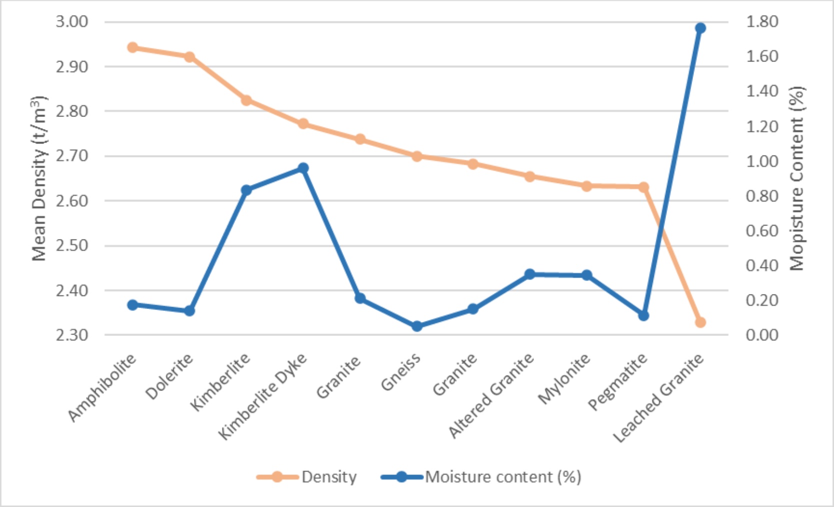

Figure 2-4: Plot of density and moisture content by lithology

2.5. Diamond data

Diamond data for the Meya deposit includes several files containing diamond data related to bulk sampling, production data, micro and macro data, diamond value reports (16 pdf files), diamond sales (21 spreadsheets and pdf files) and interim memo notes (3 pdf files).

2.5.1. Bulk Sampling

Meya have excavated a number of bulk samples and one site falls within the Meya River Domain situated directly adjacent to the Koidu Mine. Z* was provided with four Excel^{TM} spreadsheets with information related to the two Meya River Dyke bulk samples as illustrated in Figure 2-5:

- Sample MBS2_1 is a sample of the upper portion of the Meya River Dyke (between 395 to 385mamsl) with a volume of 2 890m^3 from which 14 159 stones weighing 4 115 carats were recovered; and
- MBS2_2 sampled the lower part of the dyke (between 385 and 375mamsl) with a total volume of 2 663m^3 and a recovery of 11 829 stones and 3 285 carats.

Each bulk sample spreadsheet comprises two sheets for each of the two samples: first pass information obtained from an infield plant (no diamond data) and data related to the main plant (first and second passes) that includes diamond information by sieve class and specials. The second pass comprises tailings audits.

Of a total of fifteen specials, fourteen were recovered from the upper sample 01 with a particularly large stone of 476.73 carats (recovered by the infield screening plant); the second largest stone was 46.47carats.

The bulk sample data excludes coordinates but it is assumed that these diamonds were recovered from the FB1 Main and FB1 North domains.

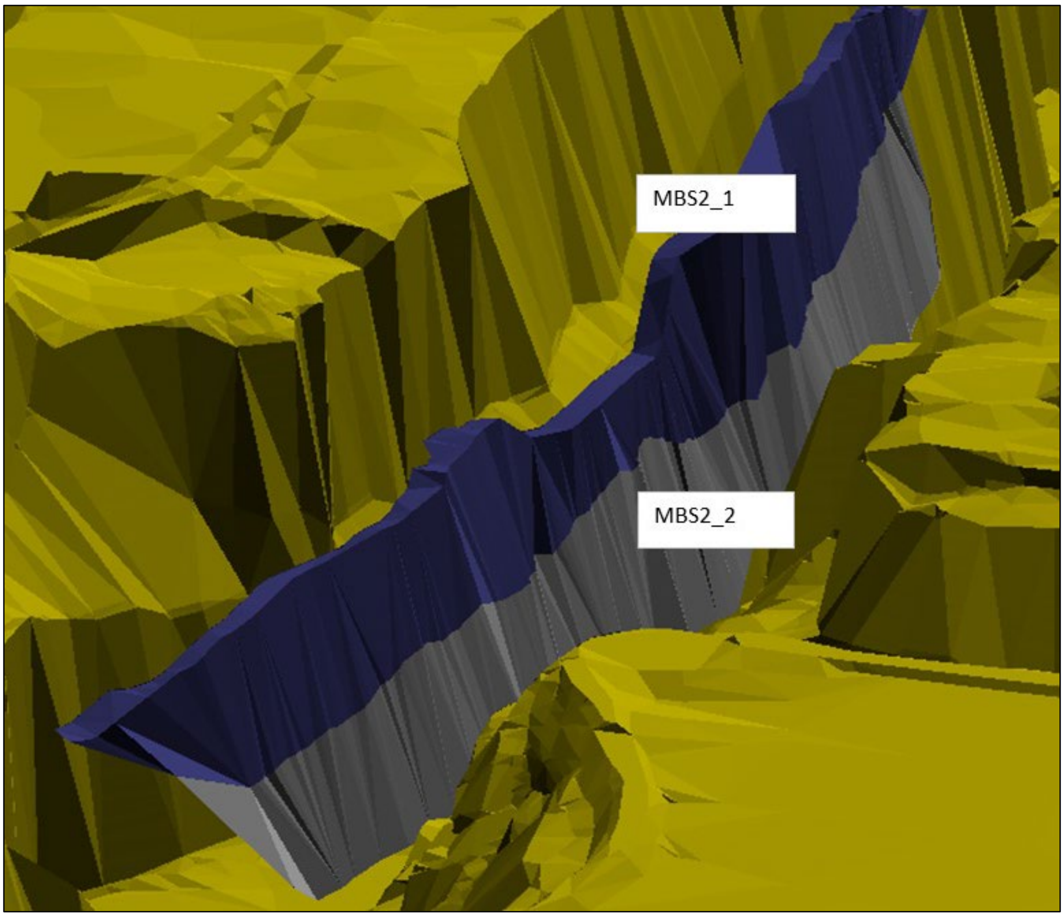

Figure 2-5: Image showing relative locations of the two bulk samples in the Meya River Dyke (source Meya)

The results of the bulk sampling programme are included in Table 2-5; 19 204 stones were recovered weighing 6 319carats. The majority of the stones were recovered from the elevations between 395 and 385mamsl and the average stone size is highest at these elevations.

Table 2-5: Bulk sample diamond recoveries

Area/Blast ID	Elevation	Stones	Carats	cts/stn
MMB_MBS2_001/17	395 to 385	9 062	3 320	0.37
MMB_MBS2_002/17	385 to 375	6 575	1 929	0.29
MMB_MBS2_003/17	385 to 375	3 528	1 036	0.29
MBS2 Dyke - Audit	395 to 385	39	34	0.87
	Total	**19 204**	**6 319**	**0.33**

A significant % of diamonds were also recovered from the tailings audits as shown by the data in Table 2-6; as expected, the average stone size is smaller.

Table 2-6: Diamonds recovered from bulk sample tailings treatment

Elevation	Stones	Carats	cts/stn
385 to 375	1 726	320	0.19
395 to 385	5 058	761	0.15
Total Tailings	**6 784**	**1 081**	**0.16**

The bulk sample size frequency distribution data are summarised in Table 2-7. The data for MBS2_1 excludes the 467 carat Meya Prosperity stone and the MBS2 Dyke – Audit stones.

Table 2-7: Bulk sample and Production stone and carat size frequency distribution data

Size	Bulk Sample MBS2_1			Bulk Sample MBS2_2			ROM 1	ROM 2
	Pass 1	Tailings	Total	Pass 1	Tailings	Total	230627	240313
+10.8c	6	0	6	1	0	1	3	11
+23	8	0	8	2	0	2	5	21
+21	38	1	39	20	1	21	19	92
+19	97	12	109	136	1	137	77	317
+17	110	7	117	119	9	128	72	301
+15	101	3	104	77	2	79	50	265
+13	525	73	598	570	43	613	405	1680
+12	437	69	506	471	46	517	348	1461
+11	1263	293	1556	1407	138	1545	973	4072
+9	2481	951	3432	2857	371	3228	2192	8299
+7	1661	918	2579	1910	339	2249	1697	5528
+6	1681	1425	3106	1934	485	2419	2346	6075
+5	587	894	1481	539	237	776	1461	2540
-5	66	412	478	60	54	114	758	971
Total	9061	5058	14119	10103	1726	11829	10406	31633
+10.8c	103.09	0.00	103.09	11.39	0.00	11.39	84.34	224.97
+23	62.94	0.00	62.94	16.67	0.00	16.67	37.86	166.34
+21	161.24	5.56	166.80	81.91	4.62	86.52	89.77	396.87
+19	204.88	25.77	230.64	278.53	2.36	280.88	172.81	733.44
+17	153.15	11.20	164.35	176.05	12.97	189.02	103.13	438.67
+15	111.60	3.56	115.15	92.84	2.46	95.30	55.33	306.74

Size	Bulk Sample MBS2_1			Bulk Sample MBS2_2			ROM 1	ROM 2
	Pass 1	**Tailings**	**Total**	**Pass 1**	**Tailings**	**Total**	**230627**	**240313**
+13	409.47	58.06	467.53	448.23	34.86	483.09	318.63	1339.60
+12	231.46	37.34	268.80	254.60	25.97	280.56	182.86	773.97
+11	458.15	105.83	563.98	513.61	50.37	563.98	349.72	1491.19
+9	521.20	194.86	716.06	604.77	77.72	682.49	458.89	1786.34
+7	222.50	119.38	341.88	260.38	46.57	306.95	226.65	752.00
+6	162.49	127.94	290.44	185.69	45.31	231.00	212.71	576.19
+5	38.76	55.11	93.87	37.31	14.98	52.29	88.42	158.05
-5	2.63	16.16	18.79	2.36	2.16	4.52	29.62	37.87
Total	2843.56	760.75	3604.31	2964.33	320.32	3284.65	2410.75	9182.24
Mass	8 285			8 768			24 445	75 940
Kimberlite	5 037			5 755			5 732	17 508
Cpht (dilute)	34	9	44	34	4	37	10	12
Cpht (undilute)	56	15	72	52	6	57	42	52

2.5.2. Production Data

The production data was provided to Z* as three spreadsheets:

- *MR ROM Sample Trench_Data_230627.xlsx*: includes 297 records from the 22nd September 2017 to the 1st March 2022 with references to location, elevation and stones and carats by size frequency class. These data show a total of 90 330 stones and 22 705 carats (0.25cts/stn) recovered from 84 196t at elevations between 290 and 390mamsl.

- *MR ROM UG _Data_230627.xlsx*: includes 67 Main Plant records from the 28th November 2022 to the 6th June 2023 with references to location and elevation and stones and carats by size frequency class. These data include a total of 10 406 stones weighing 2 411 carats (0.23cts/stn) recovered from 22 342t at three elevations; and

- *MR ROM UG_Data_240313.xlsx*: includes 199 Main Plant records from the 28th November 2022 to the 29th February 2024 with references to location and elevation and stones and carats by size frequency class. A total of 31 633 stones and 9 182 carats (0.29cts/stn) were recovered from 75 298t from elevations between 275 and 355mamsl.

Like the bulk sample data the actual location of these data is unknown; it is assumed these diamonds were mainly recovered from FB1 Main and North.

2.5.3. Micro Diamond Sampling

The micro diamond data provided to Z* is contained in a spreadsheet, *Meya Project_Master sample inventory_20230713.xlsx*:

- *Meya Project_MIDA database*: 348 records that include hole and sample ID's, mid-point coordinates, sample type (trench, drill core, shaft, underground grab), sampling programme (bulk sample, delineation, exploration, Koidu comparison) and general information related to sample length, size, etc. and diamonds by size frequency class.

- *Drillhole MIDA sample intervals*: 209 records for Meya River, Bardu, and Waterloo occurrences including hole and sample ID's, sample depths and "from" and "to" fields.

The micro diamonds were sourced from bulk sampling in trenches (66 records) and samples of drill core (152 records) and Meya have a record of the X, Y and Z midpoints for each sample. Unfortunately, there is no way of accurately determining the location of each micro diamond sample relative to the 3D wireframe model.

There are no coordinates for the trench samples and the drill cores only include a midpoint that will often fall outside the wireframes in particular with longer samples. Attempts were made to desurvey the density data with the data that was used to create the wireframe model but there were very few records (44) with an exact match. Similalrly, desurveying the micro diamond data results in very few exact matches.

Consequently, a method was developed to identify micro diamond samples included within buffers around the wireframes, starting with a small 0.01m buffer and then increasing it to 1m, 2m, 5m, 15m and finally 100m. Initially, those Meya River records that were not within 100m of any of the Meya River wireframes were excluded. This resulted in 211 micro diamond records being selected where the sample midpoint is within or relatively close to the Meya River Dyke wireframes.

The stone size frequency distributions of the micro diamond data, combined into fault block (FB) and Main and North (see Figure 2-3) are summarised in Table 2-10

Table 2-8: Micro diamond stone size frequency distribution data

Domain	**FB1_main**	**FB1_north**	**FB2_main**	**FB2_north**	**FB3_main**	**FB4_main**	**Total**
Mass (kg)	329.55	521.75	140.7	19.45	173.85	129.55	1314.85
Stone count	1265	2284	247	71	184	148	4199
Sample count	49	68	29	6	27	32	211
+4.750mm	0	0	0	0	0	0	0
+3.350mm	0	0	0	0	0	0	0
+2.360mm	3	0	0	0	0	0	3
+1.700mm	4	3	0	0	0	1	8
+1.180mm	3	5	2	1	0	1	12
+0.850mm	7	12	3	0	1	1	24
+0.600mm	26	52	2	1	2	5	88
+0.425mm	47	83	7	3	4	1	145
+0.300mm	134	183	20	6	18	14	375
+0.212mm	186	334	46	8	33	24	631
+0.150mm	322	617	67	16	57	40	1119
+0.106mm	533	995	100	36	69	61	1794
Grade stns/8kg	30.71	35.02	14.04	29.20	8.47	9.14	25.55

3. Review of the Meya 3D Wireframe Model and Volume

As illustrated in Section 2.3 of this report the previous wireframes modelled by SRK attempted to utilise the three main kimberlitic lithologies, i.e. KIMB1, KIMB2 and MIB3. Following discussion between Z* and Meya geologists, the approach to modelling was changed as detailed in Section 2.2, where the method is to create the wireframes according to a mineral resource width that includes the percentage kimberlite (KIMB1, KIMB2 and KIMB3) and the percentage internal waste.

The focus of the current project is on the Meya River Dyke Zone and the Bardu and Waterloo dykes further along strike to the west are therefore not included in the latest model. As mentioned previously, Meya contracted DMS Mining Consulting (Paul Ehlers) to produce the Meya River Dyke wireframe model using Leapfrog™. Z* imported the wireframe model into Datamine™ for the review process and following a number of interactive discussions the model was finalised on the 19th April 2024.

As illustrated in Figure 2-3 the current Meya River Dyke comprises a Main Dyke and a North Dyke and includes six domains referred to as fault blocks, i.e. from east to west, FB1 Main, FB1 North, FB2 Main, FB2 North, FB3 Main and FB4 Main.

In addition to examining the wireframes together with the boreholes in 3D in Datamine, a total of 38 sections were created to examine the model relative to the drillhole intersections. In general the Meya 3D model is considered sufficiently robust for estimating the mineral resource volume and therefore the associated tonnage. A number of observations were made for consideration by Meya for future iterations of the model; these are elaborated on below.

The current model does not honour the information available from the underground development and stoping as illustrated by the section shown in Figure 3-1. In some locations the position of the dyke is offset from the underground development by ~4m to the north. However, the underground workings are restricted to a small part of the deposit and will not significantly change the total estimated volume. None the less it is recommended that future models take cognisance of underground workings where face mapping has been undertaken.

Minor inconsistencies in dyke thickness were observed in some sections e.g. MMDD-125 intersections indicate a true thickness of ~1.2m (and the nearby MMDD-128 is even thicker) but the model nearby is down to 0.3m and 0.5m which may also have an impact along strike.

Some holes, e.g. MMDD-097, MMDD-073, MMDD-077, MMDD-062 are excluded or not included in the current model for various reasons. The impact on the volume estimate will not be significant but reasoning should be documented. MMDD-100 is also not included but its location relative to other holes is spurious so the emission is justified. It can be argued that MMDD-111 should be excluded from the model, however, it is located on the fault boundary.

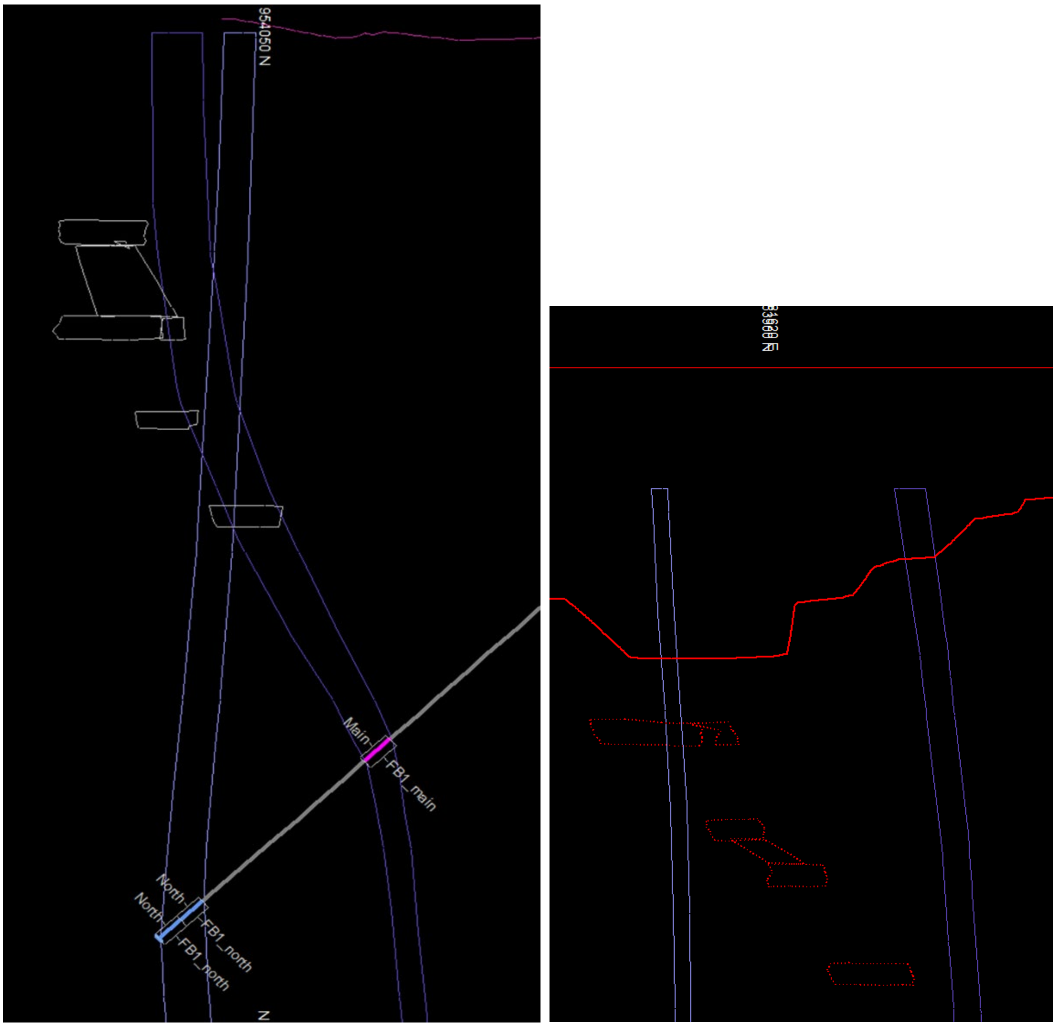

Figure 3-1: Section highlighting relative positions of the 3D wireframes (FB1 Main and FB1 North) and the underground development and stoping

As part of the review process the domain volumes were calculated in Datamine and compared to those provided by Meya and the differences are extremely small.

A more detailed view of the underground development relative to the estimation domains is shown from two angles in Figure 7-2. It is important to note that the 3D wireframes are based on the Mineral Resource Width. The mida and density drillholes were not utilised as part of the 3D wireframe modelling and this resulted in some differences. The midpoints of the kimberlite density measurements and the midpoints of the mida samples do not always fall within the wireframes. This issue is addressed in other sections of this report. However, future models should ideally take cognisance of all drillholes, e.g. the location of the mida samples.

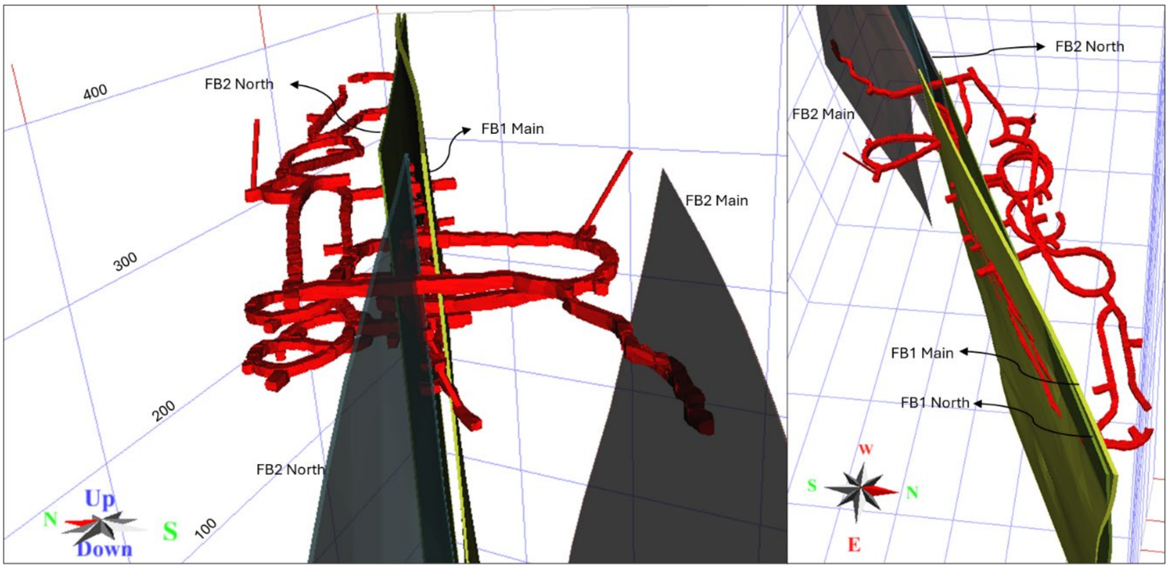

Figure 7-2: Location of underground development and the FB1 and FB2 domains, viewed from the west (left) and from above and from the east (right)

The estimated undepleted volume of the modelled Meya River Dyke as at April 2024 is 2.20Mm^3 (Table 3-1) and the depleted volume is 2.14Mm^3. It is evident from these figures that the bulk of the mining has occurred in FB1 Main (65%) and FB1_North (32%) with minor depletions in FB2.

Table 3-1: Meya River Dyke Volumes as at 18th April 2024 (figures rounded)

Domain	**Volume (m^3)**		
	Undepleted	**Depleted**	**Mined**
FB1_Main	562 700	523 000	39 700
FB1_North	375 700	356 000	19 700
FB2_Main	649 600	649 500	60
FB2_North	97 700	96 400	1 300
FB3_Main	216 400	216 400	0
FB4_Main	300 500	300 500	0
Total	**2 202 500**	**2 141 800**	**60 700**

4. Density and Tonnage Estimation

The volume of each of the six fault block domains used to estimate the Meya River Mineral Resource was discussed in the previous section of this report and an estimate of the density is required to calculate the associated tonnage. As discussed in Section 2.4 of this report there are numerous wet and dry density measurements obtained from 81 drillholes, many of which fall within the Meya River Dyke area.

Unlike previous estimation updates where attempts were made to estimate the density of different kimberlite units, this study utilises information sourced from the mineral resource width as explained in Section 2.2. The approach requires a dry density estimate to be made within the mineral resource width which is a combination of kimberlite and waste and therefore the data must be manipulated to obtain a representative dry density according to the percentage of kimberlite and internal waste.

In order to estimate a variable like dry density (t/m^3) samples are typically selected if their midpoint falls within the domain. However, the narrow width of the kimberlite dykes results in relatively low number of samples being selected using this method. Consequently, the density analysis included introducing buffers (the same approach as for the micro diamond data) and this was done using the following buffer distances: 0.1m, 1m, 2m, 5m, 10m ,15m and 100m.

The dry density analysis was undertaken using lithological groups where the kimberlite units (kimberlite and kimberlite dyke) were combined into one group and the single Kimberlite (Transitional) with a relatively low density was excluded. The other lithological units were not combined and are all considered to be part of the internal waste.

The estimation of dry density into the six estimation domains included the following main steps:

- The creation of buffers with seven different distances around each wireframe using Datamine^{TM};
- The creation of lithological groups, e.g. combining kimberlite lithologies and the selection of dry density data by lithology within the six wireframes and for each buffer using Isatis^{TM};
- Calculation of the average percent internal waste and kimberlitic material for each estimation domain using all intersections;
- The export of dry density data by domain and lithology group to spreadsheet format for the calculation of the average dry density for internal waste that includes all non kimberlite lithologies. This calculation included weighting the dry density according to the number of intersections for each lithology group, i.e. a percentage; and

- The selection of an appropriate dry density value for internal waste and kimberlite within each estimation domain.

It is evident from the plots in Figure 4-1 that the mean of the kimberlite material does not change significantly with increase in buffer size, i.e. increase in number of dry density measurements. There are minor reductions in the mean in FB3 Main and FB4 Main domains. Importantly, the mean dry density of kimberlitic material differs between domains from below 2.70t/m^3 in FB2 North to 2.95t/m^3 in the FB4 Main domain.

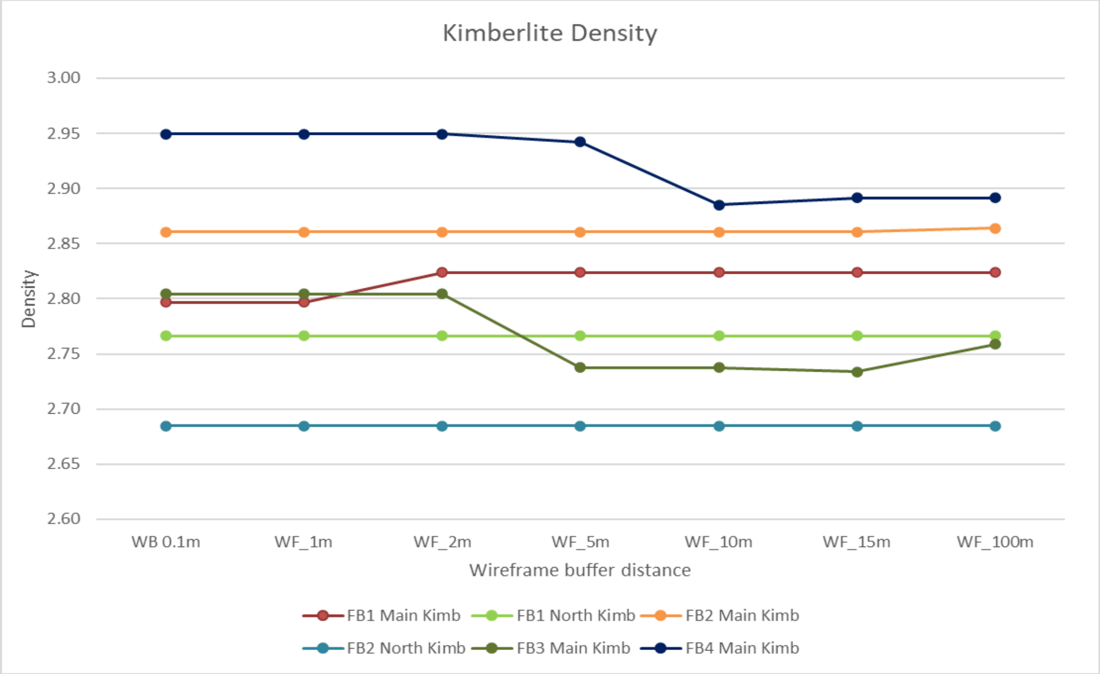

Figure 4-1: Change in kimberlite mean dry density with change in wireframe buffer distance

The mean dry density of internal waste shows minor changes with different buffer sizes and this is mostly due to the inclusion of different rock types (Figure 4-2). An example is in FB1 Main where the internal waste is only granite up to a buffer distance of 1m and beyond that amphibolite and dolerite are included, both of which have higher densities. Similarly, the dry density of FB1 North drops off at 100m due to the inclusion of leached granite with a relatively low density.

The larger buffer distances in some domains display trends that are probably not representative for the domains, in particular the internal waste dry densities that may be impacted by a rock type that is only some distance away. The number of dry density measurements for the lower buffer distances are shown in Table 4-1 for each domain. As expected, the number of kimberlite records do not increase significantly with an increasing buffer size. Contrastingly, the number of internal waste records does increase with buffer size. Consequently, it was decided to use the dry density calculated using the measurements within a buffer of 2m from the domain wireframes. It should be noted that the number of kimberlite dry density measurements is very limited.

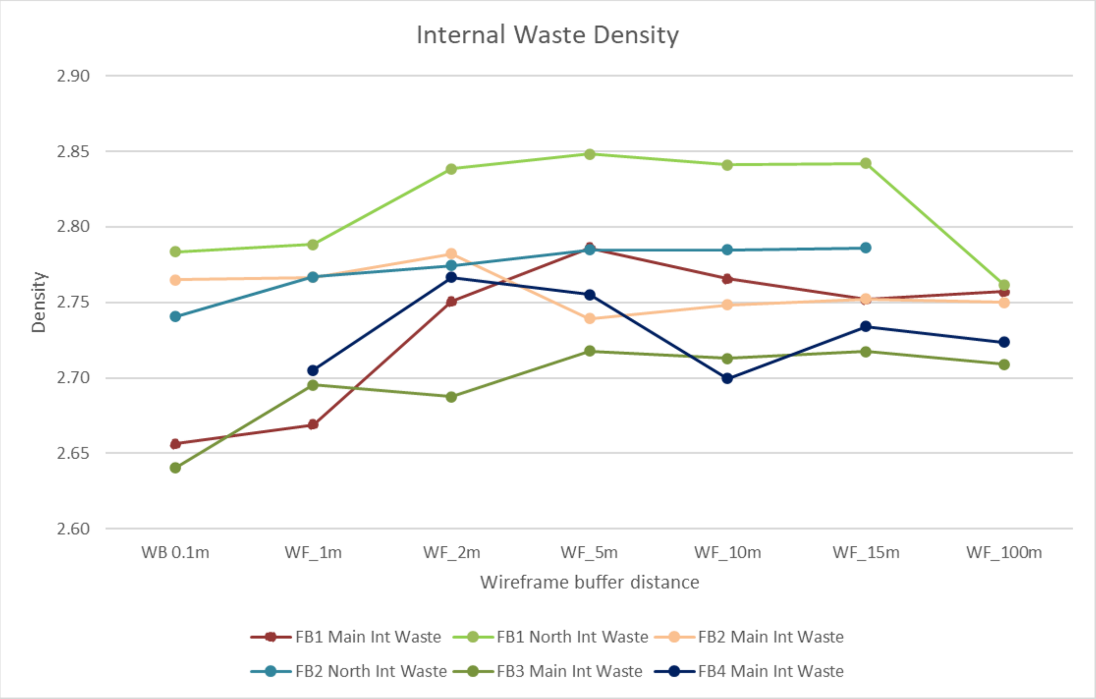

Figure 4-2: Change in internal waste mean dry density with change in wireframe buffer distance

Table 4-1: Number of dry density records for each wireframe buffer and domain

Domain	**Number of kimberlite density records**			
	WB 0.1m	**WF_1m**	**WF_2m**	**WF_5m**
FB1 Main	3	3	4	4
FB1 North	3	3	3	3
FB2 Main	8	8	8	8
FB2 North	3	3	3	3
FB3 Main	4	4	4	6
FB4 Main	10	10	10	11
	No of internal waste density records			
FB1 Main	2	7	12	22
FB1 North	3	5	11	20
FB2 Main	3	9	18	45
FB2 North	0	4	11	25
FB3 Main	3	20	30	54
FB4 Main	0	10	15	34

The calculation of an estimated dry density for each domain is illustrated in Table 4-2. The average percentage of internal waste and kimberlite was calculated for all the mineral resource widths in each domain and the associated dry densities were used proportionally to calculate an estimated dry density value for the mineral resource widths in each domain.

Following completion of the Meya River Dyke estimates the mineral resource classification process resulted in the subdivision of the FB1 Main and FB1 North domains into Upper and Lower units. Consequently, a dry density estimate was calculated for each of the sub-domains using the same method as described above.

Table 4-2: Average percentage internal waste and kimberlite by estimation domain and the associated dry density estimate

Domain	**Average % of mineral resource width**		**Average Density of mineral resource width**		**Estimated Density (t/m^3)**
	Internal Waste	**Kimberlite**	**Internal Waste**	**Kimberlite**	
FB1 Main Upper	44%	57%	2.75	2.81	2.78
FB1 Main Lower	27%	73%	2.76	2.83	2.81
FB1 North Upper	43%	57%	2.84	2.65	2.73
FB1 North Lower	43%	57%	2.83	2.82	2.83
FB2 Main	26%	74%	2.78	2.86	2.84
FB2 North	17%	83%	2.77	2.68	2.70
FB3 Main	15%	85%	2.69	2.80	2.79
FB4 Main	17%	83%	2.77	2.95	2.92

The estimated volumes and tonnage for the Meya River Mineral Resource are shown in Table 4-3.

Table 4-3: Meya River Mineral Resource Volumes, Densities and Tonnages

Domain	**Volumes (m^3)**	**Density (t/m^3)**	**Tonnes**
FB1 Main	562 700	2.80	1 574 800
FB1 North	375 700	2.79	1 048 400
FB2 Main	649 600	2.84	1 846 700
FB2 North	97 700	2.69	263 000
FB3 Main	216 400	2.80	604 900
FB4 Main	300 500	2.92	876 600
Total	**2 202 600**	**2.82**	**6 214 400**

5. Diamond Grade Analysis and Estimation

Once the diamond data was analysed by Z* it became evident that the proposed methodology of trying to estimate the grade of KIMB1, KIMB2 and KIMB3 separately and then compiling a combined Mineral Resource Width grade that included internal waste would not be possible. This is because none of the diamond data have been assigned KIMB1, KIMB2 and KIMB3 codes. The only possible way forward was to drop the KIMB1, KIMB2 and KIMB3 split and estimate a Mineral Resource Width grade that combines Kimberlite percentage and Internal Waste percentage.

The Meya River kimberlite dyke has both micro and macro diamond data (bulk samples and ROM production) and these are used to estimate grade. The macro diamond data are concentrated in the FB1 domain while the micro diamond data are the most spatially representative grade data. The size frequency distribution data shown in Table 2-7 are plotted in Figure 5-1.

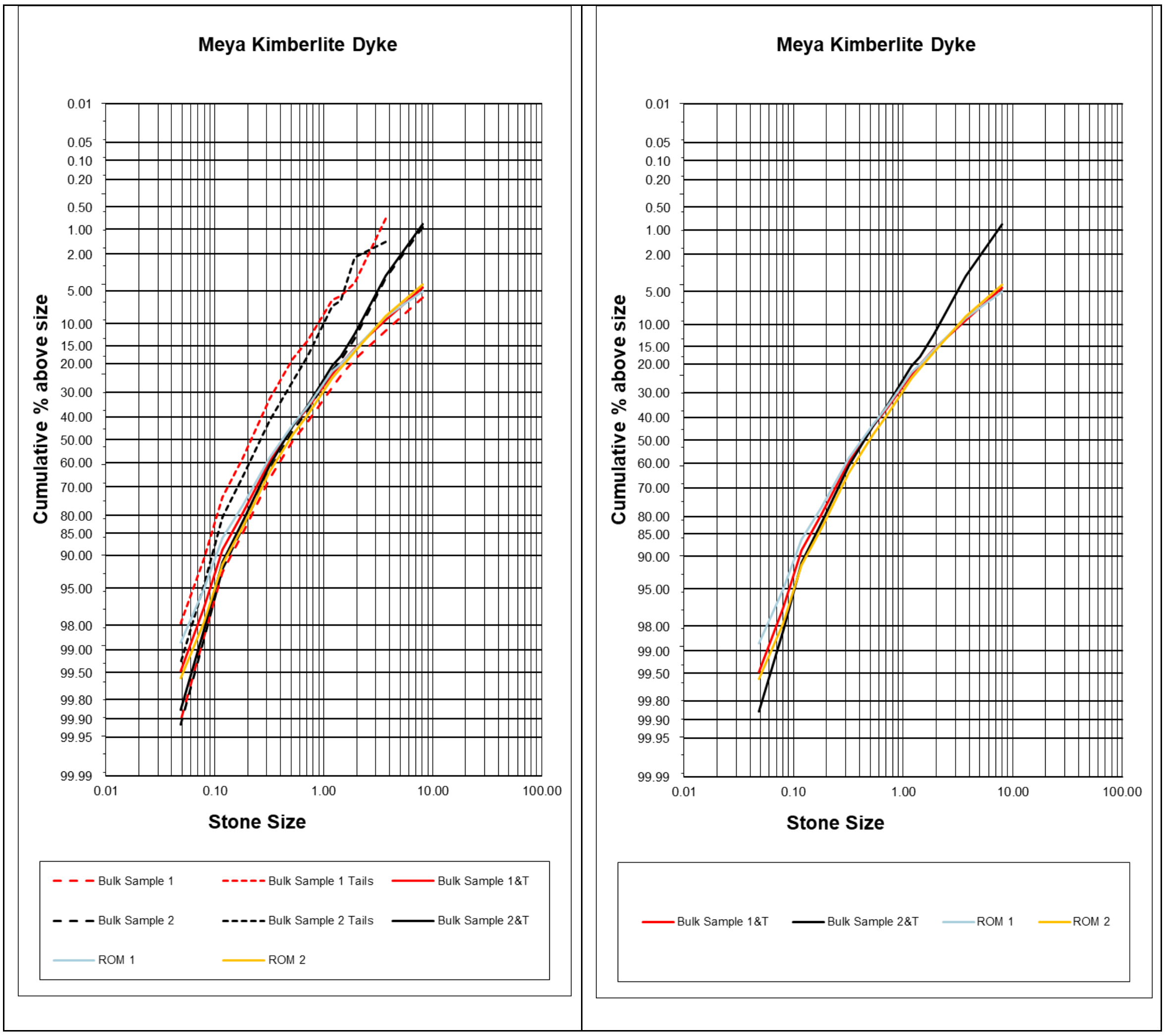

Figure 5-1: Size frequency distribution plots of the bulk sample (left) and production data (right)

A number of features are clearly evident:

- The tailings recovery, as expected, is finer than the Pass 1 bulk sample recovery;
- Bulk sample MBS2_2 shows a finer distribution than MBS2_1 with the latter containing a significantly higher proportion of larger stones; and
- Bulk sample MBS2_1 has a size frequency distribution broadly similar to the two ROM production parcels.

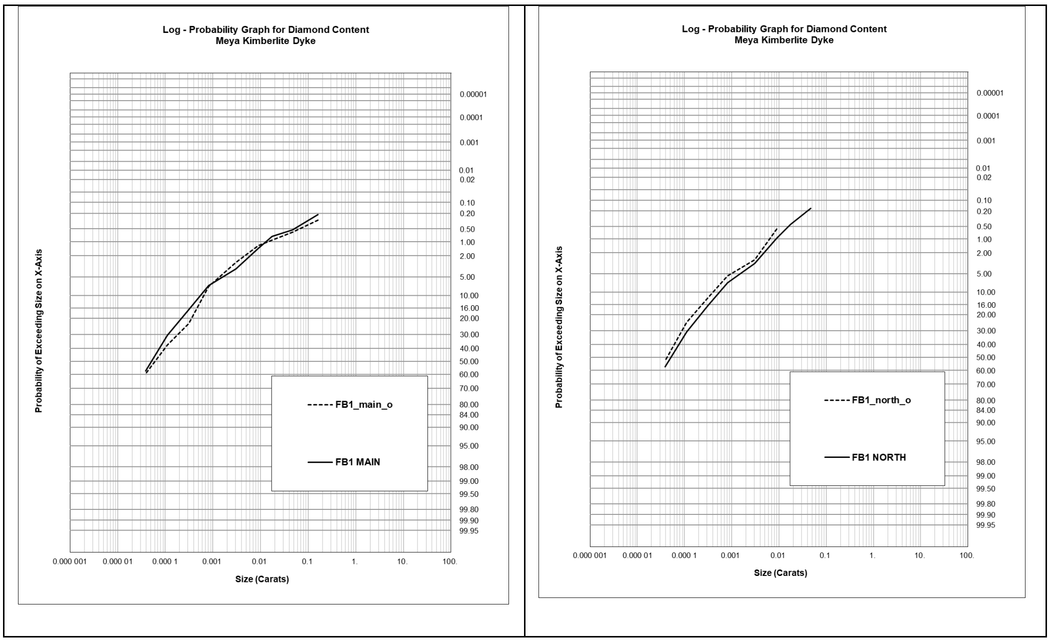

Figure 5-2: Outlier micro diamond samples in FB1 Main (left) and FB1 North (right)

The micro diamond data from the Meya Dyke are plotted in Figure 5-2 and Figure 5-3. Two outlier samples in FB1, with particularly large stone counts were identified (MBS2-CP110-MIDA2 and MBS2-CP065-MIDA) and are plotted against the remaining micro diamond data in FB1 Main and FB1 North in Figure 5-2, left and right, respectively. The stone size frequency distributions of the two anomalous samples do not compare with the remaining data and have been excluded in the following analyses.

With the two anomalous samples excluded the stone size frequency distributions for the "Main" Meya River dyke are plotted in Figure 5-3 left for each of the FB domains. It is clear that the FB1 and FB2 distributions are similar and different to the FB3 and FB4 domains. However, the differences seen in FB3 and FB4 are likely due to statistical noise as a result of limited data (see Table 2-10).

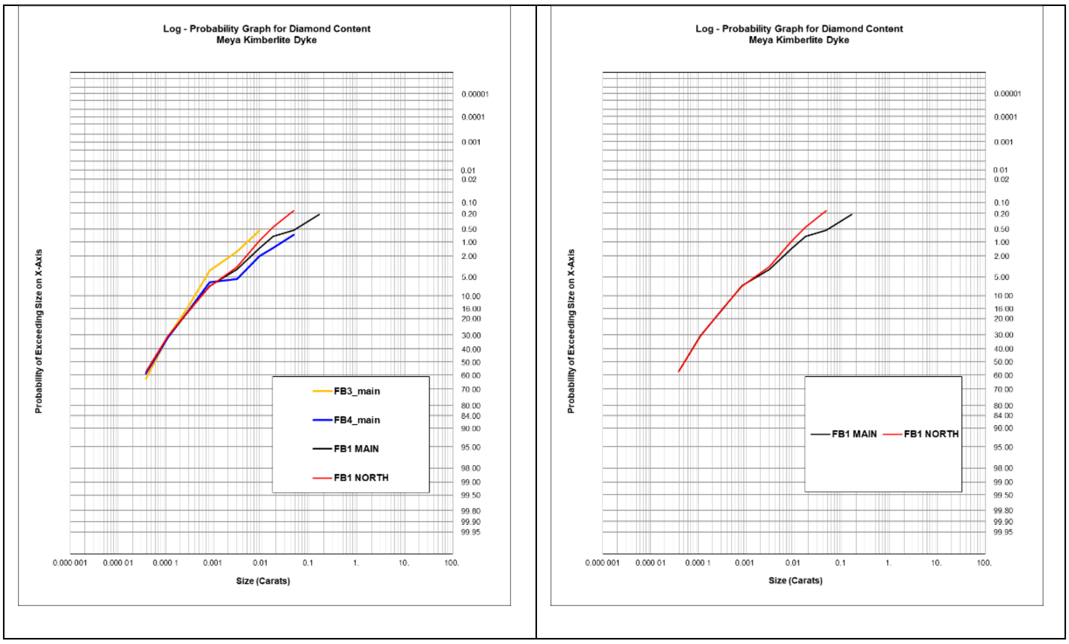

Figure 5-3: Micro diamond size frequency distributions

The stone size frequency distributions of the FB1 Main and North dykes are plotted in Figure 5-3 right and other than at the large stone extremity show similar distributions. From Table 2-10 it is evident that the difference in stone size distributions is due to three stones in the +2.36mm size class of the FB1 Main domain.

From the micro diamond stone size frequency distributions there is no compelling evidence to separate the FB domains and the Main and North dykes.

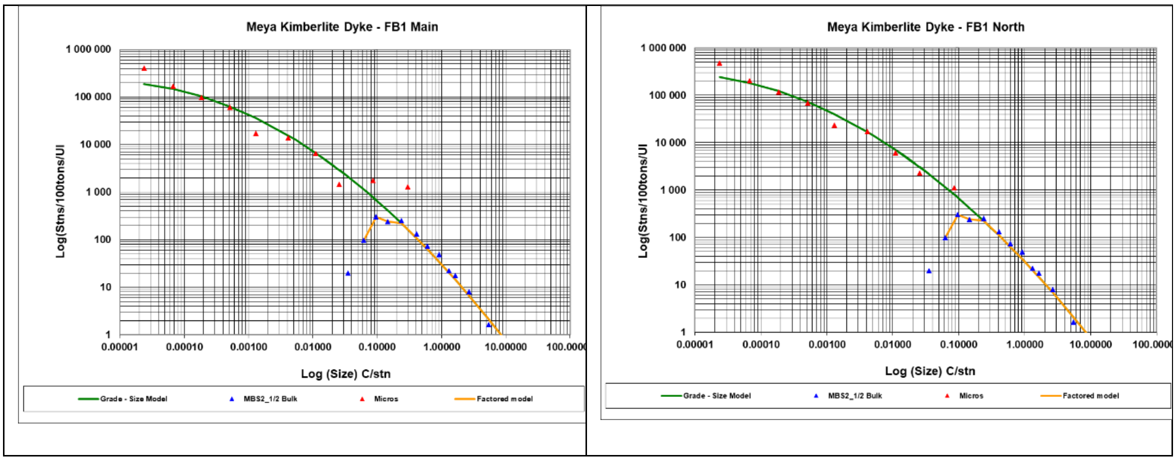

Figure 5-4: Grade size plots for the FB1 Main (left) and North (right) dykes

The bulk sample data and the associated micro diamond data in the FB1 Main and North domains provide a reasonable data set to determine average grade using the micro macro grade size diamond relationship. The process was carried out for both the Main and North micro diamond data although the bulk sample data do not distinguish between Main and North dykes. The grade size plots are shown in Figure 5-4, left and right for the FB1 Main and FB1 North dykes, respectively. (Note the micro diamond data reflect undiluted kimberlite material and the dilution is therefore excluded from the bulk sample grade data).

Undiluted zonal grade estimates for both the Main and North dykes of **64cpht** were estimated at a 1.6mm bottom cut off. Incidental diamond recovery below +5 DTC sieve size are excluded. The similar grades for the Main and North are not unexpected considering the similarity in micro diamond stone size frequency distributions (Figure 5-3 right), although the bulk sample data contain both Main and North dyke material. With the grade size relationship determined it is possible to translate the micro diamond stones/8kg grade to a macro diamond grade in carats per 100 tonnes (cpht) at a 1.6mm bottom cut off. The translation factors constitute a grade ratio between the micro and macro diamond data and the macro average size and was derived by Deakin and Boxer (1989)[3]. The translation factors for the Main and North dykes are listed in Table 5-1 and are used to determine grade in cpht for FB2, FB3 and FB4 (Table 5-2).

The undiluted zonal grade estimates for the various FB domains are summarised in Table 5-2. It is interesting to note that the grades, with the exception of FB2 North, tend to decrease along strike from East to West. The FB2 North domain does however, have the least number of dyke intersections (six) and the lowest sample mass (Table 2-10).

Domain	Micro - Macro Ratio	Av Size
FB1_main	1339.5572	0.294
FB1_north	1582.3828	0.291

Table 5-1: Deakin and Boxer factors for the Main and North dykes

The nature of dyke sampling generates clustered data in that a single drillhole might generate multiple intersections but within a limited volume. This is over and above the clustered nature of the concentrated sampling in FB1 about the bulk sample locations. A direct mean calculation on clustered data may well generate an estimate which is biased towards the clustered data and not spatially representative.

Geostatistical kriging is a good declustering process but in the absence of kriging a simple declustering algorithm can be applied. This process applies a weighting to each sample depending on the number of samples in a defined volume. The undiluted declustered mean grades of the FB domains are summarised in Table 5-2. It is recommended that the undiluted declustered mean grades are applied in the grade resource model for FB1. The sampling in FB2 North is considered unrepresentative and the undiluted declustered grade for FB2 Main should be applied to FB2 North.

It should be remembered that these undiluted grades will have to be diluted with internal waste prior to use in the mineral resource compilation.

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[3] Deakin, AS., and Boxer, GL. (1989). Argyle AK1 diamond size distribution: the use of fine diamonds to predict the occurrence of commercial sized diamonds. In J Ross, AL Jaques, et al. eds., Fourth International Kimberlite conference. Pp 1117-22.

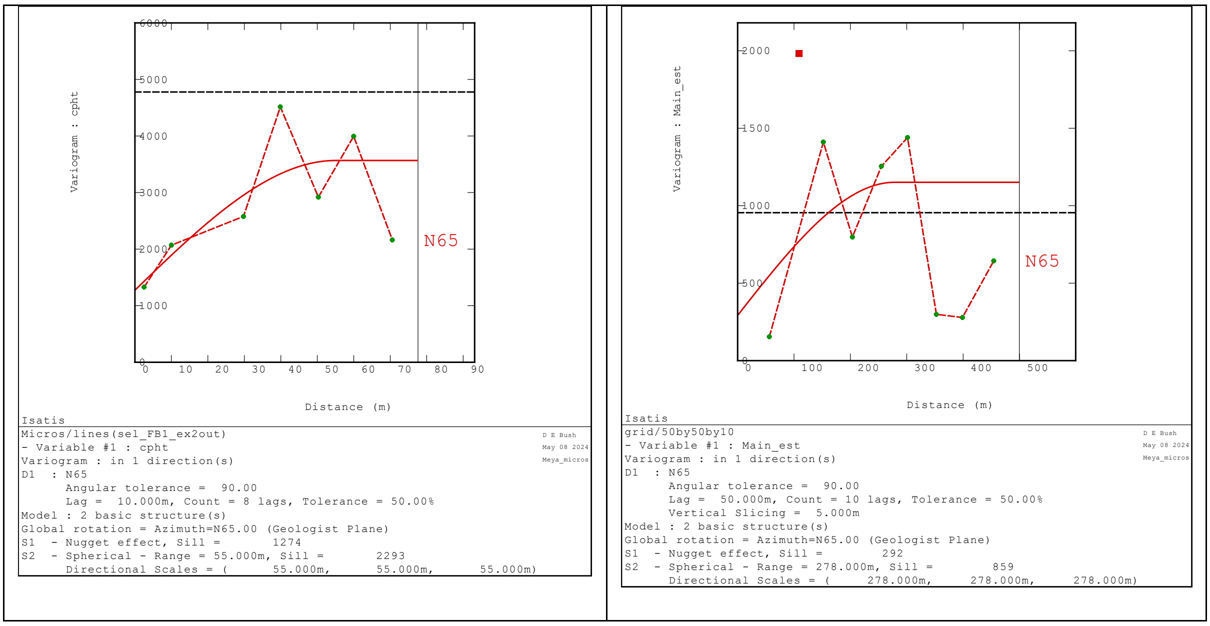
Domain	Grade Size	Intersections	Trench	Drillholes	Min	Max	Mean	Mean
								Declustered
FB1_main	64	48	17	8	8	278	70	**64**
FB1_north	64	67	49	6	7	411	65	**65**
FB2_main		29		14	0	126	39	**41**
FB2_north		6			9	123	68	**68**
FB3_main		27		9	0	47	23	**21**
FB4_main		32		14	0	66	25	**24**

Table 5-2: Undiluted grade (1.6mm bottom cut off) estimates (cpht) for the Meya River Dyke FB domains

It is recommended that the undiluted declustered mean grades are applied in the grade resource model for FB1. The sampling in FB2 North is considered unrepresentative and the undiluted declustered grade for FB2 Main should be applied to FB2 North.

An investigation into the spatial correlation of the sampling data was attempted with the calculation of variograms on the combined FB1 micro diamond data. The resulting variogram, albeit poorly defined and from limited data, generated a range of 55m (Figure 5-5 left). The limitation to this variogram however, is that the data are clustered and the variogram could be influenced by the cluster spacing rather than the sample spacing. A highly simplified kriging declustering was carried out and a varogram calculated from the kriged estimates which generated a longer range (Figure 5-5 right).

The variography is insufficient for local (block) grade estimation but the variogram range could provide some semi-quantitative indicators for sampling optimisation and resource classification.



```
Micros/lines(sel_FB1_ex2out)
- Variable #1 : cpht
Variogram : in 1 direction(s)
D1   : N65
      Angular tolerance =  90.00
      Lag =  10.000m, Count = 8 lags, Tolerance = 50.00%
Model : 2 basic structure(s)
Global rotation = Azimuth=N65.00 (Geologist Plane)
S1   - Nugget effect, Sill =        1274
S2   - Spherical - Range = 55.000m, Sill =        2293
      Directional Scales = (       55.000m,       55.000m,       55.000m)
```

```
grid/50by50by10
- Variable #1 : Main_est
Variogram : in 1 direction(s)
D1   : N65
      Angular tolerance =  90.00
      Lag =  50.000m, Count = 10 lags, Tolerance = 50.00%
      Vertical Slicing =  5.000m
Model : 2 basic structure(s)
Global rotation = Azimuth=N65.00 (Geologist Plane)
S1   - Nugget effect, Sill =        292
S2   - Spherical - Range = 278.000m, Sill =        859
      Directional Scales = (     278.000m,     278.000m,     278.000m)
```

Figure 5-5: Variogram of the combined FB1 micro diamond grade (left) and declustered micro diamond grade (right)

The production data (ROM 1 and ROM 2 in Table 2-4) were not used in the grade estimation process as the micro diamond and bulk sample data are virtually co-located and therefore optimal for grade size determination. It is interesting to note however that the production data have a lower parcel grade than the bulk samples. This is despite a similar size frequency distribution to the bulk samples (Figure 5-1).

Grade size curves of the production data (Figure 5-6 top) show the systematically lower grade in all size classes of the production parcels relative to the bulk samples. If the grade size plots are normalised (i.e. same grade for both plots, Figure 5-6 bottom) the two curves almost overlap with minor differences at the smaller and larger sizes.

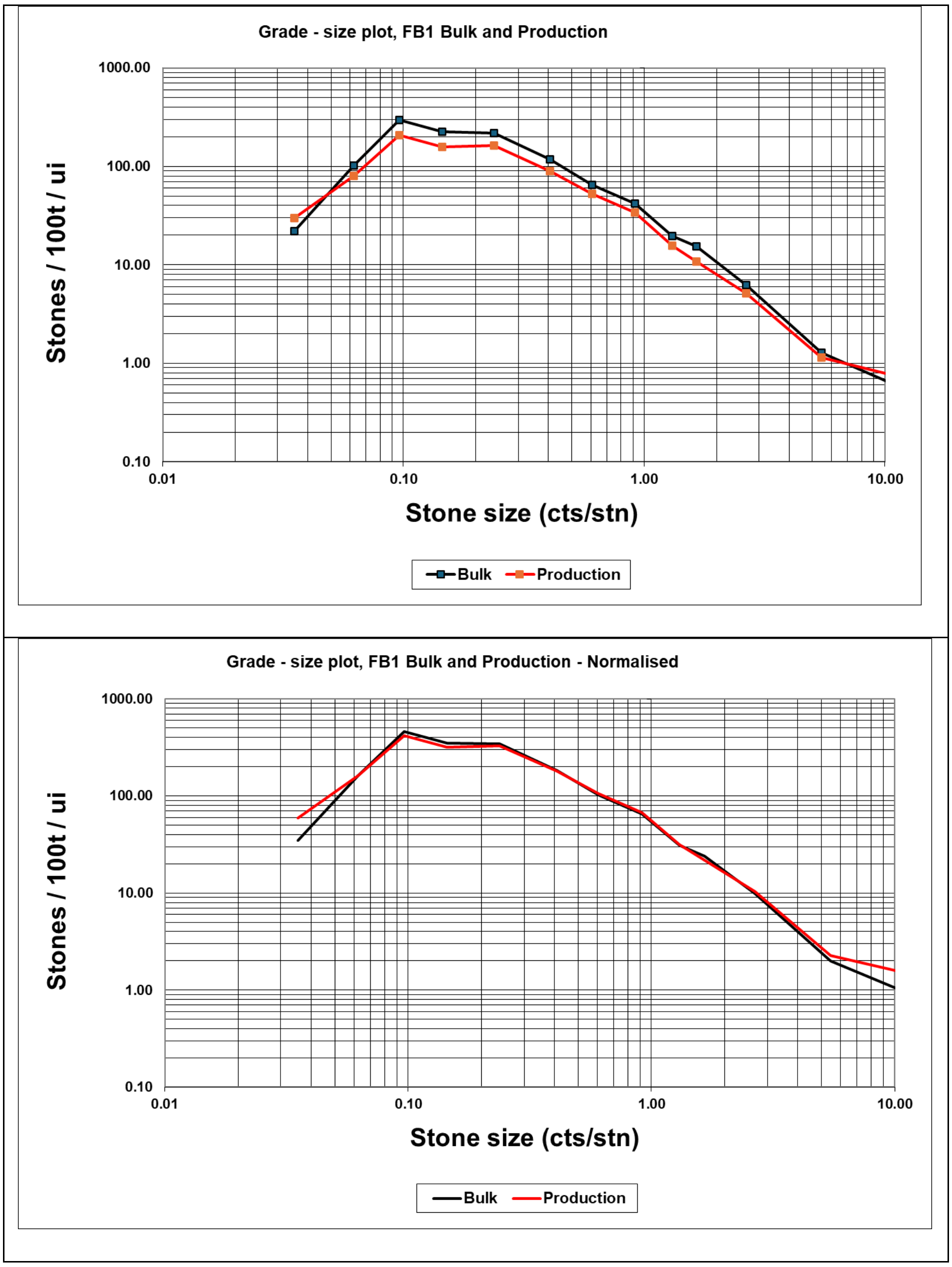


Figure 5-6: Production parcels, grade size curves (top) and normalised (bottom)

6. Size Frequency Distributions and Revenue Modelling

The size frequency distributions for the FB1 Main and North domains are obtained directly from the grade size curves shown in Figure 5-4 and are listed in Table 6-1.

Size	Main	North	Assortment
+10.8	0.95%	0.95%	3211
+23	2.86%	2.85%	3211
+21	6.03%	5.99%	1518
+19	8.00%	7.95%	633
+17	4.77%	4.75%	383
+15	3.16%	3.14%	305
+13	11.37%	11.34%	225
+12	7.60%	7.59%	164
+11	15.00%	15.04%	126
+ 9	20.44%	20.59%	95
+ 7	10.11%	10.10%	79
+ 6	7.69%	7.69%	60
+ 5	2.02%	2.02%	60
Total	100.00%	100.00%	
Price	383	381	

Table 6-1: Size frequency distribution models for the FB1 Main and North dykes

The assortment is modelled from the bulk sample data and particularly from the data summaries in Viviers (2020)[4]. The more recent production parcels are listed in sales categories which may cut across numerous and variable size categories. This makes defining the assortment (Model, Colour and Quality) by size impractical. However, rough diamond prices in 2023 are considered similar to five years ago which would make the Bulk sample parcels "price book" at the time, applicable to today's prices.

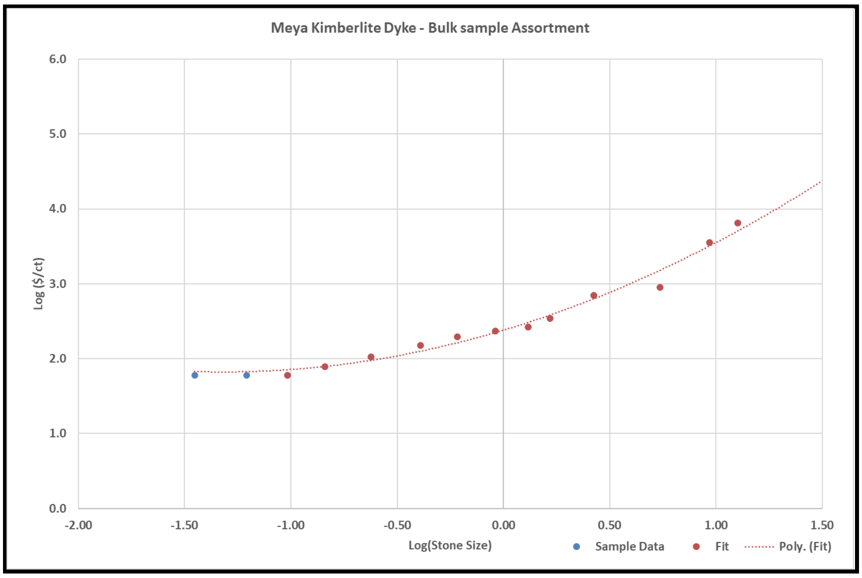


Figure 6-1: Assortment modelling FB1 Main and FB1 North bulk samples

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[4] Viviers, G., (2020) MEYA MINING – MEYA RIVER DOMAIN - SFD and Diamond Valuation. Int. report prepared for Meya Mining.

The latest three production parcels (Exports 17, 18 and 19, from July to December 2023) realised 6 195 carats at an average price of US$329 per carat. The modelled assortment obtained from the bulk sample data is listed in Table 6-1 and an average price of US$383 and US$381 estimated for FB1 Main and FB1 North, respectively.

7. Meya River Diamond Resource Classification

The Z* approach to the classification of diamond deposits includes consideration of the geology and the associated volume models, the accuracy of the drilling and sample data and the associated estimation of the grade, revenue and density models. Key to understanding the uncertainty (or risk) associated with the Meya River Dyke Mineral Resource is understanding the volume model that is based on the Mineral Resource Width calculation. The latter is calculated with drillhole intersections that are at times far apart and where the width is known to vary.

Kimberlite dyke mining operations in West Africa and South Africa, e.g. Bellsbank Dyke, have a notable characteristic: these dykes rarely maintain continuous dimensions along their lateral extent. Instead, they exhibit fluctuating widths, a trait mirrored vertically. Consequently, estimating volumes, as demonstrated in the Meya River Dyke assessment, is reliant on the average thicknesses across extended intervals between intersections.

The position of drillholes relative to the six estimation domains is illustrated in Figure 2-3; it is evident that there is a reduction of drilling and sampling density below approximately 250mamsl in all domains although several holes in the FB1 Main domain have been drilled to a greater depth (~-250m). Importantly, the volume data (related to the mineral resource width) is based on different drilling and sampling to the Mida data as illustrated in Figure 7-1. This figure also illustrates two possible spheres of influence related to the sampling, one at 50m and the other at 75m. This approach serves to highlight the gaps in the information at depth in particular in FB2 Main where there is a lack of drilling.

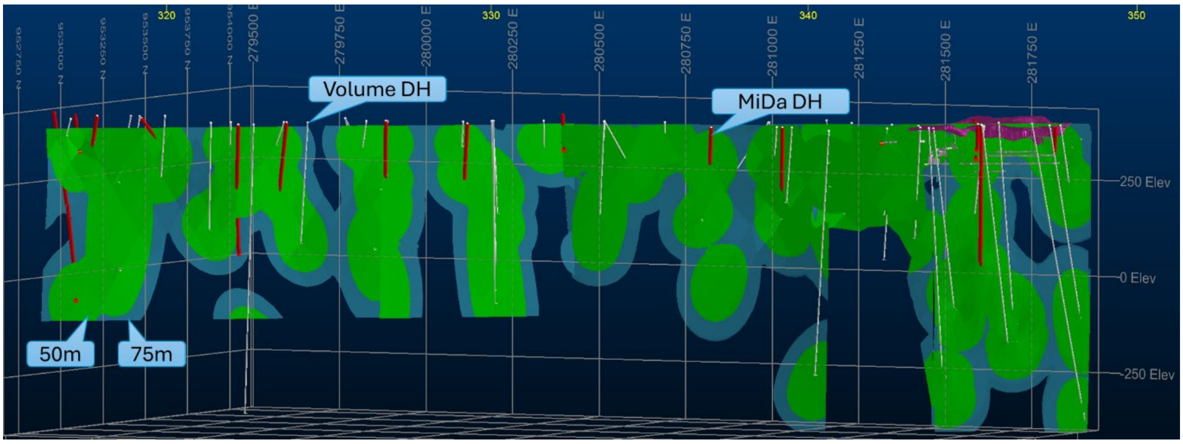

Figure 7-1: Illustration of drillholes used for volume and MiDa with a "ranges of influence of 50m and 75m"

The above figure also illustrates the location of underground development relative to FB1 Main and North (upper right) with a small portion extending into the FB2 Main.

Meya geologists (Gerrit Viviers) appear to have a good understanding of the geology of the Meya River Dyke and extensive work has been undertaken by SRK (Casey Hetman) which is detailed in their 2018 report. In addition to undertaking several site visits with

Meya personnel, SRK documented core logging procedures and have documented the quality assurance and controls. The geology model is relatively complex and the Main Dyke and the North Dyke are different zones that probably comprise different kimberlite phases with different grades. SRK have identified and logged three different types of kimberlite material and have measured their thicknesses (KIMB1, KIMB2 and KIMB3) however, for practical reasons this detail is not included in the current study. Like the volume model the uncertainty associated with the geology is related to the drillhole spacing.

The existing density data for the Meya River isn't optimal for local block estimation as it is extremely limited, leading to the application of a zonal methodology with an inherent level of uncertainty. This report has referenced the decrease in the number of density measurements with depth.

The agreed estimation methodology between Z* and Meya, outlined in Section 2.2 of this report, included estimating grades and revenue for each of three distinct kimberlite types: KIMB1, KIMB2 and KIMB3. However, these units are not coded in the grade and revenue data and therefore implementing the proposed methodology while considering kimberlite type is not possible. In addition, the estimation of the Meya River Dyke undiluted grade variable employed a zonal methodology as there was insufficient data to define robust variography. Zonal grade estimates are typically associated with an Inferred level of confidence.

Two revenue estimates have been modelled, one for the Main dyke and one for the North dyke. These estimates also do not take cognisance of the KIMB1, KIMB2 and KIMB3 subdivision which introduces a level of uncertainty.

The adjacent Koidu Mine is now an underground mining operation recovering diamonds from the K1 and DZB deposits and the latter is the equivalent of the Meya River Dyke deposit. The two FB1 domains have adequate drilling to enable a 3D volume to be estimated with good confidence, in particular in the upper portions above 250mamsl where the drilling density is highest. In addition, most mining and bulk sampling has occurred in these upper portions of the FB1 domains, resulting in reasonable diamond yields and the uncertainty associated with the mineral resource estimate is lower than in other portions of the mineral resource. The bulk sample results can be considered as being representative of FB1 Main Upper and FB1 North Upper.

Based on 50% of the range of the declustered grade a halo of approximately 150m can be applied around the bulk sample trenches and underground development in FB1 Main and FB1 North to define a zone of Indicated grade and revenue. Fault blocks 2 to 4 and the balance of FB1 are classified at an Inferred level of confidence for grade and revenue.

As a result of these findings, it was deemed prudent to partition the FB1 Main and FB1 North domains into upper and lower sub-domains based on an elevation of 250mamsl, creating FB1 Main Upper, FB1 Main Lower, FB1 North Upper and FB1 North Lower. The upper sections of FB1 Main and FB1 North are considered sufficiently robust to merit inclusion in an Indicated classification category. Conversely, there is lower confidence associated with the lower sections of both FB1 domains, as well as the FB2, FB3, and FB4 domains; thus these are classified at an Inferred level of confidence. It must be understood that the uncertainty associated with the Inferred Mineral Resource increases with depth as a result of reduced drilling density, however, it is the view of the authors that exclusion from the mineral resource is not justified.

It is apparent from the bulk sample, mining and drilling data provided to Z* that there is significant dilution that will need to be considered for the Meya River Dyke. However, dilution has not been considered for the grade estimate and this will need to be introduced prior to the mineral resource compilation.

In summary the FB1 domains above 250mamsl are classified as part of the Indicated category and the lower portions of these domains and the FB2, FB3 and FB4 domains are classified as part of the Inferred Mineral Resource.

8. Meya River Mineral Resource Compilation

The calculation of depleted volume within the Meya River domains is 60 768m^3 of which 65% falls within the FB1 Main Domain, 32% within the FB1 North Domain and the remaining small amounts within the two FB2 domains.

As detailed earlier in this report the agreed estimation methodology utilises a mineral resource width that comprises a percentage internal waste and a percentage kimberlite. The internal waste is present in the volume model and has been introduced to the density variable. It only remains for it to be applied to the undiluted grade estimates to ensure compatibility. This process is shown in Table 8-1.

The depleted Meya River Dyke Mineral Resource as at the end of March 2024 (including internal waste dilution) comprises 2.14Mm^3 at an average dry density of 2.82t/m^3 resulting in 6.05Mt. At an average grade of 33cpht the mineral resource includes a total of 2.00 million carats at a bottom cut-off of 1.6mm with a value of US$763million (US$382/ct).

As explained in the previous section of this report, the Meya River Mineral Resource comprises two domains that have been classified at an Indicated level of confidence and six domains making up the Inferred Mineral Resource. The mineral resource figures for each classification category are included in Table 8-1.

Table 8-1: Meya River Mineral Resource

Meya River Dyke Indicated Mineral Resource																		
Domain	**Volume (m^3)**	**Waste**				**Kimberlite**						**Mineral Resource**					**US$/ct**	**Value (M)**
		%	**Volume (m^3)**	**Density (t/m^3)**	**Tonnes**	**%**	**Volume (m^3)**	**Density (t/m^3)**	**Tonnes**	**Grade (cpht)**	**Carats**	**Volume (m^3)**	**Tonnes**	**Density (t/m^3)**	**Carats**	**Grade (cpht)**		
FB1 Main Upper	170 200	43%	73 186	2.75	201 260	57%	97 010	2.81	272 600	64	174 500	170 196	473 860	2.78	174 500	37	$383	$66.8
FB1 North Upper	99 400	43%	42 742	2.84	121 390	57%	56 660	2.65	150 150	65	97 600	99 402	271 540	2.73	97 600	36	$381	$37.2
Total Indicated	**269 600**	**43%**	**115 928**	**2.78**	**322 650**	**57%**	**153 670**	**2.75**	**422 750**	**64**	**272 100**	**269 598**	**745 400**	**2.76**	**272 100**	**37**	**$382**	**$104.0**
Meya River Dyke Inferred Mineral Resource																		
Domain	**Volume (m^3)**	**Waste**				**Kimberlite**						**Mineral Resource**					**US$/ct**	**Value (M)**
		%	**Volume (m^3)**	**Density (t/m^3)**	**Tonnes**	**%**	**Volume (m^3)**	**Density (t/m^3)**	**Tonnes**	**Grade (cpht)**	**Carats**	**Volume (m^3)**	**Tonnes**	**Density (t/m^3)**	**Carats**	**Grade (cpht)**		
FB1 Main Lower	352 800	27%	95 256	2.76	262 910	73%	257 540	2.83	728 840	64	466 500	352 800	991 750	2.81	466 500	47	$383	$178.7
FB1 North Lower	256 600	32%	82 112	2.83	232 380	68%	174 490	2.82	492 060	65	319 800	256 600	724 440	2.82	319 800	44	$381	$121.8
FB2_Main	649 500	26%	168 870	2.78	469 460	74%	480 630	2.86	1 374 600	41	563 600	649 500	1 844 060	2.84	563 600	31	$383	$215.9
FB2_North	96 400	17%	16 388	2.77	45 390	83%	80 010	2.68	214 430	41	87 900	96 400	259 820	2.70	87 900	34	$381	$33.5
FB3_Main	216 400	15%	32 460	2.69	87 320	85%	183 940	2.80	515 030	21	108 200	216 400	602 350	2.78	108 200	18	$383	$41.4
FB4_Main	300 500	17%	51 085	2.77	141 510	83%	249 420	2.95	735 790	24	176 600	300 500	877 300	2.92	176 600	20	$383	$67.6
Total Inferred	**1 872 200**	**24%**	**446 171**	**2.78**	**1 238 970**	**76%**	**1 426 030**	**2.85**	**4 060 750**	**42**	**1 722 600**	**1 872 200**	**5 299 720**	**2.83**	**1 722 600**	**33**	**$383**	**$658.9**
Total	**2 141 800**	**26%**	**562 099**	**2.78**	**1 561 620**	**74%**	**1 579 700**	**2.84**	**4 483 500**	**44**	**1 994 700**	**2 141 798**	**6 045 120**	**2.82**	**1 994 700**	**33**	**$382**	**$763.0**

Declared mineral resource figures are at a 1.6mm bottom cut-off

9. Risks and Recommendations

1. The existing diamond information is incompatible with the geological model. The data needs to be correctly aligned in 3D space and coded as KIMB1, KIMB2, KIMB3 or Mixed if a combination. This applies to all diamond data whether from drilling, bulk sampling or production.

2. The sample spacing over the vast majority of the mineral resource is insufficient for an Indicated level of confidence in terms of both geology and grade. The nature of this deposit is very complex and thus attaining an Indicated level of confidence mineral resource is difficult. A proper optimisation study is required to identify clear objectives and the requirements moving forward.

3. The density sampling is extremely limited and needs to be supplemented, this should also form part of the sampling optimisation study mentioned above.

4. It is recommended that the next update of the Meya River 3D wireframes should take cognisance of the underground workings.

5. Despite a broadly similar micro diamond stone size frequency distribution between the four FB domains the stone grade appears to decrease along strike from East to West. In addition, the two production parcels, despite having similar size frequency distributions to the bulk samples, reflect a lower grade than the bulk samples, particularly MBS2_1. The decrease in grade appears to occur across the entire size distribution range which would tend to exclude the recovery process, other than the dilution calculation, as the cause. The sampling optimisation measured above must ensure sufficient sampling to test these issues.

6. The revenue estimate appears reasonably robust; however, it is recommended that the sales parcel data be sorted and valued by size before allocation into sales lots to facilitate average price calculation.

Competency

Work Undertaken by:

Duggan

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Sean Duggan graduated in 1984 with a BSc degree in Geology, in 1985 with a BSc Honours degree in Geochemistry, both from the University of Stellenbosch, South Africa and in 1994 was awarded an MSc degree in Mining Engineering (Geostatistics) from the University of the Witwatersrand. He has been directly involved in the estimation and classification of diamond deposits for the last 33 years and base metal deposits specifically for 7 years. He is a Fellow of the Geological Society of South Africa, a member of the Geostatistical Society of South Africa and is registered as a Professional Natural Scientist with the South African Council for Natural Scientific Professions (Registration No. 400035/01). He is currently a Principal Mineral Resource Analyst and Director of Z Star Mineral Resource Consultants (Pty) Ltd.

Bush.

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David E Bush is a graduate of Ecole Nationale Supérieure des Mines de Paris, France, with a DEA in Geostatistics (1990); an MSc DIC in Mineral Exploration from Imperial College, London, England (1984) and a BSc (Hons) degree in Geology from the University of the Witwatersrand, South Africa (1980). He has in excess of twenty years' experience in geostatistical Diamond Resource estimation and classification. A significant proportion of this experience has been directly related to diamond deposits. He is currently a director of Z Star Mineral Resource Consultants (Pty) Ltd. and a member of the Geostatistical Association of South Africa. David qualifies as a competent person as defined in the "South African Code for Reporting of Diamond Resources and Ore Reserves" (SAMREC) and is registered as a Geological Scientist with the South African Council for Natural Scientific Professions (Registration No. 400071/00).

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Cuan Lohrentz holds a BSc in Geology and Physics and a BSc Hons in Geology from the Nelson Mandela Metropolitan University. After completing his formal education he joined Bloy Resource Evaluation as an evaluation geologist. In 2012 he joined Z Star Mineral Resource Consultants as a Mineral Resource Analyst. He has received exposure to and conducted mineral resource estimates for many Southern African base metals and African gold deposits as well as numerous primary and secondary diamond deposits. He is experienced in geological modelling, mineral resource estimation and classification and has extensive Datamine Studio^{TM} skills. Cuan is also competent in a number of additional software packages, including Isatis and GsLib. Cuan is registered as a Professional Natural Scientist with the South African Council for Natural Scientific Professions (Registration No. 40224/12).

Review by:

Andy Grills.

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Director & Principal Mineral Resource Analyst (Z)*

Andy Grills holds a BSc Honours degree in Geology and a PhD in Geology as well as a Diploma in Advanced Geostatistics from the Ecole des Mines de Paris. He has been directly involved in the estimation and classification of mineralised deposits for the last 30 years. Andy has worked on mining operations on various commodities as Geologist in charge of the production service and contiguous evaluation. He is a member of the Geostatistical Society of South Africa and is registered as a Geological Scientist with the South African Council for Natural Scientific Professions (Registration No. 400426/04). Andy Grills is currently a director of Z Star Mineral Resource Consultants (Pty) Ltd and qualifies as a competent person as defined in the "South African Code for Reporting of Diamond Resources and Ore Reserves" (SAMREC).

10. References

Independent Technical Report for the Meya Project, Sierra Leone. Prepared by SRK Consulting in June 2018.

Deakin, AS., and Boxer, GL. (1989). Argyle AK1 diamond size distribution: the use of fine diamonds to predict the occurrence of commercial sized diamonds. In J Ross, AL Jaques, et al. eds., Fourth International Kimberlite conference. Pp 1117-22.

Viviers, G., (2020) Meya Mining – Meya River Domain - SFD and Diamond Valuation. Int. report prepared for Meya Mining.