NI 43-101 Independent Technical Report for the Meya Diamond Mine Project, Sierra Leone

Meya Mine Project Preliminary Economic Assessment 2024, Sierra Leone

Meya Mining

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1 Executive Summary

1.1 Introduction

The Meya Mine project ("Project") is a diamond exploration and development project located in the Kono District of eastern Sierra Leone. The Project is owned and operated by Meya Mining, which holds a 25-year large-scale mining licence (ML 2/2019) covering 129.38 square kilometres (km^2), effective from 26 July 2019.

This Technical Report presents the results of a Preliminary Economic Assessment (PEA) for the Meya Mine project, focused on the underground development of the Meya River kimberlite dyke zone. The PEA is based on maiden mineral resource estimate incorporating drilling and sampling completed through June 2024. The study evaluates the potential for underground mining using Long Hole Open Stoping (LHOS) method and applying TOMRA sorting technology to eliminate run of mine waste rock from the diamond bearing kimberlite prior to treating the material through a dense media separation (DMS) plant. The process plant includes a series of TOMRA XRT units to recover large diamonds, as the Meya Mine Project has proved to be a large stone producer.

The Meya Mine project benefits from existing infrastructure developed during bulk sampling operations, including a 50 tonne per hour DMS plant. A key aspect of the proposed development is the inclusion of near-infrared (NIR) waste sorting technology to pre-concentrate the run of mine material prior to processing as illustrated in Figure 1-1.

This integrated approach is designed to maximise diamond recovery whilst minimising breakage, with expected overall recoveries of 95% to 99%.

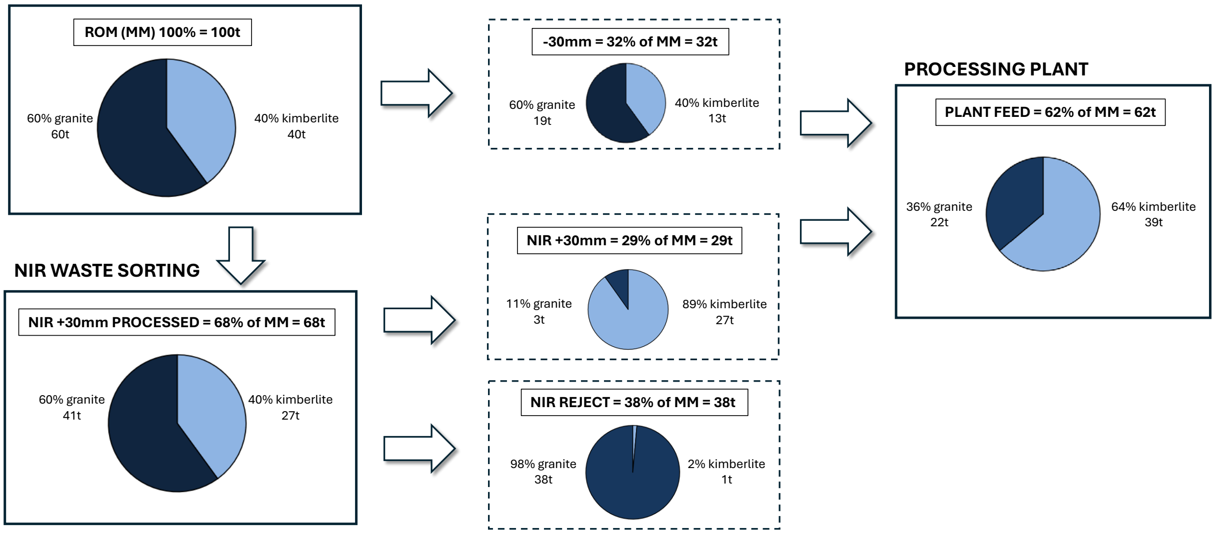
	LOM	Ratio LOM	Month	Ratio Month	Day	t/h
MM Tonnes Processed NIR	6770047	100%	105000	100%	3500	180
MM Tonnes To MP (HF)	4271531	63%	65212	62%	2174	112
MM Tonnes To MP (Scrubber)	3844378	57%	58039	55%	1935	100
MM Tonnes Processed DMS	2990072	44%	45648	43%	1522	78

Source: This report, 2024

Note: Values provided are for illustrative purposes; percent (%) of rejected material is set to a conservative estimate.

Figure 1-1: Schematic showing mineralised material movement from mine through NIR and Plant

The basis of the cashflow analysis was a monthly production schedule as described in Section 16.8 of this report and material movement as illustrtated in Figure 1-2.



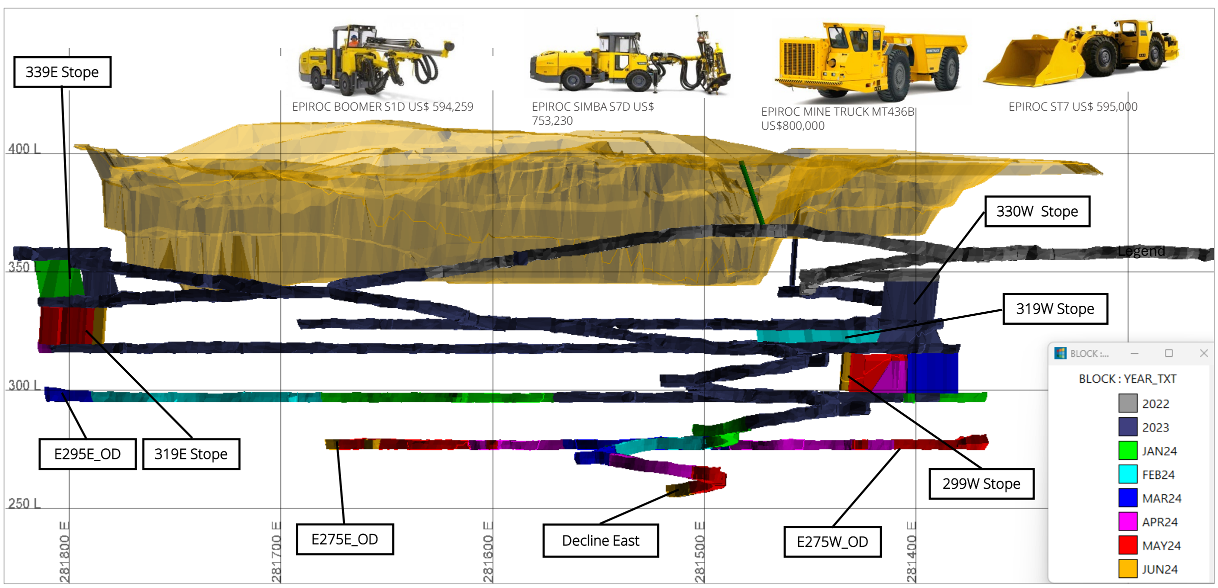
Source: This report, 2024

Note: Values provided are for illustrative purposes; percent of rejected material is set to a conservative estimate.

Figure 1-2: Mineralised material balance

SRK Consulting (Canada) Inc. ("SRK") notes that the underground development on Meya River Dyke Zone is at an advanced stage already, with more than 3,800 metres (m) development completed and three stopes in production (Figure 1-3 and Figure 1-4).

The Meya River kimberlite dyke produced high quality diamonds with significant proportion of Type IIa during the exploration and recent mine development phases.



Source: This report, 2024

Figure 1-3: Long section of Meya River bulk sample pit and current mine development as at 30 June 2024

Source: This report, 2024

Figure 1-4: Aerial view of Meya River bulk sample and Underground Portal infrastructure as at 23 July 2024

1.2 Property Description and Ownership

The Meya Mine project is located in the Kono District of eastern Sierra Leone, approximately 350 km east of the capital Freetown. The Project area surrounds the 5 km^2 Koidu kimberlite mine operated by Koidu Limited. Primary access is via paved road from Freetown to the town of Koidu.

The Project lies within a historically significant alluvial diamond field centered around the towns of Koidu and Yengema. Alluvial diamond mining has been conducted in the area since the 1930s, with kimberlite pipes and dykes discovered in the 1940s and mined since the 1950s at the adjacent Koidu property.

Meya Mining holds 100% ownership of the Meya Mine project through a large-scale mining licence ML 2/2019, which covers 129.38 km^2 and is valid for 25 years from July 2019. The licence allows for exploration and mining of kimberlite and alluvial diamond deposits.

1.3 Geology and Mineralisation

Sixteen kimberlite dyke occurrences, including minor blows, have been recorded within the Meya License area by previous workers. Four dyke zones are extensions of Dyke Zones DZA, DZB, DZC and DZD on the immediately adjacent Koidu Lease.

SLST discovered kimberlites at Koidu (Dyke A and Pipes K1 and K2) in 1948. SLST and NDMC reportedly mined the K1 and K2 pipes from 1953 to 1986. In 2010 Koidu Holdings publicly announced that the Koidu kimberlites on their property contained 4.2 Mt of Indicated Resources at an average grade of 0.45 carats per tonne (cpt or cts/t) and 10.12 million tonnes (Mt) of Inferred Resources at an average grade of 0.54 cts/t. It is estimated that the Koidu kimberlites have produced more than 6.5 million carats (Mct) over the past 15 years. The Koidu Mine is now an underground operation processing ore from K1 and DZB.

By the mid-1960s, the Koidu area was reported being the richest alluvial diamond district in Sierra Leone, with approximately 9 Mct mined within a radius of about 1.5 kilometres (km) of Koidu. In the Yengema Lease, reportedly over half of the total drainage network was diamond-bearing, and about one-third, including all the principal streams, contained payable gravel. There were two principal producing streams, having grades generally between 0.3 and 1.5 ct per cubic yard.

Illicit artisanal mining activities have not been formally reported, monitored or controlled. The alluvial miners continue to work these deposits and recover significant diamonds to this day. Several of the world's largest rough gem diamonds have been recovered from the Meya Project area.

The major diamondiferous occurrence presently under investigation within the License area is the southwestern extension of Koidu Dyke Zone B (DZB) known as the Meya River Dyke Zone. In addition to the Meya River North Dyke Zone, and lying on the same structural corridor along the same strike plane are the Bardu and Waterloo Dyke Zones which together extend for 10,808 m. The dyke systems are all steeply dipping or sub-vertical. The dykes vary in thickness and their morphology is typical of dyke zones around the world, being characterized by pinching, swelling and bifurcation as well as fault offsets. Individual dyke segments can vary from 1 centimetre (cm) to greater than 1 m in width, typical of kimberlite dyke systems globally. In addition to the Meya, Bardu and Waterloo dykes a fourth dyke located to the north named Simbakoro is considered of high interest and will be investigated.

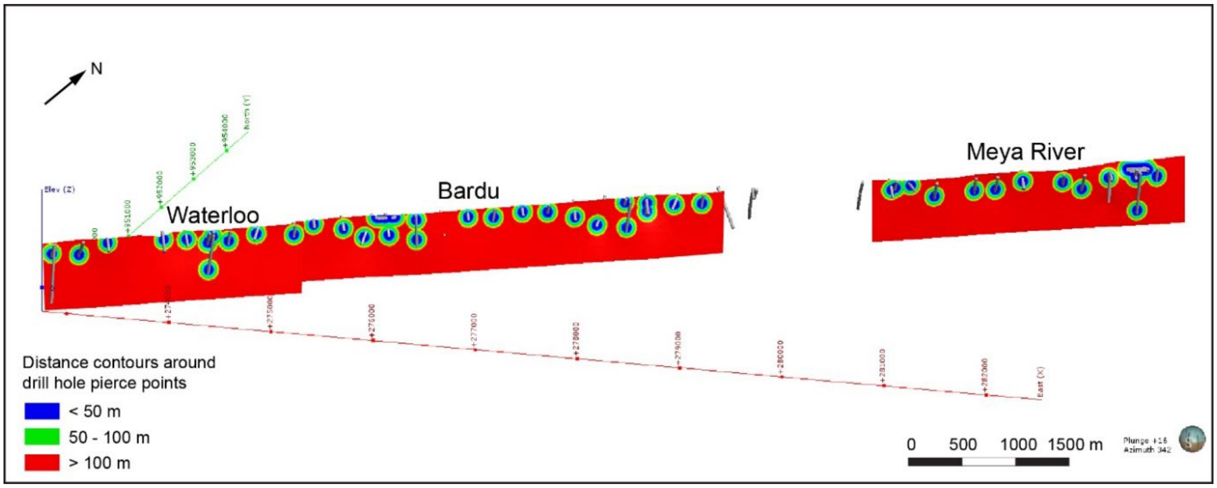
Following multiple core delineation drilling programs within three dyke zones, bulk sample results prioritised Meya River Dyke Zone.

The current understanding of the Meya River Dyke Zone was developed following core logging investigations, petrography, groundmass spinel composition studies, microdiamond results, surface bulk sampling, mapping of underground mining exposures and production data, and it has been established that this dyke system is comprised of three phases of kimberlite: KIMB1, KIMB2 and KIMB3. These rock types were formed by three distinct emplacement events. Based on cross-cutting relationships, KIMB1 predates KIMB3, and the relationship of these two dykes to KIMB2 has not been established. The separate phases of kimberlite can be distinguished from one another based on differences in mantle-derived constituents, country rock xenolith populations and abundance, petrographic features displayed by primary groundmass minerals, groundmass spinel compositions and dyke thickness and morphology. In addition the microdiamond results are significantly different between KIMB1 and KIMB3.

1.4 Core Drilling

Core drilling was initiated in October of 2016 on the Meya, Bardu and Waterloo dyke zones with a total of 107 holes being completed. Since May 2018 when the focus was concentrated on resource development within the Meya River Dyke Zone, 49 holes totalling 21,952.6 m were completed including multiple deep delineation holes.

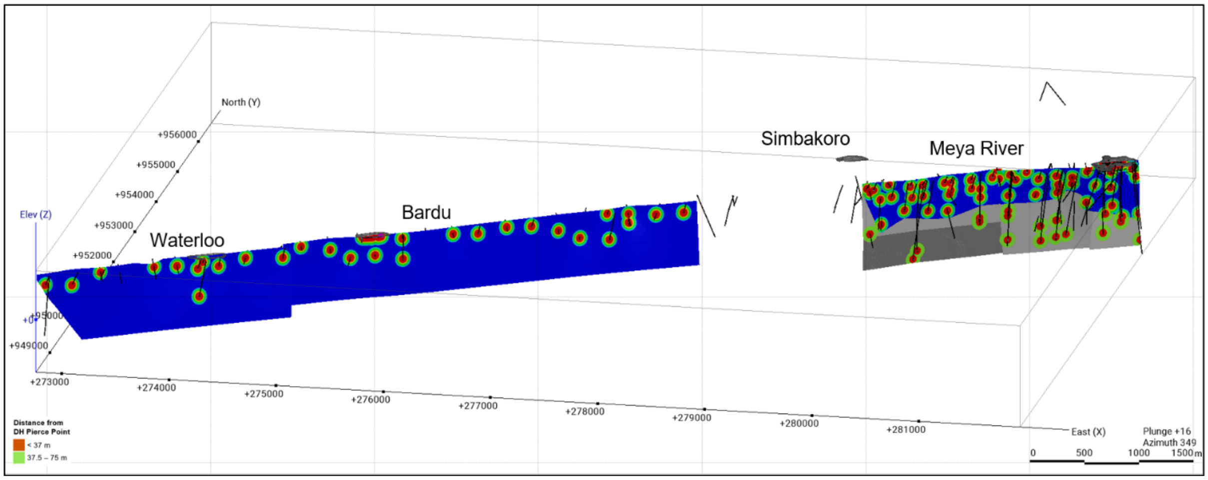
Refer to Figure 1-5 for the Meya River Dyke Zone showing drill hole pierce points up to May 2018. Figure 1-6 presents a 3D geological model image of the drill hole pierce points as of June 2024. A comparison of these figures reveals a significant increase in drilling activity within the Meya River Dyke Zone over this six-year period. The majority of the drill hole pierce points in the dyke zones are spaced more than 250 m apart.



Source: SRK, 2018

Note: Showing the distribution of drilling up to May 2018

Figure 1-5: Inclined view of 3D geological model of the dyke zones



Source: This report, 2024

Note: Showing the distribution of core drill holes within the Meya River, Bardu, and Waterloo with pierce point contours

Figure 1-6: Inclined view of the 3D geological model of the three dyke zones – distribution of core drill holes

In summary:

- Meya River Dyke Zone: 71 holes for 27,683 m of drilling
- Between Meya River and Bardu Dyke Zones: four holes for 1,201.1 m
- Bardu Dyke Zone: 19 holes for 4,155.2 m
- Between Bardu and Waterloo Dyke Zones: one hole for 285.5 m
- Waterloo Dyke Zone: 12 holes for 3,028.9 m

The following fourteen holes were reported as not intersecting any kimberlite:

- MMDD-022; MMDD-023; MMDD-026; MMDD-034; MMDD-049; MMDD-065; MMDD-084, MMDD-085, MMDD-099, MMDD-101, MMDD-106, MMDD-121, MMDD-122, MMDD-123.

The following 14 holes were reported abandoned:

- MMDD-004; MMDD-013; MMDD-024; MMDD-032; MMDD-044; MMDD-055; MMDD-057; MMDD-058, MMDD-060, MMDD-070, MMDD-076, MMDD-095, MMDD-0107 and MMDD-0117.

1.5 Mineral Resource Estimates

This PEA describes the estimation of a mineral resource for Meya Mining undertaken by Z Star Mineral Resource Consultants (Pty) Ltd. ("Z Star" or "Z*") in June 2024. The report details the estimation of a mineral resource associated with the Meya River Dyke, located directly west of the Koidu Mine in Eastern in Sierra Leone.

In recent years Meya Mining has overseen exploration and mining activities of the Meya dykes and recently engaged Z Star to produce 3D 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 Mining has undertaken micro diamond sampling programmes and has carried out density measurements across the deposits. More recently Meya Mining has started underground development on the Meya River Dyke (development which has progressed as much as 3,800 m underground as of the effective date of this report) and are planning increased production in the future.

As part of producing the 3D wireframe models, Z Star and Meya Mining geologists collaborated to establish a method for estimating the Meya River Mineral Resource. The agreed approach prioritises accurate volume modelling, followed by density estimation, grade and revenue modelling and mineral resource classification. The Meya River 3D volume model utilised dyke drillhole intersections and a mineral resource width based on percentages of kimberlite and internal waste. The Meya River Mineral Resource width is restricted to 4 m.

The 2024 Meya River Dyke Zone 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 250 metres above sea level (mamsl or masl) 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 1.6 millimetres (mm). 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.

The underground development that predominantly impacts the FB1 Main and FB1 North domains has been modelled by Meya and these volumes were used to obtain a depleted volume. Z Star utilised the data and information provided by Meya to produce the 3D Meya River volume model, i.e. the estimated volume model for the Meya River Mineral Resource.

The mineral resources are reported in accordance with CIM Definition Standards (2014) and have been classified as Indicated and Inferred based on the level of geological confidence. The estimate is summarised in Table 1-1 and Table 1-2.

The mineral resource estimate was prepared by Sean Duggan and David Bush, Principal Mineral Resource Analysts (Pri.Sci.Nat.) of Z Star Mineral Resources (Pty) Ltd, an independent consultancy. Sean Duggan and David Bush are Qualified Persons (QP) within the meaning of National Instrument 43-101.

Key points regarding the mineral resource estimate:

- Resources are reported at a bottom cut-off size of 1.6 mm
- The estimate is based on a diluted mining width that includes internal waste
- Indicated resources are limited to the upper portions of the FB1 Main and FB1 North domains above 250 m elevation
- Inferred resources extend to depths of up to 800 m in some areas
- Diamond value is based on an average price of US$383/ct for the FB1 domains

The depleted (existing pit surface and underground working volumes removed as of April 2024) Meya River Dyke Indicated Mineral Resource as of the 6th of June 2024 (including internal waste dilution) comprises 158,130 cubic metres (m^3) at an average dry density of 2.77 tonnes per cubic metres (t/m^3) resulting in 0.44 Mt. At an average grade of 37 carats per hundred tonnes (cpht) the Indicated mineral resource comprises a total of 160,400 cts at a bottom cut-off of 1.6 millimetres (mm) with a value of US$61.4M (US$383/ct).

Table 1-1: Meya River Indicated Mineral Resource, effective date 06 June 2024

Domain	Volume (m^3)	Tonnes	Density (t/m^3)	Carats	Grade (cpht)	US$/ct	Value ($M)
FB1 Main Upper	119,230	331,960	2.78	122,200	37	$383	$46.8
FB1 North Upper	38,900	106,260	2.73	38,200	36	$381	$14.6
Total Indicated	**158 130**	**438,220**	**2.77**	**160,400**	**37**	**$383**	**$61.4**

Source: Z Star, 2024

The Inferred Mineral Resource as at the 6th June 2024 (including internal waste dilution) comprises 2.3M m^3 at an average dry density of 2.83 t/m^3 resulting in 6.42 Mt. At an average grade of 32 cpht the Inferred mineral resource comprises a total of 2.08 Mct at a bottom cut-off of 1.6 mm with a value of US$797.3M (US$383/ct).

Table 1-2: Meya River Inferred Mineral Resource, effective date 06 June 2024

Domain	Volume (m^3)	Tonnes	Density (t/m^3)	Carats	Grade (cpht)	US$/ct	Value ($M)
FB1 Main Lower	414,390	1,164,900	2.81	547,900	47	$383	$209.8
FB1 North Lower	230,960	652,050	2.82	287,900	44	$381	$109.7
FB2_Main	974,960	2,768,100	2.84	846,000	31	$383	$324.0
FB2_North	122,790	330,960	2.70	112,000	34	$381	$42.7
FB3_Main	206,660	575,240	2.78	103,300	18	$383	$39.6
FB4_Main	317,820	927,840	2.92	186,800	20	$383	$71.5
Total Inferred	**2,267,580**	**6,419,090**	**2.83**	**2,083,900**	**32**	**$383**	**$797.3**

Source: Z Star, 2024

1.6 Mineral Processing and Metallurgy Testing

The process plant design for the Meya Mine project PEA incorporates innovative technology and significant upgrades to existing facilities, with two key components working in tandem to maximise diamond recovery and operational efficiency: the NIR Waste Sorting Plant and the Main Plant upgrade.

NIR Waste Sorting

The NIR Waste Sorting plant, utilising TOMRA sorters, is designed to efficiently remove granite from the feedstock. A 70% grantive removal estimate is based on extensive testwork conducted at TOMRA's facility in Germany, which indicated potential for over 90% waste removal. However, a more conservative 70% removal rate is used in the design to reduce the risk of removing kimberlite to the granite waste stockpile. Benefits of NIR sorting include:

- Upstream concentration of mine feed
- Reduced wear on the main plant

The TOMRA NIR sorters use a combination of colour and NIR spectroscopy to differentiate kimberlite from waste rock. The testwork involved developing a sorting-task-specific algorithm using images taken of a reference sample set including kimberlite, granite, pegmatite, amphibolite, and dolerite.

The Consulmet (Pty) Ltd (“Consulmet”) design optimises grading and washing steps, accommodating variations in mineralised material quality.

Main Plant Upgrade

The upgrade consists of two phases:

- Phase 1:
  - Addition of a log-washer
  - Replacement of the mobile secondary crusher with a fixed installation
- Phase 2:
  - New 100 tph primary Dense Medium Separation (DMS)
  - Closed-circuit quaternary crushing with Vertical Shaft Impact (VSI) crusher
  - Repurposing existing DMS as a secondary concentrator

  - Removal of jet pump systems
  - Final recovery upgrades

These upgrades aim to double plant capacity and improve diamond liberation.

Process Simulation Results

LIMN simulations, based on a range of Particle Size Distributions (PSD) and Diamond Size Frequency Distributions (DSFD), indicate a 25-33% increase in carat recovery across various scenarios. The simulations also show that the proposed upgrades, coupled with the savings on wear and tear, water consumption, and improved handling of diamond-bearing mineralised material, validate the effectiveness of the proposed scope of work.

Process Plant

The integrated approach is designed to maximise diamond recovery while minimising breakage. Key features include:

- 200 tonnes per hour (tph) NIR Waste Sorting Plant with four TOMRA sorters
- Upgraded main plant with 100 tph DMS capacity
- Expanded final recovery section with X-Ray transmission (XRT) and optical sorting technologies
- Enhanced security measures

The plant design emphasises flexibility to handle feed variations and allow for future optimisations. The NIR sorting technology has been extensively tested on Meya Mine project material, with results indicating high selectivity and efficiency in separating kimberlite from waste rock. Overall diamond recoveries are expected to range from 95% to 99%, depending on the size frequency distribution of the diamonds.

This design incorporates lessons from bulk sampling operations and industry best practices, focusing on efficient recovery of diamonds, particularly larger, high-value stones that significantly impact the project's economics. The plant design places particular emphasis on the recovery of large, high-value stones, which have been shown to contribute significantly to the project's economics.

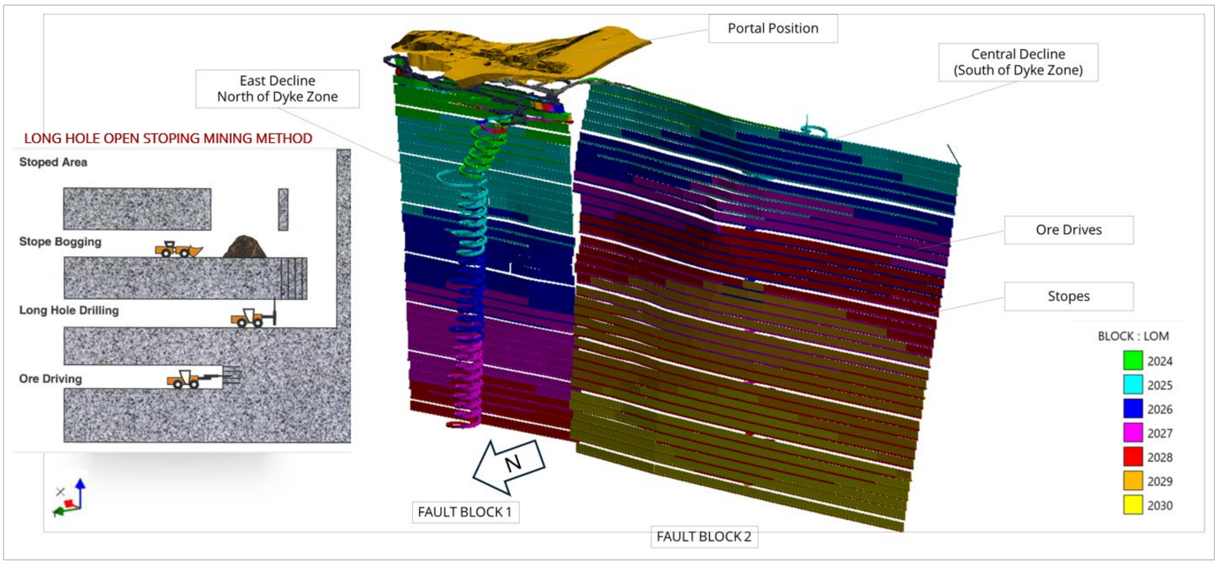
1.7 Mining Methods

The historical kimberlite dyke mining experience around the world indicates that low productivity, labour-intensive, high risk mining method – sublevel shrinkage (SLS) was used. In order to deliver a modern, safe, mechanised, and more productive mining method SRK recommended long hole open stopes (LHOS). This mining method is successfully used at adjacent Koidu mine, which is mining the same dyke system as Meya River. Although the LHOS method has not been used on kimberlite dykes (except at Koidu), it is a very common among narrow-vein, steeply-dipping, gold deposits.

One of the advantages of Meya’s approach which enables large production volumes, is mining dyke zone including granite rather than focus on extracting kimberlite only, which would be labour intensive, risky and achieve only low production rates. Although this method generates more dilution, the TOMRA NIR waste separation revolutionary process on a surface will eliminate uneconomical rocks and enables to streamline the diamond recovery. It has to be highlighted that LHOS method with on-strike development is very flexible and enables to follow the dyke geometry very effectively (Figure 1-7).

The LHOS design incorporates several key features:

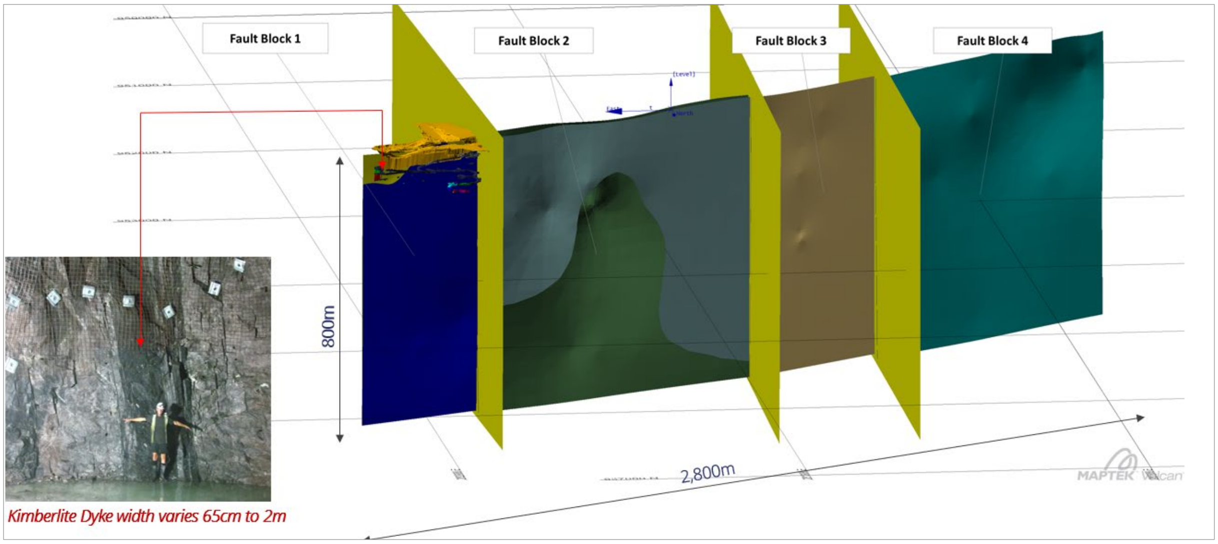
- Multiple stopes will be mined simultaneously within the same stope block to achieve the desired production rate.
- Stopes will be progressed in a staggered fashion, with the highest stopes always being the furthest advanced.
- Rib pillars will be left in place to provide support, eliminating the need for rock backfill.
- Crown pillar will separate underground mining activities from the surface.
- Stope mining width will vary based on dyke width, with a minimum designed width of 2.0 m to ensure efficient mineralised material extraction and equipment operation (Figure 1-7). This minimum width also helps to capture the full geological wireframe while managing dilution.



Source: This report, 2024

Note: Isometric view

Figure 1-7: Meya Mine project underground mine design long section, LHOS mining method

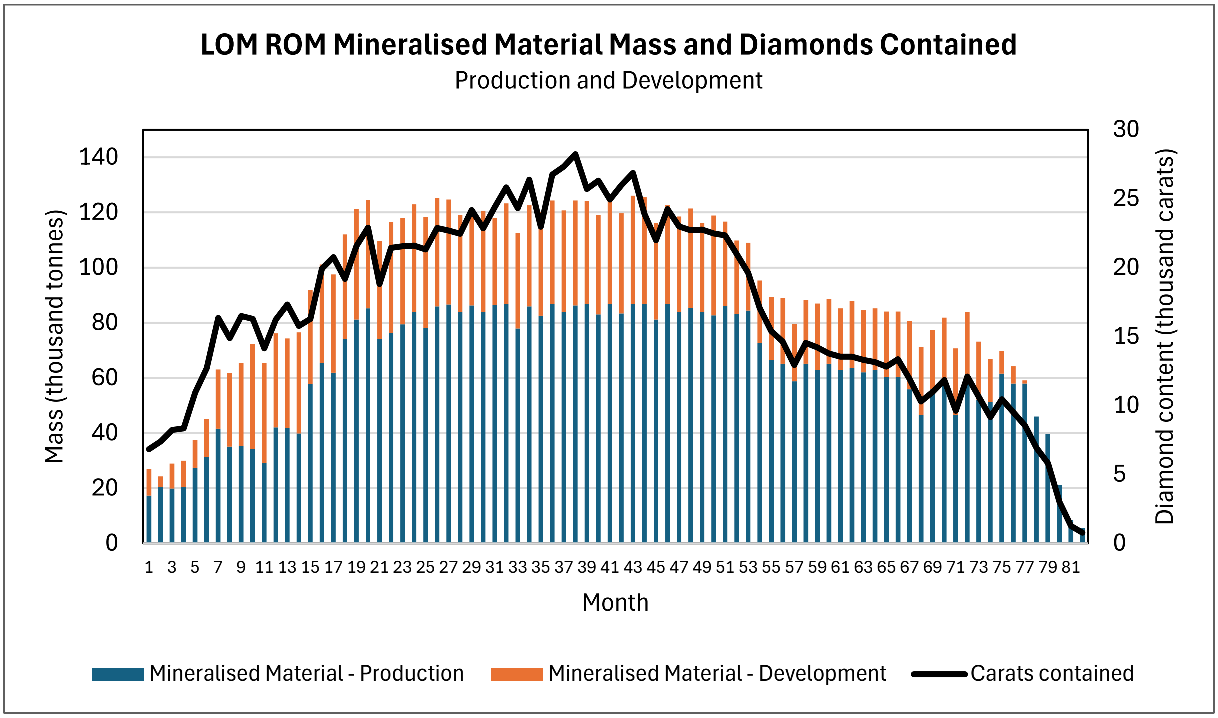


Source: This report, 2024

Figure 1-8: Meya River dyke 3D wireframe model

Based on drillholes, wallrock, kimberlite intersections, surface/underground development at Meya and neighboring Koidu property, the Rock Mass conditions for both country rocks and kimberlite dykes could be characterised as competent, good to very good rock mass. It is estimated that 10% to 15% of the rock mass will be faulted or include weathering susceptible kimberlite. Granite encountered in underground development is mainly massive with sub-vertical joint set sympathetic to the kimberlite dyke in the dyke contact zone.

The monthly run of mine (ROM) mineralised material mined is illustrated in Figure 1-8. These results indicate an average of approximately 120 kilotonnes per month (ktpm) of ROM mineralised material is achieved when FB1 and FB2 are mined together at target rate, stoping accounts for 85 kt and development accounts for 35 kt. Average monthly diamond contained is approximately 23k carats at target production rate, with a peak at 28k carats as the highest-grade areas are mined. The ROM mineralised material production rate drops from 120 ktpm to 70 ktpm after the 53rd month as production in FB1 comes to an end. It is assumed that the available stope fronts in FB2 will not be enough to cover the tonnage drop from FB1.



Source: This report, 2024

Figure 1-9: Monthly production and development schedule summary

1.8 Project Infrastructure

The Meya Mine project benefits from existing infrastructure developed during bulk sampling operations, including:

- Site roads and a 4 km haul road
- Operational DMS processing plant
- Offices, workshops and storage facilities
- Accommodation camp
- Water supply system

Consulmet was engaged to conduct an assessment and submit a proposal for the additional infrastructure required for the underground development. Based on the scope of work conducted by Consulmet in collaboration with Meya Mining team, additional infrastructure items will include:

- Power Generation and Distribution:
  - Six 2 megavolt-amperes (MVA) diesel generators for expanded power generation
  - 11 kilovolt (kV) overhead power line for distribution
  - Mini substations for power distribution to various facilities
- Water Management:
  - Underground dewatering system with a capacity of approximately 2,832 m^3/day
  - Process water distribution system using gravity feed from a header tank

  - Water treatment plant (WTP) for potable water supply
  - Wastewater treatment plant (WWTP) for sewage management
- Ventilation System:
  - Two fresh air ventilation raises
  - Three exhaust air raises
  - Associated fans and ducting
- Mining Infrastructure:
  - Expanded workshop facilities for equipment maintenance
  - Mineralised material and waste handling systems, including conveyors and stockpiles
  - Explosives magazine and emulsion storage facilities
- Processing Infrastructure:
  - NIR waste sorting plant
  - Upgraded main processing plant
  - New final recovery section
- Support Infrastructure:
  - Expanded security systems, including fencing and access control
  - Additional administrative and technical offices
  - Expanded accommodation facilities
  - Medical clinic and emergency response facilities
- Waste Management Facilities:
  - Waste rock dump (WRD) with a capacity of 6 Mt
  - Tailings storage facility (TSF) designed for the life of mine

These infrastructure upgrades are designed to support the transition from bulk sampling to commercial underground mining operations, ensuring efficient and safe production throughout the mine's life.

1.9 Marketing

The global diamond industry experienced a challenging 2023, with oversupply and weak demand exerting downward pressure on rough and polished prices. Despite a price correction, rough prices demonstrated resilience, nearing pre-pandemic levels. However, escalating costs, inflationary pressures, and higher interest rates significantly impacted the profitability of mining companies.

Underwhelming retail consumption, particularly in China, led to a buildup of polished inventories. Geopolitical tensions, notably G7 sanctions on Russian diamond exports, further exacerbated uncertainties. While the mechanisms remain unclear, disruptions to Russian supply could significantly alter market fundamentals.

WWW International Diamond Consultants (“WWW”) forecasts gradual macroeconomic improvements, with recessionary risks subsiding as inflation moderates. However, recovery hinges on restoring consumer confidence, especially in lagging markets like China.

Looking ahead, WWW forecasts the potential for a supply deficit as by the early 2030s production is expected to decline to below 100 million carats, where junior miners ought to be able to capitalise on the reduced supply into the market.

For Meya Mining, rough production is sold through competitive tenders organised by KOIN International DMCC (“KOIN”) in Dubai. Remaining goods are sold to Diarough (“DA Trading DMCC”), a related party of the majority shareholder, governed by a purchase agreement on a buyer of last resort basis (i.e. as a final “backstop”) – always subject to a guaranteed minimum price. This mitigates all sales risks for Meya Mining by adopting a different, mixed approach that WWW believe caters for downside protection and upside benefit. Having the backstop of direct offtake sales (as set out under the purchase agreement) in a weaker market ensures liquidity as a constant source of cash flow to feed mining finance, workers, energy and general operating expenditures.

The KOIN tender process involves preparing assortments, inviting vetted participants, and operating a blind "best bid" system. This approach has proven effective according to WWW, with Meya's latest KOIN tender achieving an average price of US$328.04 per carat, a 7.7% premium over WWW's valuation.

WWW considers the KOIN tender process and the back stop of guaranteed purchase by DA Trading DMCC efficient, transparent, and designed to maximise revenue for Meya's fine rough diamond production.

1.10 Environmental Studies and Permitting

Meya Mining holds a valid Environmental Impact Assessment (EIA) licence for the Project. An updated Environmental and Social Impact Assessment (ESIA) was completed in 2023 to support the transition to commercial underground mining.

Key environmental considerations for the Meya Mine project include:

- Management of waste rock and tailings
- Water management and quality control
- Air quality and dust suppression
- Biodiversity protection
- Community health, safety and livelihoods

Table 1-3: Current permits and licences held by Meya Mining

Certificate / Licence	Renewal Frequency	Next Renewal Date
Large-Scale Mining Licence (ML 2/2019)	Every 25 years	July 2044
Environmental Impact Assessment Licence	Annually	November 2024
Blaster's Certificate	Every 5 years	March 2026
Large-Scale Blasting Licence	Annually	April 2024
Mine Manager's Certificate of Competence	Annually	April 2024
Certificate of Authorisation – Local Content	Every 3 years	October 2026

Meya Mining is committed to operating in compliance with all relevant environmental regulations and international best practices. Digby Wells was commissioned by Meya Mining to develop a comprehensive environmental management plans to address potential impacts, including:

- Waste Management Plan
- Water Management Plan
- Air Quality Management Plan
- Biodiversity Action Plan
- Social Management Plan
- Stakeholder Engagement Plan

Regular environmental monitoring and auditing will be conducted throughout the life of the mine to ensure compliance with regulatory requirements and to identify any areas for improvement in environmental performance.

A conceptual closure plan has been developed with an estimated cost of US$4.0M.

1.11 Capital and Operating Costs

The total life of mine capital cost for the Meya Mine project is estimated at US$99.5M, comprising:

- Underground mine development and equipment: US$73.3M
  - Including 10% contingency
- Processing plant upgrades: US$17.1M, of which US$3.4M has been spent and is considered sunk cost for the purposes of this PEA
  - Including 9% contingency
- Infrastructure and owner's costs: US$4.0M
- Sustaining capital over the life of mine is estimated at US$4.5M

Authors note that there is an assumption that any of the operational equipment that carries residual value at the end of the life of mine will be sold for approximately US$2.7M based on the current depreciation schedule, thereby reducing the Project’s capital cost to US$96.8M.

The total life of mine operating costs are estimated at US$198.0M and average US$26.8 per tonne of run of mine (ROM) material, comprising:

- Mining: US$16.8/t ROM
- Processing: US$5.6/t ROM
  - Combined cost based on unit costs of US$1.6/t NIR feed and US$6.5/t Main Plant feed
- Power generation & dewatering: US$0.8/t ROM
- Stockpile rehandling: US$0.1/t ROM
- General & administrative: US$3.5/t ROM

1.12 Economic Analysis

The economic analysis indicates the potential for positive returns of post-tax net present value (NPV) of US$95.1M discounted at 10% over nearly seven years life of mine. Key performance indicators (KPI) of the project are summarised in Table 1-4.

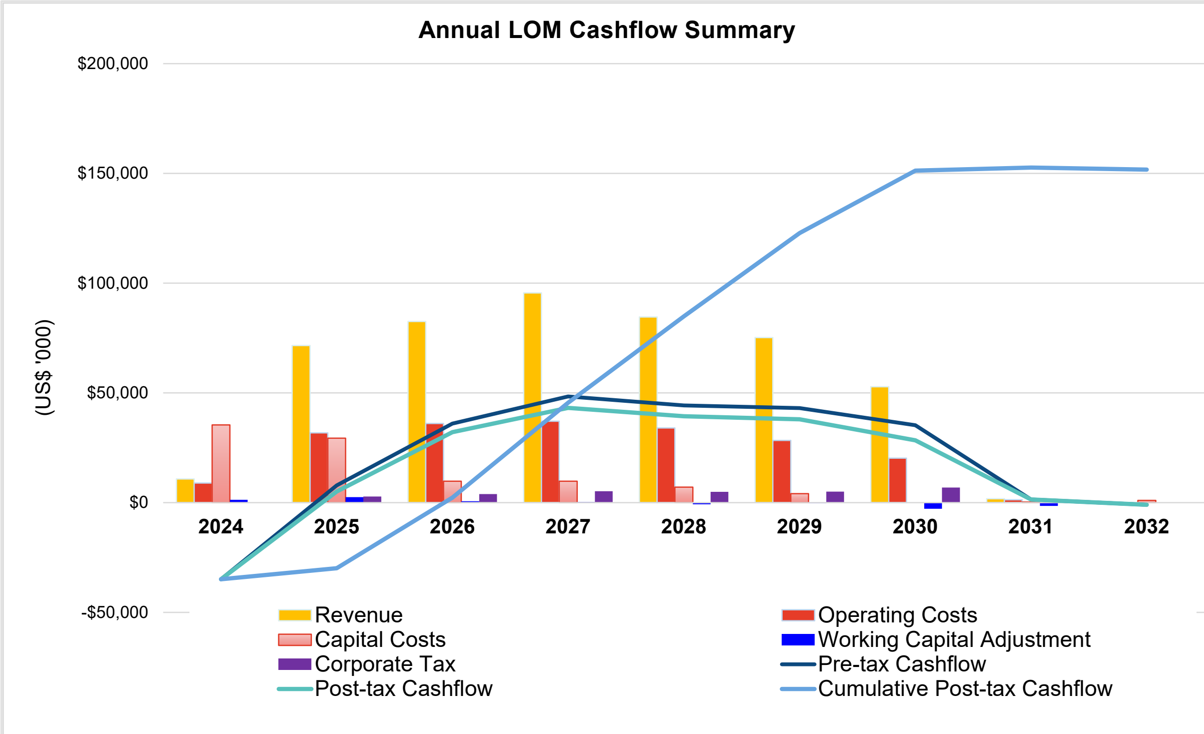
The economic analysis was performed using a discounted cashflow model developed using MS Excel®.

The basis of the cashflow was a monthly production schedule as described in Section 16.8 of this report and material movement as illustrated in Figure 1-2. It is noted that the last three months of the developed schedule do not generate positive cashflows and were therefore excluded from the valuation

Table 1-4: Meya Mine project key performance indicators

Metric	Unit	Values
Diamonds Recovered and Sold	Carats	1,364,220
Diamond Sale Price	US$/Carat	$380
Royalty, Export Fees, Community Development, Marketing	US$'000	$43,600
Revenue	US$'000	$474,804
Site Operating Cost	US$'000	$198,046
Operating Margin	%	53%
Capital (Initial and Sustaining)	US$'000	$99,451
Working Capital	US$'000	-$494
Pre-Tax Cashflow	US$'000	$180,464
Pre-Tax IRR	%	75%
Pre-Tax NPV @ 10% Discount Rate	US$'000	$115,121
Corporate Tax @ 25%	US$'000	$28,775
Post-Tax Cashflow	US$'000	$151,689
Post-Tax IRR	%	65%
Post-Tax NPV @ 10% Discount Rate	US$'000	$95,137

The annual life of mine cashflow summary is illustrated in Figure 1-10. The annual cashflow summary shows positive cashflows throughout most of the project's life, with peak cashflows occurring in the middle years of operation.



Source: This report, 2024

Figure 1-10: Life of mine annual cashflow summary

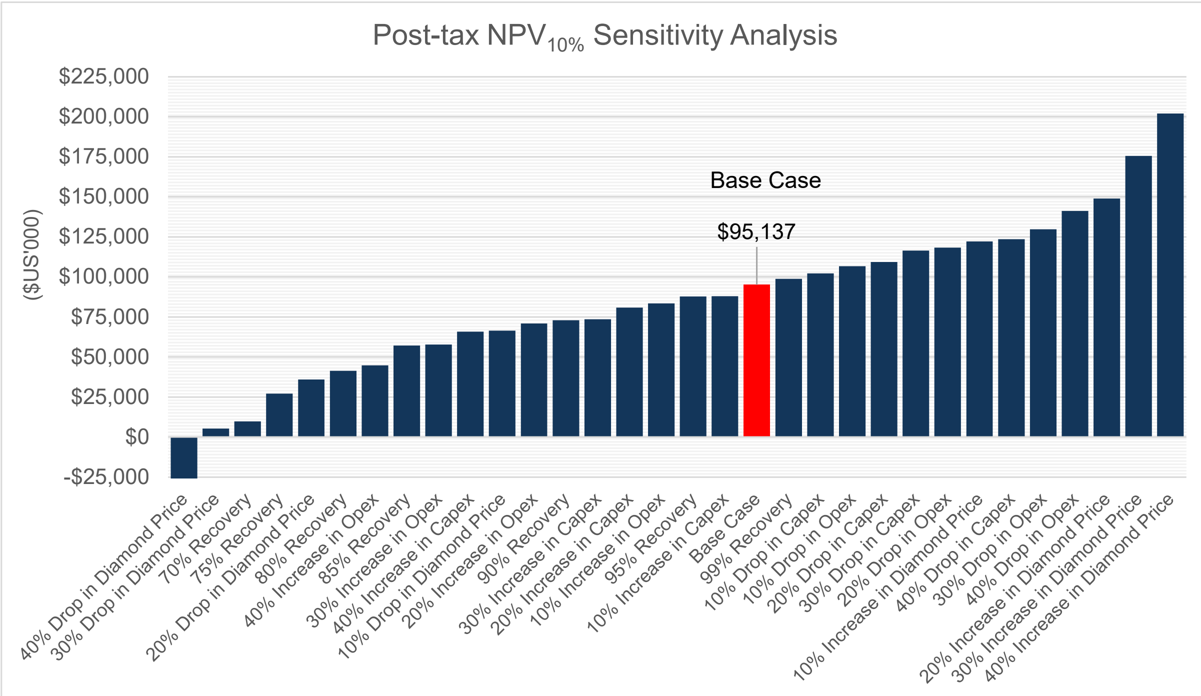
A sensitivity analysis was conducted on the parameters such as diamond price, operating and capital costs, and diamond recoveries. Pareto chart showing results of the sensitivity analysis is illustrated on Figure 1-11.

The chart shows that the Project's NPV is most sensitive to changes in revenue, followed closely by diamond recovery. This is typical for diamond mining projects and suggests that factors affecting revenue (such as diamond prices) and those affecting recovery have the largest impact on project value.

Operating costs appear to be the third most significant factor influencing NPV, after revenue and diamond recovery. This underscores the importance of cost control in maintaining Project value.

Capital costs seem to have a lesser impact on NPV compared to revenue and operating costs, but they still play a significant role.

The Project appears to maintain a positive NPV across a wide range of sensitivities, as evidenced by the chart showing most bars remaining in positive territory. This suggests that the Project is robust and can withstand some adverse changes in key parameters while still remaining economically viable.



Source: This report, 2024

Figure 1-11: Pareto sensitivity analysis on the post-tax NPV$_{10\%}$

1.13 Conclusions, Interpretations and Recommendations

Strengths, weaknesses, opportunities, and threats (SWOT) analysis is a strategic planning tool used to identify and assess the strengths, weaknesses, opportunities, and threats of a project. Strengths and weaknesses are typically internal factors that represent the positive and negative attributes respectively, such as resources, capabilities, or processes within the organisation. Opportunities and threats are external factors that reflect the potential for growth or challenges posed by the external environment, such as market trends, competition, or regulatory changes.

By identifying individual aspects of SWOT analysis, Meya Mine project can align future strategic planning to maximise strengths and opportunities while addressing weaknesses and mitigating threats.

Table 1-5: Meya Mine project SWOT analysis summary

Strengths	Weaknesses
Experienced diamond mining management team	Wide spacing of drillhole intersections
Brown-field project with existing underground development	Lack of local experienced underground mining professionals
Proven mining method used on adjacent property	Complex dyke geometry
Mechanised, large-scale, flexible, and safe mining method	Multiple headings required for production targets
Presence of Indicated resource	Potential political instability in Sierra Leone
NIR waste sorting facility	
Competent country rock and kimberlite dyke	
All permits in place	
Opportunities	**Threats**
Proven existence of large, high-value Type IIa diamonds	Potential diamond breakage affecting value
Resource expansion potential at depth and on-strike	Possible poor performance of NIR sorter
Implementation of experience from Koidu to optimize mining	Risk of more complex dyke geometry than anticipated
Potential for optimized blasting to minimize dilution	Unknown deeper mine stress conditions
Possibility to increase kimberlite recovery	Diamond price volatility

The Meya Mine project presents an opportunity to develop a significant new diamond mine in Sierra Leone, with potential for resource expansion across the remaining 16 known dyke zones and recovery of exceptional large diamonds.

Following provides conclusions and recommendations by discipline.

1.13.1 Geology

The work presented herein is based on the results from core drilling, bulk sampling and trial mining since the initiation of drilling in October 2016.

Based on SRK's work completed to date, the following interpretations and conclusions have been made.

1. The current drill confirmed strike length of the kimberlite dyke system projected west from Koidu's Dyke Zone B or "DZB" is 10,808 m within the Meya Mining lease area and a total of 107 drillcores have been completed in this system. Currently, the entire strike length of the system has been subdivided into three geological zones or domains, starting with the Meya River Dyke System located in the far east adjacent to the Koidu Mine, the Bardu Dyke System in the center and the Waterloo Dyke System in the far west. The focus of this PEA study is on the Meya River Dyke System.
2. Within each of the three dyke zones, the dykes can be seen to be near vertical in orientation and dipping to the south. Thicknesses range from small cm segments to individual dyke widths of greater than 1 m, and the number of segments present with ore drive widths varies from two segments to greater than 12 segments. 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 different phases of kimberlite result from the emplacement of different batches of magma that are characterised by different grades and diamond values. These features are consistent with kimberlite dykes that have been investigated and mined from around the world.

3. The sub-vertical kimberlite dykes that comprise the Meya River Dyke System have been delineated by 71 core holes, indicating an approximately strike length of 2,696 m. This system has been modelled to a depth of 800 m below the surface. Based on core logging, mapping of the bulk sample surface and underground mining exposures, petrographic investigations, groundmass spinel compositions, microdiamond analysis results and macrodiamond recovery from bulk sampling, at least three different phases of kimberlite have been established by the QP and include KIMB1, KIMB2 and KIMB3.
4. The KIMB1, KIMB2 and KIMB3 rock types within the Meya River Dyke System are discrete dykes. They are characterised by different morphology and can be distinguished based on olivine populations, petrographic features, microdiamond results, groundmass spinel compositions, and country rock xenolith populations. The cross-cutting relationship shows that KIMB1 was emplaced before KIMB3, which can be seen to cross-cut KIMB1 in multiple underground exposures. The relationship of KIMB1 and KIMB3 to KIMB2 has not yet been established.
5. The Meya River Dyke Zone 3D Geology model currently includes three separate wireframe models for each of the phases of kimberlite identified – KIMB1, KIMB2 and KIMB3. These three wireframe models are further subdivided into three domains due to two major faults that have been identified and termed Fault Block 1 (FB1), Fault Block 2 (FB2) and Fault Block 3 (FB3).
6. The geological confidence with respect to the location of the dyke and the consistency of the mantle components within the various kimberlite phases in the Meya River Dyke System is considered moderate to high down within FB1 to -500 m, FB2 to – 300 m and FB3 down to -400 m from surface. KIMB1 is geologically the most consistent dyke. The KIMB3 dyke often displays significant changes in thickness, position and internal dilution and the geological confidence of this dyke is less than that for KIMB1. The confidence in the KIMB2 dyke is the lowest of the three dykes due to the thin nature of this dyke and the highly irregular pierce point distribution within the current drilling density.
7. The Bardu Dyke Zone is presently modelled based on current wide-spaced drilling (+250 m centres) at ~4,070 m in strike length to a depth of 550 m below the surface. Based on the treatment of 2,608 survey tonnes of kimberlite, a grade of 0.38 cts/t has been established. A macrodiamond parcel of 1,059.35 cts was recovered from the primary processing and tailings retreatment.
8. The Waterloo Dyke Zone is currently modelled as a single dyke zone until more detailed studies are completed. Based on current wide-spaced drilling (+250 m centres), the dyke zone strike length is ~2,600 m in strike length and has been modelled to a depth of 550 m below the surface. Bulk sampling was not completed at Waterloo; however, a small parcel of 539 cts of diamonds was recovered from weathered kimberlite exposed while developing a bulk sample pit.
9. Simbakoro (historic Pol-K) is another dyke zone within the License, located to the northwest of the Meya River, Bardu and Waterloo Dyke Zones. Although Simbakoro has not yet been drilled by Meya Mining, underground bulk sampling and work were completed by Stellar Diamonds. Meya Mining has extracted a small carat parcel from a partial bulk pit, totalling 1,267 cts.
10. 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. Both internal and external dilution exists in the dyke zones. Internal dilution is the country rock component or waste present as xenoliths within a particular dyke segment. The present internal dilution information is

based on very limited exposure of the various dykes at the surface and very limited drill core intersections along the strike. The external dilution consists of in situ country rock between segments and immediately adjacent to the dyke zones that become mixed with the kimberlite during bulk sampling and potential future mining. It is possible that the dilution encountered in the drilling and bulk sampling to date is different between the presently available data points. Effectively managing dilution will be extremely important for this project.

With respect to the continuity of geology, the dyke zones are currently drilled on very wide-spaced centers (> 250 m), and 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 characterised by higher dilution or lower grade. There will be areas within the dyke system where the dyke becomes wider and may develop into small blows or small pipes, as observed in these systems globally.

11. At this stage, the main geological opportunity within the present Meya License is the discovery of significantly more diamondiferous kimberlite. Many untested kimberlite dykes are located on the property, as reported by previous workers and mined by artisanal workers. In addition to the kimberlite dykes, it is possible that additional blows or pipes infilled with volcaniclastic kimberlite may be present. A historic discarded drill core from Simbakoro (historic Pol-K) was examined, and a rock classified as tuffisitic kimberlite was identified (now classified with updated terminology as Kimberley- type Pyroclastic Kimberlite or KPK). This is texturally the same rock type infilling the steep-sided pipes at the operating Koidu Mine.
12. Recovery of the 476 ct Meya Prosperity diamond, classified as a Type IIa stone, is considered extremely significant. The diamond was sold to Laurence Graff for US$16.5M. This diamond was recovered from the Meya River Dyke Zone bulk sample trench and unfortunately was broken during liberation and was originally > 500 ct. Other high-value Type IIa stones have been recovered from the Meya River Dyke Zone bulk sample, and the proportion of these stones is extremely encouraging. It is re-emphasised here that the average US$/ct value presented in this report has been calculated by excluding this stone, so there is upside potential in the US$/ct value for the Meya River diamonds.
13. It is important to appreciate that there are only three large mines in the world that produce super large (> 500 ct) Type IIa diamonds: the Karowe Mine in Botswana, the Cullinan Mine in South Africa and the Letšeng Mine in Lesotho. All these mines are liberating super large Type IIa diamonds from steep-sided pipes infilled with volcaniclastic kimberlite. The explosive fragmentation processes responsible for the development of these pipes and the fragmentation of the kimberlite that occurs within them has an impact on diamond breakage – particularly with more brittle Type IIa diamonds. The known kimberlites in the Meya License were emplaced as intrusive dykes and no explosive fragmentation was involved. The QP, therefore, considers it possible that any potential super large diamonds sampled by the kimberlite may have a better chance of transport and emplacement at the surface intact.

Due to the number of super large diamonds found in the artisanal fields within the License and in the immediately surrounding area, and because the only super large Type IIa diamond recovered from a primary kimberlite source in Sierra Leone (the Meya Prosperity) is from the Meya River Dyke Zone, it is the opinion of the QP that the probable source for these super large Type IIa diamonds is the Meya River Dyke Zone.

The largest diamond recovered in Sierra Leone is the Star of Sierra Leone at 968.9 ct. This stone was recovered within the Meya License area in 1972 within alluvial diggings extremely close to the now-delineated Meya River Dyke Zone. The QP considers it possible to recover diamonds greater than 1,000 ct from the Meya River Dyke Zone. The largest gem-quality diamond ever recovered from a kimberlite is the Cullinan from the Premier Mine in South Africa, and it was 3,106 ct; it is considered by many experts to be a fragment of a larger diamond based on the morphology of the diamond. It is recommended that the processing facility at Meya be configured to recover intact stones up to 5,000 ct at the front end.

The following summarises recommendations on geology:

- Within the Meya River Dyke System, additional drilling is required within all phases, KIMB1, KIMB2 and KIMB3 with each of the fault blocks below the current moderate to high confidence geology levels. It is recommended that HQ core drilling is completed to -800 m, matching the drilling density that has been achieved in the upper portion of the dyke system. It will be a requirement to complete a petrographic investigation as well as undertake a microprobe analysis of the petrography samples to confirm that the kimberlite intersected at depth is similar to that encountered within the Meya bulk sample pit (MBS2) in support of diamond grade and value projections within the deeper portions of the dyke.
- The Bardu kimberlite should be reexamined, and additional holes should be completed to the – 500 m level below the surface. The understanding of the detailed geology of the Bardu Dyke System has not been developed. Detailed petrography and groundmass spinel composition work is required to establish the continuity within the dyke and if other phases of kimberlite are potentially present. The Bardu kimberlite displays extreme variations in the mantle package it contains, and therefore, the diamond grade is expected to be highly variable within this system. Low-interest Intervals completely lacking olivine macrocrysts are present. However, other intersections are characterized by very high-interest mantle components.
- It is a requirement to complete the bulk sampling at the Waterloo kimberlite that was started to obtain a macrodiamond parcel for diamond grade and value determination. This is considered a high-interest kimberlite based on the mantle components it contains. Additional HQ drilling to the - 500 m below the surface is recommended based on the current geological information.
- The Simbakoro dyke remains undrilled, and based on the limited information available from the partial bulk sample pit exposures, this dyke is also considered of high interest, and the small package of macrodiamonds is very encouraging in terms of size and quality. It is recommended that this kimberlite be drilled in a staged approach similar to the Meya River Dyke System initially to -50 m below the surface first to determine the full strike length of the kimberlite and the continuity of the kimberlite along strike in terms of juvenile components, dilution, dyke thickness and complexity (segment variability) and microdiamonds.
- Due to the current focus on resource development and underground mining over the last few years, there has been a lack of exploration work conducted to add additional kimberlites to the drill-confirmed kimberlite inventory within the mining license. It is highly recommended that a dedicated team of geologists within Meya be focused on exploration activities. There are active artisanal mining sites where kimberlite is being exposed within the license, and these sites need to be documented and sampled. In addition, the recent airborne geophysics completed by the government should be purchased so that any potential new kimberlite targets may be investigated and drilled.

1.13.2 Resource Estimate

The Meya River Dyke, like other kimberlite dyke mining operations in West Africa and South Africa, exhibits fluctuating widths both laterally and vertically. Volume estimation relies on average thicknesses between intersections. Drilling density decreases below 250 m amsl in all domains, with FB2 Main particularly lacking depth information. The geology model is complex, with the Main Dyke and North Dyke comprising different kimberlite phases and grades. Three kimberlite types (KIMB1, KIMB2, KIMB3) have been identified and logged by SRK, but this detail is not included in the current study due to practical reasons.

Limited density data has led to a zonal methodology with inherent uncertainty. The agreed estimation methodology for grades and revenue considering kimberlite types could not be implemented due to uncoded data. Zonal grade estimates typically indicate an Inferred level of confidence. Two revenue estimates have been modelled for the Main and North dykes, without considering kimberlite subdivisions, which introduces a level of uncertainty.

The adjacent Koidu Mine is now an underground operation recovering diamonds from the K1 and DZB deposits, with the latter equivalent to the Meya River Dyke deposit. The two FB1 domains have adequate drilling to enable a 3D volume to be estimated with good confidence, particularly in the upper portions above 250 m amsl where drilling density is highest. Most mining and bulk sampling has occurred in these upper portions, resulting in reasonable diamond yields and lower uncertainty in the mineral resource estimate compared to other portions.

Based on 50% of the range of the de-clustered grade, a halo of approximately 150 m 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.

The FB1 Main and FB1 North domains have been partitioned into upper and lower sub-domains based on an elevation of 250 m amsl. The upper sections are considered sufficiently robust for Indicated classification, while the lower sections and FB2, FB3, and FB4 domains are classified as Inferred. The uncertainty associated with the Inferred Mineral Resource increases with depth due to reduced drilling density.

Significant dilution needs consideration for the Meya River Dyke grade estimate. The general approach to estimating the Mineral Resource has yielded satisfactory results, focusing on accurate volume, grade, revenue, and density modelling.

Recommendations include aligning existing diamond information with the geological model by correctly coding it as KIMB1, KIMB2, KIMB3, or Mixed in 3D space. A proper optimisation study is required to identify clear objectives and requirements moving forward. Density sampling needs to be supplemented, which should form part of the sampling optimisation study.

Despite similar micro diamond stone size frequency distribution between the four FB domains, stone grade appears to decrease along strike from East to West. Production parcels reflect a lower grade than bulk samples, particularly MBS2_1, across the entire size distribution range. The sampling optimisation must ensure sufficient sampling to test these issues.

The revenue estimate appears reasonably robust. However, it is recommended that sales parcel data be sorted and valued by size before allocation into sales lots to facilitate average price calculation. These measures will help address the uncertainties and improve the overall confidence in the mineral resource estimation for the Meya River Dyke.

1.13.3 Mining

The Meya River Dykes in Fault Blocks 1 and 2 appear suitable for underground mining using the LHOS method. In FB1, most of the main dyke wireframe is included in mine designs, with some exclusions in the north dyke wireframe due to critical pillar spacing. FB2 mine plan includes only stopes from the main dyke wireframe, excluding a low-grade area in the north dyke that may offer future upside potential. Pillar designs account for crown, rib, and sill pillars, with potential to optimise rib pillar placement in narrow dyke areas.

The Life of Mine (LOM) plan reports 2.70 Mt at 0.251 cts/t in FB1 and 4.69 Mt at 0.154 cts/t in FB2, totalling 7.39 Mt at 0.189 cts/t (1,397k carats). This represents a resource-to-mine plan conversion rate (in terms of diamonds contained) of 68% in FB1 and 75% in FB2. Stopes are designed with a 2.2 m minimum width, resulting in 38.0% kimberlite content in ROM material. There may be potential to reduce minimum width to 1 m based on narrow vein gold mining experience.

Mining operations are planned for 82 months, producing an average of 120 kt of ROM material monthly at full production, with 21k-28k carats per month. Production rates decrease after month 53 when FB1 stopes are exhausted.

Critical aspects include development advance rates, stope production rates, and dilution control. Recommendations include:

- Verify minimum stope width and modifying factors.
- Re-evaluate cut-off grades with updated assumptions.
- Assess alternative mine design criteria for economic viability and technical feasibility.
- Verify development and stope mining rates with ongoing operational experience.
- Investigate optimal mining rates between FB1, FB2, and different depth levels.

Adjust mine designs and schedules based on improved geotechnical understanding, optimising stope dimensions, ground support, blast design, and potential backfilling use.

These recommendations aim to enhance the accuracy of the mine plan, optimise economic performance, and ensure safe, efficient mining operations throughout the project's life.

1.13.4 Processing

The process design is based on a combination of Meya Mine Project site data and Consulmet best practice. It is noted that sampling was carried out as the Meya exploration and geological assessments were ongoing. As such it is recommended that a final review of the geology be conducted and if found to significantly deviate from the current design basis that the simulations be redone, and the design basis updated accordingly.

The risk of not including the NIR waste sorting stages, will result in high volumes of granite waste being treated by the crushing and main processing plant which will increase the wear rates of critical components resulting in higher operating costs. The exclusion of the NIR Sorting also increases the risk of diamond breakage from the hard granite rock in the crushers and will reduce the hourly diamond grade and revenue recovered due to increased dilution of the feed.

To maintain a steady state operation between the waste sorting, secondary crushing and main processing plant operation, the use of strategic stockpiles has been used. This will also maximise throughput at the required processing rate.

It may also be useful to consider variations to the quaternary crushing circuit to consider the cost benefit of the recirculating load. This exercise can be easily completed when necessary.

1.13.5 Marketing

Despite certain trading difficulties faced by commodity markets all over global economies, the outlook for the international diamond trade remains positive. Longer term, market fundamentals are unchanged and point to strong future price growth as demand comfortably outstrips future supply, in particular with the closing down of certain Canadian and African mining operations by the end of this decade and a general reduction of global rough diamond supply, resulting in carat production dipping below 100 million carats in the early 2030s. Exploration trends and prospector capital continues to be at record lows, with any new high class diamond mine only likely to come into production in 8-10 years' time. In line with the overall state of dwindling natural diamond supply, Meya Mine Project would stand to benefit from its position as a developing diamond project.

Demand for natural diamond jewellery will continue to grow in line with wealth creation and increases in population, especially in the growth Asian markets. Recurring data over the past number months from natural diamond jewellery brands, maisons (including luxury watches) is positive – brands are reporting year-on-year growth, supported by high-net worth buyers. Across the diamond retail's big three markets: the United States, China and India, it is likely that economic growth will be boosted by a growing consumer base.

The EU and G7 group of countries are considering implementing further sanctions against Russia – diamonds are this time on the table for discussion. Product sanctions in their essence are a disruptive mechanism and could further undermine the image of natural diamonds. The obvious winners will be African and Canadian producers who will seek to capitalise on this shortage of supply with new tools for marketing their "non-sanctioned" product. It is worth noting that Russian rough diamond supply accounts for approximately 30% of world diamond production by carat volume, and the economies comprising the G7 (including the EU) currently account for approximately 70% of the world's diamond jewellery sales.

Material risks to the diamond industry, like with most of the world's commodities, are connected to external geo-political and macro-economic factors outside of its control. Macro-economic pressure on global economies and consumers persists, with a combined dual-threat of high inflation and stubbornly-high interest rates impacting the ability to save personal income. It is expected that pressures on demand for a discretionary product such as natural diamonds ought to abate once inflation lowers further and Central Banks begin to cut interest rates.

Synthetic or "lab-grown" diamonds (LGD) may also be seen as a threat to natural diamond demand and pricing. LGD are well-known to be trading on the wholesale markets at more than a 90% discount to their natural diamond equivalent. LGD are also in infinite supply, a major fundamental divergence to the natural diamonds which are dwindling in supply over the next decade. It is forecast that the majority of LGD consumer demand will be "incremental" to global jewellery demand – that is to say, LGD are forming a standalone consumer category of personal consumption, and not deemed to be "taking away" market share from natural diamond equivalents.

1.13.6 Economic Analysis

The preliminary economic analysis of the Project indicates the potential for a positive economic outcome. It is recommended that the Project proceed to a PFS. A more detailed and precise economic analysis should be undertaken as part of that study. Further, it is recommended that the Project cashflows continue to be modelled on a monthly basis with a view to tying them more closely to budgeting forecasts and ultimately considering financing options at the FS stage.

PEAs, such as one prepared for the Meya Mine project, are by nature preliminary and often incorporate inferred mineral resources. These resources are typically considered too geologically speculative to have economic considerations applied that would allow them to be classified as mineral reserves. The outcome of any PEA remains uncertain.

2 Introduction

2.1 Meya Diamond Project Overview

The Meya Mine project is located in the Kono District, a diamond-rich district in the Eastern Province of Sierra Leone (Figure 2-1). Exploration and evaluation work is being conducted in the License area towards the definition of a Mineral Resource within a series of sub-vertical kimberlite dyke zones located immediately west of the active Koidu Mine.

In February 2023, Meya Mining engaged SRK Consulting (Canada) Inc. (“SRK”) to conduct a Preliminary Economic Assessmenet of the Meya River Dyke Zone at the Meya Mine project in support of Mineral Resource estimation and classification, and potential future mining.

SRK has conducted several site visits to guide and direct the geological and underground mine development activities being undertaken in support of the resource targets established by Meya Mining. In addition, SRK, Z Star, and Consulmet specialists have visited the site to review the processing facility and examine the bulk sample excavations for preliminary mine planning activities. SRK has examined macrodiamonds within the final recovery facility during multiple site visits as well as sorted packages of diamonds at the offices of KOIN International DMCC in Antwerp.

2.2 Terms of Reference

This Technical Report was prepared following the guidelines of the Canadian Securities Administrators’ National Instrument 43-101 (NI 43-101) and Form 43-101F1. The mineral resource statement reported herein was prepared in conformity with generally accepted CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines.” The Report presents mineral resource estimates, preliminary mine design and production schedules, process plant design incorporating innovative NIR waste sorting technology, infrastructure requirements, environmental and social considerations, capital and operating cost estimates, and an economic analysis on the Meya River Dyke at a preliminary economic assessment level.

This Technical Report is an update to the previously issued internal Technical Report titled "NI 43-101 Independent Technical Report for the Meya Mine project, Sierra Leone" with an effective date of 29 June 2018, produced for internal use of Meya Mining and further referenced as SRK, 2018.

The primary focus of exploration and evaluation has been on the Meya River Dyke Zone, a continuation of the diamondiferous Dyke Zone B currently being mined at the adjacent Koidu Mine. Extensive drilling, bulk sampling, and underground development have been completed to evaluate the mineral resource potential.

The Qualified Persons responsible for preparing this Technical Report have reviewed the data, methodologies and results presented and consider them to be of appropriate quality to support the conclusions and recommendations herein.

In QPs opinion, the Meya Mine project merits additional exploration and evaluation expenditure based on the current PEA level work. An initiation of PFS level investigations are recommended. The PFS should include additional core drilling and bulk sampling to facilitate engineering studies, continued geological development work and Mineral Resource estimation and classification for PFS level underground mine design.

Source: One Planet Nations Online

Figure 2-1: Administrative map of Sierra Leone

2.3 Responsibility amd Qualifications of the Project Team

SRK was joined by multiple parties in undertaking the PEA and preparing this report. A summary of responsibilities by Qualified Persons is shown in Table 2-1.

Table 2-1: QP responsibilities

Full Name	Qualifications	Responsibility Sections
Jarek Jakubec	C.Eng., FIMMM, M.Sc.	3, 12, 15, 16, 19, 21.1.1, 21.2.1, 22
Casey Michael Hetman	P.Geo., M.Sc.	4, 5, 6, 7, 8, 9, 10, 11, 12, 23, 24
Graham Trusler	Pri.Sci.Nat, M.Sc	4.3, 4.4, 20
Philip John Rider	Pr.Eng., MIMMM, B.Sc.	13.1 to 13.6, 13.8
Sean Duggan	Pri.Sci.Nat., M.Sc.	14
David Bush	Pri.Sci.Nat, DEA, CFSG, M.Sc.	14
Molojwa Bennett Herbet Keikelame	Pr.Eng., SAIMM, B.Sc.	16.7, 17, 21.1.2, 21.1.3
Bevan Edward Jones	B.Sc.	17.4
Jacobus Stephanus Koos Davel	B.Ing., ECSA	13.7
Pieter Steyn	M.Arch., SACAP	18.2.2

The whole Project team has reporting responsibility for their relevant sections of Section 1 (Executive Summary) and Sections 25 and 26 (Interpretation and Conclusions, Recommendations).

This Technical Report was compiled by Alfina Abdrakhimova, MBA, under the supervision of Casey Hetman, M.Sc., P.Geo, and Jarek Jakubec, C.Eng., FIMMM. By virtue of education, membership with a recognised professional association and relevant work experience, Casey Hetman (Corporate Consultant - Primary Diamond Deposits) is considered an independent Qualified Person as this term is defined by NI 43-101 for the geological component of this report. Jarek Jakubec (Corporate Consultant – Mining) is considered an independent Qualified Person (QP) as this term is defined by NI 43-101 for the mining component of this report.

2.4 Basis of Technical Report

This report is based on information collected by SRK, Z Star, Consulmet, EXT, and Digby Wells during the site visits, processing testwork monitoring conducted offsite, and on information provided by Meya Mining throughout the course of SRK's involvement. Other information was obtained from the public domain. The QPs have no reason to doubt the reliability of the information provided by Meya Mining.

The report is based on the following sources of information:

- Discussions with Meya Mining, Z Star, Consulmet, and Digby Wells personnel.
- Several site visits by SRK, Z Star, Consulmet, and Digby Wells.
- Inspection of the License area including outcrops, drill cores, surface bulk sampling trenches, and the processing facility.
- A visit to an Antwerp diamond sale.
- Review of exploration and evaluation data and samples collected by Meya Mining and SRK.

- Additional information from public domain sources.

2.5 Site Visits

In accordance with NI 43-101 guidelines, Qualified Persons from the SRK team visited the Meya Mine project on numerious occasions from 2017 thorugh 2024 to the effective date of this report 19 August 2024, accompanied by Meya Mining personnel as summarised in Table 2-2.

Table 2-2: Qualified and accompanying persons for Meya Mine project site visits

Name	Discipline	Site Visit Dates
Mr. Casey Hetman, SRK	Geology and Logging	11 to 20 Jan 2017 28 Jun to 07 Jul 2017 11 to 16 Feb 2018 05 to 09 May 2018 18 to 24 Jul 2019 09 to 13 Jul 2021 09 to 21 Feb 2022 01 to 06 May 2022 15 to 09 Sept 2022 29 to 30 Nov 2022 13 to 23 May 2023 25 Sep to 10 Oct 2023 27 Oct to 26 Nov 2023 13 to 18 Feb 2024
Dr. Stephen Moss, Terram Vero Consulting	Diamond Sampling	11 to 25 Jul 2017 13 to 21 Dec 2017
Mr. Howard Coopersmith, Howard Coopersmith LLC	Process Plant	07 to 12 Dec 2017
Mr. Jarek Jakubec, SRK	Mine Planning and Getoech	11 to 16 Feb 2018 05 to 10 Nov 2022 13 to 23 May 2023
Mr. Wayne Barnett, SRK	Geology and Resource and Structure	13 to 23 May 2023
Mr. Cliff Revering, SRK	Geology and Resource and Structure	13 to 23 May 2023
Mr. Rowan Bjorn Haai, Consulmet	QAQC Processing Plant	15 Apr to 17 Jul 2019
Mr. Wildu Mostert, Consulmet	General Site Visit	20 to 26 Feb 2022 13 to 19 Sep 2022
Mr. Morne Lindeque, Consulmet & Mr. Koos Davel, Tailings Solutions	TSF and Tailings Assessment	13 to 17 Nov 2022
Mr. Nico Van Vuuren & Mr. Wildu Mostert, Consulmet	Witness NIR Test Work	28 Nov to 3 Dec 2022
Mr. Rowan Bjorn Haai, Tomra	Bulk Sampling Preparation	11 to 25 Jan 2023
Mr. Rowan Bjorn Haai, Consulmet	Bulk Processing	21 Apr to 01 Jun 2023
Ms. Erin Margaret McLintock, Consulmet	Bulk Processing	09 to 16 May 2023
Mr. Gerhard Grobler, IMS	Tertiary Crusher Repair	01 to 08 Aug 2023
Mr. Wesley Daniel Jansen van Nieuwenhuizen, Micron Weighing	Recalibration of Weightometers	03 to 09 Oct 2023
Mr. Sean Duggan, Z Star	QP Site Visit	18 to 20 Jul 2024
Mr. Samba Sangare, Digby Wells	Socio Economic Survey	06 to 12 March 2022

Name	Discipline	Site Visit Dates
Mr. Jan Arie Van T'Zelfde, Digby Wells	Socio Economic Survey	06 to 12 March 2022
Safiatu Luseni, CEMMATS Ltd.	Socio Economic Survey	06 to 12 March 2022
Mr. Mohamed Mansaray, CEMMATS Ltd.	Socio Economic Survey	06 to 12 March 2022
Mr. Peter Kimberg, Digby Wells	Noise & Aquatics / Groundwater Survey	25 April to 03 May 2023
Ms. Phoebe Cochrane, Digby Wells	Noise & Aquatics / Groundwater Survey	25 April to 03 May 2023
Mr. Aviwe Sentwa, Digby Wells	Noise & Aquatics / Groundwater Survey	25 April to 03 May 2023
Keenan Terry, Digby Wells	Noise & Aquatics / Groundwater Survey	25 April to 03 May 2023
Ms. Christiana Fortune, CEMMATS Ltd.	Noise & Aquatics / Groundwater Survey	25 April to 03 May 2023
Mr. Malcom Smith, CEMMATS Ltd.	Noise & Aquatics / Groundwater Survey	25 April to 03 May 2023
Mr. Joe A.D. Alie, CEMMATS Ltd.	Archaeology and Cultural Heritage	25 April to 03 May 2023
Lahai Kellie, CEMMATS Ltd.	Archaeology and Cultural Heritage	25 April to 03 May 2023
Mr. Peter Kimberg, Digby Wells	Soil & Wetlands Survey	12 to 19 July 2023
Ms. Phoebe Cochrane, Digby Wells	Soil & Wetlands Survey	12 to 19 July 2023
Mr. Ivan Baker, Digby Wells	Soil & Wetlands Survey	12 to 19 July 2023

Source: This report, 2024

Furthermore, there have been six visits to Antwerp by three Qualified Persons in 2017 and 2018 at the request of Meya Mining, as part of conducting and reviewing diamond valuations of parcels recovered from the Meya Mine project bulk samples, as summarised in Table 2-3.

Table 2-3: Qualified and accompanying persons for Meya Mine project Antwerp visits

Name, Company and Responsibility	Date	Purpose	Accompanied By
Ray Ferraris, QTS Kristal Dinaminka: Rough Diamond services	Visit 1: December 6 to 7, 2017	Diamond characterisitics and breakage	Meya Mining
	Visit 2: February 15 to 21, 2018	Diamond characterisitics and breakage	Meya Mining
	Visit 3: March 19 to 28, 2018	Diamond characterisitics and breakage	Meya Mining
	Visit 4: May 16 to 24, 2018	Diamond characterisitics and breakage	Meya Mining
Casey Hetman, SRK: Geology	Visit 1: December 6 to 7, 2017	Diamond characterisitics and breakage, valuation	Meya Mining
Jarek Jakubec, SRK: Mining	Visit 1: December 6 to 7, 2017	Diamond characterisitics and breakage, valuation	Meya Mining

Source: This report

SRK was given full access to relevant project data and worked together with the Meya Mining personnel to obtain information on past exploration work, and to establish and refine the procedures used to collect, record, store and analyse the current exploration data.

2.6 Acknowledgement

SRK would like to acknowledge the support and collaboration provided by Meya Mining, Z Star, Consulmet, EXT, and Digby Wells for this assignment, which is greatly appreciated and was instrumental to the success of this Project.

2.7 Declaration

The QPs' opinion contained herein and to the effective date of 18 July 2024 is based on information collected by the QPs throughout the course of their investigations, which in turn reflect various technical and economic conditions at the time of writing. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. Consequently, actual results may be significantly more or less favourable.

This report may include technical information that requires subsequent calculations to derive sub-totals and totals. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the QPs do not consider them to be material.

Neither SRK, Z Star, Consulmet, nor Digby Wells is an insider, associate or affiliate of Meya Mining, their subsidiaries or their affiliates in connection with this project. The results as presented in this report by the QPs are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.

3 Reliance on Other Experts

3.1 Land Titles and Mineral Rights

The QPs have not performed an independent verification of land title and tenure information as summarised in Section 4 of this report. The QPs have relied on a title opinion dated 30 June 2024, prepared by Basma & Macaulay Law Firm, regarding the legal status and ownership of the mineral claims. This reliance applies to the content presented in Sections 4 of this report.

The QPs understand that there are no known litigations potentially affecting the Meya Mine project.

3.2 Diamond Valuations

The QPs relied on WWW International Diamond Consultants Limited (WWW) for the information presented in Section 19 (Marketing). Specifically, the QPs relied on the “Commercial and Technical Diamond Industry Due Diligence Report” prepared for Meya Mining as of 30 April 2024 in accordance with pre-agreed engagement, confidentiality and use terms with Meya Mining.

It is reasonable for the Qualified Persons to rely on WWW for this information since WWW is an internationally recognised independent diamond valuation and advisory firm delivering services to diamond mining and exploration companies, governments of diamond producing countries and private diamond companies.

4 Property Description and Location

4.1 Mineral Tenure

Meya Mining holds a Large-scale Mining Licence, ML 2/2019, over an area comprising 129.38 km^2 and known as the Meya Mine project ("the License") (Table 4-1, Figure 4-1 and Figure 4-2). The License was granted to Meya Mining for 25 years from 26 July 2019 to 25 July 2044.

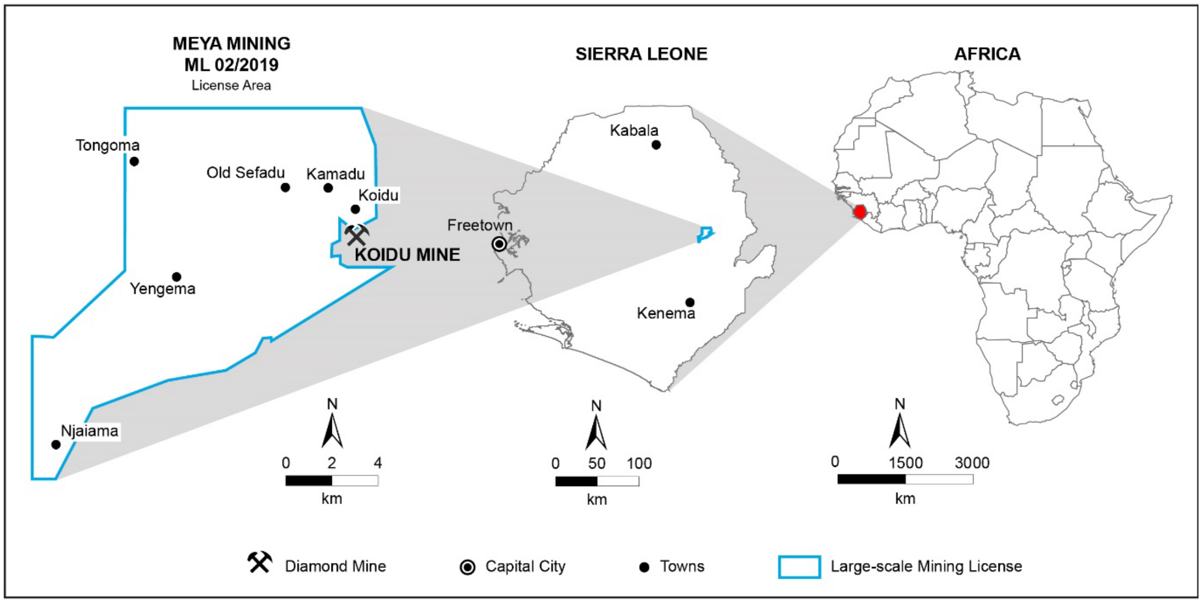
The License occurs over two 1:50,000 Map Sheet areas of the Sierra Leone Topographic Map Sheet Series (2005):

- Yengema Map Sheet No. 058, primarily
- Sefadu Map Sheet No. 059

Diamond exploration and evaluation activities are governed under the Sierra Leone Mines and Minerals Act, 2009, and the Sierra Leone Environment Protection Agency Act, 2008.

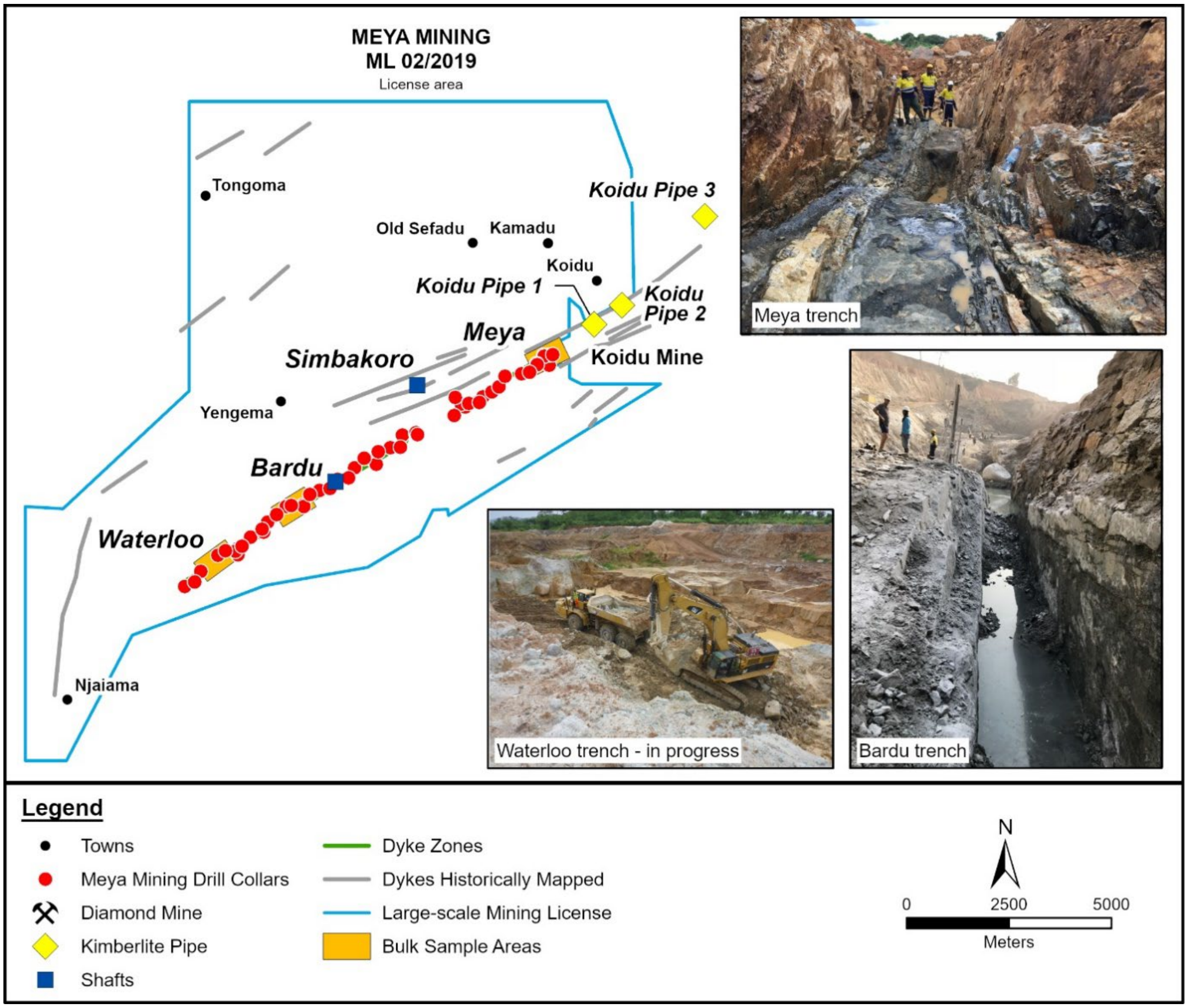
Table 4-1: Mineral tenure information

Tenement Name	Tenement Type	Grant Date	Expiry Date	Surface Area
Meya Mine project License ML 2/2019	Large-Scale Mining License	26 July 2019	26 June 2044	129.38 km^2



Source: This report, 2024

Figure 4-1: Meya Mine project location and tenure map



Source: This report, 2024

Figure 4-2: Meya Mine project land tenure map showing locations of identified kimberlite dykes

4.2 Property Ownership

The Meya exploration licence was originally acquired by Germinate Sierra Leone Limited ("Germinate") in June 2015, and named the Meya Mine project. Germinate subsequently entered into an agreement with TrustCo Group Holdings Limited group (a company listed on the Johannesburg Stock Exchange) to develop the Meya Mine project. In 2023, Germinate and TrustCo entered into a further subscription and shareholders agreement with Sterling Global Trading Limited ("Sterling Global"), being an entity owned by the Parikh Family (who are also the ultimate beneficial owners of the Diarough Group). Diarough is one of the world's largest diamantaires. Sterling Global agreed to invest some US$50M in the Meya Mine project in terms of this agreement.

The License is now held by Meya Mining with Sterling Global, now the majority shareholder, owning 70.0%, TrustCo owning 19.5% and Germinate owning 10.5%.

4.3 Permits and Authorisation

4.3.1 Institutional Context

The Sierra Leone government ministries and institutions which have some bearing on the implementation and operation of a project of this nature include the:

- Ministry of Mines and Mineral Resources
- National Minerals Agency
- Ministry of Lands Country Planning and the Environment
- Ministry of Agriculture and Food Security
- Environment Protection Agency Sierra Leone (EPA-SL)
- Local Government

4.3.2 The National Minerals Agency Act, 2012

The National Minerals Agency Act, 2012 was established to promote the development of the minerals sector by effectively and efficiently managing the administration and regulation of mineral rights and minerals trading in Sierra Leone, including geological survey and data collection activities; and also to establish a National Minerals Agency Board to provide technical and other support to the agency and to provide for other related matters.

4.3.3 The Mines and Minerals Operational Regulations, 2013

These regulations outline the operational requirements of mining licence holders in several aspects, including mine design for open pit mines, occupational health and safety, workplace standards, and explosives and blasting.

4.3.4 List of Permits and Authorisations

Meya Mining advised SRK that the required permits are in place, they are summarised in Table 4-2.

Table 4-2: Meya Mining current list of permits

Certificate/Licence	Renewal Frequency	Next Renewal Date
Large-Scale Mining Licence (ML 2/2019)	Every 25 years	July 2044
Blaster's Certificate	Every 5 years	March 2026
Certificate of Authorisation – Local Content	Every 3 years	October 2026
Environmental Impact Assessment Licence	Annually	November 2024
Large-Scale Blasting Licence	Annually	April 2024
Mine Manager's Certificate of Competence	Annually	April 2024

4.4 Environmental Considerations

4.4.1 Sierra Leone Environment Protection Agency Act, 2022

Environmental considerations relevant to exploration and mining are cited in the Sierra Leone Environment Protection Agency Act, 2022, covering environmental impact assessments and protection of the environment.

4.4.2 The Environment Protection (Mines and Minerals) Regulations, 2013

These regulations outline the environmental and legal responsibilities of a mining licence holder.

They state that “All mining activities shall be carried out in a sustainable manner by minimising or eliminating negative environmental and social adverse impacts under the provisions relating to environmental impacts contained in Section 132 (1) of the Sierra Leone Mines and Minerals Act, 2009, and those relating to social impacts contained in Section 133 (1) (b) (xii) and (xiii) of the same.”

4.4.3 Environmental and Social Impact Assessment study for the Meya Mine project, 2023

An updated Environmental and Social Impact Assessment (ESIA) was completed in 2023 to support the transition to commercial underground mining, and is summarised in Section 20.

Key objectives of the ESIA included:

- Update the environmental and social impact assessment for the underground development of the Meya River Domain
- Assess baseline conditions of the physical and biological environment in the Project area
- Identify and evaluate potential environmental and social impacts of the Project
- Develop an Environmental and Social Management Plan (ESMP) with mitigation measures
- Produce an initial Mine Closure and Rehabilitation Plan (MCRP) with associated closure cost estimate
- Ensure compliance with Sierra Leone regulations and international standards
- Support the upgrade of Meya Mining's Environmental Impact Assessment License for commercial underground mining

4.5 Mining Rights in Sierra Leone

Diamond exploration and mining activities are governed under the Sierra Leone Mines and Minerals Act, 2022, which replaced the Mines and Minerals Act 2009. The act covers mineral ownership, acquisition of mineral rights, mineral and surface rights, surrender, suspension, and cancellation of mineral rights, and small-scale and large-scale mining licences.

The Mines and Minerals Development Act, 2022, provides that all rights of ownership in, of searching for, mining and disposing of minerals in, under or upon any land in Sierra Leone and its continental shelf are vested in the Republic of Sierra Leone. Pursuant to the Act, the Ministry of Mineral Resources of Sierra Leone administers the country's mineral resources.

The Ministry has the power to grant mineral interests to qualifying persons under the Act, including the following types of mineral rights (Parts X – XIV) – Acquisition of Mineral Rights, 22):

a. A reconnaissance licence
b. An exploration licence
c. An artisanal mining licence
d. A small-scale mining licence
e. A large-scale mining licence

A reconnaissance licence shall be valid for an initial period not exceeding one year (Part X – Reconnaissance Licenses, 67).

An exploration licence is valid for an initial period not exceeding three years (Part XI—Exploration Licenses, 77 (1).

An artisanal mining licence is valid for one year and may be renewed annually for the commercial life of the Project (Part XII—Artisanal Mining Licenses, 89 and 90 (1)).

A small-scale mining licence is valid for a period not exceeding four years and may be renewed for further periods not exceeding four years at a time (Part XIII—Small-Scale Mining Licenses, 99 and 100).

A large-scale mining licence shall be valid for a period not exceeding 25 years and may be renewed for five-year periods thereafter for the duration of the commercial life of the mine (Part XIIII – Large Scale Mining Licenses, 111 and 112).

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1 Accessibility

Primary access to the Meya Mine project is by paved road. The road connecting Freetown, the coastal capital city of Sierra Leone (Figure 2-1), and Koidu was upgraded from 2007 to 2011 and is in good condition.

Gravel roads are constructed within the License area providing light vehicle and heavy equipment access to the camp and process plant site facilities, core drilling and bulk sample site locations.

A regional airstrip, Yengema Airfield, is located about 15 km west of Koidu along the major road to Freetown, within the Meya License area. It is approximately 800 m long and 14 m wide and has a tarmac surface.

A helipad is present on site.

5.2 Climate

The Meya Mine project is located in the tropical rainforest belt of Sierra Leone. The climate in the region is described as wet tropical monsoon by Hall (1968):

- There are two main seasons: dry season (mid-November to mid-May) and rainy season (mid-May to mid-November)
- The average rainfall is approximately 2,500 mm, the wettest month typically being August with rivers attaining maximum discharge in mid-September
- River discharge is at its lowest in March and April, and begins to increase progressively in May with the onset of the rainy season
- Groundwater levels begin to rise significantly in late July
- Temperatures typically range from 20–33 degrees Celsius (^{o}C), and can drop as low as 10^{o}C at night in January
- Average day temperatures are 31^{o}C in the dry season and 28^{o}C in the wet season

The Meya Mine project operates year-round.

5.3 Local Resources and Infrastructure

The major local resources and infrastructure are the encroached Koidu town and the adjoining Koidu Mine. Koidu town recordedly began to spread southward in 1934 after the demarcation of the Yengema Lease area. The southward expansion of Koidu has continued, particularly since the 1990s, with a sizeable encroachment occurring after 2002. The population of Koidu, based on the 2015 Sierra Leone census, is 124,662 persons, and it is the fourth largest city in Sierra Leone by population.

Other towns and villages located in the License area west of Koidu include Kamadu, Tongoma, Old Sefadu, Yengema and Njaiama (Figure 4-1 and Figure 4-2).

Fixed landline communications are developed and maintained in Sierra Leone, yet communications are predominantly cellular. Several cellular providers operate in Sierra Leone, offering voice and data services. At the Meya Mine project, communication is primarily through cell phones and satellite internet.

Meya Mining commenced construction of a site camp with infrastructure to support exploration drilling and evaluation bulk sampling operations in January 2017, which was completed in March 2017. A mining fleet was mobilised in March 2017. Construction of a purpose-built process plant commenced in March 2017 and was completed in September 2017. The development of a ramp and portal to access the underground mining operation was initiated in May 2021 and completed in February 2022.

5.4 Physiography

Situated along the central-western coast of Africa, Sierra Leone may be described as containing four distinct geographical regions: “Coastal Plains,” “Hill Country,” “Inland Plateau,” and “Eastern Mountains” (after Hall, 1968). Eastern Sierra Leone is generally comprised of large plateaus interspersed with mountains.

Hall (1968) recorded that the dissected margins of the Inland Plateau are embayed by broad valleys of the major rivers of Sierra Leone. The southern scarp of the Inland Plateau is divided into seven plantation (erosional) surfaces, as summarised in Table 5-1 (after Hall, 1968), and the significant surface in the License area is the Koidu Surface.

According to Hall (1968), most diamond fields display subdued topography of low convex hills separated by networks of shallow swamps and stream valleys, with occasional hills of monadnock type or bare granite outcrops. This topography is typical of the plains of the south and the valley floors between plateau surfaces where they remain undissected (Hall, 1968).

Table 5-1: Planation Surfaces of the inland plateau and coastal plains of Sierra Leone (after Hall, 1968)

Surface	Elevation	Characteristics
Nimini Surface (Cretaceous)	~ 685 m	Solitary remnant high in diamond fields, Nimini Hills, southwest Kono District. No diamonds.
Main Plateau Surface, (Eocene)	~ 460 m	One of the two principal surfaces in Sierra Leone occurs in the extreme north of the diamond fields area. Diamonds are scarce.
Koidu Surface	~ 380 m	The local basin-like feature of the Koidu area is mainly surrounded by Hilly Country. Hosts most known kimberlites and important alluvial deposits.
Thousand Foot Surface	~ 305 m	Important surface in the diamond fields area, consistent elevation traceable over long distances. Principal step between the Coastal Plain and the dissected margins of the Plateau Surface. Few diamond deposits.
Tongo Surface	~ 230 m	In the Tongo diamond fields area, a low plateau of a limited extent occupies an embayment in the Main Plateau Surface.
Coastal Plain Surface (Pliocene?)	~ 30 m to 185 m	Major surface occupying over half of Sierra Leone. Elevation varies with distance from the coast.
Bullom Surface	~ 0 m to 15 m	The youngest surface forms the Sierra Leone coastal strip, up to 40 km wide. No diamonds.

Source: This report

According to Hall (1968), the forest had been cleared for farming in most of the Sierra Leone diamond fields.

Drainage in the License area is variable. A WNW-ESE trending regional drainage divide appears to run through the center of the License area. In the northeast, the Meya River and Woiye River catchments flow west and northwards. Both these rivers join the Moinde River in the northwest. The Moinde River is a tributary of the Bafi River, a tributary of the Sewa River, a major river in Sierra Leone. The catchments in the southwest of the License area drain south-westerly into the Sewa River, which flows south past Njaiama township into the Atlantic Ocean (Figure 5-1).

Within the adjoining Koidu Kimberlite Project Mining Lease, Monkey Hill (Figure 5-1) reaches a height of just over 500 metres above sea level (masl) and forms a watershed between the Meya and Woyie Rivers, surrounded by gently undulating topography of the Koidu Surface between elevations of about 365 masl and 390 masl.

Source: This report, 2024

Note: Historic DZB bulk sample site in the foreground; Koidu Mine and Monkey Hill in the background

Figure 5-1: Typical landscape in the licence area of Meya River Dyke Zone

6 History

6.1 Prior Ownership of the Property and Ownership Changes

6.1.1 CAST – SLST, NDMC and Others, 1930s to 1980s

Hall (1968) documented that Consolidated African Selection Trust Ltd ("CAST") arrived in Sierra Leone in 1931 after the report of the first diamond discovery in 1930. CAST was formed in 1924 and was part of a much larger mining finance house, Selection Trust Ltd, which had been founded in 1913.

Sierra Leone Selection Trust ("SLST") was formed in 1934 as a private company wholly owned by CAST (Hall, 1968). SLST took over the diamond business in Sierra Leone in 1935 following an agreement with the colonial government and had exclusive mineral mining rights in Sierra Leone to last for 99 years. In Kono District, the original SLST diamond field property was named the Yengema Lease, which covered the current Meya License and the adjacent Koidu Lease. The Meya License occurs in the central portion of the historic SLST Yengema Lease.

Hall (1968) maintained that illicit artisanal mining began in Sierra Leone in 1950, and between 1950 and 1955 there was a major increase in illegal artisanal mining throughout southeast Sierra Leone. In 1955, colonial authorities terminated SLST's nationwide monopoly, restricting its operations to cover two main diamond fields around Yengema and Tongo, the latter located about 50 km to the south-southwest, with the rights to the remainder of Sierra Leone reverting to the Crown.

In 1956, colonial authorities introduced the Alluvial Mining Scheme, under which both mining and buying licences were granted to indigenous miners. Smillie et al. (2000) stated that by 1956 there were an estimated 75,000 illicit miners in Kono District.

Names of other historical alluvial diamond mining companies operating in the Yengema Lease area in the 1960s and 1970s obtained from public domain searches include Diminico for which there is limited information available.

With the creation of the Sierra Leonean parastatal National Diamond Mining Company (NDMC) in 1971, the diamond business in Sierra Leone at that time was effectively nationalised, ending SLST in Sierra Leone. The SLST rights to the Yengema and Tongo areas were revised to remain in effect until 1985 and the company was paid compensation for the loss of rights (Patrick & Forward, 2005).

6.1.2 Stellar – Petra JV, 2002 to 2012

Mano River Resources Inc. ("Mano River"), through its 93.8% owned Golden Leo Resources, held three exclusive diamond prospecting licences totaling 260 km^2 over the Koidu-Yengema region in 2002, surrounding the Koidu Lease. A press release issued by Mano River on 01 December 2004 announced that they had concluded a Heads of Agreement for diamond production from kimberlite dykes (the "Lion dykes") on their licences with Crown Diamonds (subsequently Petra Diamonds Ltd: "Petra Diamonds").

A joint venture (JV) partnership between Mano River and Petra Diamonds for the "Kono Kimberlite Project" was released on 23 February 2005. The initial Kono Kimberlite Project comprised two permits: Yengema Exploration License EL 04/05 and Njaiama Exploration License EL 03/05. A third exploration licence adjoining the west of EL 03/05 was reportedly obtained in August 2007: Nimini Central Exploration License EL 08/07. The Meya License is generally coincident over these three prior Licenses.

On 03 October 2005, Mano River announced that it agreed to an offer by Petra Diamonds (51%) subject to all necessary approvals. Mano River announced on 05 April 2007 its planned listing of Stellar Diamonds Limited ("Stellar Diamonds") as its 100% owned subsidiary with 49% interest with Petra Diamonds in the Kono Kimberlite Project joint venture. A proposed merger between Stellar Diamonds and West African Diamonds Ltd was released by Stellar Diamonds on 27 October 2009, and was followed by an approved reverse takeover by Stellar Diamonds announced on 19 February 2010.

On 24 May 2010 Stellar Diamonds announced that it reached agreement with Petra Diamonds to acquire its interest in the Kono Kimberlite Project, and Petra Diamonds exited the joint venture, returning to Stellar Diamonds its 51% project equity.

Application for renewals of the Kono Kimberlite Project exploration licences, held by Basama Diamonds Limited, a 100% owned Stellar Diamonds subsidiary, were reported submitted to the Ministry of Mines of Sierra Leone on 02 November 2011 and stated to be in accordance with the Mines and Minerals Act of 2009. Stellar Diamonds reported on 12 April 2012 that a letter was received from the Ministry of Mines of Sierra Leone that asserted it ought not to have granted the renewals of the licences in 2010 under the Mines and Minerals Act of 2009, and that as a result Stellar Diamonds no longer had mineral rights to the Kono Kimberlite Project exploration licences.

6.1.3 Germinate – Meya Mining, 2015 Onwards

The Meya exploration licence, EL 07/2015, was originally acquired by Germinate in June 2015, and referred to as the "Meya Mine project". The License was transferred from Geminate to Meya Mining on 15 November 2016. In 2017, Germinate entered into an agreement with TrustCo to further invest in the Meya Mine project.

Meya acquired a 25-year Large-scale Mining License effective 26 July 2019, ML 2/2019.

In 2023, TrustCo and Germinate entered into an agreement with Sterling Global for further investment via an equity subscription and provision of loans. Sterling Global is now the majority shareholder of Meya Mining as to 70.0%.

6.2 Type, Amount, Quantity and General Results of Exploration and Development Work Undertaken by Previous Owners or Operators

6.2.1 Geological Survey and CAST, Initial Work and Results 1930 to 1932

The first diamond found in Sierra Leone was reported recovered by a routine Geological Survey field party exercise in Kono District, January 1930. Subsequent exploration established that there were extensive alluvial diamond fields in many parts of the region, with an exceptionally rich group of deposits in the Koidu area (Hall, 1968).

CAST initially commenced diamond exploration and development work in Sierra Leone in 1932 (Hall, 1968). Mining of the Shongbo deposits in the Yengema field commenced in late 1932 (Patrick & Forward, 2005).

6.2.2 SLST, 1935 to 1955

SLST began alluvial mining in 1935 focused on the Yengema diamond field and based out of a permanent camp built near the village of Yengema (Hall, 1968). Hall (1968) recorded that alluvial deposits within the Yengema Lease were developed by SLST from seven catchments. Within the current Meya License, the significant areas were Koidu and Yengema.

The Koidu area was the richest alluvial diamond district in Sierra Leone reported by Hall (1968), with approximately 9 Mct being mined within a radius of about 1.5 km of Koidu town, at that time. The three principal deposits of the Koidu area were the flats of the Woyie stream, the flats of the Meya stream, and the Wongoyie Swamp and its tributaries. Grades varied widely from 265 ct per cubic yard from a prospecting pit in Wongoyie Swamp, to generally 5 ct to 1 ct per cubic yard recovered from drainages.

In the Yengema area, Hall (1968) stated that over half of the total drainage network was diamond-bearing, and apparently, about one-third, including all the principal streams, contained payable gravel. The principal producers were the Oyie and Gaiya streams. Grades ran generally between 0.3 ct and 1.5 ct per cubic yard, often higher than in the flats of the Oyie and the Gaiya, which reportedly contained a high proportion of the total reserves.

Hall (1968) recorded that kimberlites were discovered and exposed in pits near Koidu town (Koidu Dyke A and the K1 and K2 pipes), and on the Oyie stream in 1948.

Between 1948 and 1955, prospecting parties delineated payable gravels along the Sewa River and in many of the Sewa tributaries and terraces, and mobile washing plants suitable for exploiting these scattered deposits were constructed (Hall, 1968).

6.2.3 Alluvial Mining Scheme,1956 to 1970s

In 1956, when the Alluvial Mining Scheme was implemented, recorded mining techniques included diving, dam-building and air-lift pumping (Hall, 1968). When shallow deposits were exhausted, divers used aqualung equipment to reach deeper deposits. From 1958, earth-filled coffer dams were constructed during the 3-month dry seasons, sealing off portions of riverbeds that were pumped dry of water. Gravel was then extracted manually and stockpiled for treatment.

6.2.4 Sierra Leone Geological Survey, 1958 to 1965

In November 1958, the Sierra Leone Geological Survey appointed P.K. Hall to carry out a detailed study of the alluvial diamond fields to investigate the geology of the deposits and assess diamond resources. This was conducted over seven years. Hall (1968) reported the Sierra Leone diamond fields covered an area of about 20,000 km^2 in the southeastern part of the country, centred on the town of Kenema, Kenema District. The work recorded in Hall (1968) is regarded as the authoritative historic reference on diamond deposits in Sierra Leone.

6.2.5 DEC, 1962 to 1965

The Diamond Exploration Company (“DEC”), a subsidiary of the Diamond Corporation, was formed in 1961 to carry out specific investigations into diamond mining and occurrences on behalf of the Sierra Leone government, including the feasibility of dredging the Sewa River channel deposits that continued from 1962 until January 1965 (Hall, 1968). The dredge produced 3,282 ct from some 90,000 cubic yards of sand and gravel. No deposits regarded as payable were discovered (Hall, 1968).

6.2.6 NDMC, 1971 to 1980s

The Sierra Leone Truth and Reconciliation Commission (Volume Three B, 2004, p.11) stated that transformation of the diamond industry of the country into an informal economy was complete with the "nationalisation" of the SLST and its replacement by the NDMC in 1970. In 1973, the government created the Cooperative Contract Mining (CCM) scheme, which allowed private mining operations within the NDMC lease. This initiative was presented as a concession to local miners.

6.2.7 UN Survey, 2003 to 2004

Patrick & Forward (2005) reported that country-wide aerial reconnaissances were conducted over two years by UK Department of Foreign and International Development (DFID) and Ministry of Mines personnel under the auspices of the United Nations (UN), which revealed many major extensions to known artisanal mining areas, as well as several large areas and many small areas of previously unknown activity.

DFID and Ministry of Mines personnel subsequently visited many of the sites to assess the level of adherence to the Government's artisanal mining legislation, and workings were identified as alluvial diamond or alluvial gold. The locations identified by DFID are plotted on UNAMSIL GIS maps (Patrick & Forward, 2005).

6.3 Meya License Area Summary

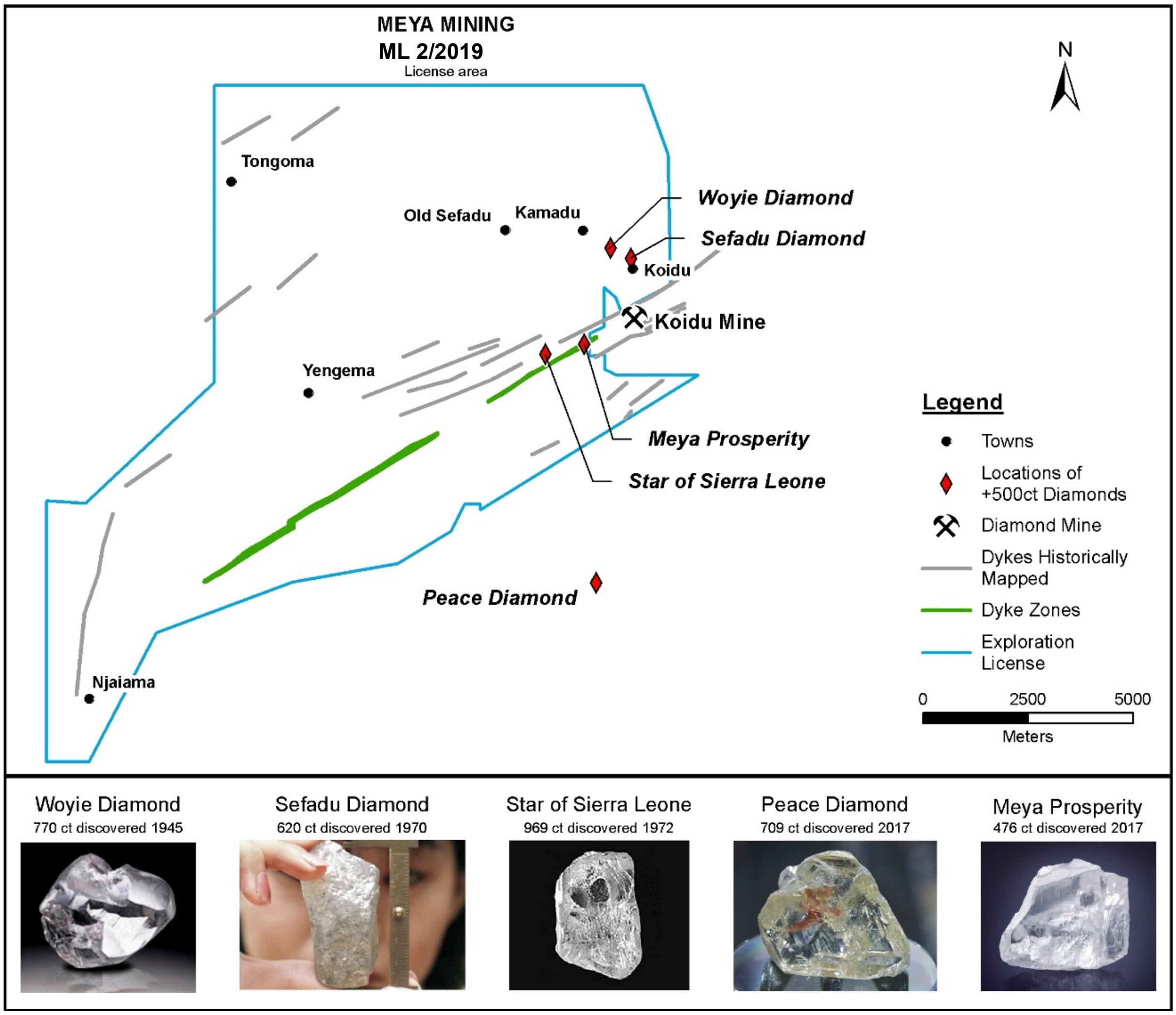
Historical diamond workings within the current Meya License area are intermittently formally and informally publicly reported from 1932 to the present, and the scale and impact of alluvial workings appear significant. Exploration and artisanal mining of kimberlite dykes within the License area has been ongoing since their discovery. Formal mining of kimberlite has been restricted to two small pipes and associated dykes and small blows in the adjacent Koidu Lease.

The drainages, areas of soils in the uplands, swamps and kimberlite dykes within the License area have been developed by numerous private companies and consortiums, government corporations and tens of thousands of illicit artisanal miners over 80 years prior to the commencement of exploration activities by Meya Mining in October 2016.

It is noteworthy that several of the world's largest and famous diamonds have been recovered in the Koidu area from alluvial deposits of the Woyie and Meya Rivers and their tributaries (Table 6-1 & Figure 6-1). The 969 ct Star of Sierra Leone is one of the 10th largest rough diamonds in the world and remains Sierra Leone's largest find. The Star of Sierra Leone, Woyie diamond (Hall, 1968), Sefadu diamond and the 476 ct Meya Prosperity diamond recently recovered by Meya Mining all derive from the eastern portion of the Meya License.

Table 6-1: Reported large diamonds discovered in Kono district, Sierra Leone

Diamond Name	Carats (ct)	Date Found	Kono District Location
Woyie	770	January 1945	Meya License, Woyie River, Koidu area
Sefadu	620	1970	Meya License, Sefadu town, Koidu area
Star of Sierra Leone	969	February 1972	Meya License, Diminco field, Koidu area
Peace	709	March 2017	Kweo Village, c. 6 km south of Koidu town, outside of Meya License
Meya Prosperity	476*	November 2017	Meya License, Meya River Dyke Zone bulk sample (MBS2), Koidu area *Broken diamond, was originally > 500 ct



Source: This report, 2018

Note: Showing location of four largest alluvial diamonds and Meya River bulk sample Meya Prosperity diamond

Figure 6-1: Meya Mine project land tenure map

7 Geological Setting and Mineralisation

7.1 Regional Geology

The regional geology of Sierra Leone can be broadly divided into three main zones (Schlüter and Trauth, 2008): the Archean Man Craton of the southern West African Shield in the east; the Rokelides in the west, an early Cambrian orogenic belt and with a 20 to 40 km coastal strip of “young” sediments (Figure 7-1).

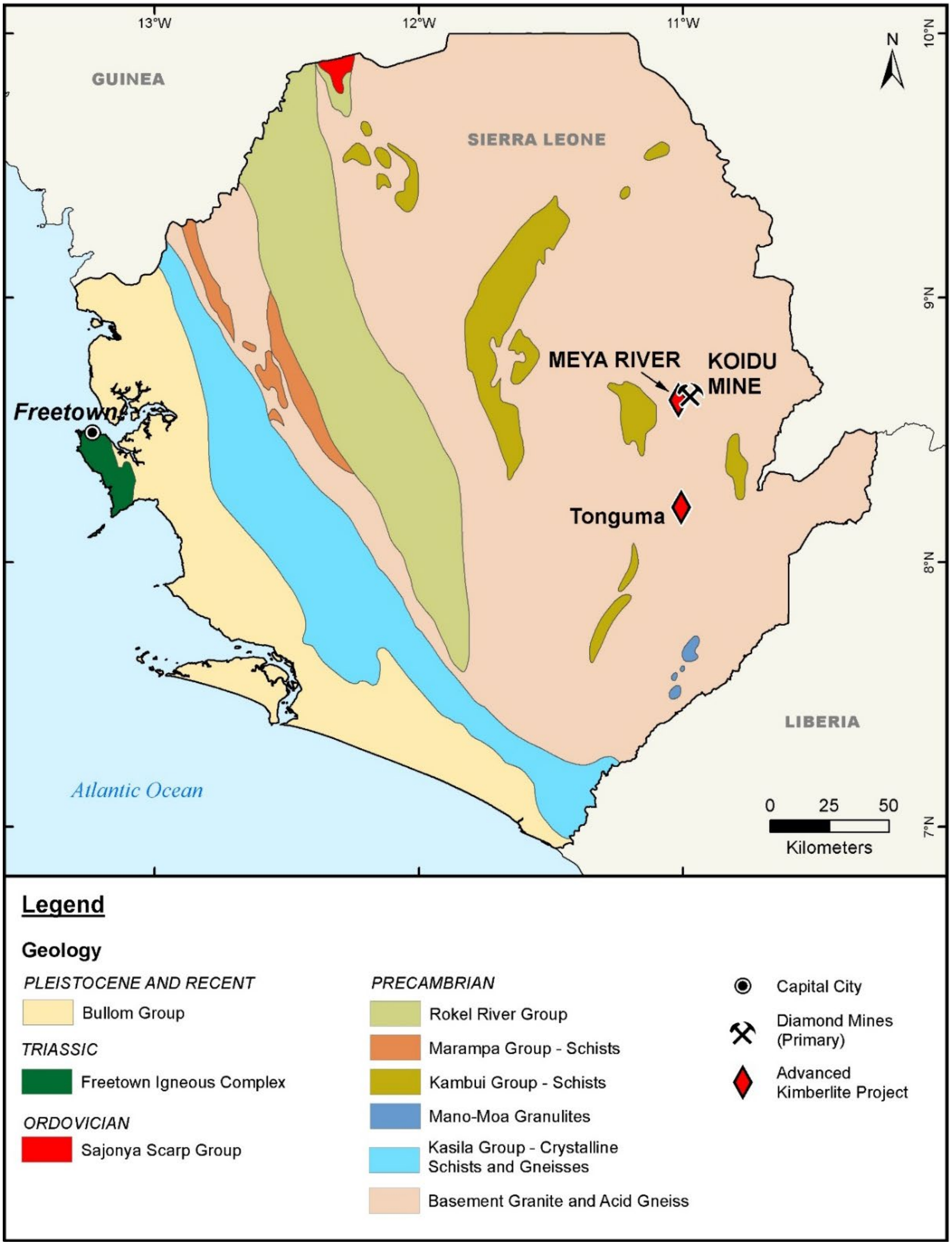
The Archean shield consists of a granitic basement containing elements of early sedimentary and mafic formations and a group of supracrustal greenstone belts with banded ironstone and detrital sediments known as the Kambui Group. At least two thermotectonic episodes have been recognised within the basement complex. The Leonean, older than 3,000 Ma, involved a complex history of granite formation, migmatisation, deformation along east-west axes, and pegmatite formation. The later Liberian episode at 2,700 Ma followed the deposition of the Kambui Group and imposed a north-south lineation on both the basement and younger rocks which were deformed and metamorphosed together and intruded by late and post orogenic granites (Morel, 1979). The Kasila Group in the southwest of the craton comprises mafic gneisses and schists with relict structures considered to represent the Leonean east-west trend, the Liberian north-south trend and the later Pan-African northwest to southeast lineations. This third tectonic episode, the Rokelide at ~550 Ma, where mobilisation and shearing followed granulite facies metamorphism of older rocks, superimposed northwest to southeast trends on the earlier deformation events (MacFarlane et al., 1979). Sedimentary rocks including marl, quartzite and sandstone of the upper Proterozoic to mid Cambrian Rokel River Group and Triassic-Jurassic basic intrusives form part of the Pan-African age province. The presence of sedimentary rock, basalt and dolerite xenoliths in the Sierra Leone kimberlites testifies to the former more extensive coverage of these rock types (Skinner et al., 2004).

The diamond fields of Sierra Leone occupy an area of roughly 20,000 km^2 in the southeast of the country centered around Kenema (Hall, 1968). Primary diamond deposits have been found near Koidu town in the Kono District and near Panguma 50 km to the south; the latter were originally known as the Tongo cluster and have since been renamed Tonguma (Figure 7-1). Extensive alluvial deposits make up the remainder of the diamond fields.

The Koidu and Tonguma clusters of kimberlite pipes and dyke zones are part of a Jurassic age province of kimberlites within the Man Craton, which extends from the 154 Ma Droubja kimberlite in southeast Guinea, westwards to the +145 Ma bodies at Koidu, and then southwards to the + 140 Ma Tonguma bodies and ~135 Ma kimberlites in western Liberia. The distribution of kimberlites of the Man Craton is thought to be related to continental scale movements and tectonic stresses established in the lithosphere rather than local scale structures. Skinner et al. (2004) presented evidence in support of hotspot activity being related to kimberlite genesis and, assuming that kimberlites are generated from a fixed position in the asthenosphere, that it is possible to track the direction and rates of movement of the overriding lithosphere from known kimberlite distributions and ages.

Haggerty (2018) reported new kimberlite discoveries in northwest Liberia comprising eight dykes ~ 10 m wide and an *en echelon* pipe comparable in size to the Kimberley pipe and De Beers’ pipe in South Africa. The discoveries include a well-defined trend for kimberlite dykes along paleo-fracture zones, Precambrian in age (Liberia Trend), coupled with kimberlite dykes on the craton that are traced to

Mesozoic oceanic transform faults: the Sierra Leone trend. The dyke trends were stated to be controlled by reactivated paleo-sutures from the Mesozoic transform faults to Precambrian flexures.



Source: Modified after Morel, 1979

Figure 7-1: Regional geology of Sierra Leone, showing locations of primary diamond deposits

7.2 Property Geology

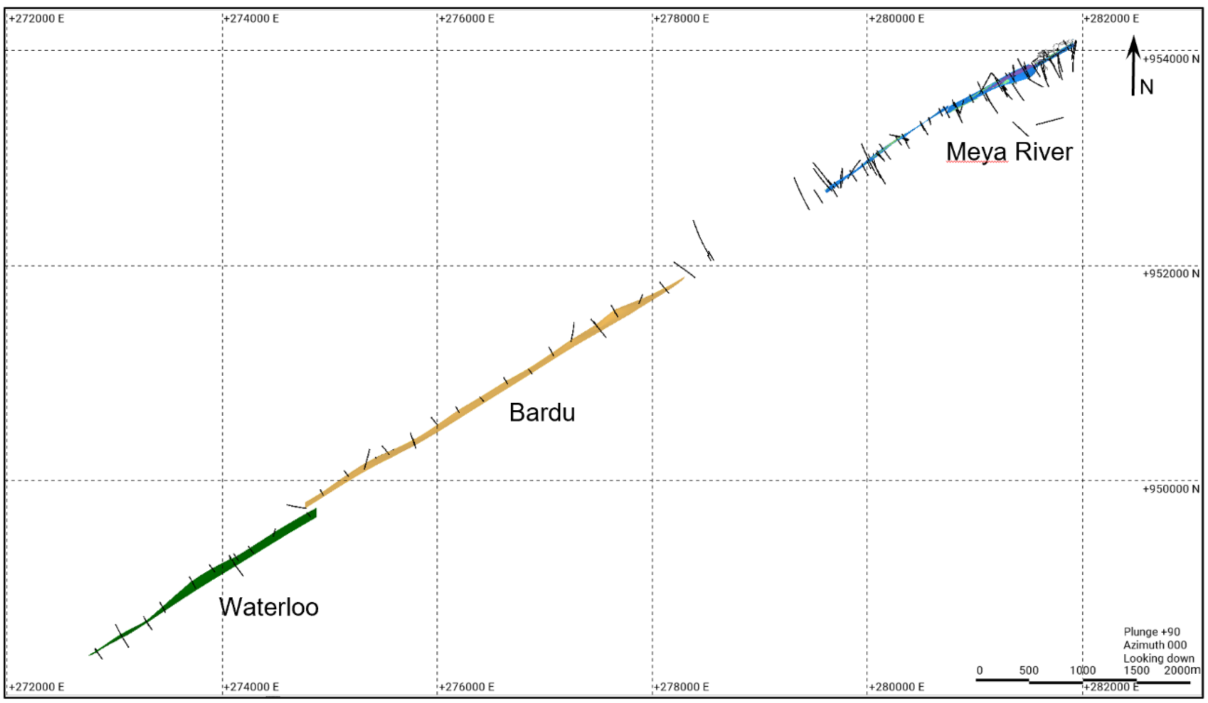
7.2.1 Basement Rocks

The Meya River Dyke Zone was emplaced between 143+/-1 and 146+/-3 Ma, based on $^{40}Ar/^{39}Ar$ laser-probe ages for phlogopite, within the Archean granitoid terrain of the Man Craton (Skinner et al., 2004), (Moss et al., 2012). The Meya License area is also underlain by common amphibolite dykes formed by metamorphism of dolerite (diabase) dykes. Three dominant brittle structural patterns were observed by Williams (1977) in the basement rocks of the Man craton: N-S, ENE-WSW and NW-SE.

7.2.2 Kimberlites

Sixteen kimberlite dyke occurrences have been recorded within the Meya License area. The dykes vary in thickness and their morphology is typical of dyke zones around the world, being characterised by pinching, swelling, and bifurcation. Individual dyke segments can vary from 1 cm to greater than 2 m in width. Country rock dilution within the dykes is generally low and consists mainly of xenoliths of locally derived gneiss, granitoid, diabase, amphibolite and pegmatite. All of these rocks are present in the country rock immediately surrounding the dykes. Another rock type found as xenoliths, specifically in the Meya River Dyke Zone, is vesicular basalt that no longer exists in this area of Sierra Leone and therefore, represents fragments of the previous cover rocks.

The major diamondiferous occurrence presently under investigation is the Meya River Dyke Zone which represents the on-strike extension of Dyke Zone B (DZB) that is currently in production at the adjacent Koidu Mine (Figure 7-1). The Meya River Dyke Zone falls within a 10 km long corridor that hosts three separate dyke zones with Meya to the east, Waterloo on the far west and Bardu in between the two (Figure 7-2). The Meya River Dyke Zone is the focus of the current resource development work and current mining.



Source: This report, 2024

Figure 7-2: Plan view the 3D geological model of the dyke zones showing drill traces in black

The Meya River Dyke Zone is comprised of multiple phases of kimberlite. There are several locations along strike where the dyke is greater than 1 m thick, to a maximum of 2.3 m in the bulk sample trench. An even thicker interval may be related to the development of a blow in the area of MMDD-131 at depth. The sub-vertical Meya River Dyke Zone is a series of near-vertical dykes that strike ENE-WSW at approximately 60 degrees. It has been intersected in 82 drill holes along a strike length of approximately 2,696 m to a maximum depth of ~775 m (MMDD-126) below the surface. It has also been exposed in a ~250 m surface bulk sample trench (MBS2). The Meya River Dyke Zone displays a simple to locally complex morphology. The wall rock contact zones are characterised by minimal jointing, brecciation and alteration of the host rock and kimberlite.

Within the Meya River Dyke Zone, three main phases of kimberlite have been established: KIMB1, KIMB2, and KIMB3. The three kimberlite phases have different olivine populations, mantle-derived indicator minerals, groundmass mineral populations, groundmass spinel compositions, country rock xenoliths, and diamond grades.

The key geological characteristics of these kimberlites observed in the trench exposures, drill core intersections, and thin sections available to date are described and illustrated in Figure 7-3. Kimberlite terminology and classification are after Scott Smith et al., (2013).

Meya River North Dyke Zone

Source: SRK, 2018

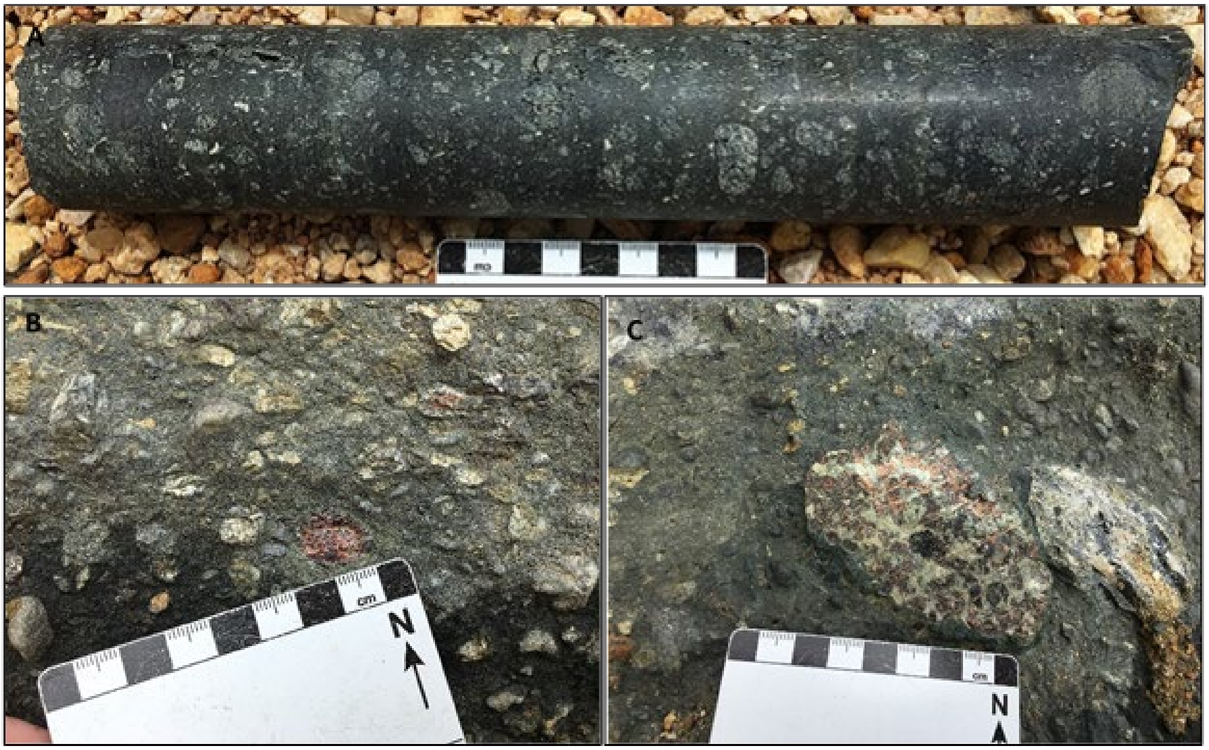
Note: (a) simple section of the dyke zone, approximately 1.5 m wide and comprising two adjacent segments separated locally by a thin wedge of granite (between surveyor's boots, right), and (b) complex section of the dyke zone, approximately 2.5 m wide and comprising at least 10 bifurcated segments.

Figure 7-3: The Meya River Dyke Zone exposed in bulk sample trench MBS2

KIMB1

Macroscopic Characteristics

KIMB1 is a very hard and competent, dark grey/black macrocrystic hypabyssal kimberlite characterised by conspicuous coarse- to ultra-coarse-grained olivine macrocrysts and minor phlogopite macrocrysts (Figure 7-4a). The kimberlite is predominantly massive and homogeneous and commonly displays crude preferred alignment of components; less than a third of material observed to date displays flow zonation defined by variations in olivine size and abundance. Total olivine abundance is 50 to 55% with olivine macrocrysts (crystals >1 mm) making up 20 to 30% of the rock. Olivine is commonly fresh (15 to 90% of the population) and where pseudomorphed, secondary minerals include serpentine/chlorite, carbonate, and magnetite. Very coarse- to ultra coarse-grained Cr-poor megacryst suite minerals - orange/red-brown Fe-rich garnet (Figure 7-4b) and ilmenite - are common and conspicuous, and ilmenite is more abundant than garnet. Other mantle-derived indicator minerals occur as xenocrysts in the kimberlite but are not as common as the Cr-poor megacrysts and include red and purple peridotitic garnets and rare chrome diopside. Mantle xenoliths include both Group I (Figure 7-4c) and Group II eclogites (MacGregor and Carter, 1970; Viljoen et al., 2005) as well as a variety of peridotite xenoliths. Country rock xenolith abundance is very low (0 to < 5%; locally 10%); xenoliths comprise locally derived granitoid/gneiss, dolerite, and various metamorphic rocks – basalt xenoliths are absent.



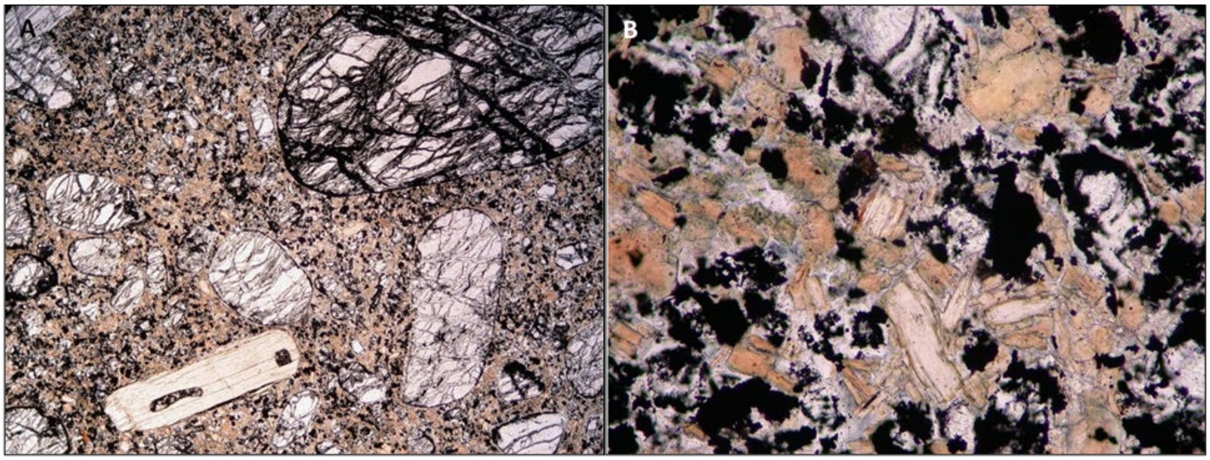
Source: SRK, 2018

Note: (a) Drill core and (b, c) trench exposures illustrating the macroscopic appearance of the Meya River Dyke Zone kimberlite. Conspicuous fresh coarse- to ultra coarse-grained olivine macrocrysts are set in a dark groundmass, Cr-poor garnet megacrysts (b) and eclogite xenoliths (c) are common, and country rock xenoliths are rare or absent.

Figure 7-4: Photographs of drill core and trench exposures of macroscopic kimberlite

Microscopic Characteristics

Thin section examination reveals that the abundant, commonly fresh anhedral olivine macrocrysts and sub- to euhedral olivine phenocrysts are set in a crystalline, homogeneous groundmass dominated by phlogopite and carbonate (Figure 7-5a). Olivine is often altered to serpentine and fine-grained magnetite on rims and fractures. Blocky shaped phlogopite macrocrysts are observed in most samples. Groundmass phlogopite occurs as variably zoned, stubby laths and tablets – this contrasts with the nature of groundmass phlogopite in KIMB3 and the Bardu and Waterloo Dyke Zones. Interlocking plates of amorphous carbonate enclose other groundmass minerals. Patches of glassy, grey serpentine are seen throughout the groundmass (Figure 7-5b). Opaque minerals include spinel and secondary magnetite. Spinel occurs as sub- to euhedral crystals generally lacking atoll textures. Perovskite is present in most samples, typically in lower proportions than spinel; accessory apatite is also present.



Source: SRK, 2018

Note: Internal report: (a) 20x magnification showing olivine macrocrysts and phenocrysts with fine-grained magnetite on rims and fractures and a single phlogopite macrocryst set in a groundmass dominated by phlogopite and carbonate (b) 100x magnification showing stubby phlogopite laths with grey, glassy serpentine patches and fine-grained magnetite rimming olivine phenocrysts and spinel.

Figure 7-5: Photomicrographs of KIMB1 sample MMDD-087_260.02m in plane-polarised light

KIMB2

Macroscopic Characteristics

KIMB2 is a very hard and competent, dark grey/black macrocrystic hypabyssal kimberlite characterised by conspicuous fine- to very coarse-grained olivine macrocrysts and minor phlogopite macrocrysts (Figure 7-6). The kimberlite is predominantly massive and homogeneous. Total olivine abundance is 45% to 55% with olivine macrocrysts (crystals >1 mm) making up 20 to 25% of the rock. Olivine is commonly pseudomorphed by talc and carbonate. KIMB2 is lacking the Cr-poor megacryst suite minerals seen in KIMB1. Mantle-derived indicator minerals occur as xenocrysts in the kimberlite and include red and purple peridotitic garnets and rare chrome diopside. The only mantle xenoliths present are peridotites. Country rock xenolith abundance is very low (0 to < 5%; locally 10%); xenoliths comprise locally derived granitoid/gneiss and various metamorphic rocks.

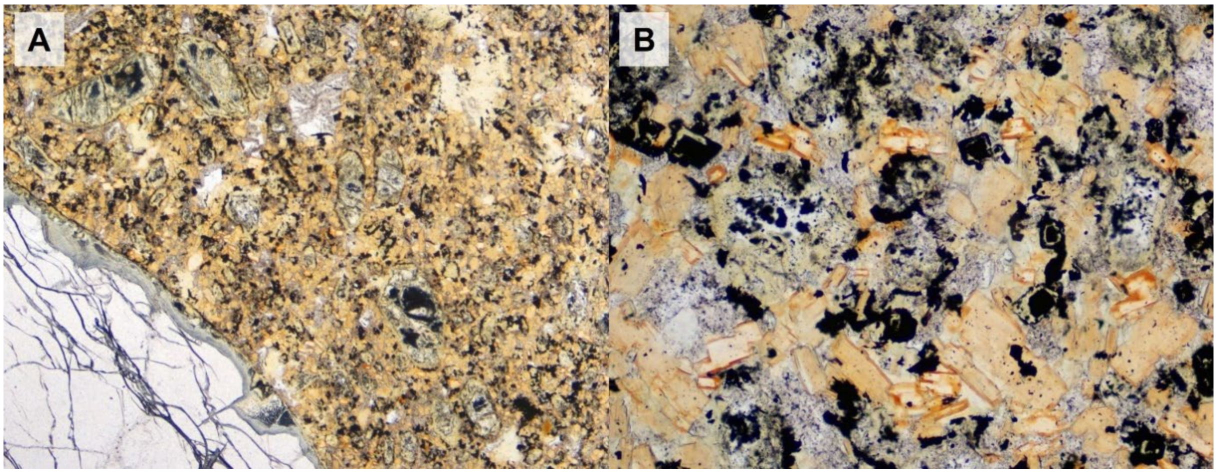
Source: This report, 2024

Note: Specimen shows conspicuous fresh coarse- to very coarse-grained olivine macrocrysts set in a dark grey to black groundmass. The lack of indicator minerals at this scale and the complete lack of country rock xenoliths. The olivine macrocryst population is finer-grained compared to KIMB1.

Figure 7-6: KIMB2 in hand specimen

Microscopic Characteristics

KIMB2 thin sections have an overall yellow to orange hue when viewed with the naked eye. Anhedral olivine macrocrysts and sub- to euhedral olivine phenocrysts are set in a crystalline, homogeneous groundmass dominated by a high abundance of phlogopite and minor carbonate ((Figure 7-6). Olivine macrocrysts and phenocrysts are often altered to talc, which is a characteristic feature of KIMB2. The groundmass phlogopite laths are stubby in shape and are commonly zoned with dark orange-brown rims. Phlogopite macrocrysts are present in most samples, and they often have a kinked morphology. Amorphous carbonate surrounds the phlogopite and other groundmass minerals. Spicular, black, opaque laths floating in the groundmass are common. The presence of atoll textured groundmass spinel is a characteristic feature of KIMB2. The spinel atoll texture can be pervasive throughout a sample, or it can occur in patches. Perovskite is present in all samples. It is typically dark brown and often rims spinel.



Source: This report, 2024

Note: (a) 20x magnification showing an olivine macrocryst with talc alteration on rim and talc altered olivine phenocrysts set in a groundmass dominated by phlogopite and carbonate (b) 100x magnification showing atoll spinel and variably zoned, stubby phlogopite laths.

Figure 7-7: Photomicrographs of KIMB2 sample MMDD-088_161.72m in plane-polarised light

KIMB3

Macroscopic Characteristics

KIMB3 is very hard and competent, dark grey/black macrocrystic hypabyssal kimberlite characterised by a high proportion of country rock that includes basalt (Figure 7-7). The kimberlite is predominantly massive and homogeneous. The groundmass is dominated by carbonate, which is often observed in the form of primary laths, with minor phlogopite. Total olivine abundance is 40 to 50%, with olivine macrocrysts (crystals >1 mm) making up 20 to 25% of the rock. There is a high proportion of fine-grained olivine phenocrysts visible in the groundmass. Olivine is commonly altered and can be difficult to make out in hand sample. Mantle-derived indicator minerals are rare in comparison to KIMB1. Ilmenite is the most common indicator mineral, with rare garnets also present. Orange Cr-poor garnets are the most abundant, with rare red and purple peridotitic garnets and very rare chrome diopside. Mantle xenoliths primarily consist of peridotite xenoliths, with rare eclogites also observed. Country rock xenolith abundance is high (15 to 20%; locally 35%) and xenoliths comprise locally derived granitoid/gneiss, metamorphic rocks, and basalt, a key feature of KIMB3. The basalt xenoliths are often vesicular and may be fresh and black or altered to brown/pale green/white.

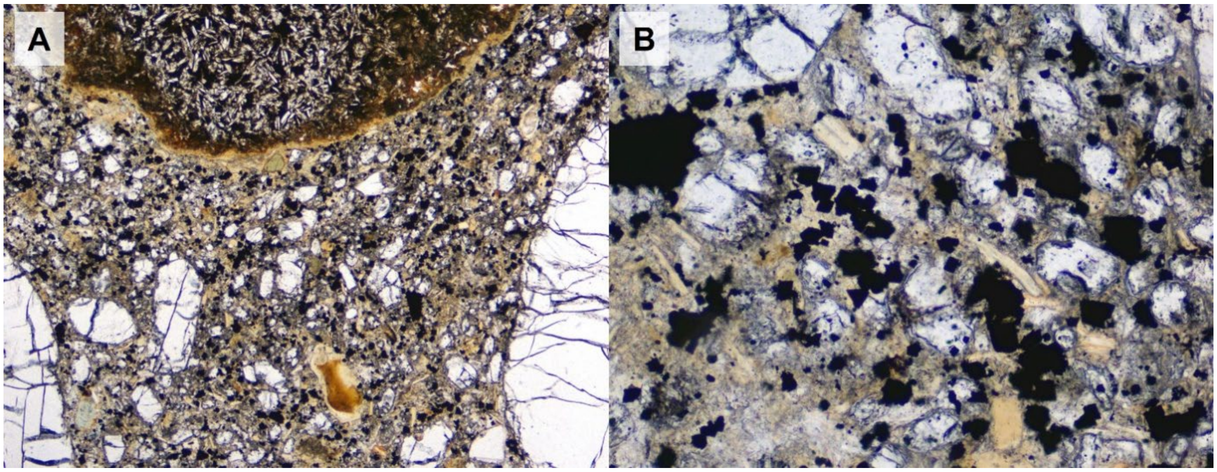
Source: This report, 2024

Note: Abundant country rock xenoliths are dominated by white granitoid and conspicuous brown to pale green altered basalt xenoliths. Olivine is often difficult to discern within KIMB3. In contrast, KIMB1 has extremely low to absent country rock xenoliths and no basalt.

Figure 7-8: KIMB3 in an underground mining exposure

Microscopic Characteristics

Thin section examination reveals that the abundant, anhedral olivine macrocrysts and anhedral to euhedral olivine phenocrysts are set in a crystalline, homogeneous groundmass dominated by phlogopite and carbonate (Figure 7-8). The olivine macrocrysts often have a shattered texture which is a characteristic feature of KIMB3. Olivine macrocrysts are often broken and angular in shape. Recrystallised olivine macrocrysts are also common. There is a high abundance of fine-grained, anhedral olivine phenocrysts. The groundmass phlogopite is elongate and ratty in appearance, distinguishing it from KIMB1 and KIMB2. Phlogopite macrocrysts are present in every sample with complex morphologies and uneven, ratty rims. Groundmass spinel is generally clustered and does not have atoll textures. Perovskite is present in all samples. The characteristic basalt xenoliths often have amygdules filled with carbonate. While basalt is a key feature of KIMB3, it is not observed in every sample. Therefore, other key petrographic characteristics and groundmass spinel geochemistry must be used for identification.



Source: This report, 2024

Note: (a) 20x magnification showing fresh olivine macrocrysts and phenocrysts with a shattered texture and a partially fresh basalt country rock xenolith set in a groundmass dominated by phlogopite and carbonate (b) 100x magnification showing elongate groundmass phlogopite and abundant anhedral to euhedral olivine phenocrysts.

Figure 7-9: Photomicrographs of KIMB3 Sample MMDD-073A_712.65m in plane-polarised light

Bardu Dyke Zone

The sub-vertical Bardu Dyke Zone (Figure 7-18a) has been intersected in 18 drill holes to date along a strike length of approximately 3.7 km and to a maximum depth of ~ 300 m below the surface. It has also been exposed in a ~180 m bulk sample trench (MBS1, Section 11). The Bardu Dyke Zone displays a simple to locally complex morphology. Simple sections of the dyke zone are generally thinner than those in the Meya River Dyke Zone, ranging up to 1 m thick, and typically comprise several contiguous segments (many more than observed at Meya River) bounded by sharp contacts (Figure 7-18b). More complex sections occur locally within the dyke zone and display branching or bifurcation of the dyke into multiple thin segments. The wall rock contact zones are characterised by minimal jointing, brecciation and alteration of the host rock and kimberlite.

Source: SRK, 2018

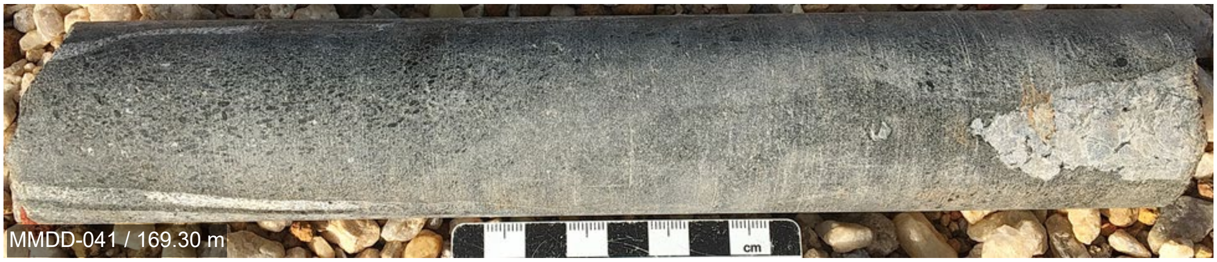
Note: Internal report showing (a) the generally thick (~1 m) and continuous, steeply dipping character of the dyke, and (b) the presence of multiple contiguous kimberlite segments with sharp contacts and variable olivine macrocryst populations and alteration.

Figure 7-10: Exposures of the Bardu dyke zone

Macroscopic Characteristics

At least two petrographic units are present among the samples examined from the Bardu Dyke Zone to date. These may be variants of the same overall phase of kimberlite as suggested by groundmass spinel chemistry (Section 7.2.3). The dominant unit is competent pale or dark grey-green or grey-brown hypabyssal kimberlite characterised by highly variable abundances of fine- to coarse-grained and locally very coarse-grained olivine macrocrysts and a notable lack of phlogopite macrocrysts. The kimberlite displays flow zonation, preferred alignment of components and local inhomogeneities in olivine size and abundance and groundmass characteristics (Figure 7-11). Total olivine abundance ranges from 20 to 45% with olivine macrocrysts (crystals >1 mm) making up 5 to 25% of the rock, and locally ranging to <5 or >25%. Olivine is typically pseudomorphed by serpentine/chlorite, carbonate, and magnetite, although zones in which up to 80% of the olivine population is fresh occur locally. Cr-poor megacryst suite minerals such as those present in the Meya River Dyke Zone have not been observed to date. Other mantle-derived indicator minerals include very rare garnet and ilmenite, either as xenocrysts in the kimberlite or within rare peridotite micro-xenoliths. Country rock xenolith abundance is very low (0 to < 5%), and xenoliths comprise mainly locally derived granitoid/gneiss.

Also present in the Bardu Dyke Zone is an olivine macrocryst-free to locally very olivine macrocryst-poor kimberlite unit. It is competent, dark grey/brown and displays small-scale inhomogeneity. No indicator minerals, mantle xenoliths or country rock xenoliths have been observed in this unit. This unit essentially comprises only the kimberlite melt fraction.



Source: SRK, 2018

Note: Internal report showing the characteristic flow zonation defined by significant variation in olivine size and abundance, and the paucity of country rock xenoliths.

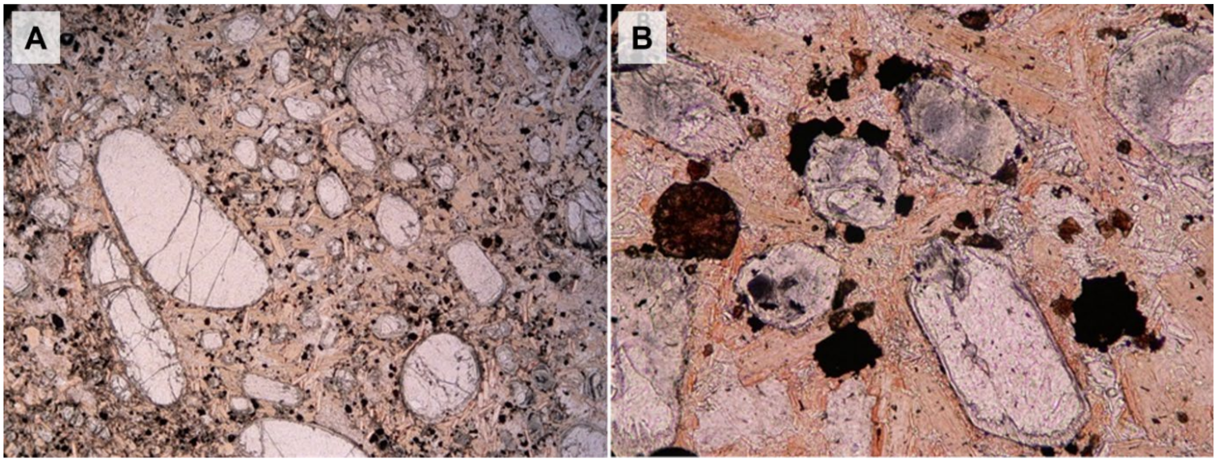
Figure 7-11: Photograph of a Bardu Dyke Zone drill core sample

Microscopic Characteristics

Thin section examination reveals that the anhedral olivine macrocrysts and sub- to euhedral olivine phenocrysts in the main Bardu kimberlite unit are set in a crystalline groundmass dominated by phlogopite and carbonate (Figure 7-12a). Variation in olivine size and abundance and the size and relative proportion of groundmass minerals is common between samples and within single thin sections. In contrast to the Meya River Dyke Zone kimberlite, the groundmass phlogopite occurs as elongated variably zoned laths. Crude parallel alignment of the phlogopite laths is common, and some are tangentially oriented around olivine crystals. Phlogopite is intergrown with interlocking plates of amorphous carbonate. Subhedral to euhedral spinel and perovskite are present in roughly equal proportions, and some mantle olivine phenocrysts (Figure 7-12b). Variable amounts of accessory apatite also occur.

Samples characterised by variable proportions of atoll textured spinel and notably less perovskite, which are thus comparable to the Waterloo Dyke Zone kimberlite, are also observed within the Bardu Dyke Zone. It is not clear whether these differences reflect the presence of two different phases or contrasting crystallisation histories and alteration states of the same phase of kimberlite; groundmass spinel chemistry suggests the latter (Section 7.2.3).

The olivine macrocryst-free to locally very olivine macrocryst-poor unit in Bardu consists of variable but typically low proportions of olivine phenocrysts set in a phlogopite-rich groundmass with minor interstitial carbonate and abundant relatively coarse-grained spinel and perovskite.



Source: This report, 2024

Note: Photomicrographs showing (a) at 20x magnification showing fresh olivine macrocrysts and phenocrysts set in a groundmass dominated by phlogopite and carbonate, and (b) at 200x magnification showing the elongate groundmass phlogopite laths (orange) and common spinel (black opaques) and fresh perovskite (brown).

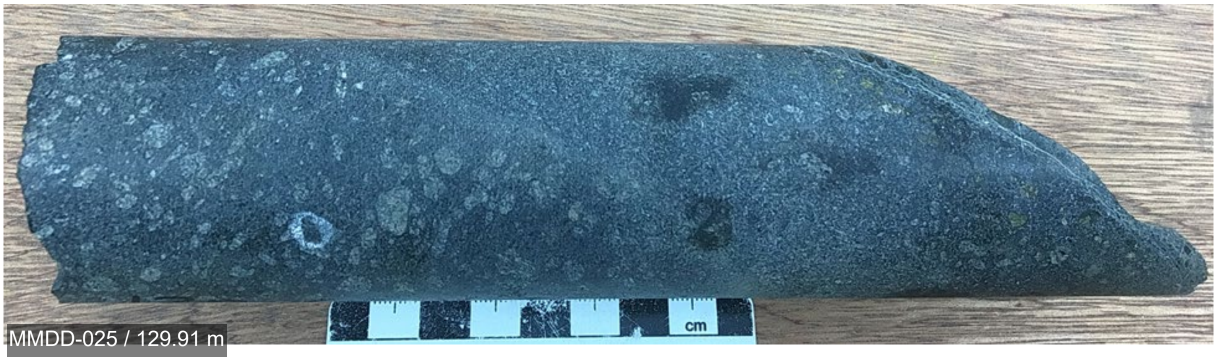
Figure 7-12: Bardu Dyke Zone kimberlite sample MMDD-006_295.31m in plane-polarised light

Waterloo Dyke Zone

The sub-vertical Waterloo Dyke Zone has been intersected in 11 drill holes to date along a strike length of approximately 2.4 km and to a maximum depth of ~370 m below the surface. Waterloo Dyke Zone thicknesses are generally thinner than those in the Meya River Dyke Zone, ranging up 1 m in thick, and typically comprise one or more contiguous segments bounded by sharp contacts. The wall rock contact zones are characterised by minimal jointing, brecciation and alteration of the host rock and kimberlite.

<u>Macroscopic Characteristics</u>

The main phase of kimberlite in the Waterloo Dyke Zone is competent pale or medium grey-green or grey-brown hypabyssal kimberlite characterised by highly variable abundances of fine- to coarse-grained and locally very coarse-grained olivine macrocrysts and a notable lack of phlogopite macrocrysts (Figure 7-13). Most kimberlite observed to date displays flow zonation, preferred alignment of components and local inhomogeneities. Total olivine abundance ranges from 25 to 45% with olivine macrocrysts (crystals >1 mm) making up 5 to 25% of the rock, locally ranging to <5 or >25%. Olivine is typically pseudomorphed by serpentine/chlorite, carbonate and magnetite, although zones in which up to 80% of the olivine population is fresh occur locally. Cr-poor megacryst suite minerals such as those present in the Meya River Dyke Zone kimberlite have not been observed to date. Other mantle-derived indicator minerals include very rare garnet and ilmenite. Mantle xenoliths have not been observed. Country rock xenolith abundance is very low (0 to <5%), and xenoliths comprise locally derived granitoid/gneiss.



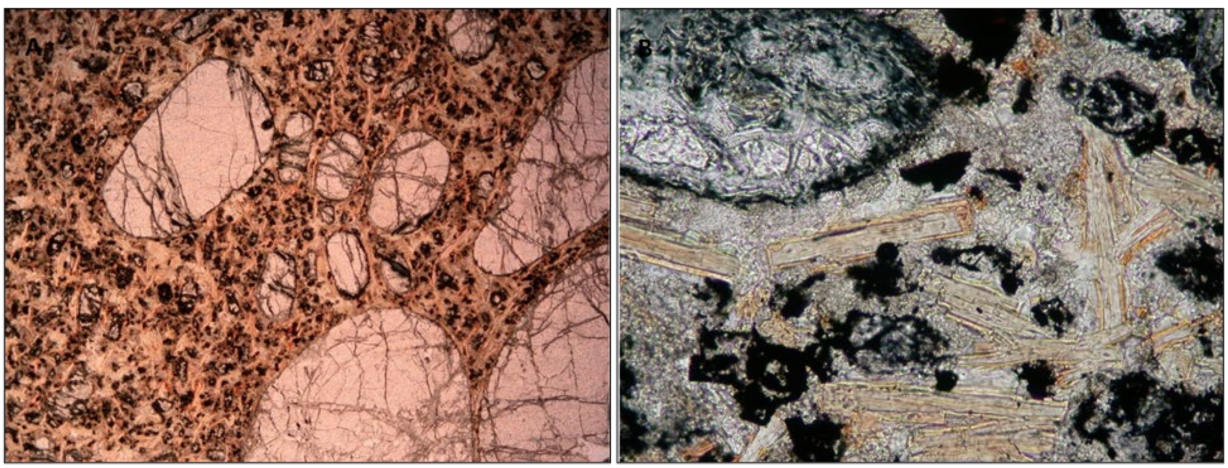
Source: SRK, 2018

Note: Showing the characteristic flow zonation defined by significant variation in olivine size and abundance, as well as the paucity of country rock xenoliths.

Figure 7-13: Photograph of a Waterloo Dyke Zone drill core sample

Microscopic Characteristics

Thin section examination reveals that the anhedral olivine macrocrysts and subhedral to euhedral olivine phenocrysts are set in a crystalline groundmass dominated by phlogopite and carbonate (Figure 7-14). Variation in olivine size and abundance and in the size and relative proportions of groundmass minerals is common between samples and within single thin sections. The groundmass phlogopite occurs as thin, elongate laths commonly zoned to bright orange rims, which contrasts with KIMB1 and KIMB2 from the Meya River Dyke Zone. Crude parallel alignment of the laths is common, and some are tangentially oriented around olivine crystals. The phlogopite is intergrown with interlocking plates of amorphous carbonate. Euhedral atoll textured spinel is common. Perovskite is generally rare and accessory apatite is also present.



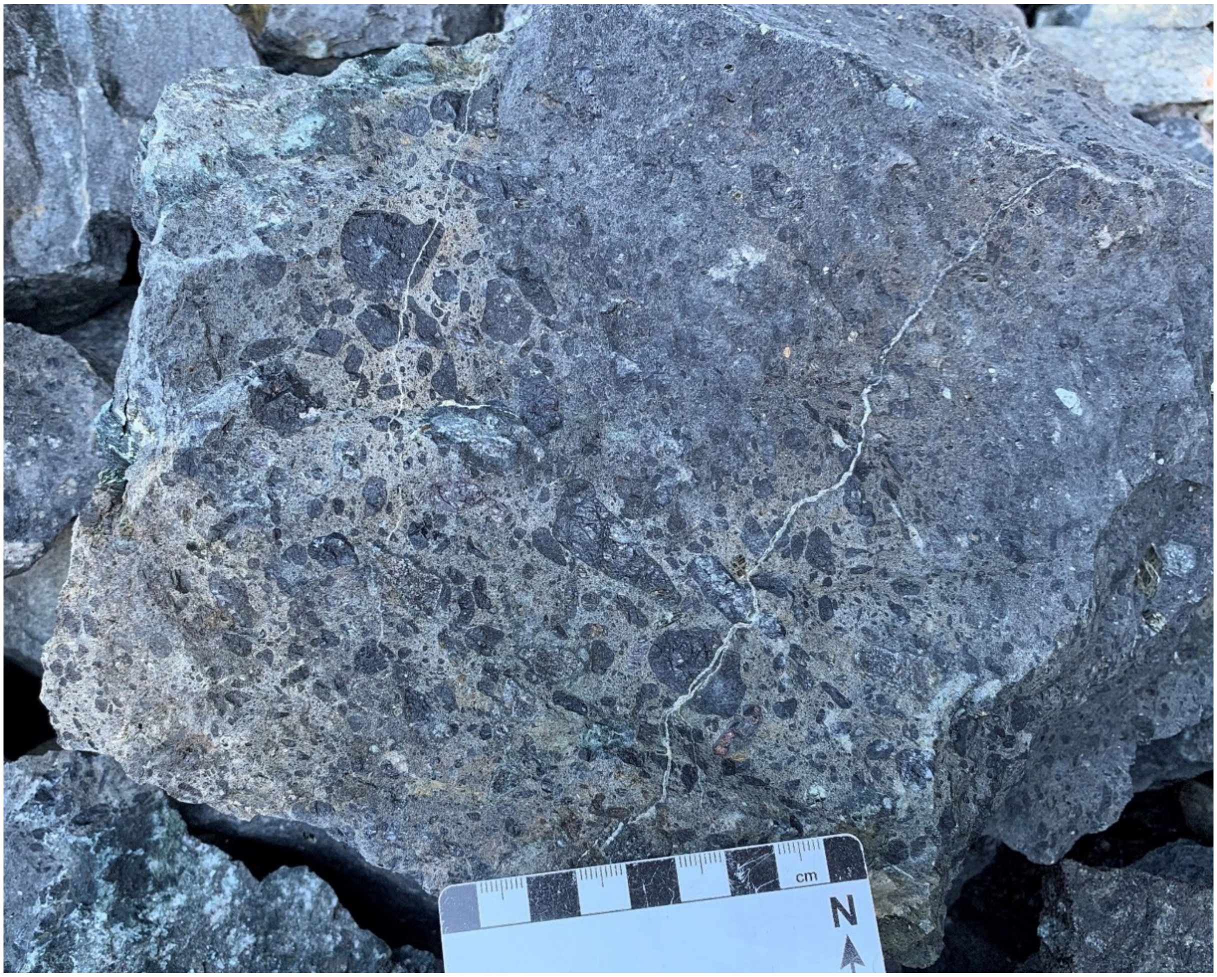
Source: This report, 2024

Note: Photomicrographs showing (a) at 20x magnification showing fresh olivine macrocrysts and phenocrysts set in a groundmass dominated by phlogopite and carbonate, and (b) at 200x magnification showing the alignment of the thin elongate groundmass phlogopite laths with bright orange rims and the common atoll textured spinel that are characteristic of this phase of kimberlite.

Figure 7-14: Waterloo Dyke Zone kimberlite sample MMDD-025_129.91m in plane-polarised light

Simbakoro Dyke Zone (Historic Pol-K)

The Simbakoro Dyke Zone, previously known as Pol-K, lies ~ 800 m north of the Meya River, Bardu and Waterloo Dyke Zones. Drilling and bulk sampling of this kimberlite is planned, as well as collecting material for microdiamond analysis and petrography. Preliminary assessment of the macroscopic characteristics of the kimberlite observed in the field suggests it is of high interest and is more comparable to Meya River than Bardu or Waterloo, being similarly characterised by a coarse- to very coarse-grained olivine population and the presence of low-Cr garnet and ilmenite megacrysts (Figure 7-15). Drilling, petrographic investigation, and spinel compositional work has not been initiated at Simbakoro to date.



Source: This report, 2024

Note: Showing the coarse to very coarse olivine macrocrysts set within a crystalline groundmass. This rock contains conspicuous dark green phlogopite macrocrysts that are the characteristic feature of this rock type. Cr-poor megacryst suite minerals (garnet, ilmenite) are similar in size and abundance to those observed in the Meya River Dyke Zone kimberlite. Note that there are very few country rock xenoliths present.

Figure 7-15: Kimberlite from the Simbakoro Dyke Zone

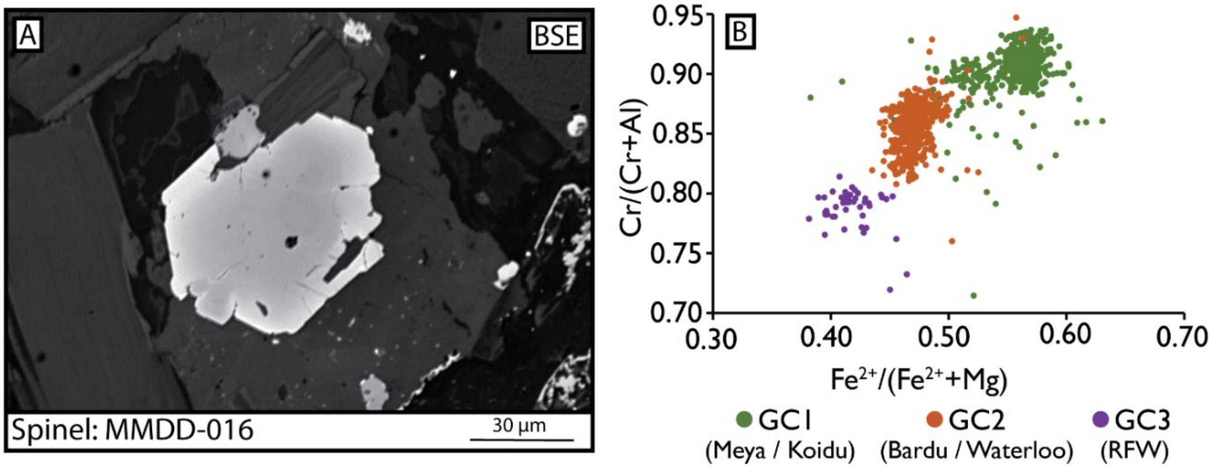
7.2.3 Groundmass Spinel Chemistry

The initial investigation into the groundmass spinel compositions from the Meya River, Bardu and Waterloo Dyke Zones is illustrated in the bi-variate cation ratio plot Cr/Cr+Al vs. $Fe^{2+}/Fe^{2+}+Mg$ (Figure 7-16b; after Mitchells 1986 spinel prism). The spinel compositions define three geochemical fields: GC1, GC2 and GC3. For any given sample all nine analysed spinel grains plot within a single geochemical field, and little or no overlap is observed between the fields. Samples were then coded with their geochemical classification and plotted in 3D for spatial validation.

GC1 samples spatially correlate with the Meya River Dyke Zone and Koidu wall dyke, and do not occur in the Bardu or Waterloo Dyke Zones. GC2 samples spatially correlate with the Bardu and Waterloo Dyke Zones and likewise do not occur within the Meya River Dyke Zone or Koidu wall dyke; the Bardu and Waterloo Dyke Zones are geochemically indistinguishable. GC3 samples are a very minor component of this dataset, encompassing only seven samples not collected in situ and recorded as originating from the Bardu shaft and Bardu pit dyke (a GC2 spatial domain); their chemistry suggests they represent a third kimberlite unit. The GC3 samples may derive from a known kimberlite blow on the Bardu Dyke Zone, but without sample coordinates this cannot be confirmed.

The analysis of groundmass spinel in the Meya Mine project kimberlites supports the subdivision of samples derived from the Meya River Dyke Zone and Koidu wall dyke (GC1), and the Waterloo and Bardu Dyke Zones (GC2) into two separate kimberlite units. A third kimberlite unit (GC3) defined by seven samples is genetically unrelated to GC1 and GC2; these may derive from a known kimberlite blow on the Bardu Dyke Zone, but at the present time, this is unconfirmed. The contrasting spinel chemistries of these three spatial-geochemical domains indicate that they represent separate crystallisation events. If, upon further consideration, these geochemical unit classifications agree with unit classifications derived by field mapping, thin-section petrography and microdiamond analysis, then they may confidently be interpreted to represent separate phases of kimberlite.

There has been no groundmass spinel composition work undertaken for the Simbakoro Dyke Zone to date.



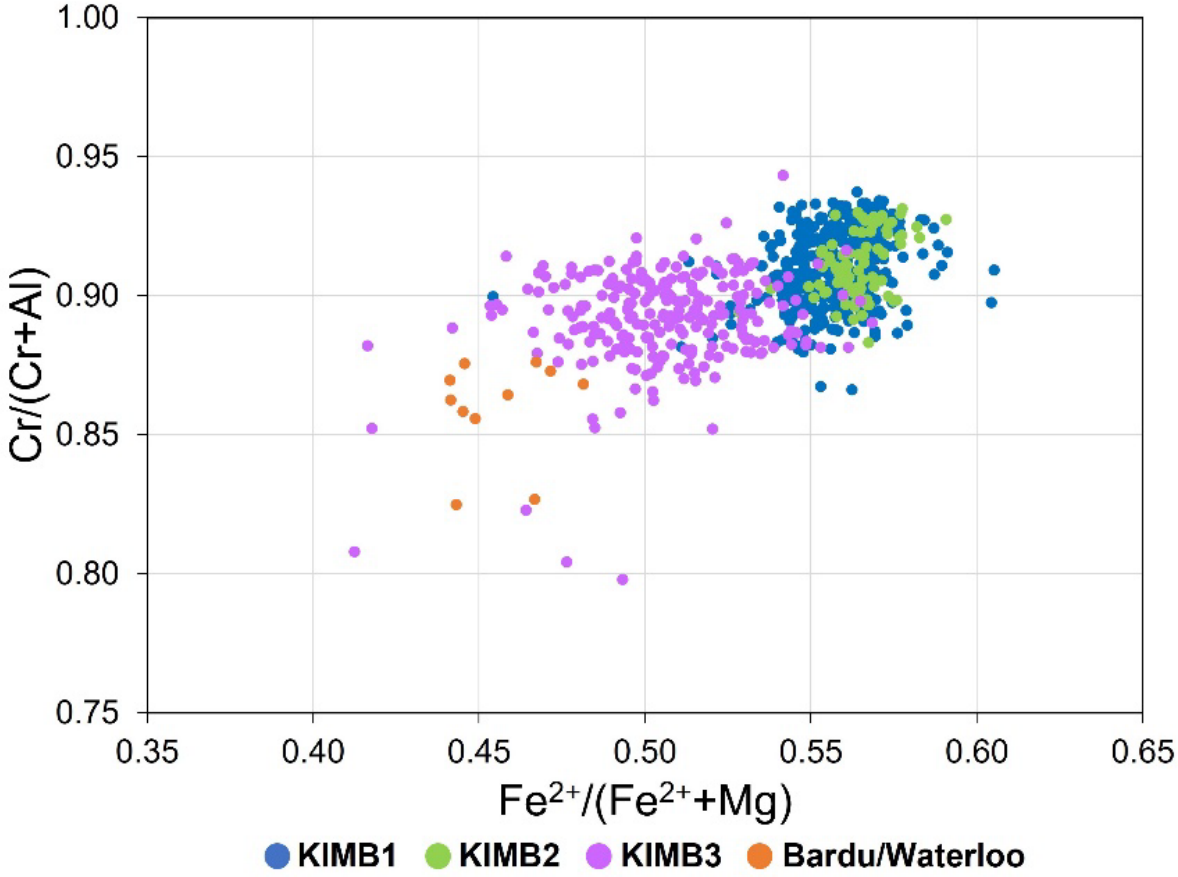
Source: SRK, 2018

Note: (a) Groundmass spinel in Back Scatter Electron imaging (BSE). (b) Compositions of phenocrystic groundmass spinel cores as illustrated in Cr/(Cr+Al) vs. Fe2+/(Fe2++Mg) space after the spinel prisms of Mitchell (1986); the groundmass spinel compositions define three geochemical fiends: GC1 (green), GC2 (orange), and GC3 (purple). GC1 samples correspond to the Koidu wall dyke and Meya River Dyke Zones. GC2 samples correspond with the Bardu and Waterloo Dyke Zones. GC3 samples correspond with select samples in the Bardu pit dyke and Bardu shaft and require further work (RFW).

Figure 7-16: Groundmass spinel compositions from the Meya River, Bardu and Waterloo Dyke Zones

Systematic electron microprobe analysis of groundmass spinel in over 200 distributed drill core and trench samples from the Meya River Dyke Zone was used to aid in identification of KIMB1, KIMB2 and KIMB3. The spinel compositions are compared in the bi-variate cation ratio plot Cr/Cr+Al vs. $Fe^{2+}/Fe^{2+}+Mg$ (Figure 7-17). Samples from the Bardu and Waterloo Dyke Zones were also compared to the Meya River Dyke Zone samples. The spinel chemistries from the Bardu and Waterloo Dyke Zones are not distinguishable from one another and they plot separately from the Meya River Dyke Zone samples.

KIMB1 and KIMB2 spinel compositions plot within the same geochemical field although KIMB2 spinel forms a tighter cluster. KIMB3 spinel has a wider compositional spread but occupies a unique geochemical field that distinguishes it from KIMB1, KIMB2, and Bardu/Waterloo. When basalt xenoliths are not present in a sample, KIMB1 and KIMB3 can be difficult to distinguish in core and petrographically. Spinel geochemistry is an important tool for classifying KIMB1 and KIMB3.



Source: SRK, 2024

Note: As illustrated in Cr/(Cr+Al) vs. $Fe^{2+}/(Fe^{2+}+Mg)$ space after the spinel prisms of Mitchell (1986). The groundmass spinel compositions of Bardu/Waterloo, KIMB1, KIMB2, and KIMB3 are compared.

Figure 7-17: Compositions of phenocrystic groundmass spinel cores

7.2.4 Kimberlite Dyke Zones 3D Geological Model

Conceptual Model

The conceptual understanding of kimberlite dykes is based on observations from mined exposures around the world, e.g. Wesselton Mine (White et al., 2012), Snap Lake Mine (Gernon et al., 2012), Koidu Mine (Harder et al., 2013 & Barnett et al., 2013), Bellsbank (Gurney & Kirkley, 1996), Helam Mine, and Star Mine (Kavanagh & Sparks, 2011). In all of these examples, the kimberlite dykes have segmented geometries and are locally anastomosing to include country rock fragments within the dyke systems. The continuity of each dyke segment is limited, but the entire dyke system is at least an order of magnitude more continuous. This understanding is supported by observations of the dykes at the adjacent Koidu Mine, and maps of the Koidu Dyke system, such as King (1972).

Modelling Procedure

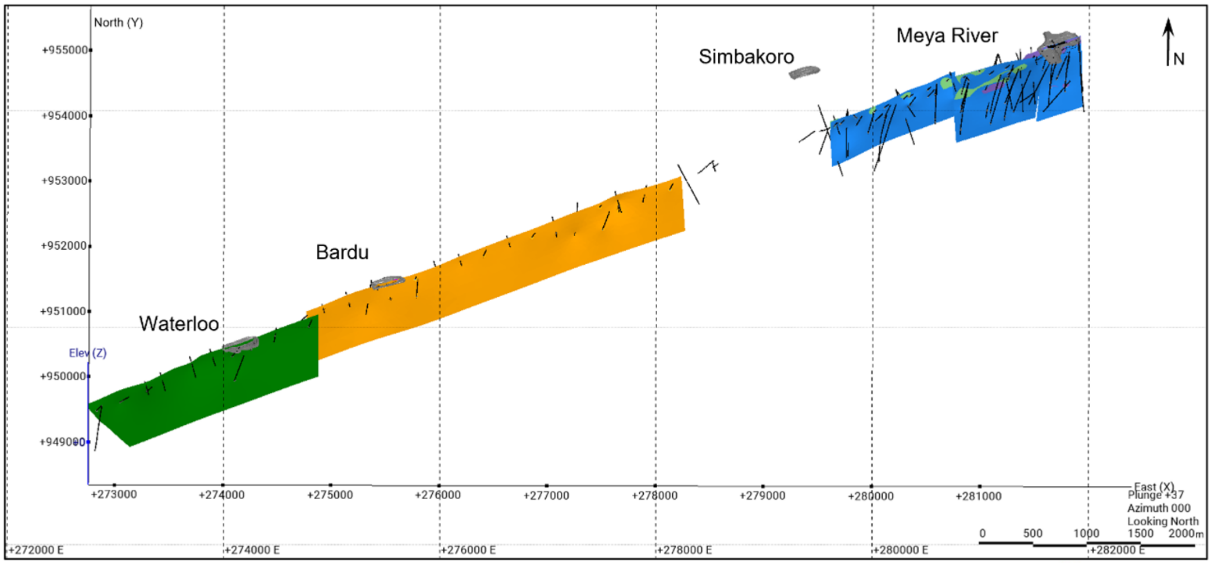
The 3D wireframe modelling of the Meya River Dyke Zone was undertaken in Leapfrog Geo™ (Version 2023.2.3). All drillhole logging and trench mapping were combined into a single dataset and imported as one drillhole data package with original and interpreted lithological codes. The lithological codes are based on petrography and groundmass spinel composition. All underground mapping was brought in as a second drillhole data package.

Leapfrog's vein construction tool was utilised to build the dyke zone wireframes. The implicit modelling process automatically constructs the wireframes based on selected intersections. The selections are modified until the model is representative of the data and overall geological model.

It is possible to model bifurcating and anastomosing kimberlite dykes in the trenched areas or in mining exposures where a significant strike length of kimberlite is visible. However, the majority of the dyke is defined by wide-spaced drillholes. The correlation of individual dyke segments between drillholes can be extremely challenging and unrealistic when segments become thin (< 25 cm). Therefore, for practical reasons, a simplified model of the dyke zone was produced to develop a minimum volume model for the Meya River Dyke Zone. Because no recent drilling was undertaken on the Waterloo and Bardu Dyke Zones following the generation of the models presented in the 2018 Technical Report (for Internal use only), the geology models remain the same (Figure 7-18).

Two types of geology models were developed for the Meya River Dyke Zone. The first model is a simplified minimum volume model for Meya River Dyke Zones: KIMB1, KIMB2, and KIMB3 based on kimberlite dyke intersects with confirmed petrographic and groundmass spinel classifications (Figure 7-19 to Figure 7-21). These models are rock type specific. Based on the current information, the Meya River Dyke Zone is offset along two major fault zones, generating three individual fault blocks: Fault Block 1 (East), Fault Block 2 (Centre), and Fault Block 3 (West) (Figure 7-19 and Figure 7-20). The Fault Block 1 and Fault Block 2 models are projected down to a depth of 800 m below the surface. Fault Block 3 (West) is projected to 500 m below the surface due to lower drilling density and uncertain geology.

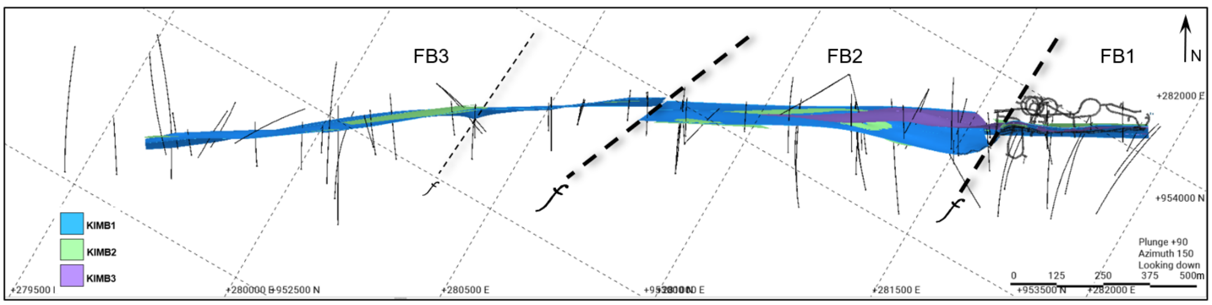
A second "envelope" wireframe model was developed to capture the majority of the kimberlite segments present within a 4 m mining width – the volume represents a combined kimberlite country rock volume which includes country rock present between the dyke segments. Note the "envelope" model incorporates multiple rock types where, for example, within a 4 m mining width, both KIMB1 and KIMB3 may be present.



Source: This report, 2024

Note: Significant drilling has been completed on Meya, Bardu, and Waterloo, but no drilling has been undertaken at Simbakoro, and therefore only a small trench is presented in the figure above.

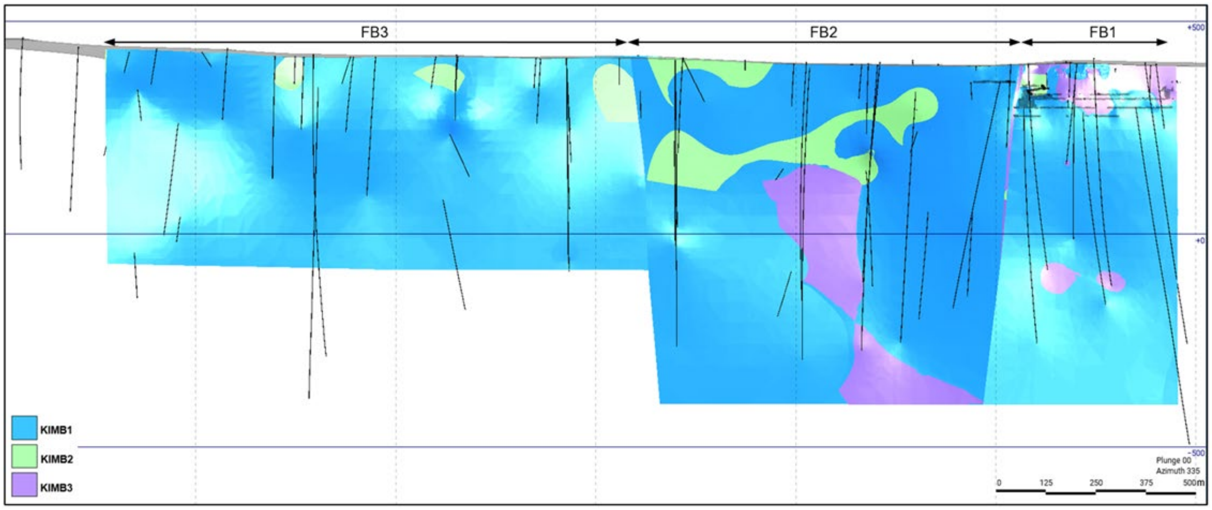
Figure 7-18: Inclined view of the 3D geological model of the dyke zones showing drill traces



Source: This report, 2024

Note: Drillhole traces are shown in black, and underground mining infrastructure is shown to the right FAULT BLOCK 1 of the eastern fault.

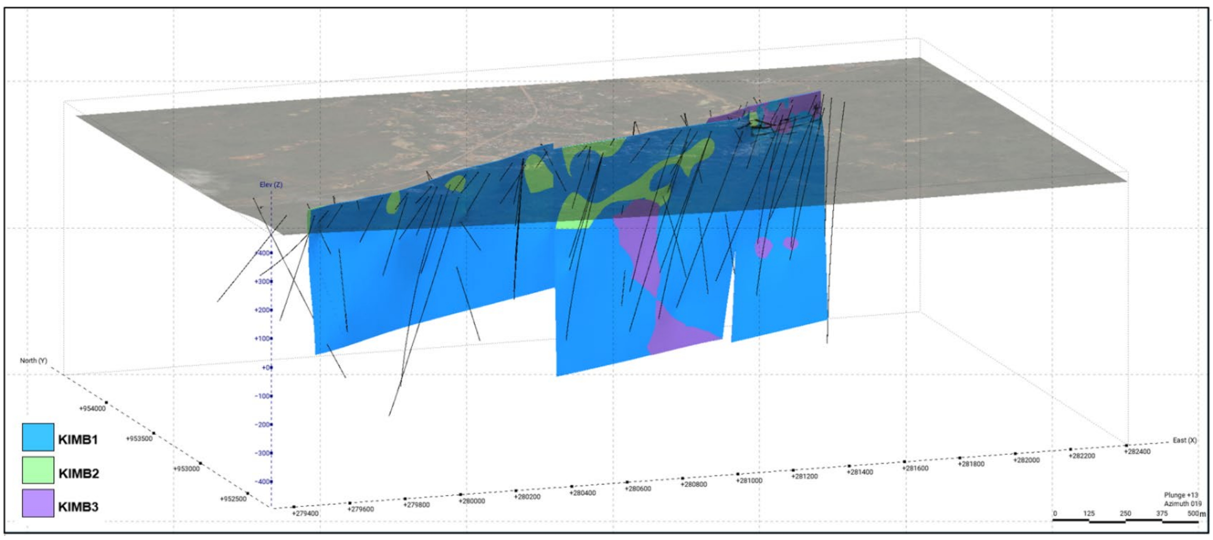
Figure 7-19: Meya River Dyke Zone plan view comprised of 3 phases of kimberlite: KIMB1, KIMB2, and KIMB3



Source: This report, 2024

Note: Three fault blocks have been modelled to date, and these consist of FB1 and FB2, projected 800 m below the surface, and FB3, projected to 500 m below the surface. The drill hole traces are shown in black and the underground mined area is displayed in the uppermost portion of FB1 onlly.

Figure 7-20: A side view of the of the Meya River Dyke Zone including: KIMB1, KIMB2, and KIMB3



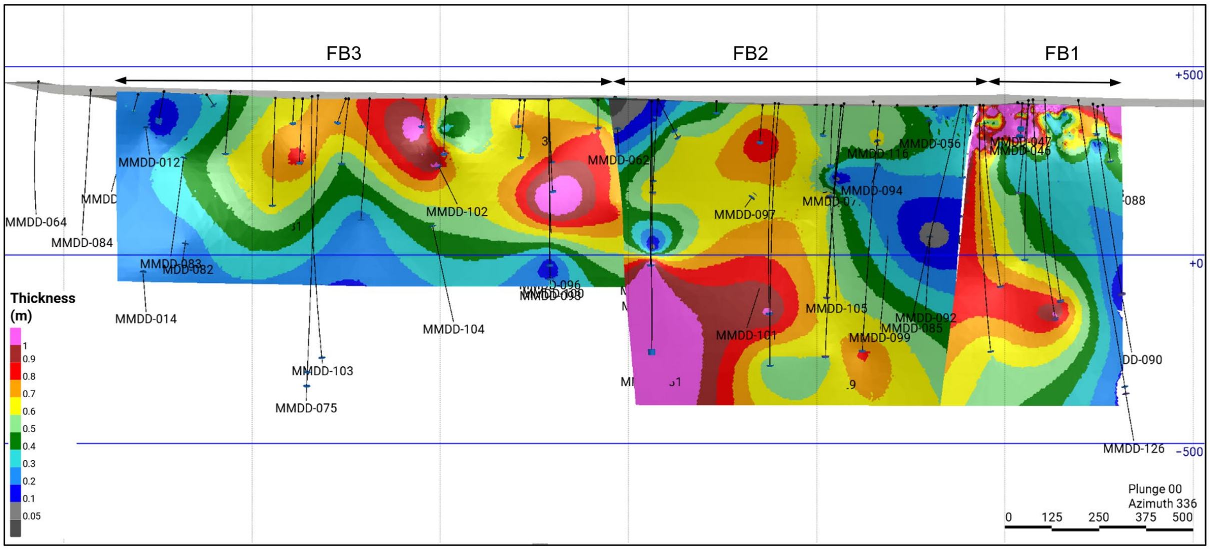
Source: This report, 2024

Note: Showing the separate kimberlite dykes: KIMB1, KIMB2, and KIMB3 within the three fault blocks. Note the rotation across the fault planes. The topography is transparent and has been draped over the dyke model.

Figure 7-21: Meya River Dyke Zone 3D geology model northeast view showing KIMB1, KIMB2, and KIMB3

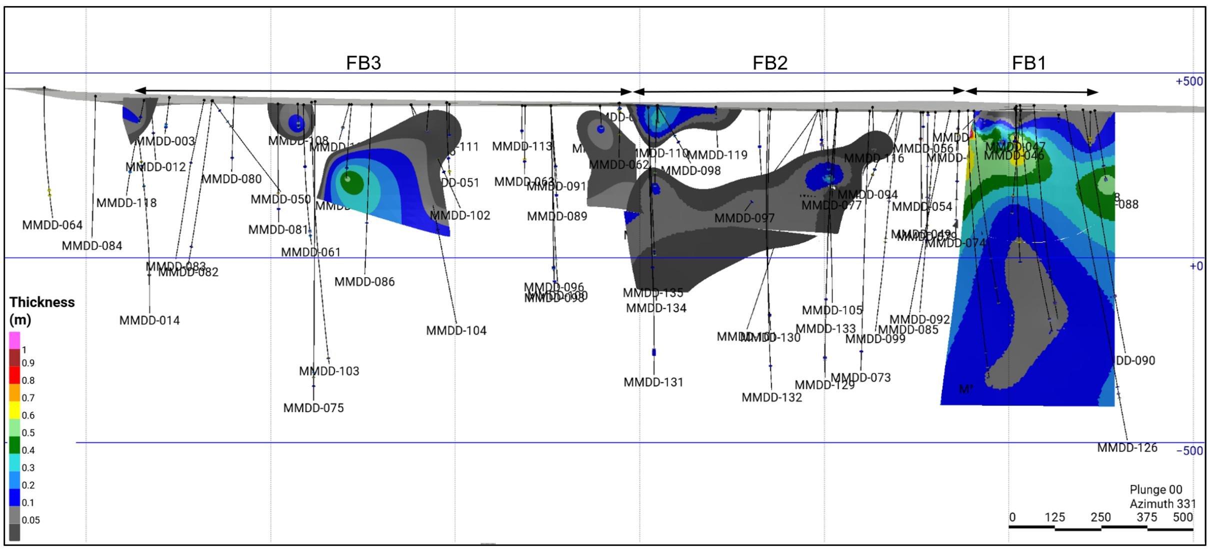
7.2.5 Kimberlite Thickness in the Meya River Dyke Zone

Dyke thickness contouring has been presented in Figure 7-22 for KIMB1, Figure 7-23 for KIMB2 and Figure 7-24 for KIMB3. Average dyke thickness was not determined due to the highly variable nature of the dykes and the irregular distribution of drillholes. The contour maps below show a more detailed picture of the variation in thickness for the various phases of kimberlite across the strike length of the dyke zone. KIMB1 is consistently the thickest dyke followed by KIMB3, and the thinnest dyke is KIMB2.



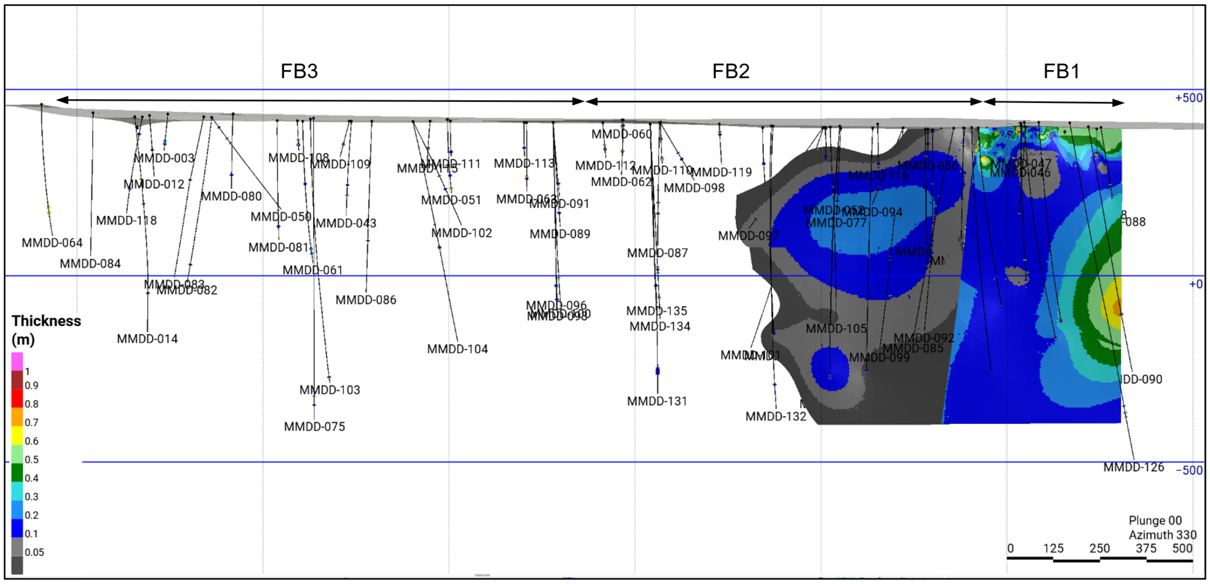
Source: This report, 2024

Figure 7-22: A side view of the KIMB1 3D geology model showing the thickness contouring



Source: This report, 2024

Figure 7-23: A side view of the KIMB2 3D geology model showing the thickness contouring



Source: This report, 2024

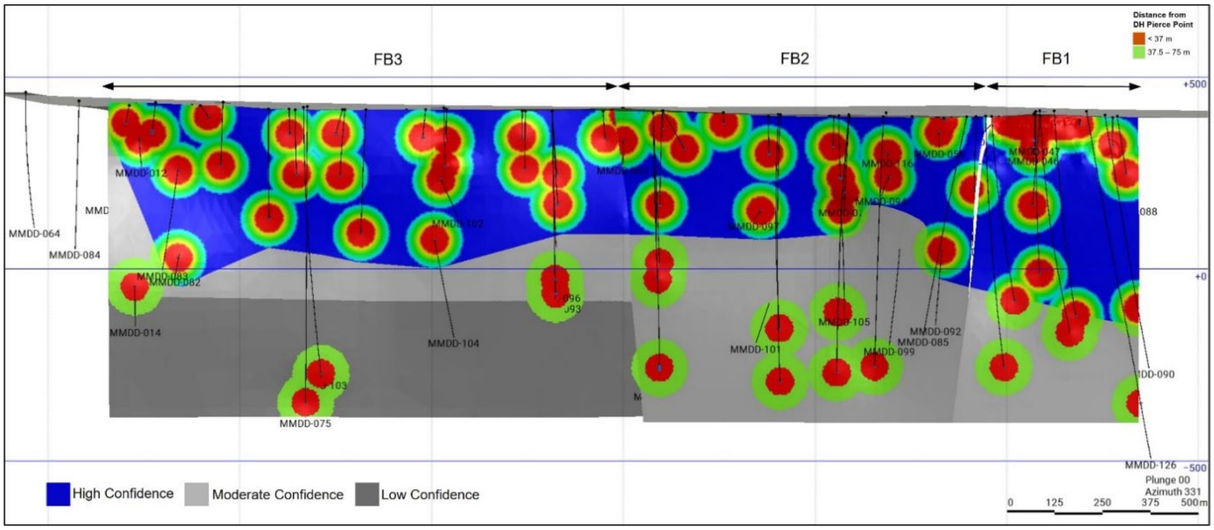
Note: The significant change in the thickness of the dyke across the Meya River Fault.

Figure 7-24: A side view of the KIMB3 3D geology model showing the thickness contouring

7.2.6 Confidence in the Meya River Dyke Zone Geology Model

The confidence in the current 3D geology model for the Meya River Dyke Zone is variable and is dependent on the distribution of drillholes and the continuity of mantle-derived and xenolithic components within the kimberlite between drillholes. Zones of geological confidence are displayed in Figure 7-25 for KIMB1.

The uppermost portion of the dyke zone for KIMB1 is considered “high confidence geology,” and this area is shown in dark blue. The pale grey area is considered “moderate confidence geology,” and the dark grey portion of the model is considered “low confidence geology.”

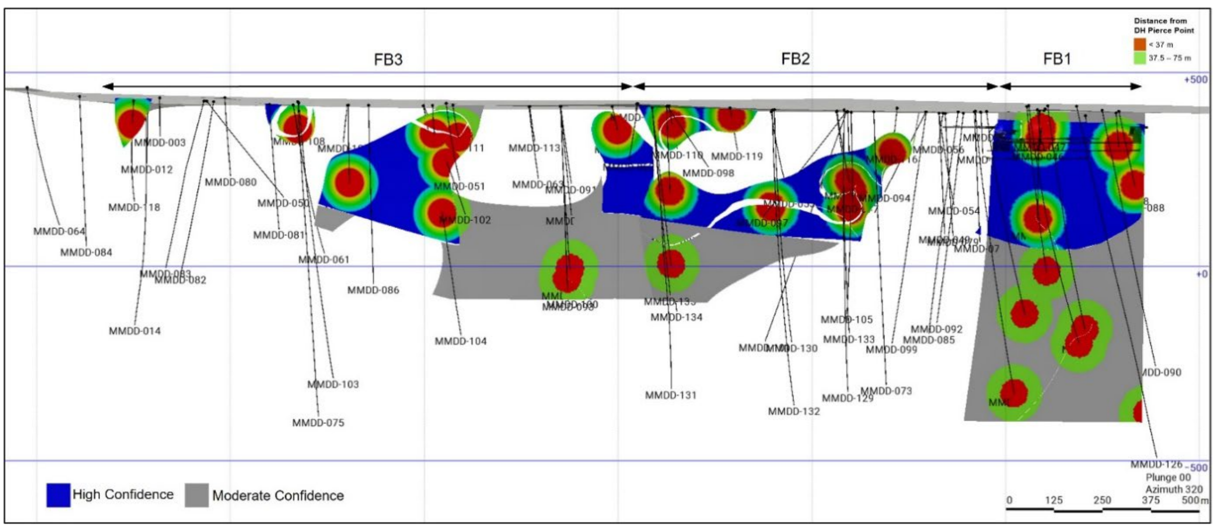


Source: This report, 2024

Note: Side view of the Meya River Dyke showing only KIMB1 illustrating drill core pierce point contours with a diameter of 150 m, indicating the different levels of drillhole distribution and geological confidence per fault block and depth below the surface. The uppermost portion of the dyke with the greatest number of pierce points is blue and has a "high" level of geological confidence. The pale grey solid immediately below the blue area is "moderate" confidence, and the dark grey area is considered "low" confidence geology.

Figure 7-25: KIMB1 geological confidence

Confidence in the geological model for KIMB2 is presented in Figure 7-26. Note that KIMB2 has not been projected to depth in FB2 or FB3 and further drilling is required to confirm the presence of KIMB2 in these areas of the Meya River Dyke Zone. There are large portions along the strike length of the Meya River Dyke Zone where the KIMB2 rock type has not been identified, and further work is required to determine the continuity of this rock.

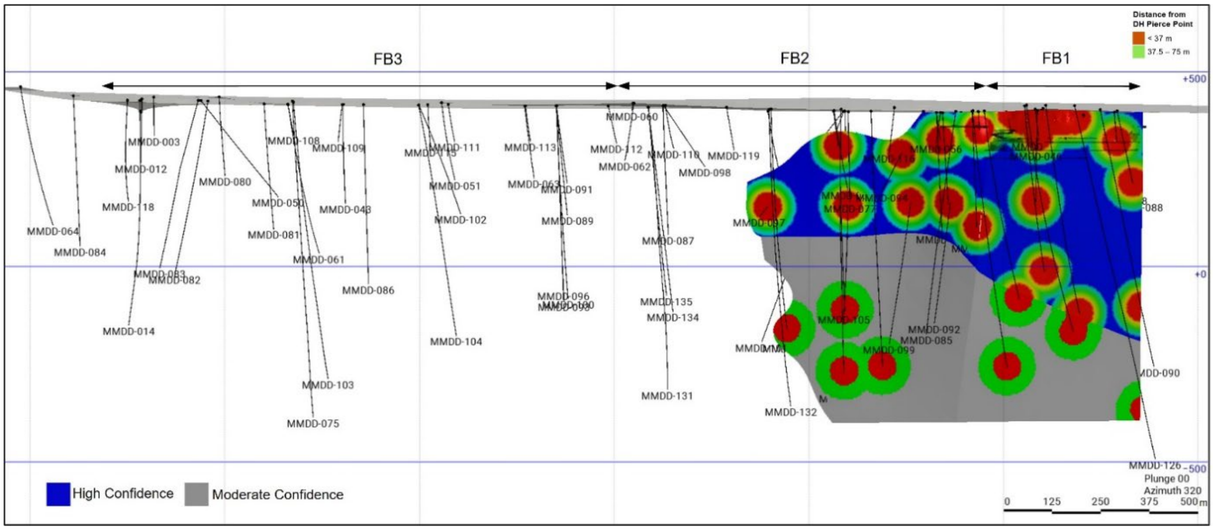


Source: This report, 2024

Note: Side view of the Meya River Dyke showing only KIMB2 illustrating drillcore pierce point contours with a diameter of 150 m, indicating the different levels of drillhole distribution and geological confidence per fault block and depth below the surface. The uppermost portion of the dyke with the greatest number of pierce points is blue and has a "high" level of geological confidence. The grey solid immediately below the blue area is "moderate" confidence.

Figure 7-26: KIMB2 geological confidence

Figure 7-27 presents confidence in the geology model for KIMB3 within FB1 and FB2. Recall that KIMB3 has not been modelled within FB3.



Source: This report, 2024

Note: Side view of the Meya River Dyke showing only KIMB3 illustrating drillcore pierce point contours with a diameter of 150 m, indicating the different levels of drillhole distribution and geological confidence per fault block and depth below the surface. The uppermost portion of the dyke with the greatest number of pierce points is blue and has a "high" level of geological confidence. The grey solid immediately below the blue area is "moderate" confidence.

Figure 7-27: KIMB3 geological confidence

7.2.7 General Characteristics and Controls on Diamond Mineralisation Within Kimberlite

Diamond occurs in kimberlite in trace amounts (ppm) as a dispersed particulate mineral. Diamonds can vary significantly within and between different kimberlite deposits regarding total concentration (grade in carats per tonne, cts/t), particle size distribution and physical characteristics. The value of each diamond and, therefore, the average value of each diamond population is governed by the size and physical characteristics of the stones. The concentration of diamonds in any given kimberlite is dependent on the following factors:

- The diamond content of that mantle
- The extent to which the source magma has interacted with and sampled potentially diamondiferous deep lithospheric mantle
- The successful transport of the diamonds from the mantle to the surface of the earth
- The extent of resorption of diamond by the kimberlite magma
- Physical sorting and/or winnowing processes during volcanic eruption and deposition
- Dilution of the kimberlite with barren country rock or surface sediments

For the Meya Mine project kimberlite dykes, the extent of mantle sampling is considered to be the main factor controlling variation in total diamond grade. The observed variation in mantle-derived juvenile components of the Meya River, Bardu, and Waterloo Dyke Zones suggests they comprise separate phases of kimberlite resulting from the emplacement of different batches of magma. Distinct phases of kimberlite, such as KIMB1, KIMB2, and KIMB3, typically have contrasting grades and diamond populations. Flow dynamics and variations in flow within individual segments (causing zonation, sorting, and filter pressing) lead to local variations in the horizontal and vertical distributions of mantle minerals, including diamond and therefore even within a single phase of kimberlite the diamond distribution and grade will not be uniform. Dilution by country rock can have a significant impact on the grade of a kimberlite. At the Meya Mine project, the amount of external country rock dilution, i.e. in situ country rock within the mining zone, will be an important factor to consider.

7.2.8 Alluvial Deposits

Extensive alluvial diamond deposits occurred throughout the Meya License area, associated with the Woyie stream, Meya stream and Wongoyie swamp, and were mapped by Hall (1968). The area has been extensively worked by artisanal miners, SLST and NDMC. Today the alluvial deposits are considered largely depleted; however, artisanal miners still work and re-work the gravels and continue to recover diamonds.

Patrick & Forward (2005) stated that workers in the Yengema diamond field in the 1960s and 1970s concluded that many of the alluvial deposits were originally laid down in a lake that was subsequently breached less than 10,000 years ago, leading to the deposition of many of the alluvial deposits in the major rivers.

Hall (1968) stated that alluvial diamond concentrations occur in river channel gravels, flood-plain gravels, terrace gravels, gravel residues in soil, and swamps. Values in these deposits vary over a very wide range, and most of the gravels mined carried between 0.2 ct and 1.5 ct per cubic yard. The grade of the Meya stream ranged from 0.7 ct to 3.8 cts/m^3 and is still being mined by artisanal miners.

Meya Mining is presently focused on the hard rock in situ kimberlite and not on alluvial diamond deposits.

8 Deposit Types

8.1 Kimberlite-Hosted Primary Diamond Deposits

The majority of primary diamond deposits mined globally consist of steep sided pipe shaped bodies infilled with volcaniclastic kimberlite. Less common are diamond mines hosted in thin hypabyssal kimberlite dykes or sills (intrusive kimberlite sheets).

Kimberlites are mantle-derived magmas (>150 km depth) that transport diamonds together with the rocks from which the diamonds are directly derived (primarily peridotite and eclogite) to the earth's surface. The emplacement of kimberlite at or just below the surface of the crust as sheet-like or irregular intrusions or volcanic pipes is influenced by many factors (Clement, 1982; Clement & Reid, 1989; Field & Scott Smith, 1999; Sparks et al., 2006; Barnett, 2008; Barnett et al., 2013) which include the following:

- Characteristics of the magma (volatile content, viscosity, crystal content, volume, temperature);
- Nature of the host country rocks
- Local structural setting
- Local and regional stress field
- Presence of water

The primary mineral deposit being evaluated at the Meya Mine project is the southwestern extension of Koidu Dyke Zone B (DZB), now referred to as the Meya River Dyke Zone. Two other dyke zones, known as the Bardu and Waterloo Dyke Zones, occur along the same strike orientation, and together the three dyke zones have a drill confirmed strike length of greater than 10.8 km.

The three dykes zones comprise sub-vertical sheets with individual segments ranging from 1 cm to over 1 m in true thickness. Texturally, all the kimberlite encountered is classified as hypabyssal kimberlite. The morphology of the dykes is variable in that there are zones of pinching and swelling as well as bifurcation and offsets. Similar features are observed in kimberlite sheet systems around the world (e.g. Gurney & Kirkley, 1996; Kavanagh& Sparks, 2011; Gernon et al., 2012) and at the adjacent Koidu Kimberlite Project (Moss et al., 2012; Barnett et al., 2013). Variation in the juvenile components of the dyke zones is consistent with them being separate phases of kimberlite resulting from the emplacement of different batches of magma. Distinct phases of kimberlite typically have contrasting grades and diamond populations.

No pipe-shaped bodies infilled with volcaniclastic kimberlite formed by explosive fragmentation processes have been discovered within the Meya Mine project; however, evidence for preconditioning of the country rock defined by zones of porous country rock has been intersected in multiple drill cores. These porous zones are found around many kimberlite pipes (and occur as xenoliths within pipes) and are interpreted to represent preconditioned zones of weakness formed by early kimberlitic fluids that act to strip components like SiO2 from the country rocks. Zones of dyke widening do exist on the dykes and the textures that have been encountered in this area today only include, to date consist of texturally hypabyssal kimberlite.

9 Exploration

9.1 Geological Survey and CAST, 1930 to 1935

Patrick & Forward (2005) reported that the early history of diamond exploration in Sierra Leone is described in detail by Pollett (1937).

In January 1930, a Geological Survey field party comprising Mr. J.D. Pollett, Mr. N.R. Junner and assistants were conducting geologic mapping in the Kono District. While prospecting gravels of the Gbogora stream in the Yengema area for heavy minerals, Pollett recovered a diamond. Furthermore, later in January 1930, Pollett discovered additional diamonds in gravels of the Kenja stream in the Tongo area about 50 km south of the original Gbogora discovery.

CAST sent a prospecting party to the Kono District in March 1931. The CAST prospecting party initially recovered nine diamonds totaling 0.35 ct from pits at the original Gbogara site. The CAST party worked east from the original discovery site into the Kono District, where in 1932 the first payable diamond deposits were discovered along the Shongbo stream. Between 1932 and 1935, it appears that diamond prospecting expanded rapidly in the Kono District, and this work reportedly established that the principal deposits of the diamond field occurred within a radius of about 150 km from Yengema.

9.2 SLST, 1935 to 1948

Patrick & Forward (2005) stated that the diamond deposits around the village of Koidu were discovered in 1935. Three “small” prospecting pits in this area produced 749 diamonds, which cumulatively weighed 371 ct.

After commencing and concentrating on production from the alluvials of the Yengema field in 1935, SLST resumed prospecting activities in 1946 with the objective of locating the source of the diamonds. In 1948, diamond bearing kimberlite dykes and two small pipes were discovered at Koidu and subsequently recognised as forming part of a more extensive field, with further kimberlite dykes being discovered to the north, and also in the Yengema area (Hall, 1968). Reportedly, in 1961, a third pipe (No. 3 Pipe) was discovered approximately 3 km northeast of No. 2 Pipe.

Patrick & Forward (2005) stated that the SLST investigated the kimberlites within their leases by soil sampling grids, pitting and trenching, and minor drilling, enabling delineation of a number of kimberlite zones in each lease. Trenching within the zones disclosed only narrow kimberlite dykes and the four small pipes/blows in the Koidu area. No major kimberlite bodies were found.

9.3 DEC, 1961 to 1963

Patrick & Forward (2005) stated that between August 1961 and May 1963, the DEC conducted a heavy mineral sampling program over all parts of southeastern Sierra Leone not leased to SLST. There were reportedly 4,070 alluvial gravel concentrates collected at about 3 km intervals throughout the majority of the drainage area. Patrick & Forward (2005) further reported the DEC carried out follow-up work at six localities with essentially negative results, and it was concluded that no kimberlites of economic importance exist in southeast Sierra Leone other than in the Koidu and Tongo areas, and that the vast majority of Sierra Leone diamonds originated from these areas.

Patrick & Forward (2005) stated that in June 1963, the DEC completed its kimberlite survey by collecting approximately 0.7 kilograms (kg) heavy mineral samples from major rivers throughout Sierra Leone at points where they were intersected by roads, with 26 samples collected from a region of approximately 40,000 km^2, evidently reported by Stracke (1963). None contained any kimberlitic minerals and it was therefore concluded that there were no kimberlite bodies in the region.

9.4 NDMC, 1971 to 1980s

SRK has not determined whether any exploration activity was carried out by the NDMC in the Meya Licence area.

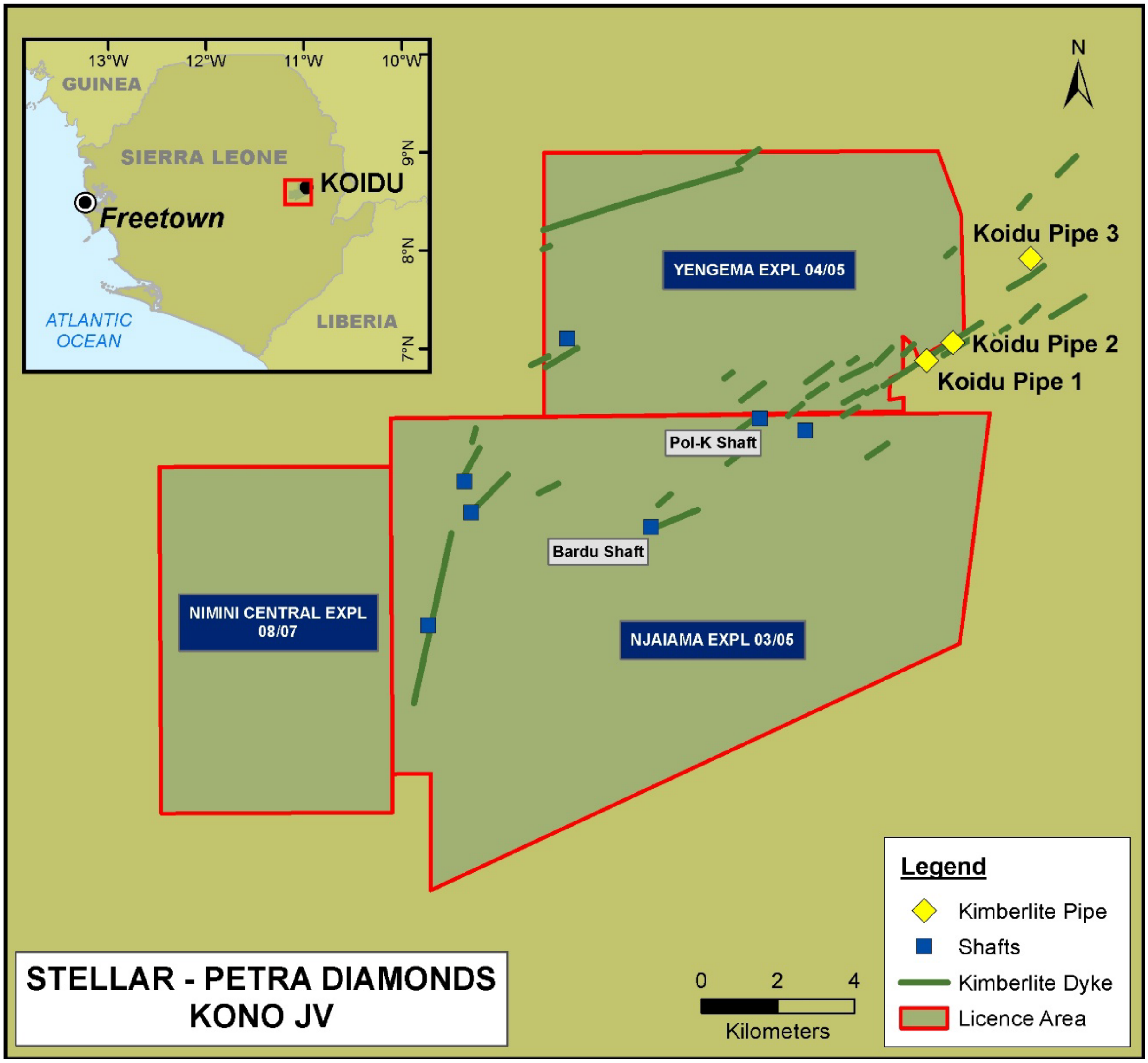
9.5 Stellar Diamonds and Petra Diamonds Joint Venture, 2005 to 2012

Exploration activities and developments reported in public domain press releases and Annual Reports by the Stellar Diamonds and Petra Diamonds Kono Kimberlite Project joint venture (Figure 9-1) are summarised below and in Table 9-1. The exploration information and data for the numbers and types of samples, kimberlite tonnages excavated and processed, and diamonds recovered and valued, are erratically reported and incomplete.

9.5.1 Exploration Developments Reported 2005

In June 2005, Stellar Diamonds (Mano River) announced exploration activities and developments of the Kono Kimberlite Project.

In April 2005, Petra Diamonds reportedly carried out continued exploration of the so-called “Lion” kimberlite dykes following sampling by Mano River, for establishment of a 75 tph processing plant. Dykes were opened to depths of 10 m and sampled. One 0.2 t sample collected from the Lion-5 kimberlite dyke was stated to recover a gem quality 0.22 ct diamond, and reportedly supported original Mano River mini bulk sampling results that returned an average grade of 94 cpht.



Source: Modified after Stellar Diamonds, 2009

Figure 9-1: Stellar Diamonds and Petra Diamonds Joint Venture exploration licences, Kono Kimberlite Project, Eastern Province (2005 to 2012)

Table 9-1: Publically reported Stellar Diamonds and Petra Diamonds Kono kimberlite project joint venture exploration development, 2005 to 2012

Year	Exploration Development	Kimberlite Mass	Carats / cpht	US$/ct
2005	Mini bulk sample: Lion-5 dyke Other dykes: N/A	 200 kg Not reported	 94 cpht Not reported	N/A
2006	3 shafts total: Lion-5 Lion-3 Lion-2 Other trenches and bulk samples: Simbakoro (historic Pol K)	 Not reported Not reported Lion-2: 18,000 kg 1,600 kg	Total 23.95 ct Not reported Not reported Lion-2: 7.7 ct 2.3 ct, 140 cpht	N/A
2007	2-shafts total: Simbakoro (historic Pol-K) Bardu	 Not reported Not reported	Total 241.7 ct Not reported Not reported	N/A
2008	Trial underground mining: Simbakoro (historic Pol K) Bardu	Not reported 757,500 kg Not reported	Total 760 ct 479.5 ct, 63 cpht 140 cpht	 US$152/ct N/A
2009	Trial underground mining: Simbakoro (historic Pol-K) Bardu	Not reported Not reported Not reported	Total >4,400 ct 65 cpht 140 cpht	 US$152/ct US$52/ct
2010	NIL	0 kg	0 ct	N/A
2011	Surface bulk sampling: Lion-5	346,350 kg (undiluted)	243.8 ct 70.39 cpht	US$230/ct
2012	NIL	0 kg	0 ct	N/A

Source: SRK, 2018

9.5.2 Exploration Developments Reported, 2006

Commissioning of a 75 tph DMS production plant for processing of exploration bulk samples was reported completed in June 2006. Four shafts and numerous ‘rolling’ exploration trenches were stated being developed to identify “the best” dyke targets from the multiple occurrences available. Shaft sinking targeting 30 m depth continued at the two original sites on the Lion-5 and Lion-3 dykes, with depths nearing 24 m each being achieved in November 2006. It was stated that when these shafts reach the target depth, core drilling was to be conducted to establish dyke dimensions along strike, prior to planning development of mining stopes to access kimberlite for production.

Sinking of a third shaft on the Lion-2 dyke at Yengema collected kimberlite samples weighing 18 t, from which 59 diamonds weighing 7.77 ct, including stones of 1.60 ct, 1.34 ct, 0.85 ct, 0.75 ct, 0.60 ct and 0.55 ct, were recovered. In November 2006, the Yengema shaft was reported to be at 9.5 m depth, and the Lion-2 dyke at 1.8 m wide.

Elsewhere in the Licenses, exploration trenching reportedly continued, aimed at locating new shaft sites. The combined length of kimberlite dykes identified was over 17 km. One dyke tested at Simbakoro yielded 2.3 ct from 1.6 t of kimberlite, including recovery of a 1.4 ct diamond. This implied grade of approximately 140 cpht that resulted in the decision to sink the fourth shaft on the Simbakoro dyke.

Apparently, some 224 diamonds weighing 23.95 cts were recovered from kimberlite processed during shaft developments over three months. It was reported not possible to establish accurate diamond grades for the kimberlite processed at this stage, due to the mixed (kimberlite and “non-kimberlite”) material collected from the shafts. The sinking of 2 m wide shafts on the generally narrower dykes resulted in “non-kimberlite” material being processed.

9.5.3 Exploration Developments Reported, 2007

It was stated in the 20 September 2007 press release that five exploration shafts had been sunk (Lion-5; Lion-3; Lion-2, Pol-K and unnamed), each to a depth of 30 m, returning in situ grades of between 50 cpht and 80 cpht, with 2,809 diamonds totaling 241.7 cts recovered from trial mining to date (compared to February 2007: 638 diamonds, 58.8 ct). These shafts reportedly displayed a consistent, near-vertical dipping dyke varying in width between 0.4 m and 2.0 m. At the Bardu shaft, trial mining had commenced in early December 2007.

9.5.4 Exploration Developments Reported, 2008

The 20 February 2008 Stellar Diamonds press release summarised the Kono Kimberlite Project trial mining interim results. A parcel of 8,640 diamonds totalling 760 cts was stated recovered at a 1.0 mm bottom cut-off. A parcel of 581 cts was awaiting valuation in South Africa.

At the Simbakoro (previously Pol-K) shaft, a total of 757.5 t of in situ dyke had been extracted. Ore processing yielded 5,603 diamonds totalling 479.50 cts, reported at an in situ grade of 63 cpht. The ten largest diamonds ranged in size from 1.1 ct to 10.55 ct. It was planned to extend shaft sinking to a depth of 60 m, to establish stope panels for underground ore extraction.

On 23 September 2008, Petra Diamonds issued a preliminary results announcement for the year ended 30 June 2008 (unaudited) and stated that trial mining was ongoing, with first tender of diamonds. The first parcel of Kono Kimberlite Project test production (1,064 cts) was sold on tender in September 2008, with the Simbakoro shaft (historic Pol-K) parcel of 866 ct reportedly achieving an average value of US$152/ct.

A 3,167 line km airborne electromagnetic geophysical survey was stated completed by Fugro Airborne Surveys, the objective being discovery of kimberlite pipes and blows. Processing of the data was outsourced to an external expert, and final interpretations were expected before the end of October 2008. SRK has not obtained and reviewed the survey data and results.

9.5.5 Exploration Developments Reported, 2009

An operational update released by Stellar Diamonds on 21 May 2009 stated that underground trial mining had continued at the Simbakoro (historic Pol-K) and Bardu kimberlites, with total diamonds produced to date being over 4,400 cts. The in situ grade of the Simbakoro kimberlite was stated consistently averaged at 65 cpht. At Bardu, a new kimberlite intrusion was reported intersected and sampled, that returned an average grade of 140 cpht.

A parcel of 2,697 ct of diamonds was stated exported to Antwerp for sale. The parcel comprised mainly Simbakoro (historic Pol-K) goods (80%) with lesser Bardu goods (20%). The sale realised US$125,000 at an average of US$46.34/ct. In comparison, in September 2008 a sale of 811 ct from Simbakoro (historic Pol-K) and 252 ct from Bardu reportedly realised average prices of US$152/ct and US$52/ct respectively (US$128/ct average).

On this basis Stellar Diamonds and Petra Diamonds agreed to place the Kono Kimberlite Project into temporary care and maintenance until the rough diamond market improved sufficiently to achieve more reasonable sales values, for what the partners considered to be good quality run of mine diamond product.

9.5.6 Stellar Diamonds 2009 Annual Report

It was stated in the Stellar Diamonds 2009 Annual Report that previous exploration and trial mining at the Kono Kimberlite Project to depths of 85 m below surface identified two key kimberlites having grades ranging from 65 cpht to 140 cpht, and diamond values of up to US$150/ct (Simbakoro & Bardu).

9.5.7 Stellar Diamonds 2010 Annual Report

No exploration or trial mining activities were reported for 2010, and the Kono Kimberlite Project remained in care and maintenance.

9.5.8 Stellar Diamonds 2011 Annual Report

Stellar Diamonds reported carrying out further surface exploration and collection and processing of a 300 t bulk sample from the Lion-5 kimberlite dyke, which from previous work undertaken by Stellar Diamonds reportedly had a grade of about 100 cpht. Trial mining across the Kono Kimberlite Project did not continue.

9.5.9 Exploration Developments Reported 2012

The 06 February 2012 press release stated that the Lion-5 kimberlite had been mapped over 1,990 m and based on satellite imagery and the presence of previous artisanal workings, it was expected to extend further.

The Lion-5 kimberlite was reported excavated for 60 m of strike length, adjacent to the Koidu Lease, with observed dyke widths ranging from 0.84 m to 1.98 m, the average width calculated at 1.48 m. The kimberlite was competent and drilling and blasting was required to extract it. The material recovered comprised kimberlite and country rock granite, that was transported to Stellar Diamonds process plant at Tongo, located 60 km to the south. The kimberlite and country rock granite was crushed and processed via a 5 tph DMS plant at 1.0 mm bottom cut-off, with diamond recovery by grease tables in a secure container. The whole process was reported being observed by a Government Mines Monitoring Officer.

A total dry mass of 400.59 t of kimberlite and granite country rock was reported processed. Country rock dilution was calculated at 14% for 346.35 t of kimberlite. Diamond recovery reported was 243.8 ct. Based on the calculated kimberlite tonnage, an in situ (dry) grade of 70.39 cpht at +1.0 mm bottom cut-off was determined (diluted grade of 60.86 cpht).

Reportedly, about 62% of the diamonds recovered were classified as gem quality, with the five largest stones weighing 4.45 ct, 3.22 ct, 3.07 ct, 3.00 ct, 2.57 ct, and 25 stones being over 1 ct.

9.5.10 Stellar Diamonds 2012 Annual Report

Prior to the exploration licence dispute (Section 6.1) Stellar Diamonds reported in their 2012 Annual Report that bulk sampling of the Lion-5 dyke yielded a grade of 90 cpht and an average diamond value of US$230/ct. Further resource drilling and evaluation of the Lion-5 and Simbakoro dykes was planned before care and maintenance was imposed.

9.6 Meya Mining 2016 to Present

Exploration activities by Meya Mining commenced in October 2016 after the Trustco - Germinate joint venture agreement was concluded in August 2016. The focus of Meya's exploration program is the delineation and bulk sampling of the Meya River Dyke Zone, the southwest extension of Dyke Zone B (DZB) on the adjacent Koidu Mine property, as well as the Bardu and Waterloo Dyke Zones.

The geology of DZB has been established by Koidu Holdings and the dyke zone is presently being mined by underground methods. SRK has examined the Koidu Mine portion of the dyke zone in detail (Casey Hetman and Jarek Jakubec – Site Visit 3). This included examination of surface exposures, historic surface bulk sampling pits and active underground mining exposures. Casey Hetman previously undertook multiple detailed investigations of the geology of the dyke zone and associated geology of the Koidu kimberlites, and parts of this work are presented in Hetman et al. (2010) and Harder et al. (2013). The exploration and geological sampling work established for the Meya Mine project kimberlites was based on the previous work at Koidu and Tonguma.

There have been several stages of exploration drilling undertaken at Meya Mining. The first phase of drilling was completed to initially delineate the extent of the Meya, Bardu, and Waterloo dykes along a strike length of approximately 10 km, with subsequent drilling programs targeting these kimberlites to a depth of -150 m, -250 m, -500 m and -750 m. The first phase of drilling used recent and historic satellite images to highlight the locations and extent of the artisanal mining activities within the mining lease, and this was extremely successful.

The recovered core was logged in detail, and representative samples were selected for petrographic investigation and groundmass spinel chemistry to assess the continuity of the geology along the strike and with depth. All main kimberlite intersections have been submitted for microdiamond analysis. The majority of the holes were drilled to intersect the dyke zones at an angle.

In addition to the drilling program, the dyke zones are being evaluated by the excavation of ~200 m long trench bulk samples, one in each dyke zone. These have been completed in Meya, Bardu and partially at Waterloo and Simbakoro. The exposed unweathered kimberlite was processed at Meya and Bardu to obtain a macrodiamond parcel to determine grade and diamond value. The exposed bulk sampling trenches are mapped in detail, and petrography and microdiamond samples are collected at regular intervals along the strike.

Limited exploration drilling was conducted within the Meya River fault zone north (two holes) and South of Meya (two holes); however, no kimberlite was intersected.

Current core drilling is focused on resource definition of KIMB1, KIMB2 and KIMB3 to depths of –800 m from the surface.

10 Drilling

10.1 Core Drilling Procedures

10.1.1 Core Drilling Program Planning

The core drilling program planning documents included the following components:

- Introduction and background
- Objective
- Optimisation
- Locality map
- Schedule
- Drilling techniques
- Logging processes
- Sampling methods
- How data will be stored
- Legal and Environmental
- Roles and Responsibilities
- Risks and Constraints

10.1.2 Core Drilling Method

Core drilling was carried out using diamond core drills supplied by Boart Longyear (Figure 10-1) capable of penetrating to depths greater than 900 m at PQ (122.6 mm hole diameter; 85.0 mm core diameter), HQ (96.0 mm hole diameter; 63.5 mm core diameter) and NQ (75.7 mm hole diameter; 47.6 mm core diameter) core barrel system sizes.

HQ and PQ core bits were used in the upper laterite and saprolite portions of the holes, which is mostly unconsolidated ground. HQ or PQ rods were left in the holes to act as casing to keep holes available for further work at a later date if required (e.g. hydrogeology and Piezometer installations) and to allow cement to be pumped into the holes. HQ and NQ and minor amounts of PQ core bits were used through the fresh hard rock to depth.

Source: SRK (internal technical report), 2018

Figure 10-1: Boart Longyear diamond core drill at the Meya Mine project site

10.1.3 Drill Hole Collar and Down Hole Surveying

Drill hole collars were surveyed by an appointed Meya Mining surveying team who also marked the drill hole azimuths as supplied by the Project geologist. Downhole dip and azimuth readings were obtained using a Gyroscope multi-shot electromagnetic survey system, following a dedicated downhole survey procedure completed by a rig geologist. Readings were taken every 5 m. The downhole survey readings were plotted immediately at the rig to ensure data accuracy before moving off the hole.

10.1.4 Core Orientation

All core holes were drilled at dip angles between 50 degrees (º) and 79º which allows orientation of core for geotechnical logging. A Reflex ACT II Digital Core Orientation Tooling Kit was used to orientate the core, and the bottom of the core retrieved was marked by the drill contractor and inspected by the Project geologist.

10.2 Core Logging Procedures

10.2.1 Geological Core Logging Procedure

The geological core logging was divided into two components:

1. Standard borehole information
2. Geological observations and interpretations.

The standard borehole information captured is as follows:

- Hole number
- Prospect
- Geological logger
- Drill contractor
- Dip and Azimuth (planned at collar only)
- Water table
- Drill date
- Log date
- Coordinates and elevation
- Final depth of hole

The geological observations and interpretations recorded are as follows:

- Depth From (m) / Depth To (m). The Project geologist verifies the "From / To core intervals received from the driller, and reassembles the recovered core.
- Thickness (interception thickness – not true thickness)
- Nature of contact (Sharp – measured dip angle; Gradational – sharp with potential dip angle; Gradational over measured cm; Not preserved; Extensively veined or Broken)
- Textural and mineralogical preservation
- Log code (Legend): lithology code, model code, domain code
- Rock type, structure, and description
- Grain size – maximum for xenoliths and average for olivine
- Olivine – % of macrocrysts and phenocrysts (visual estimates) and box counts (macrocrysts)
- Groundmass mineralogy if possible

- Dilution – % of country rock (visual estimate); also lithology, size and box counts
- Indicator minerals (box counts)
- Megacrysts
- Mantle xenoliths
- Interpretation

10.2.2 Core Drilling Log Sheets

Core drilling log sheets record the following:

- Core drilling work control sheet: hole number; collar; differential GPS; down hole survey; recovery; core pictures; specific gravity; core mark; geology; geotechnical; petrography sampling; microdiamond sampling; update tables; update sections; update file
- Core drilling monitoring – shift summary
- Collar master: hole number; type; driller; rig; latitude/longitude; X_UTM29P/Y_UTM29P; elevation; azimuth; dip; end of hole
- Final coordinates conversion (latitude/longitude; UTM eastings/northings)
- Gyroscope survey sheet and master: hole number; instrument type; survey by; survey date; survey station; true dip and bearing
- Diamond drill hole information sheet summary: exploration responsibility; driller and safety; hole and pre-collar; hole position; survey and drilling; water; rehabilitation
- Core recovery sheet and recovery master
- Core geology
- Core photography - high-quality photographs are taken of each core box after the hole is completed
- Orientation log sheet and compilation sheet: rock type; depth; weathering; strength; structure type; stick Top/Bottom; structure orientation – alpha degrees; beta degrees; structure condition - open/cement; macro-roughness; micro-roughness; infill type; wall alteration

10.2.3 Geotechnical Core Logging Procedure

Geotechnical logging is carried out to describe major weak geological structures such as faults and shear/crushed zones. Each hole is geotechnical logged for 20 m on both sides of the kimberlite intersections. Geotechnical intervals within geotechnical logs are divided into domains, and each domain is identified by a combination of the following characteristics:

- Lithology – no geotechnical domain boundary should cross a lithological boundary
- Rock quality designation (RQD)
- Fracture abundance
- Fracture orientation and length

The minimum width of a domain is 0.3 m and the maximum width of a domain is 20 m. Structures are logged individually to understand their positions and characteristics.

10.2.4 Geotechnical Log Sheets

The geotechnical log sheet and compilation sheet records the following:

- Solid recovery; rock quality designation; broken matrix; matrix type; total recovery; primary and secondary rock types; length; strength; weathering; micro-roughness; fill thickness; open and cemented joints and veins orientation and surface condition; cement strength; wall alteration; geological strength index (GSI) estimate.

10.3 Drilling Pattern and Density

Core drilling at the Meya Mine project summarised herein covers the commencement of delineation drilling from May 2018 through to June 2024, and the last hole completed is MMDD-135, with individual holes ranging in length from 24.0 m to 950.0 m and dipping between -45.0º to 85.0º.

Since May 2018, 49 additional holes totalling 21,952.6 m were drilled in the Meya River Dyke Zone.

Refer to Figure 10-2 for the Meya River Dyke Zone showing drill hole pierce points up to May 2018. Figure 10-3 shows the 3D geological model image of the drill hole pierce points as of June 2024. The majority of the drill hole pierce points in the dyke zones are spaced more than 250 m apart.

In summary:

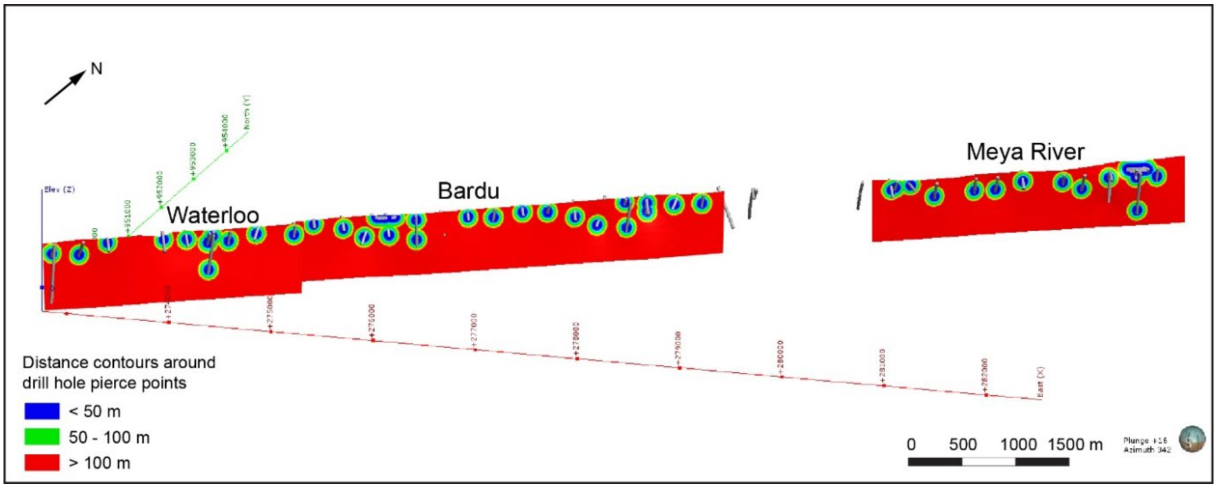
- Meya River Dyke Zone: 71 holes for 27,683 m of drilling
- Between Meya River and Bardu Dyke Zones: four holes for 1,201.1 m
- Bardu Dyke Zone: 19 holes for 4,155.2 m
- Between Bardu and Waterloo Dyke Zones: one hole for 285.5 m
- Waterloo Dyke Zone: 12 holes for 3,028.9 m

The following fourteen holes were reported as not intersecting any kimberlite:

- MMDD-022; MMDD-023; MMDD-026; MMDD-034; MMDD-049; MMDD-065; MMDD-084, MMDD-085, MMDD-099, MMDD-101, MMDD-106, MMDD-121, MMDD-122, MMDD-123.

The following fourteen holes were reported abandoned:

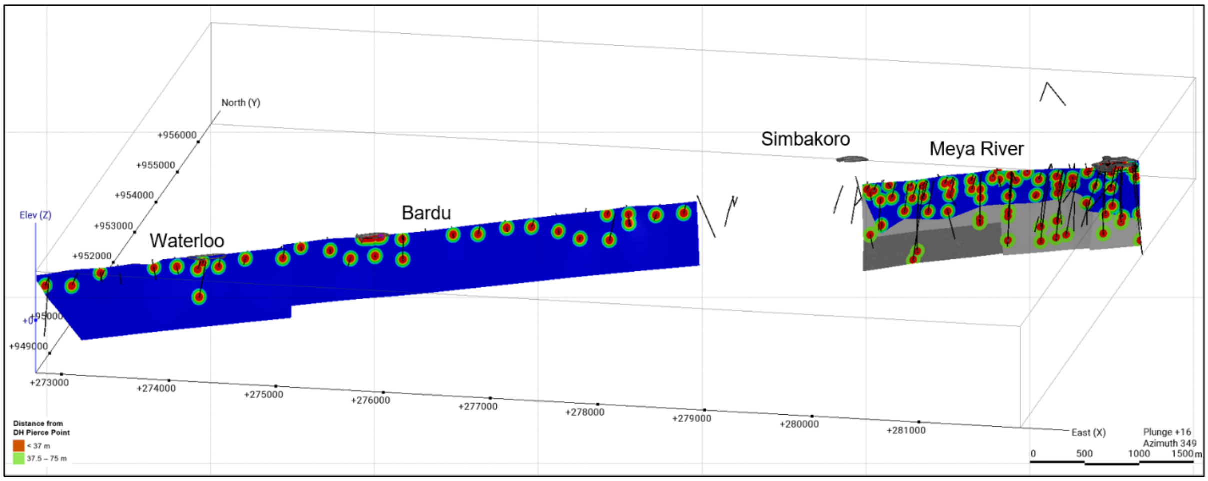
- MMDD-004; MMDD-013; MMDD-024; MMDD-032; MMDD-044; MMDD-055; MMDD-057 MMDD-058, MMDD-060, MMDD-070, MMDD-076, MMDD-095, MMDD-0107 and MMDD-0117.



Source: SRK (internal technical report), 2018

Note: showing the distribution of drilling up to May 2018

Figure 10-2: Inclined view of 3D geological model of the dyke zones – distribution of drilling to May 2018



Source: This report, 2024

Note: Showing the distribution of core drill holes within the Meya River, Bardu, and Waterloo with pierce point contours

Figure 10-3: Inclined view of the 3D geological model of the three dyke zones – distribution of core drill holes

10.4 Dyke Zones Drill Core Sampling Summary

Since May 2018 through June 2024, additional kimberlite petrography, groundmass spinel, density, and microdiamond drillhole sample analyses were completed in Meya River Dyke Zone.

- For kimberlite petrography and groundmass spinel samples, 157 sample analyses were conducted from the additional 56 holes.
- For kimberlite density samples, 43 sample analyses were conducted from the additional 22 holes.
- For kimberlite microdiamond samples, 94 sample analyses were conducted from the additional 29 holes.

These analyses include:

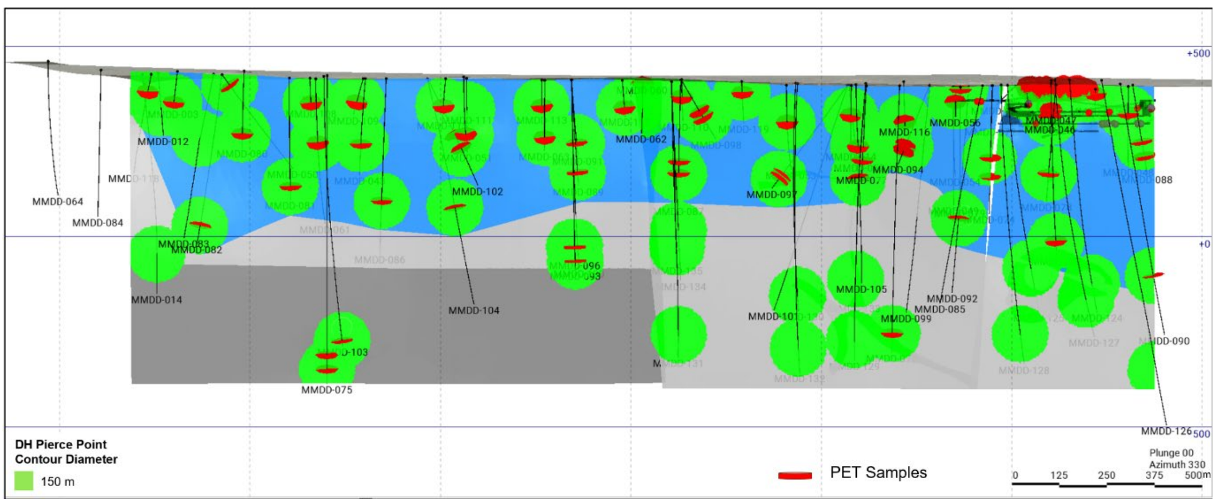
- Petrography, as illustrated in Figure 10-4 through Figure 10-6;
- Groundmass spinel chemistry, as illustrated in Figure 10-7 through Figure 10-9;
- Specific gravity determinations, and microdiamond analysis (Figure 10-10 through Figure 10-12).

Additional specific gravity samples were collected from country rock intersections as described in Section 11.3. All petrography and microdiamond samples up to MMDD-124 have been submitted to the respective laboratories for processing. Samples from Holes MMDD-125 to MMDD-135 are pending submission, scheduled for July 2024.

The sampling of kimberlite drill core for various analyses is summarised by dyke zone in Table 10-1.

Table 10-1: Dyke zones drill core sampling summary – kimberlite

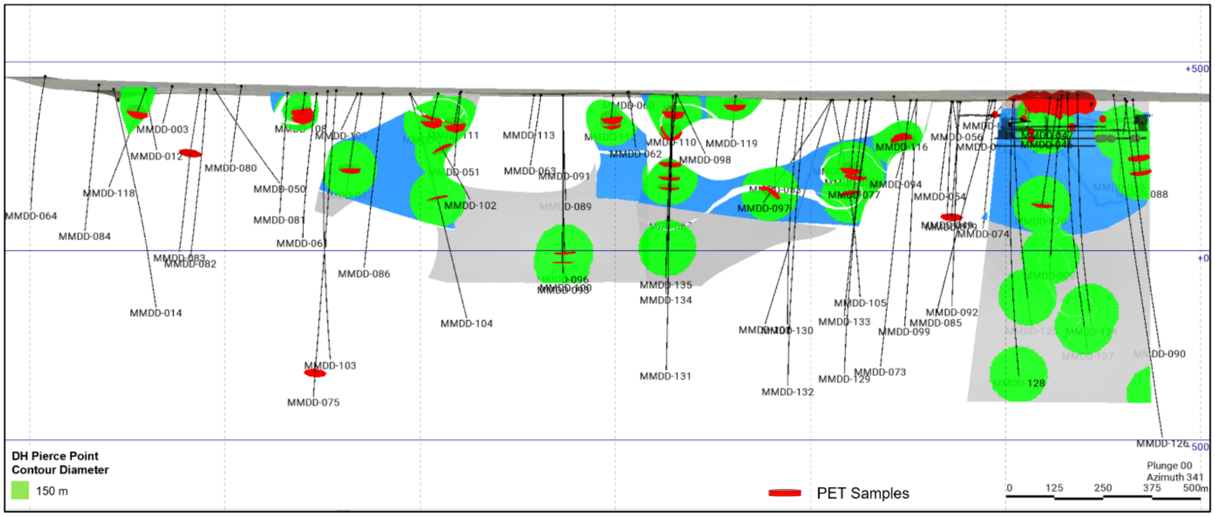
	Kimberlite Petrography Samples		Kimberlite Groundmass Spinel Samples		Kimberlite Density Samples		Kimberlite Microdiamond Samples	
Drill Holes	**MMDD-001 to MMDD-124**		**MMDD-001 to MMDD-124**		**MMDD-001 to MMDD-124**		**MMDD-001 to MMDD-124**	
Dyke Zone	**No. of Holes Sampled**	**No. of Samples**	**No. of Holes Sampled**	**No. of Samples**	**No. of Holes Sampled**	**No. of Samples**	**No. of Holes Sampled**	**No. of Samples**
Meya	60	163	60	163	28	60	50	155
Bardu	16	19	16	18	14	30	19	47
Waterloo	10	13	10	12	8	11	10	13



Source: This report, 2024

Note: Showing the Meya River Dyke Zone distribution of KIMB1 samples confirmed by petrography represented by the red discs inside the green pierce point spheres

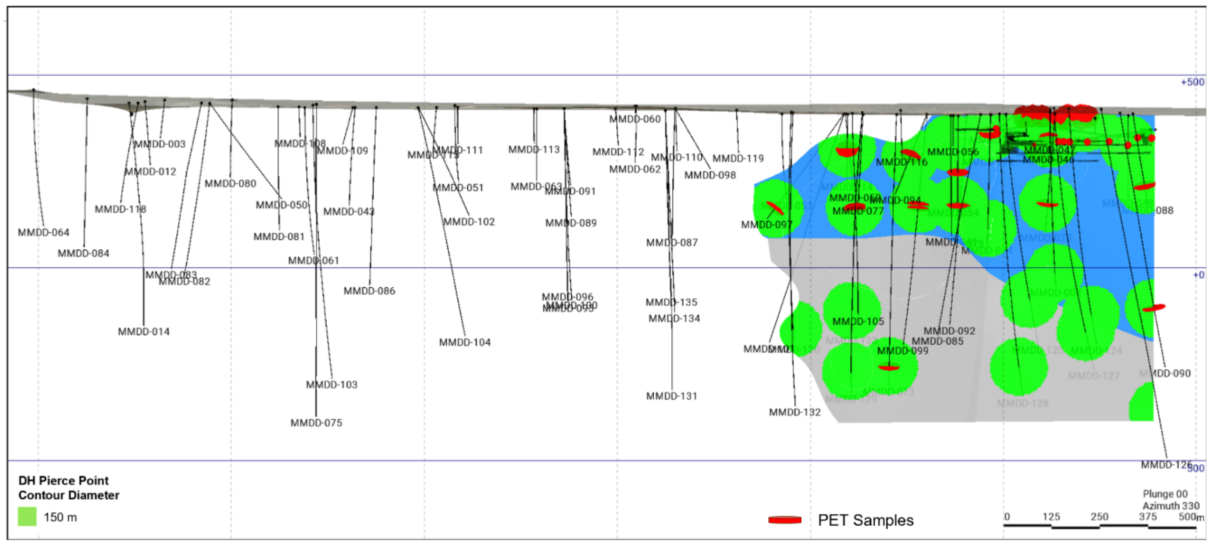
Figure 10-4: Side view of KIMB1 3D geological model – distribution of samples confirmed by petrography



Source: This report, 2024

Note: Showing the Meya River Dyke Zone distribution of KIMB2 samples confirmed by petrography represented by the red discs

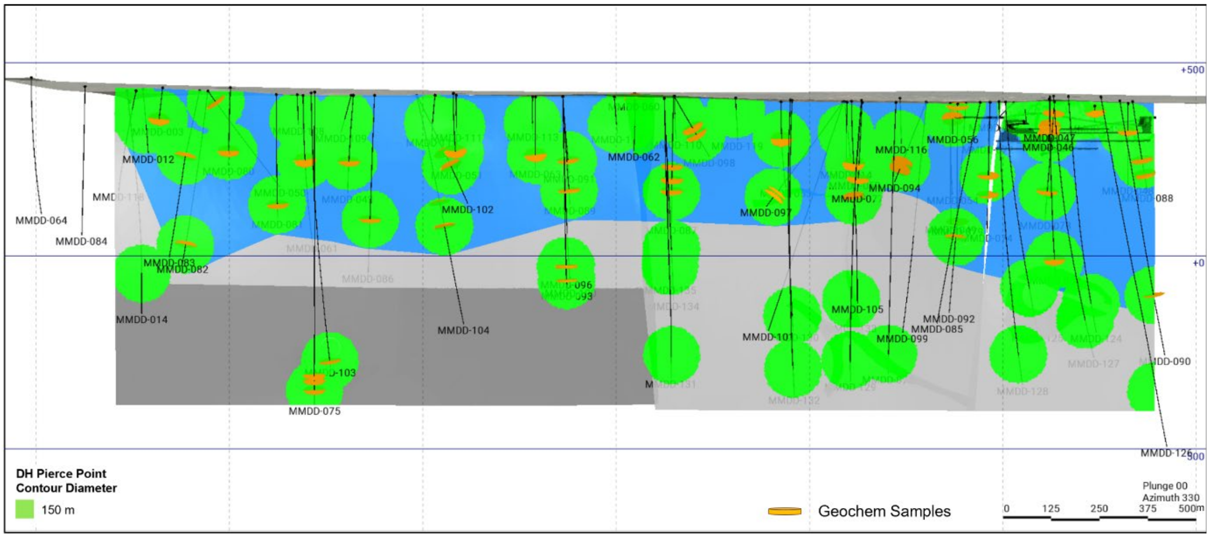
Figure 10-5: Side view of KIMB2 3D geological model – distribution of samples confirmed by petrography



Source: This report, 2024

Note: Showing the Meya River Dyke Zone distribution of KIMB3 samples confirmed by petrography represented by the red discs inside the green pierce point spheres

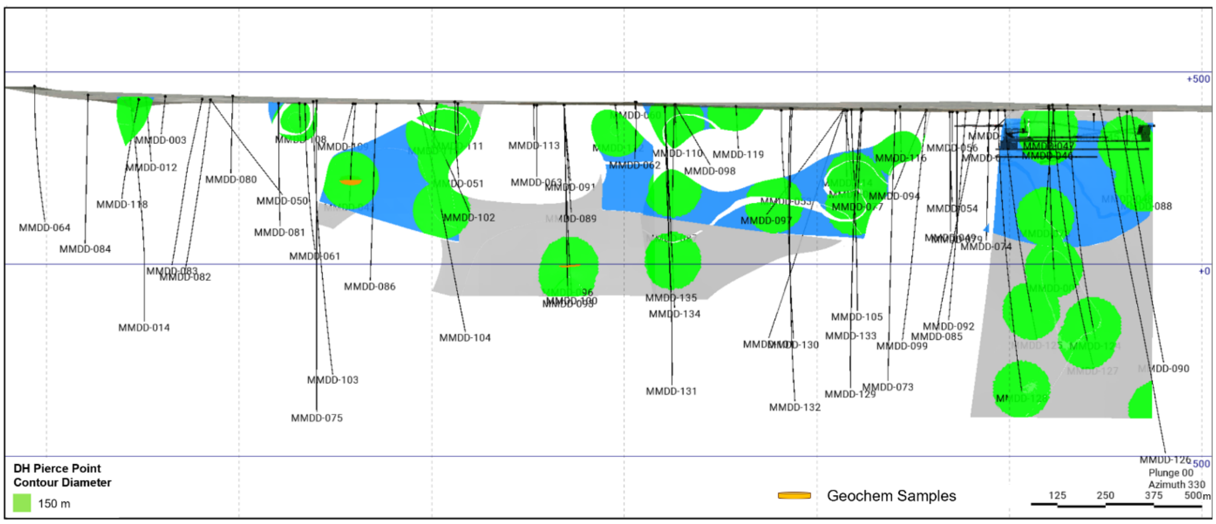
Figure 10-6: Side view of KIMB3 3D geological model – distribution of samples confirmed by petrography



Source: This report, 2024

Note: Showing the Meya River Dyke Zone distribution of KIMB1 confirmed by groundmass spinel analysis represented by the orange discs

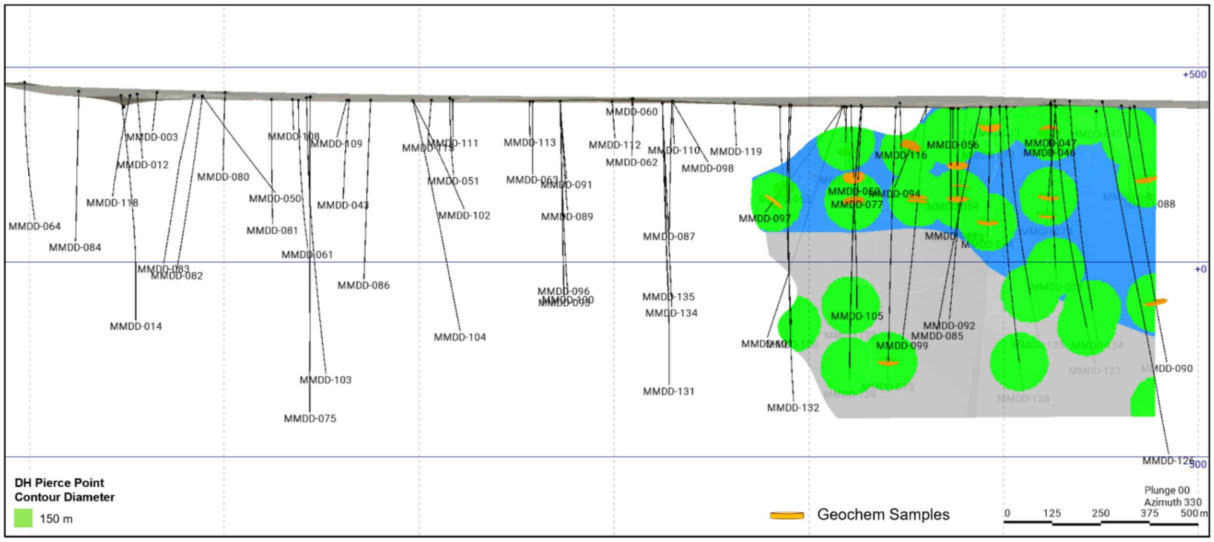
Figure 10-7: Side view of KIMB1 3D geological model – distribution confirmed by groundmass spinel analysis



Source: This report, 2024

Note: Showing the Meya River Dyke Zone's distribution of KIMB2 confirmed by groundmass spinel analysis represented by the orange discs

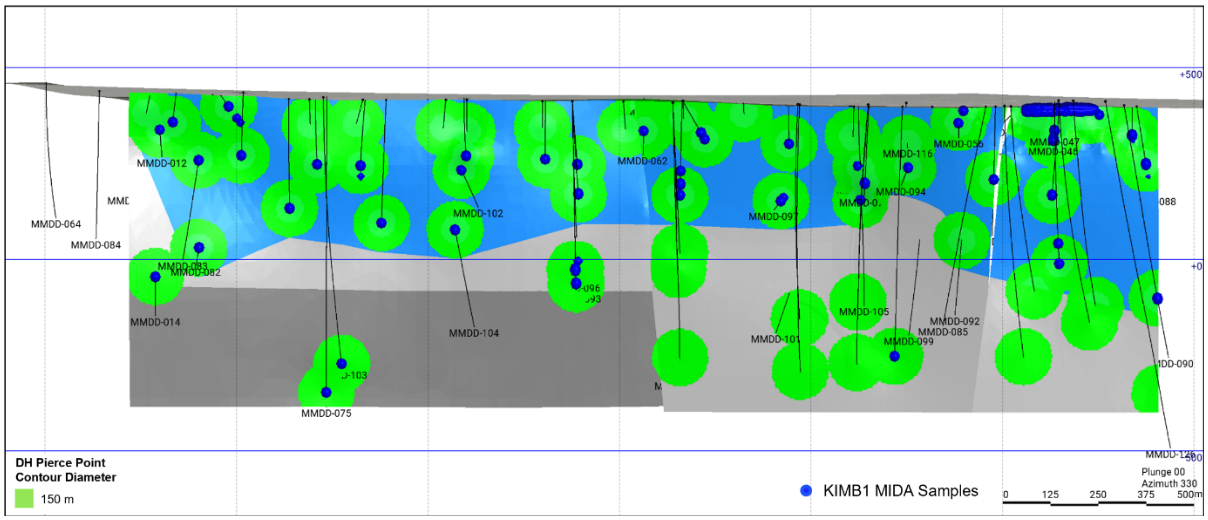
Figure 10-8: Side view of KIMB2 3D geological model – distribution confirmed by groundmass spinel analysis



Source: This report, 2024

Note: Showing the Meya River Dyke Zone's distribution of KIMB3 confirmed by groundmass spinel analysis represented by the orange discs

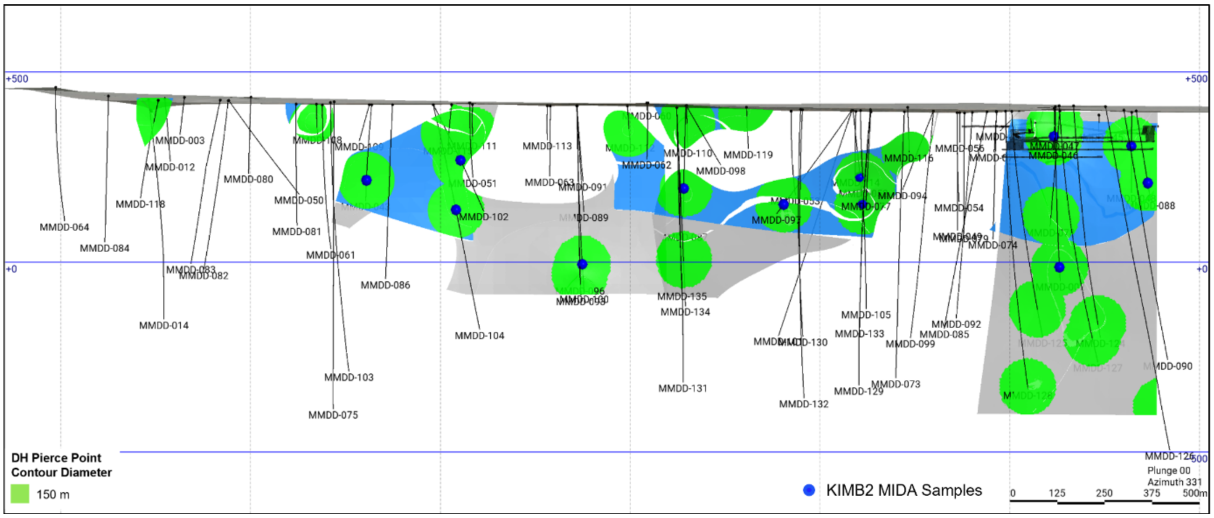
Figure 10-9: Side view of KIMB3 3D geological model – distribution confirmed by groundmass spinel analysis



Source: This report, 2024

Note: Showing the Meya River Dyke Zone distribution of KIMB1 classified MIDA samples

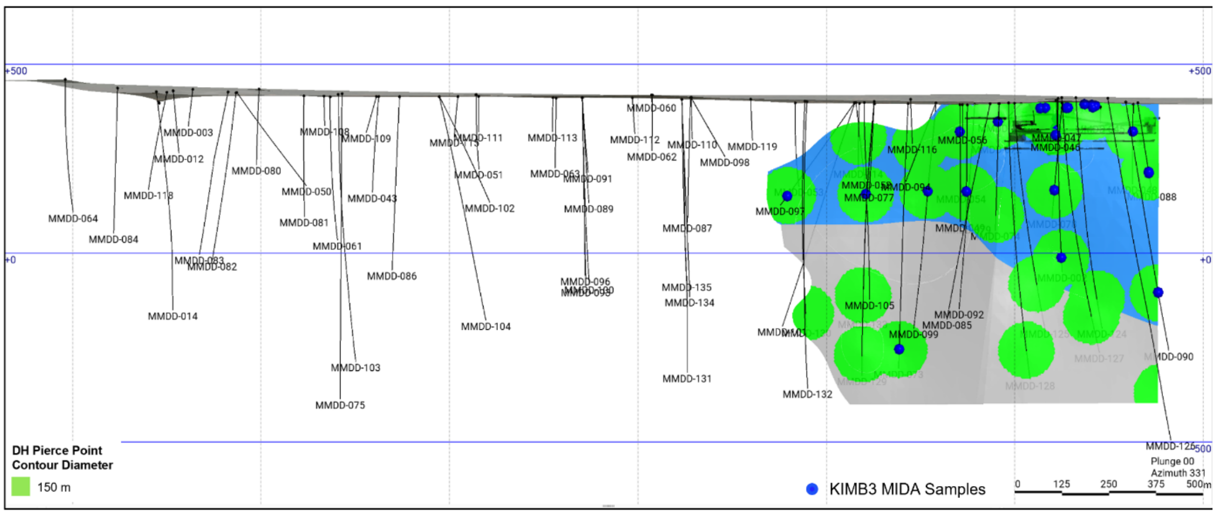
Figure 10-10: Side view of KIMB1 3D geological model – classified MIDA samples



Source: This report, 2024

Note: Showing the Meya River Dyke Zone distribution of KIMB2 classified MIDA samples

Figure 10-11: Side view of KIMB2 3D geological model – classified MIDA samples



Source: This report, 2024

Note: Showing the Meya River Dyke Zone distribution of KIMB3 classified MIDA samples

Figure 10-12: Side view of KIMB3 3D geological model – classified MIDA samples

10.5 SRK Comments

Currently, drilling is in progress on the Meya River Dyke Zone only and includes deep delineation holes that are to be drilled to a depth of ~800 m below the surface. These holes will provide continuous geological and geotechnical data from the surface to the end of the hole depth. The entire kimberlite intersections will be systematically sampled for petrography, groundmass mineral chemistry and microdiamond analysis.

11 Sample Preparation, Analyses and Security

Drill core petrography sampling was focused on kimberlite primarily from the Meya River, Bardu and Waterloo Dyke Zones. Minor country rock samples were collected for reference purposes.

The drill core was sampled for petrography to accomplish the following:

1. Maintain a reference collection of all the main kimberlite segments > 25 cm in length (downhole).
2. Enable textural and mineralogical classification of the various kimberlite segments.
3. Identify different phases of kimberlite.
4. Assign diamond carry capacity ratings where possible.
5. Establish the geological variability between drillholes.

Samples were collected to represent the general geology of each main kimberlite segment within each drill hole. This is not a comprehensive collection of every kimberlite segment, which would not be practical.

SRK carried out most of the petrography sampling following core logging on-site or in its North Vancouver, Canada office.

Individual petrography samples are typically 8 centimetres (cm) to 20 cm long and labelled twice on each piece of the core with the drillhole number, way up direction and depth in meters of the center point of the sample. Each sample was placed into a plastic bag with a single Tyvek sample tag, including the sample details. Before core was removed for shipping, sample details recorded on the core and sampling table were verified.

Petrography samples were shipped and stored in 20 L white plastic pails, and packed with bubble wrap to ensure they did not break during transport.

Each consignment of samples was shipped under Chain of Custody documentation that includes:

- Completed laboratory submission form
- Detailed sample list
- Delivery note
- Laboratory work order confirmation

Petrography samples were shipped to the Vancouver Petrographics facility in Langley, British Columbia, Canada, and the Precision Petrographics facility also in Langley for thin section and slab preparation.

After completing the petrographic investigation, geological rock codes (KIMB1, KIMB2 and KIMB3) were assigned to all petrography samples and corresponding microdiamond samples. In the small number of cases (< 5%) where a classification could not be established, these rocks were classified as “Requires Further Work” (RFW).

11.1.1 Trench Petrography Samples

The trench petrography samples were collected from the Bardu (MBS1) and Meya River (MBS2) bulk sample sites for the preparation of polished slabs and thin sections by Vancouver Petrographics Ltd or Precision Petrographics Ltd and subsequent petrographic analysis by SRK (Table 11-4).

Sample numbers comprising the bulk sample site (MBS1 or MBS2) and sample location along the strike length of the exposure were labelled on the outside of the bags and on each sample collected. Sample packaging and shipment was carried out as for the core petrography samples.

11.1.2 Other Petrography Samples

A total of 12 other petrography samples were collected from various sources on the License for comparison with the core and trench petrography samples (Table 11-5). The samples were labelled BS1 through BS12 and were packaged, shipped, prepared, and analysed for the core and trench petrography samples.

11.1.3 Petrography / Groundmass Spinel Chemistry Samples

The samples collected for petrography were also utilised for the groundmass spinel analyses. Groundmass spinel chemistry samples were analysed using energy dispersive spectroscopy (EDS) on a scanning electron microscope (SEM), and wavelength dispersive spectroscopy (WDS) on an electron microprobe (EMP). Samples were prepared as polished thin sections by Vancouver Petrographics Ltd and Precision Petrographics Ltd. EDS analyses were conducted on a Bruker Quantax 200 Microanalysis system and light element XFLASH 6010 detector, and WDS analyses were conducted on a fully automated CAMECA SX-50 instrument, operating in the wavelength-dispersion mode, at the Earth, Ocean and Atmospheric Sciences department at the University of British Columbia as well as with a Cameca SX 100 electron microprobe at the Saskatchewan Research Council. Geoanalytical Laboratories in Saskatchewan, Canada. The spinel grains were selected for analysis in each sample where euhedral phenocrystic cores could be observed in reflected light on the EMP using methods described by Roeder & Schulze (2008). The results from microprobe analyses, reported in weight-percent oxide, were used in the calculation of cation proportions based on stoichiometry (using methods described by Droop, 1987).

11.1.4 Microdiamond Samples

SRK conducted the majority of the microdiamond sampling with support from the Meya Mining geology team while working on-site. All microdiamond samples collected from drill core and bulk sample sites were sealed with security cable lock ties and packed in white 20 litres (L) plastic pails before transportation for microdiamond analysis at the Saskatchewan Research Council (SRC) Geoanalytical Laboratories in Canada. Sample numbers comprising the drill hole number and downhole depth or trench location were labelled on the outside of the sample bags and on Tyvek sample tags inserted into the bags.

Sample weights varied up to 8.5 kilograms (kg). Many samples collected were less than the standard 8 kg due to limited drillcore availability from specific kimberlite segments. When the core or mining exposure was sampled, all material was submitted, and no waste rock was avoided or removed from the samples.

No sample preparation of any kind, including core cutting, was undertaken on-site. The Sierra Leone government reviewed the sample pails and manifests before they being exported to the SRC under chain of custody for caustic dissolution and description of diamonds. The recovered residues were retained at the SRC for QA/QC to ensure no diamondiferous material was present.

The SRC diamond facility is an ISO/IEC 17025:2005 accredited processing laboratory with well-established security and QA/QC procedures. The received samples were organised into ~8 kg aliquots (where possible) and placed into kilns and fused with caustic soda.

Residues were poured through bottom size screens of 0.075 mm for all microdiamond samples, and treated chemically to reduce the residue to a manageable size. The quality and reliability of the method was evaluated by assessing recoveries of “spike” synthetic tracer diamonds added to the samples during the caustic fusion and chemical treatment processes. All recovered diamonds were weighed on an Ultra Micro Analytical balance that undergoes regular (daily) calibration and scheduled external calibration under ISO/IEC 1725:2005 calibration. The diamonds were then screened into size fractions and described based on CIM guidelines for reporting diamond results.

Security measures at the SRC include a sample chain of custody, motion-sensing video surveillance, key card access control throughout the facility, and a Laboratory Information Management System (LIMS) for data control.

Synthetic diamonds derived from drill core bits or cutter blades are commonly visually distinctive from natural diamonds. Synthetic diamonds were not included in any of the reported diamond parcels.

11.1.5 Microdiamond Sampling Summary

Microdiamond samples collected at the Meya Mine project to date derive predominantly from delineation drill cores, bulk sample trenches, and two samples from an underground mining exposure within the first mining stope developed and are summarised in Table 11-1.

Table 11-1: Summary of microdiamond sampling at the Meya Mine project

Sample Type	Drill Holes Sampled	Samples Collected	Samples Processed	Weight Processed (kg)	Total Stones (st)	Av st/kg	Total Carats
Bulk Sample MBS1	n/a	25	25	197.9	213	1.1	0.38
Bulk Sample MBS2	n/a	66	66	550.3	2,633	4.8	1.61
Delineation Drilling	81	215	213	998.6	2,165	2.1	1.71
Underground Stope Sample	n/a	26	26	218.1	542	2.5	0.14
Shafts/Exploration	n/a	4	4	20.9	86	4.2	0.10
Totals	**81**	**336**	**334**	**1,985.8**	**5,639**		**3.94**

11.1.6 Bulk Samples

Bulk sampling undertaken at the Meya Mine project utilised surface trenching methods rather than large diameter drilling due to the morphology of the Meya, Bardu and Waterloo kimberlite deposits. The trench bulk sampling was carried out by Meya Mining staff.

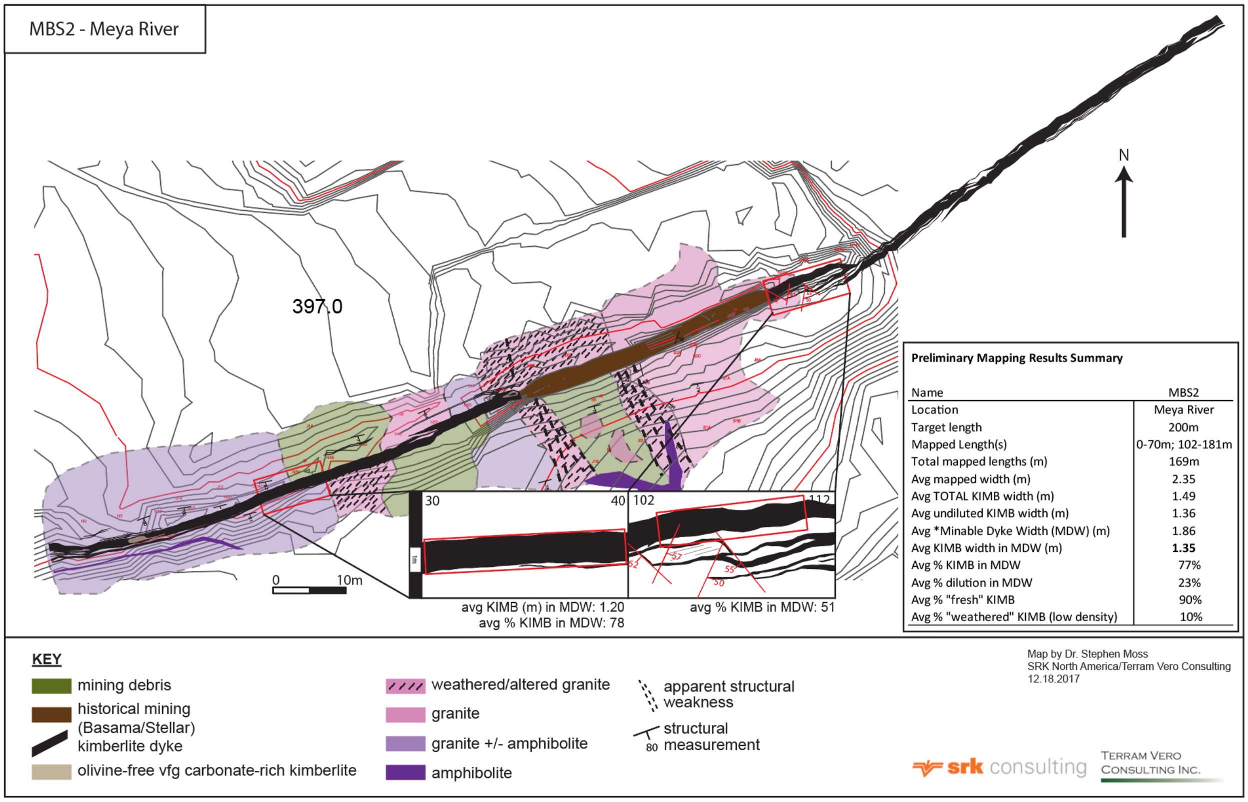
Bulk samples sites were defined by surveyed dimensions at location. Weathered bedrock and kimberlite were removed by track mounted hydraulic excavator and articulated dump trucks. The weathered kimberlite was stockpiled for later processing.

Exposed wall rock and kimberlite were mapped (Figure 11-1 and Figure 11-2) before and after each bulk sample was collected to maximise the amount of information used to estimate the percentage of kimberlite in the sample, and to assess the continuity of the dykes along strike and with depth. The mapping procedure used is as follows:

- All decomposed and weathered overburden was stripped off to expose the dykes
- The hard rock exposures surrounding the dykes were washed and cleaned by a labour crew using a combination of shovels, rakes, and high-pressure water hoses
- On the cleaned surface, a geologist and survey crew identified a strike line which served as a baseline for mapping the exposures
- The survey crew then put into place pegs/nails/spraypaint at precise 1 m spacing along the strike line to serve as ‘control points’ for mapping the bedrock geology
- Rock type intervals were measured perpendicular to the control points: lithology/mapping code; percentage of olivine (visual estimate); kimberlite structure; percentage of country rock (visual estimate) were recorded
- After measuring, representative photographs were taken of the exposures at each control point
- Sampling density: upon completion of mapping of each exposure to be used for bulk sampling, the mapped dykes were sampled for petrography, groundmass spinel chemistry, bulk density and microdiamond analysis using the relevant sampling protocols
- The measured interval data were captured by survey, and the data were imported into a 3D software platform, and displayed as “false” horizontal drill holes
- Survey and mapping data were combined to guide modelling in 3D software. The mapping data as interpreted in the 3D software platform was then verified using field photographs.

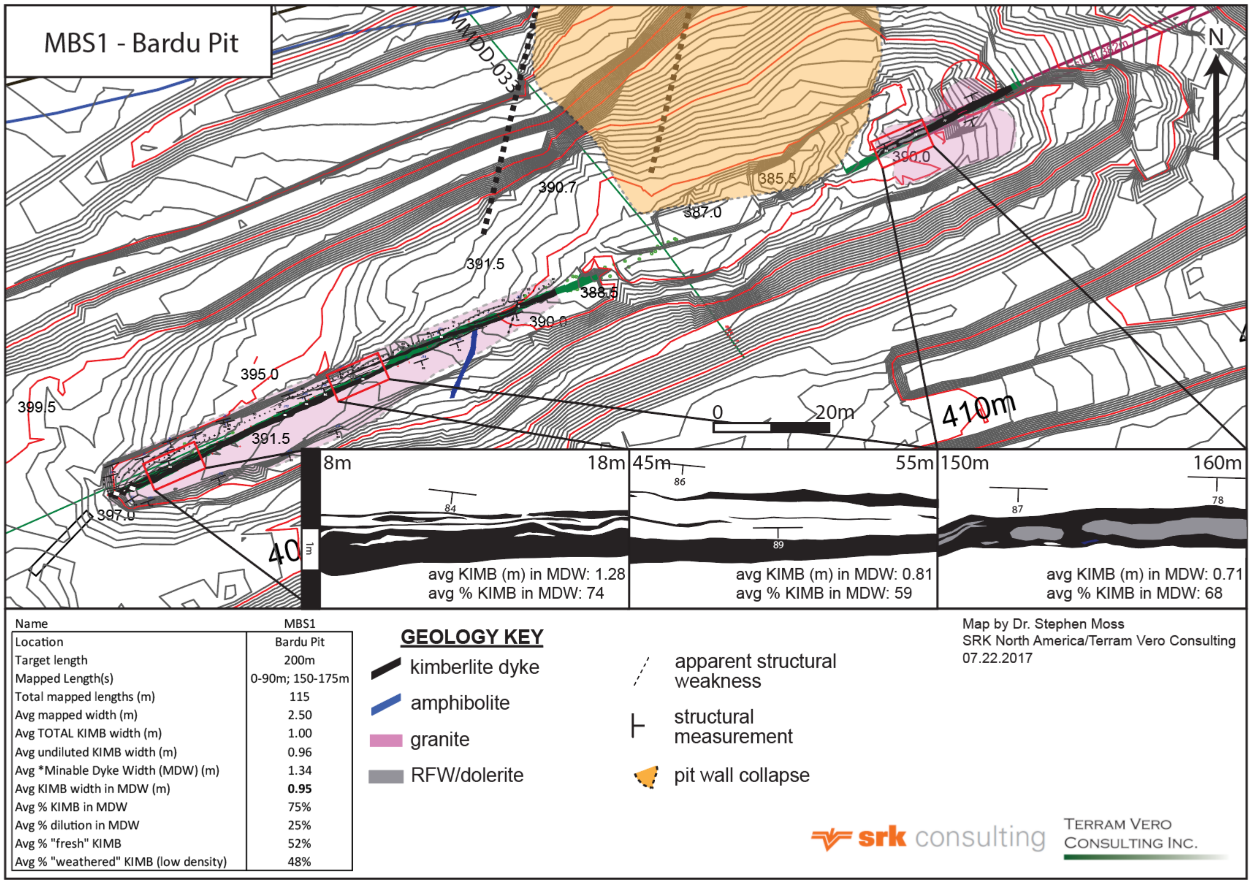
Bulk sample sites were blasted using pneumatic blast hole drill rigs. Kimberlite was physically separated from wall rock granite and partially broken up by the track mounted hydraulic excavator. Loads into articulated dump trucks were indicated at the excavation sites by the Project geologist and received at the process plant site by security and plant management to ensure proper labeling and storage of individual stacked samples.

The samples were processed through an XRT/DMS/X-ray plant at the Meya River site.



Source: SRK, 2018

Figure 11-1: Meya River MBS2 bulk sample site map



Source: SRK, 2018

Figure 11-2: Bardu MBS1 bulk sample site map

Bulk sample processing follows dedicated procedures. The sample processing facility at the Meya Mine project is a secure facility with controlled access and monitored by several layers of security personnel and video surveillance. Sample storage is in a controlled yard. Sample processing occurs inside a fenced and monitored site, with further personnel control and monitoring as the sample is treated through more secure sections, culminating in recovery and sorting.

One or more security officers are present for all operations in the XRT concentrate collection, the recovery facility and the sorting room. This officer is present for all material handling, opening or closing of sample containers, sealing or unsealing, locking or unlocking, and transfer of concentrate material. All concentrate is hands off through the use of direct transfers, secure dock lock containers, and glove box sorting. Dual or triple custody composed of security personnel and Meya Mining senior operating personnel is required at all times for handling of sample material or concentrate, and for seals and locks. A dual, triple, or quadruple key system is utilised, with keys kept in on site safes during off hours. In addition to the Meya Mining and independent security personnel, a Sierra Leone government representative, the Mines Monitoring Officer, is present for all sensitive activities and transports.

All sensitive areas are covered by real-time monitored video surveillance, and recordings are stored on site. Personnel access is restricted, and records are kept of all visitors and personnel present. Security staff maintains a seal register and log of concentrates and recoveries.

11.1.7 Bulk Sample Trenches – Microdiamond sampling

Trench samples of approximately 8 kg each were collected at 5 m spacing along the exposed strike length at the top surface of each bulk sample exposure. The exposed strike lengths at MBS1 and MBS2 were 175 m and 180 m, respectively, generating a total of 25 samples (197.9 kg) at MBS1 and 31 samples (255 kg) at MBS2. Approximately 60 m of the dyke zone in the MBS1 trench (90 m to 150 m along strike) formed a topographic low covered with water and was thus not able to be sampled. Additional samples were also collected from the top surface of the remaining exposure at MBS2 between two sub-samples (35 samples; 295.3 kg). Care was taken to ensure sample material was collected evenly across the entire width of the exposed dyke zone. At the time of sampling, detailed studies of the kimberlite dyke zones had not been completed.

11.2 Bulk Sampling Analyses

11.2.1 Bulk Sampling Summary

There are three planned ± 10,000 tonne bulk sample locations (Figure 4-2), each targeting recovery of approximately 1,000 to 6,000+ carats:

- MBS2: Meya River bulk sample at the northeastern end of the Meya River Dyke Zone
- MBS1: Bardu bulk sample in the central Bardu Dyke Zone delineated strike length
- MBS3: Waterloo bulk sample at the southwestern end of the Waterloo Dyke Zone

Macrodiamonds recovered to date from bulk sample processing, and the retreatment of tailings as produced by Meya, are presented in Table 11-2. Bulk sample survey volumes, tonnes treated, dilution and sample grades as issued by Meya Mining in June 2018 are summarised in Table 11-3.

Table 11-2: Total carats recovered to date from bulk samples and tailings retreatment

Total Carats Recovered	Meya River	Bardu	Screen Size Cutoff
Bulk Sample	6,318.51	747.32	1.6 mm
Tailings Retreatment	1,081.08	312.03	0.8 mm
Total	**7,399.59**	**1,059.35**	

Table 11-3: Bulk sample results as issued by Meya Mining, June 2018

Information	Sample MBS2_1	Sample MBS2_2	Meya River (Total)	Bardu (Total)	Comments
Survey Volumes (m^3)	2,462	2,476	4,938	948	
Survey Tonnes	6,770	6,810	13,581	2,608	
Final Tonnes Treated (Plant)	8,285	8,768	17,053	5,598	~25% (Meya River) and ~114% (Bardu) external dilution factor (survey vs. plant tonnes - grade based on plant tonnes and therefore conservative)
Dilution	39%	34%	37%	48%	Dilution under measured
Grade Sample (cts/t)	0.67	0.52	0.59	0.26	
Grade Tailings (cts/t)	0.15	0.18	0.16	0.12	
Grade (Including Tailings) (cts/t)	0.81	0.69	0.74	0.38	Bardu – extreme conservative due to dilution
Value (US$/ct)	536	260	396	171	Revenue at Meya River excludes Meya Prosperity

Kimberlite samples collected from the Meya River and Bardu bulk sample trenches for petrography and groundmass spinel chemistry, microdiamonds and specific gravity analyses are summarised in Table 11-4.

Table 11-4: Kimberlite samples collected from bulk sample trenches for petrography, groundmass spinel chemistry, specific gravity and microdiamond analysis

Bulk Sample Trench	Petrography	Spinel Chemistry	Specific Gravity	Microdiamond
Meya River – MBS2	67	67	65	66
Bardu – MBS1	27	26	20	25
Total	**94**	**93**	**85**	**90**

11.2.2 Other Sampling – Exploration Shafts, Pit and Dyke Wall Rock

In addition, kimberlite samples were collected from previous Stellar – Petra JV exploration shafts, Koidu Wall Dyke and loose kimberlite at the Bardu Dyke Zone, variously for petrography and groundmass spinel chemistry, and microdiamond analysis, as summarised in Table 11-5.

Table 11-5: Summary of other sampling of exploration shafts, pit and dyke wall rock

Other	Petrography	Groundmass Spinel	Microdiamond
Koidu Wall Dyke	2	2	-
Bardu Pit Dyke	5	5	-
Bardu Shaft	5	5	-
Simbakoro Shaft	-	-	1
Yengema Shaft	-	-	1

11.3 Specific Gravity Data

11.3.1 Drill Core Specific Gravity

In this report, drill core specific gravity is summarised for holes numbered from MMDD-001 to MMDD-135, from the Meya River, Bardu and Waterloo Dyke Zones.

Drill core specific gravity determinations were carried out by Meya Mining staff, recording:

- Specific gravity core sample log sheet and master: sample number; From (m) / To (m) sample interval; length; lithology; lithocode; mass; specific gravity wet/dry.

A dedicated density measurement procedure was followed, which included calibration of balances, density measurements, mass checks, data capture, calculation and validation. The procedure is based on the difference between “Weight in water” and “Weight in air” volume displacement of non-porous rocks. An electronic scale was used, accurate to 0.05 grams (g), capable of weighing samples in air and when submerged in water. Steel pieces of an identified mass are used to calibrate the density scale pre-measurement.

The scope of the procedure covers:

- Calibration of the scale, both pre-measurement and annual checks
- Practical density measurement using the water displacement method
- Calculate density using measured weights of samples

The procedure ensures that both wet and dry densities are measured for all samples to enable quantification of the variance in moisture content.

In summary, 101 kimberlite specific gravity measurements are reported from 50 drill holes. The kimberlite data are summarised in Table 11-6 by dyke zone.

Table 11-6: Summary of kimberlite core sample specific gravity determinations by dyke zone

Kimberlite Core Sample Summary			Specific Gravity Wet g/cc			Specific Gravity Dry g/cc		
Dyke Zone	No. of Samples	No. of Drill Holes	Minimum	Maximum	Average	Minimum	Maximum	Average
Meya River	60	28	2.62	3.16	2.89	2.45	3.16	2.88
Bardu	30	14	2.61	2.94	2.79	2.56	2.94	2.77
Waterloo	11	8	2.58	2.89	2.71	2.53	2.87	2.68

Furthermore, there are 2,641 specific gravity determinations of the country rock core.

11.3.2 Bulk Sample Specific Gravity

A total of 85 bulk sample specific gravity measurements are reported from the Bardu MBS1 and Meya River MBS2 trench bulk sample locations:

Bulk sample specific gravity determinations employing the volume displacement method were carried out by Meya Mining staff, recording:

- Lithology: kimberlite and country rock (weathered and fresh)
- Number of samples
- Wet and dry density, and % variance

Three datasets are reported for the two bulk samples: MBS1 (Bardu – one dataset) and MBS2 (Meya River – two datasets). The specific gravity data for fresh kimberlite are summarised in Table 11-7.

Table 11-7: Summary of Meya River and Bardu trench bulk sample specific gravity determinations

Kimberlite (Fresh) Trench Sample Summary			Specific Gravity Wet g/cc			Specific Gravity Dry g/cc		
Dyke Zone	No. of Samples	Dataset	Minimum	Maximum	Average	Minimum	Maximum	Average
Meya River	30	MBS2_1	2.65	2.91	2.76	2.55	2.90	2.73
Meya River	35	MBS2_2	2.62	2.94	2.82	2.60	2.93	2.81
Bardu	20	MBS1	2.56	2.88	2.70	2.51	2.88	2.67

11.4 Quality Assurance and Quality Control Programs

11.4.1 Core Drilling Program

The core drilling program planning and optimisation were peer-reviewed with the SRK team prior to the completion of the majority of holes. All drilling was planned using Leapfrog® software so that holes could be viewed spatially in 3D together with a GoogleEarth™ image showing the location of the historic artisanal mining activity, which was used to guide and direct the drilling.

The Project geologist verified the collar position, dip, and azimuth of each drill hole by obtaining accurate readings of the drill mast using a handheld differential GPS (position and azimuth) and a clinometer (dip). Upon completion of each hole, the collar is re-surveyed by the Meya Mining survey team and recorded in the final drill hole database.

Once a drillhole was completed, the hole was laid out, and the depth markers were verified. Following verifying the box labelling and depth markers, the on-site geology team photographed the entire hole before any core sampling was undertaken so that a permanent record of the core could be made.

All geological samples collected were submitted to laboratories agreed upon by the QP and the Meya Mining Mineral Resource Manager.

All results released by the various labs and analytical facilities represent auditable documents and, as such, are maintained in their original form. The reports are archived for the life of the Project. The original electronic files of the results received are archived as received without editing.

All original geological logs, geotechnical logs, survey documentation, and specific gravity determinations are also auditable documents. They are maintained in their original form and archived for the life of the Project.

11.4.2 Bulk Sampling Program

Quality control testing was performed on all diamond bulk sampling programs at the Meya Mine project. Processed tailings were also subject to audits (Section 13). QA/QC measures include:

- Adherence to documented processing and handling protocols
- Securing transport units with sample identifications and labeling
- Plant inspection before processing
- Independent third party process monitoring and auditing
- Recording of dense medium separation (DMS) processing parameters as kimberlite is processed (Scada system recording of process parameters) as well as real time observation of operating parameters and review of operating condition trends
- Testing of the DMS processing with density tracers and auditing of these tracer tests by an independent third party
- Audit of representative coarse DMS tailings from select samples as necessary
- Monitoring of diamond recovery statistics, including size frequency analysis
- Review and audit of DMS and diamond data, operating procedures and QA/QC programs

Meya Mining engaged SRK and SRK Associate, Mr. Howard Coopersmith, an external independent consultant, to act as QP to oversee all phases of diamond processing and recovery for the bulk sampling program. Coopersmith confirmed all diamond processing and recovery procedures and operation through limited observation and review.

The XRT/DMS/X-ray diamond recovery facilities are governed by a series of detailed procedures that are appropriate to ensure the security and integrity of samples and the final results. All samples received at the bulk sample process plant are accompanied by a chain of custody document that must be verified prior to processing any sample. Upon receipt, the samples are stored in a secure facility with restricted access. The diamond recovery circuits are in restricted areas, and all samples, concentrates, and diamonds are locked in safes within secure rooms when not being handled.

11.4.3 Bulk Sampling Macrodiamond Studies

December, 2017

Ferraris (2017) reported preliminary diamond characteristics and breakage from the Meya River MBS2 bulk sample production as part of a diamond valuation carried out in Antwerp on 08 December 2017.

All the tender lots of single stones and groups of sorted goods called ‘baskets’ were examined for Type I and Type IIa diamonds. No blast damage was evident in all the stones studied. There was some damage and breakage reported as severe, however Ferraris (2017) believed that some of the less severe forms of damage noted are transport and impact related and could be eliminated. The severe breakage noted was obviously crusher related and the necessary adjustments to gaps was recommended.

February, 2018

Ferraris (2018a) reported diamond characteristics in a series of studies of three diamond samples conducted in Antwerp from 15 to 21 February 2018. The studies included the following:

- Size frequency distributions;
- Diamond valuations;
- Breakage and damage studies;
- Type IIa diamond population studies; and
- Meya River diamond characteristics – shape, colour, fluorescence.

The three samples studied in February 2018 were (Ferraris, 2018a):

1. MBS2 & Dyke – 0 m to 173 m – 10,328 stones and 3,042.152 ct.
2. MBS2 – 8 mm Tailings (Audit) – 1,975 stones and 370.078 ct.
3. Meya Mine (Miscellaneous) – 2,128 stones and 626.742 ct.

No blast damage was evident in any of the stones studied. It was estimated that at least 75% of the stones in the larger sizes had been subjected to crusher impact damage. While this percentage does reduce with size, it still contributes to value loss.

March, 2018

A further three diamond samples were studied 19 to 28 March 2018 in Antwerp (Ferraris, 2018b):

1. Bardu Sample weighing 747.35 ct. This sample had a first pass (normal treatment) and tertiary closed size setting of 10 mm and was further screened at 12 mm.
2. Bardu DMS 8 mm Tailings weighing 79.73 ct. A portion of the DMS floats were re-crushed with the tertiary crusher and screened with 8 mm screens.
3. Miscellaneous ROM Sample weighing 1,299.94 ct. This sample does not reflect the Bardu sample; it consists of various recoveries rolled together and is mostly Meya River material.

Ferraris (2018b) stated that a full breakage study was not possible; however, observations were that while breakage appeared to be much less, impact damage was ongoing, albeit at a reduced rate. The lower breakage levels were considered to be most likely due to the following points:

1. Changes made to the circuits in the plant to reduce impact damage
2. An increase in the amount of rounded dodecahedra
3. A decrease in the amount of larger Type IIa stones

The study concluded that while impact and abrasion were still present, the overall level and amount of points and edges affected by abrasion had decreased. Only one stone was noted with crusher damage.

May, 2018

Ferraris (2018c) reported studies and observations of a further set of three samples for size frequency distribution, valuations, breakage, impact and Type IIa population, conducted in Antwerp from 16 to 24 May 2018.

The three samples were:

1. Meya River Dyke Zone ROM Sample – MBS2 - B5: weighing 2,348.35 ct. This sample was screened at 12 mm.
2. Meya River Dyke Zone – MBS2 Tailings Sample: weighing 969.95 ct. This sample is from the DMS Tailings Audit.
3. Bardu Dyke – MBS1 Tailings Sample: weighing 232.34 ct. This sample is from the DMS Tailings Audit.

A full breakage study was not carried out; however, observations were included in this report, specifically on the large broken Type IIa stones. While the overall breakage was higher than the March 2018 samples with impact damage ongoing, the abrasion had reduced markedly. It was noted that the Type IIa population was higher than in the March 2018 samples.

The overall colour of the Meya River production appears to be constant, with minimum yellow and brown goods present. Many of the yellows seen in most images have a very thin yellow coat; however, the true colour is white.

11.5 SRK Comments

In QP's opinion, the sampling, preparation, security and analytical procedures implemented by Meya Mining are consistent with generally accepted industry best practices and are considered adequate for the current project stage. All future sampling must be undertaken in such a way that samples collected do not mix the separate phases of kimberlite that have now been established.

12 Data Verification

12.1 Verifications by Meya Mining

12.1.1 Microdiamond Data

A routine QA/QC process conducted by the SRC is measured through the addition of synthetic diamond tracer “spikes” prior to the caustic fusion (Spike 1) and the residue treatment (Spike 2) stages of sample processing. The Spike 1 tracers (between 11 and 20 per sample) were added to 79 samples and Spike 2 tracers (between 10 and 20 per sample) were added to 84 samples. This provides a robust evaluation of the potential diamond loss related to sample processing. The picking of both the Spike 1 and Spike 2 tracer diamonds recovered 98% (1196/1219) and 99.6% (1214/1218) of the inserted diamonds, respectively. The tracer diamonds were never missed from consecutively-picked samples for either Spikes 1 or 2.

Concentrates were considered “picked” when they could be picked twice consecutively (after the initial and subsequent re-picks during which diamonds were recovered) without recovering any more diamonds. Every fraction of every residue was then re-picked by a second observer until an entire pass was conducted without recovering a single diamond. The processes employed and the QA/QC results confirm that no significant loss of diamond or contamination between samples has been incurred during microdiamond sample processing.

12.1.2 Density Determinations

Specific gravity determinations using a volume displacement method against a reference standard of 2.68 grams per cubic centimetre (g/cc) were obtained from 59 kimberlite samples (17 core, 42 trench) sent for microdiamond analysis at the SRC in 2017 as summarised below:

- Drill Core
  - 10 drill holes, 17 samples, 18 measurements (1 repeat): average 2.77 g/cc
  - Bardu Dyke Zone: 7 drill holes, 13 measurements: average 2.77 g/cc
  - Waterloo Dyke Zone: 3 drill holes, 4 measurements: average 2.76 g/cc
- Trench Samples
  - Bardu MBS1: 25 samples, 26 measurements (1 repeat): average 2.52 g/cc
  - Meya River MBS2: 17 samples, 18 measurements (1 repeat): average 2.77 g/cc

12.2 Verifications by SRK

12.2.1 Meya Mine project Geology, Diamond Sampling, Mining and Processing Site Visits

- Mr. Casey Hetman, SRK: Geology and Logging Visit 1: 11 to 20 January 2017
  - Review of selected collar positions to confirm location, dip and azimuth
  - Review of all drill cores available to confirm kimberlite-country rock contacts
  - Logging of selected holes to confirm kimberlite geology – country rock not examined in detail
  - Review of down hole survey procedures
  - Review of petrography sampling
- Mr. Casey Hetman, SRK: Geology and Logging Visit 2: 28 June to 07 July 2017
  - Review of selected collar positions to confirm location, dip and azimuth
  - Review of all drill cores available to confirm kimberlite-country rock contacts
  - Logging of selected holes to confirm kimberlite geology – country rock not examined in detail
  - Review of bulk sampling exposures within Bardu and Meya River to confirm geology
  - Review of petrography sampling
- Dr. Stephen Moss, Terram Vero Consulting: Diamond Sampling Visit 1: 11 to 25 July 2017
  - Mapping and bulk sampling oversight at MBS1 (Bardu) and MBS2 (Meya River) for training of Meya Mining geologists.
  - Review of exposures at MBS3 (Waterloo site).
  - Bulk sample optimisation to ensure control over kimberlite contained in bulk samples.
- Mr. Howard Coopersmith, Howard Coopersmith LLC: Process Plant Visit 1: 07 to 12 December 2017
  - Review of Process Plant Operating Practices and adherence to standard QA/QC.
  - Verify adherence to Diamond Value Management principles.
  - Certify procedures and recoveries.
- Dr. Stephen Moss, Terram Vero Consulting: Diamond Sampling Visit 2: 13 to 21 December 2017
  - Review and revision of survey methodology for bulk sample collection.
  - Review and documentation of procedures and sample security for mineralised material and sample movements from pit to plant and within the plant.
  - Review of process plant components to identify potential impacts on recoverable diamond size frequency distribution.
  - Review and documentation of the diamond sorting room process to ensure sample security.
  - Review of potential methods to determine the density of diamonds with attached kimberlite.

- Mr. Casey Hetman, SRK: Geology and Logging Visit 3: 11 to 16 February 2018
  - Review of selected collar positions to confirm location, dip and azimuth.
  - Review of all drill cores available to confirm kimberlite-country rock contacts.
  - Logging of selected holes to confirm kimberlite geology – country rock not examined in detail.
  - Review of bulk sampling exposures within Bardu and Meya River to confirm geology.
  - Review of petrography sampling.
- Mr. Jarek Jakubec, SRK: Mine Planning Visit 1: 11 to 16 February 2018
  - Review of bulk sample excavations to confirm rock mass characteristics.
- Mr. Casey Hetman, SRK: Geology and Logging Visit 4: 05 to 09 May 2018
  - Review of selected collar positions to confirm location, dip and azimuth.
  - Review of all drill cores available to confirm kimberlite-country rock contacts.
  - Logging of selected holes to confirm kimberlite geology – country rock not examined in detail.
  - Review of bulk sampling exposures within Bardu and Meya River to confirm geology.
  - Review of petrography sampling.
- Mr. Casey Hetman, SRK: Geology Visit 5: 18 to 24 July to 09 July 2019
  - Meya, Koidu, Tonguma and Boroma.
  - Review of plant and diamond production.
  - Review of underground geology at Koidu – DZB and Tonguma.
  - Review of drillcores and bulk sampling exposures.
- Mr. Casey Hetman, SRK: Geology Visit 6: 13 to 09 July 2021
  - Site visit # 1 with Alrosa technical team to Meya, Koidu, Tonguma and Boroma
  - Review of plant and diamond production
  - Review of underground geology at Koidu – DZB
  - Review of drillcores and bulk sampling exposures
- Mr. Casey Hetman, SRK: Geology Visit 7: 21 to 09 Feb 2022
  - Site visit # 2 with Alrosa technical team to Meya, Koidu, Tonguma and Boroma
  - Review of plant and diamond production
  - Review of underground geology at Koidu DZB
  - Review of drillcores and bulk sampling exposures
- Mr. Casey Hetman, SRK: Geology Visit 8: 01 to 06 May 2022
  - Site visit with De Beers technical team to Meya and Boroma
  - Review of plant and diamond production
  - Review of underground geology

- Mr. Casey Hetman, SRK: Geology Visit 9: 15 to 09 Sept 2022
  - Site visit with Gemcorp technical team to Meya and Boroma
  - Review of plant and diamond production
  - Review of underground geology at Meya
- Mr. Casey Hetman, SRK: Tomra Production Facility Germany Visit 10: 29 to 30 Nov 2022
  - Review of waste sorting technology at the Tomra plant in Hamburg, Germany
  - Review of sorting of Meya waste vs kimberlite.
- Mr. Casey Hetman, SRK: Geology and Resource and Structure Visit 11: 13 to 23 May 2023
  - Review of underground exposures in ore drives: KIMB1, KIMB2 and KIMB3 with Cliff Revering
  - Simbakoro exposures reviewed with Wayne Barnett and Cliff Revering
  - Review of underground structures with Wayne Barnett – Meya River Fault
  - Collection of KIMB1, KIMB2 and KIMB3 samples for petrography
  - Mapping underground exposures of KIMB1, KIMB2 and KIMB3
  - Review of plant and diamond production
- Mr. Wayne Barnett, SRK: Geology and Resource and Structure Visit 1: 13 to 23 May 2023
  - Review of underground exposures: KIMB1, KIMB2 and KIMB3
  - Review of underground structures – Meya River Fault
  - Review of plant and diamond production
- Mr. Cliff Revering, SRK: Geology and Resource and Structure Visit 1: 13 to 23 May 2023
  - Review of underground exposures: KIMB1, KIMB2 and KIMB3
  - Review of underground structures – Meya River Fault
  - Review of plant and diamond production
- Mr. Casey Hetman, SRK: Geology and Mapping Visit 12: 25 Sept to 10 Oct 2023
  - Review of underground exposures in ore drives: KIMB1, KIMB2 and KIMB3
  - Collection of KIMB1, KIMB2 and KIMB3 samples for petrography
  - Mapping underground exposures of KIMB1, KIMB2 and KIMB3
  - Sampling of KIMB1 and KIMB3 from first stope
  - Review of diamonds recovered by GemFair in Kono district
- Mr. Casey Hetman, SRK: Grade Control for Discrete Sample Visit 13: 27 Oct to 26 Nov 2023
  - Review of underground exposures in ore drives: KIMB1, KIMB2 and KIMB3
  - Collection of KIMB1, KIMB2 and KIMB3 samples for petrography
  - Mapping underground exposures of KIMB1, KIMB2 and KIMB3
  - Guiding the separation of KIMB1 vs KIMB3 for discrete production to determine grade

- Mr. Casey Hetman, SRK: Geology and Underground Mapping Visit 14: 13 to 18 Feb 2024
  - Review of underground exposures in ore drives: KIMB1 and KIMB3
  - Collection of KIMB1, KIMB2 and KIMB3 samples for petrography
  - Mapping underground exposures of KIMB1 and KIMB3
- Mr. Jarek Jakubec, SRK: Review of UG and Geotech Site Visit: 05 Nov 2022 to 10 Nov 2022
  - Drill core and bulk sample excavations to review rock mass properties of the portal
  - Review of neighbouring site underground mine – Koidu
  - Review of underground mining equipment and mining experience at Meya dyke
  - Visit of underground mining activities at Tonguma neighbouring property
- Mr. Jarek Jakubec, SRK: Review of UG and Geotech Site Visit: 12 May 2023 to 17 May 2023
  - Review of the underground mining progress with focus on excavation quality and ground support
  - Assessment of rock mass condition of exposed kimberlite dykes

12.2.2 Antwerp Diamond Valuation Visits

- Mr. Casey Hetman, SRK (Geology) and Mr. Jarek Jakubec, SRK (Mining) Visit 1: 06 to 07 December 2017
  - Diamond characteristics, damage and breakage, and valuation

12.2.3 Verifications of Analytical Quality Control Data

SRK has not conducted verifications of analytical quality control data at this time.

12.2.4 Independent Verification Sampling

SRK has not conducted verification sampling at this time.

12.2.5 Summary

In the QPs' opinion, the processing of drill core and bulk samples and recovery microdiamonds and macrodiamonds were performed in a proper manner and the results are of sufficient quality and integrity to be used for resource definition purposes.

12.3 Verification by Consulmet

- Mr. Rowan Bjorn Haai, Consulmet: QAQC Processing Plant: 15 April 2019 to 17 July 2019
  - Confirmation of adherence to process control parameters
  - Assist with plant operation
  - Data capturing per shift
  - To confirm assumed PSD's correlate with actual plant mineralised material PSD's

- Mr. Wildu Mostert, Consulmet: General Site Visit: 20 to 26 February 2022
  - General plant inspection and report on the plant condition
- Mr. Wildu Mostert, Consulmet: General Site Visit: 13 to 19 September 2022 to 19/09/2022
- Mr. Morne Lindeque, Consulmet & Mr Koos Davel, Tailings Solutions: TSF and Tailings Assessment: 13 to 17 November 2022
  - To assess the condition of the current TSF facility
  - To identify possible constraints in the event that higher volumes need to be pumped to TSF as a result of the plant upgrade
  - To assess deposit position for the slimes from the NIR plant
- Mr. Nico Van Vuuren, Consulmet and Mr Wildu Mostert, Consulmet: Witness NIR Test Work: 28 November to 3 December 2022
  - Consulmet personnel witnessed the Tomra NIR test work of the Meya sample material in Wedel, Germany
- Mr. Rowan Bjorn Haai, Tomra: Bulk Sampling Preparation: 11 to 25 January 2023
  - To prepare the plant to treat the bulk sample
  - Ensure that the plant is operate at process design parameters
  - Data capturing
- Mr. Rowan Bjorn Haai, Consulmet: Bulk Processing: 21 April to 01 June 2023
  - Bulk processing of selected underground samples
- Ms. Erin Margaret McLintock, Consulmet: Bulk Processing: 09 to 16 May 2023
  - Bulk processing of selected underground samples
- Mr. Gerhard Grobler, IMS: Tertiary Crusher Repair: 01 to 08 August 2023
  - Assist the mine to repair the tertiary cone crusher to original equipment manufacturer’s (OEM) standards
- Mr. Wesley Daniel Jansen van Nieuwenhuizen, Micron Weighing: Recalibration of Weightometers: 03 to 09 October 2023
  - Calibration of all belts scales to ensure correct tons are logged

12.4 Verifications by Z Star

- Mr. Sean Duggan, Z Star: QP Site Visit: 18 to 20 July 2024
  - Conduct estimation and classification of the mineral resources as appointed by Meya Mining
  - To satisfy Z Star of the exploration, core drilling, sampling, production and historical operations conducted.
  - Visited the drill sites, exploration areas, open cast exposures, underground development/production and treatment/recovery facilities to fulfill the NI 43-101 mineral resource reporting requirement.

12.5 Verifications by Digby Wells

- Mr. Samba Sangare & Mr. Jan Arie Van T'Zelfde, Diby Wells: Site Survey #1: 06 to 12 March 2022
  - Socio Economic Survey
- Mr. Peter Kimberg, Ms. Phoebe Cochrane, Mr. Aviwe Sentwa & Mr. Keenan Terry, Diby Wells: Site Survey #2: 25 April to 03 May 2023
  - Noise & Aquatics / Groundwater Survey
- Mr. Peter Kimberg, Diby Wells: Site Survey #3: 12 to 19 July 2023
  - Soil & Wetlands Survey

12.6 Verifications by CEMMATS

- Safiatu Luseni & Mr. Mohamed Mansaray, CEMMATS: Site Survey: 06 to 12 March 2022
  - Socio Economic Survey
- Ms. Christina Fortune & Mr. Malcolm Smith: Site Survey: 25 April to 03 May 2023
  - Noise & Aquatics / Groundwater Survey
- Mr. Joe Alie & Lahai Kellie, CEMMATS: Site Survey: 25 April to 03 May 2023
  - Archaeology and Cultural Heritage

13 Mineral Processing and Metallurgical Testing

13.1 Introduction

The mineral processing and metallurgical testing carried out by Consulmet PTY Ltd. for Meya Mining is based on two scopes of work:

1. Near-Infrared (NIR) Waste Sorting Plant (200 tph)
    a. Comprises testwork results, design criteria, scope, and pricing
    b. Designed to efficiently separate waste rock from kimberlite
2. Main Plant upgrade (100 tph scrubber feed)
    a. Developed to accommodate extra capacity provided by the NIR circuit
    b. Aims to increase the main plant mill feed to 100 tph

The Main Plant upgrade is further divided into two phases.

- Phase 1 focuses on replacement of the mobile secondary cone crusher with a static Kawasaki secondary cone crushing circuit and installation of a log-washer.
- Phase 2 of the main plant upgrade includes installation of a new 100 tph primary DMS, a quaternary crushing circuit, upgrades to the recovery circuit, and removal of as many jet pump systems as possible to minimise diamond damage.

13.2 Metallurgical Testing

13.2.1 Sampling

Bulk samples were selected by the Meya Mining geologists in line with sampling procedure developed to ensure representativeness of all samples collected. The testwork report is summarised in Consulmet's report (Consulmet (a), 2024, Appendix A), while the sampling procedures can be found in Consulmet's report (Consulmet (a), 2024, Appendix B).

The mineralised material samples collected for the NIR testwork included the following:

- Six tonnes of kimberlite (crushed)
- Six tonnes of granite (crushed)

The samples were then mixed to represent the feed mineralised material. Both kimberlite and granite material were broken into smaller fractions (max -300 mm) before mixing to create nine tonnes of material consisting of about one-third (33%) kimberlite and two-thirds (67%) granite in line with the LOM production forecast's dilution ratio. It must be noted that the purpose of the sampling is to create a reasonable representation of the mineralised material such that the efficacy of the waste sorting could be determined. Here more importance is placed on the ability of the sorter to differentiate between the kimberlite mineralised material and the granite waste rock.

In addition to the granite and kimberlite samples that were collected, the testwork also included calibration of the sorter using a range of other potential waste rock that may be present in the field. Meya Mining provided samples of the following mineralised material:

- Kimberlite
- Granite
- Dolerite (diabase)
- Amphibolite
- Pegmatite

These samples were used to calibrate and map the NIR sorting machine prior to testwork, ensuring its ability to differentiate between various rock types present in the orebody.

13.2.2 NIR Testwork

NIR testwork conducted by TOMRA™ took place at their test facility in Germany. The TOMRA NIR machines use a combination of colour and NIR formats to distinguish the gangue from the kimberlite in the feed. To develop a sorting-task-specific algorithm for the Meya mill feed, images were taken of a reference sample set (kimberlite, granite, pegmatite, amphibolite and dolerite) to define parameters into the software. The reference sample set contained samples of all discrete groups defined by the Meya Mining geologists.

The testwork was conducted on two size fractions: 30–80 mm and 80–200 mm. For the 30-80 mm fraction, a double-stage sorting process was employed.

Due to the limitations on the testwork sorter, the larger size fraction could not be fed through the machine at design feed rates and was instead fed through the sorter, applying a single rock at a time.

No variability testwork was performed.

As the TOMRA NIR sorters rely on a surface detection technique, adequate surface preparation is vital to the efficiency of the sorters as any surface contamination can lead to misdetection. This was controlled during the testwork, where all samples were washed prior to being fed through the sorter. In the NIR Waste Sorting Plant design, this is achieved by two-stage washing prior to sorting.

13.2.3 Testwork Results

The results of the NIR sorting testwork are summarised as follows.

For the 30–80 mm mineralised material:

- Test 1.1, at a feed rate of 100 tph, achieved 93.7% kimberlite recovery with 89.6% waste removal.
- Test 2, at a feed rate 70 tph + scavenger, achieved 98% kimberlite recovery with 91.4% waste removal was achieved (Figure 13-1). This two-step approach proved most effective for this size fraction.
- Test 3.1, at a feed rate of 70 tph, achieved kimberlite loss of less than 2%, but the waste removal was 66%.

For the coarser, 80–200 mm mineralised material:

- Test 4.1, individual rock scanning, when the material was sorted within the detectability tests, and each rock was hand-fed, demonstrated that less than 1% of kimberlite was misplaced.

Table 13-1 provides an overview of the test results.

Table 13-1: NIR sorting testwork results

	Feed		Non-Eject		Eject		Efficiency (%)		Feed Rate (t/h)
	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Kimberlite Recovery	Waste Removal	
Feed	845.5	100.0	328.5	38.9	517.0	61.1			100
Kimberlite	288.8	34.2	270.5	32.0	18.3	2.1	93.7		
Waste	556.7	65.8	58.0	6.9	498.7	59.0		89.6	
Test 2.1									
	Feed		Non-Eject		Eject		Efficiency (%)		Feed Rate (t/h)
	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Kimberlite Recovery	Waste Removal	
Feed	789.5	100.0	265.0	33.6	524.5	66.4			70
Kimberlite	265.6	33.6	236.4	29.9	29.2	3.7	89.0		
Waste	523.9	66.4	28.6	3.6	495.3	62.7		94.5	
Test 2.2									
	Feed		Non-Eject		Eject		Efficiency (%)		Feed Rate (t/h)
	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Kimberlite Recovery	Waste Removal	
Feed	524.5	100.0	40.5	7.7	484.0	92.3			70
Kimberlite	29.2	5.6	24	4.6	5.2	1.0	82.2		
Waste	495.3	94.4	16.5	3.1	478.8	91.3		96.7	
Test Run 2 Combined Results									
	Feed		Non-Eject 2.1+	Eject 2.2	Eject 2.1+	Non-Eject 2.2	Efficiency (%)		Feed Rate (t/h)
	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Kimberlite Recovery	Waste Removal	
Feed	789.5	100.0	305.5	38.7	484.0	61.3			70
Kimberlite	265.6	33.6	260.4	33.0	5.2	0.7	98.0		
Waste	523.9	66.4	45.1	5.7	478.8	60.6		91.4	
Test 3.1									
	Feed		Non-Eject		Eject		Efficiency (%)		Feed Rate (t/h)
	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Kimberlite Recovery	Waste Removal	
Feed	840	100.0	471.0	56.1	369.0	43.9			70
Kimberlite	287.8	34.3	283.3	33.7	4.5	0.5	98.4		
Waste	552.2	65.7	187.7	22.3	364.5	43.4		66.0	
Test 4.1									
	Feed		Non-Eject		Eject		Efficiency (%)		Feed Rate (t/h)
	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Mass (kg)	Mass (%)	Kimberlite Recovery	Waste Removal	
Feed	813.0	100.0	300.0	36.9	513.0	63.1			Hand-Fed
Kimberlite	263.4	32.4	261.0	32.1	2.4	0.3	99.1		
Waste	549.6	67.6	39.0	4.8	510.6	62.8		92.9	

Source: Consulmet (a) 2024

Figure 13-1 illustrates the distinct separation of red granite mineralised material from kimberlite achieved in Test 2.1, visually demonstrating the effectiveness of the NIR sorting process.

Source: Consulmet (a) 2024

Note: Showing a distinct separation of the red granite mineralised material from the kimberlite

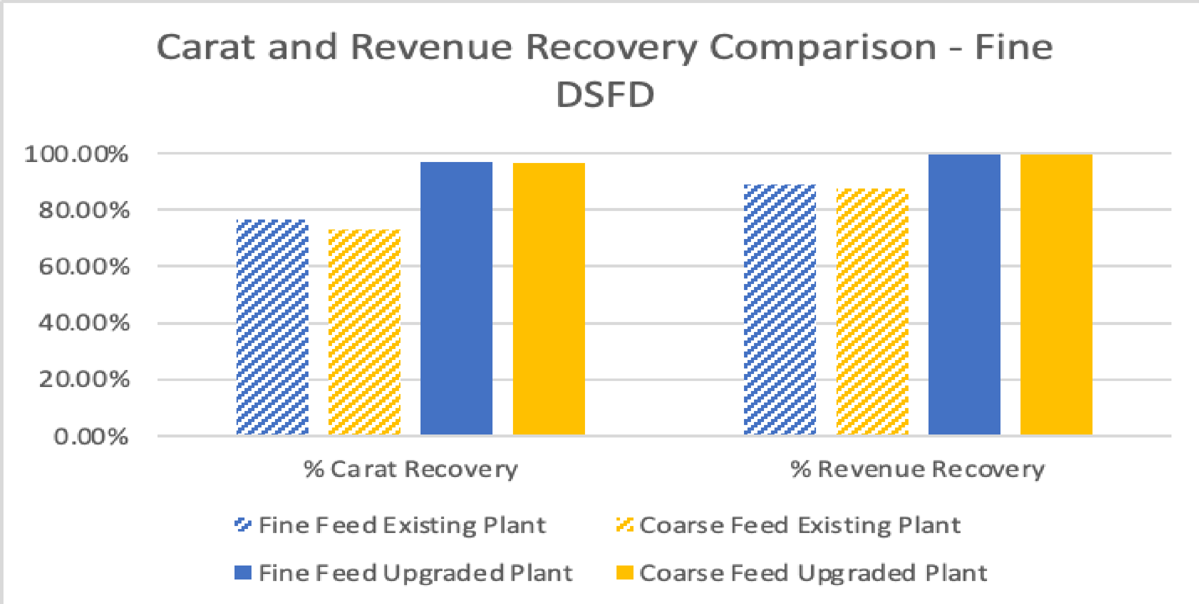
Figure 13-1: Product and waste from Test 2.1 mineralised material characteristics

13.2.4 Carat and Revenue Recovery Findings

The proposed plant upgrades and the inclusion of an NIR Waste Sorting Plant are based on extensive LIMN software simulations that indicate that improvements in both carat and revenue recoveries are achievable through the proposed plant upgrades and inclusion of the NIR Waste Sorting Plant.

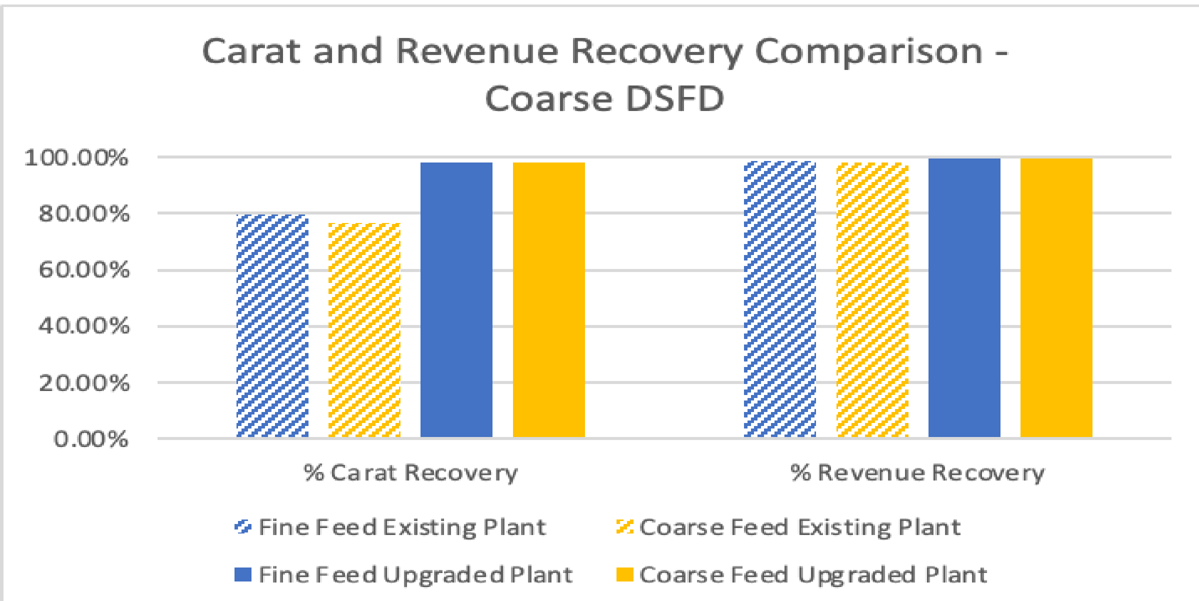
Figure 13-2 and Figure 13-3 compare carat and revenue recoveries for fine and coarse diamond size frequency distributions (DSFD) respectively. The results can be summarised as follows.

- For a fine DSFD
  - Current plant: approximately 74% carat recovery and 88% revenue recovery (Consulmet (a) 2024)
  - Proposed plant: approximately 96% carat recovery and 99% revenue recovery
- For a coarse DSFD
  - Current plant: approximately 77% carat recovery and 98% revenue recovery
  - Proposed plant: approximately 98% carat recovery and 99.9% revenue recovery



Source: Consulmet (a), 2024

Figure 13-2: Comparison of carat and revenue recoveries for a fine diamond size frequency distribution

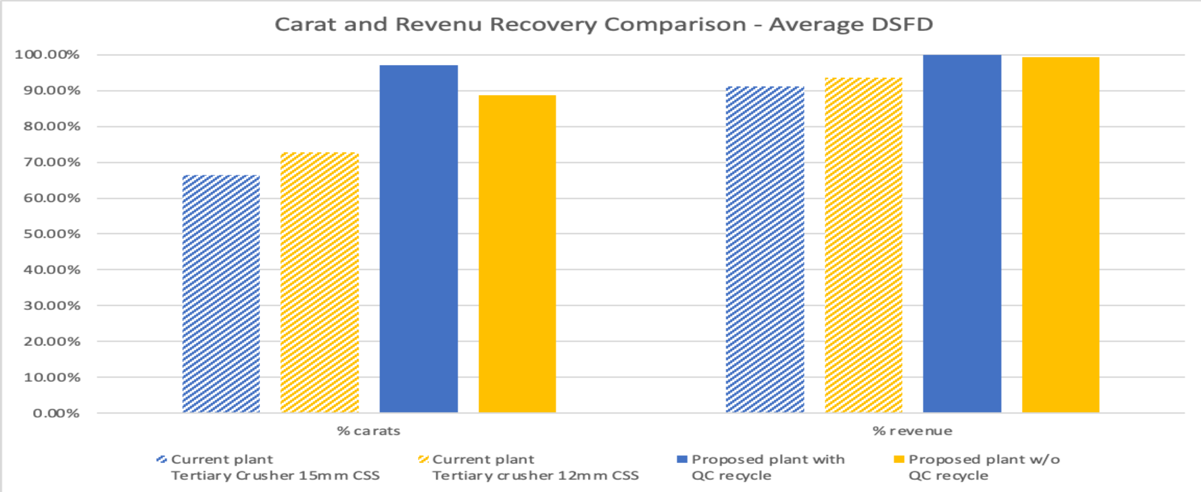


Source: Consulmet (a), 2024

Figure 13-3: Comparison of carat and revenue recoveries for a coarse diamond size frequency distribution

It is important to note that when the DSFD for Meya Mine Project is better understood, it is likely the diamond size distribution will tend to be more to the Fine DSFD.

As part of the process design, Consulmet considered different options for increasing carat and revenue recoveries. Figure 13-4 further illustrates that despite some gains that can be achieved using the existing setup, such as adjusting the closed-side setting on the tertiary crusher, much higher gains are possible with the proposed plant and the additional Quaternary Crusher (QC).



Source: Consulmet (a), 2024

Note: Based on optimisation options for both current and proposed plant

Figure 13-4: Comparison of carat and revenue recoveries for a coarse diamond size frequency distribution

From Figure 13-4 above it is noted that the recycle on the QC will have a greater impact in the event of a finer DSFD. It is recommended that the option to include/remove the QC recycle be considered during the detailed design phase.

13.2.5 Sample Representativeness

The bulk samples were selected to be representative of the expected feed mineralised material, including the anticipated dilution ratio. However, as exploration of the underground dyke zones is ongoing, the final mill feed characteristics may vary from those used in the testwork.

13.2.6 Processing Factors and Deleterious Elements

Several key processing factors have been identified:

- **Mineralised Material Competency**: The country rock is predominantly very competent granite, while the Meya River kimberlite rock is also competent. There is negligible clay anticipated in the rate of mining (ROM).
- **Waste Dilution**: A high waste dilution (~64%) is expected in the ROM due to the planned mining strategy. This is a significant processing factor that necessitates the NIR Waste Sorting Plant.
- **NIR Waste Sorting**: The NIR Waste Sorting Plant will remove most of the granite waste from the competent kimberlite feed. This will reduce the amount of material to be trammed to the main plant and improve the quality of material to be treated, resulting in a positive economic outlook for the Project.
- **Wear Rates**: The general hard geology is expected to result in above-normal wear patterns on equipment. However, reducing waste percentages through NIR sorting should help mitigate this issue.
- **Diamond Breakage Risk**: Meya Mining regularly has a higher incidence of Type IIa diamonds in their mineralised material, which are highly brittle and prone to breakage. This has influenced the

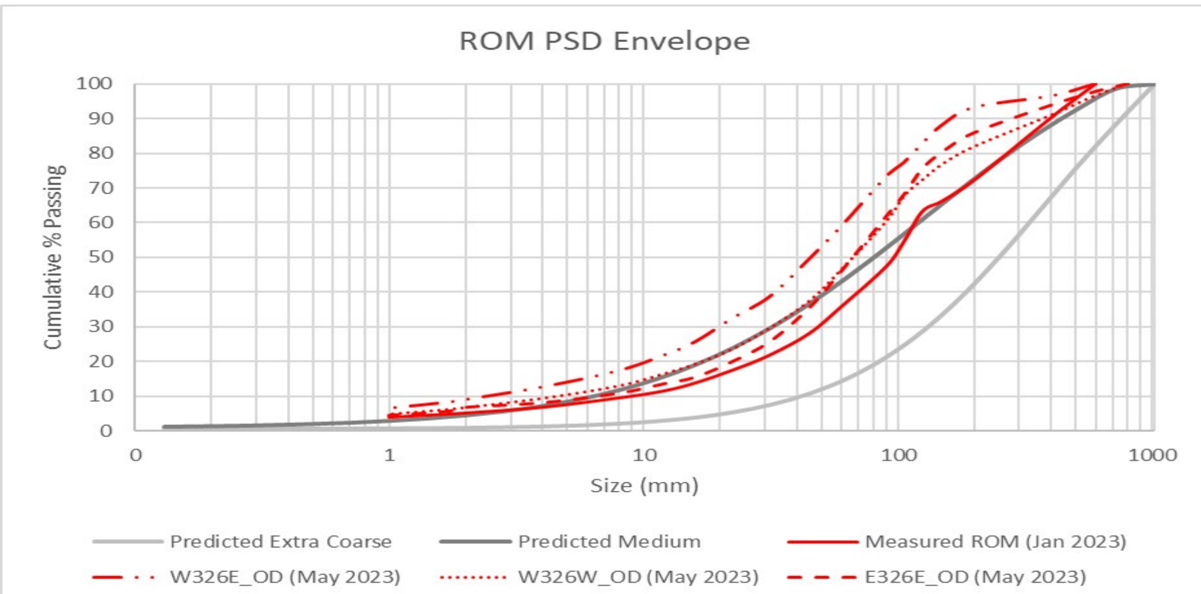
design of the processing plant, particularly in areas such as the replacement of jet pump systems where possible.

- **Water Availability**: Water availability on site remains a challenge during the dry season, which could potentially impact processing operations. This will require careful management and potentially further investigation of water recovery methods.

13.2.7 Particle Size Distribution

Initially, due to insufficient actual data on the expected underground ROM feed particle size distribution (PSD), an initial PSD model was developed by Mr. Phil J. Rider, an external consultant to both Consulmet and Meya Mining. This model was later compared with limited actual measurements and verified by Consulmet's process engineers in January and May 2023. The results are presented in Figure 13-5.

The measured ROM samples are finer than predicted or measured earlier. However, these results have been obtained over a specific short timeframe and may change over time. The implications of this for the NIR Waste Sorting Plant and the Main Plant are explained in greater detail in the following sections.



Source: Consulmet (a), 2024

Figure 13-5: Actual vs predicted NIR Waste Sorting Plant ROM PSD envelope

NIR Waste Sorting Plant

A larger portion of the ROM will not require crushing in the jaw crusher, reducing wear in this crusher.

A higher-than-expected portion of the feed could report to the 30–80 mm middlings NIR sorters which were already near the limit of their capacity.

If the ROM PSD shifts, the head feed throughput will need to be scarified in order to maintain efficiency within the sorting process.

Increasing capacity in this size fraction (30–80mm), by installing an additional middlings NIR sorting stream is not a viable solution at this point.

Various options regarding processing flexibility have been considered. It was concluded that one option to mitigate the effect of this would be to widen the coarse NIR feed size fraction from 80–200 mm, to 70–200 mm. This shifts approximately 10 tph from the middlings NIR stream to the coarse NIR stream and introduces operational flexibility back into the circuit. This option has been approved by the OEM.

The ROM fines are constant at 5–8%, and while higher than predicted, are already catered for in the plant design.

The finer than expected ROM PSD could be related to blasting techniques and the extensive dilution experienced at the moment, whilst the ore drives are under development. Once these are completed, it should be easier to control the blasting pattern and dilution to an extent.

With a fine PSD, up to an additional 13% of the material could report to the -30 mm stockpile, bypassing the NIR sorters and not having the waste fraction ejected.

PSD Considerations and Impact on Main Plant

Increasing the -30 mm NIR plant product by up to an additional 13% could increase the effective wear rates experienced by the main plant, which could result in increased operating costs as crusher wear parts could need to be replaced at the same or increased frequency as currently experienced.

The ROM fines are constant at 5–8%, and while higher than predicted, are already catered for in the main plant design.

13.3 Processing – Basis of Design

13.3.1 NIR Waste Sorting Plant Approved Design Basis

Table 13-2 summarises the process design criteria used as the basis for the NIR Waste Sorting Plant design.

Table 13-2: High-level process design criteria for the NIR waste sorting plant

Description	Units	Value	Comment
General Operating Parameters			
Throughput	tph	200.0	
Operating Philosophy			CONTOPS
ROM Specific Gravity	t/m^3	2.71	
Bottom Cut-Off Size (BCOS)	mm	1.6	
LOM – Meya Dyke	years	15	
Feed Preparation			
Primary Jaw Crusher CSS	mm	127.0	
Washing & Screening Stages Prior to Sorters	#	2	
NIR Modules			
Number of Modules	#	2	
Module Configuration			Rougher + Scavenger
Size Ranges			
Middlings	mm	-70 +30	
Coarse	mm	-200 +70	
Middlings NIR Module			
Type of Sorter			TOMRA PRO Secondary COLOR-NIR
Rougher Maximum Throughput (Based on Testwork)1	tph	70	
Rougher Yield to Waste	% w/w	70	
Scavenger Yield to Product	% w/w	10	
Coarse Nir Module			
Type of Sorter			TOMRA PRO Primary COLOR-NIR
Rougher Maximum Throughput (Based on Testwork)1	tph	150	
Rougher Yield to Waste	% w/w	70	
Scavenger Yield to Product	% w/w	10	
Slimes & Water Consumption			
Slimes Design SG	t/m^3	1.01 – 1.08	
Slimes % Solids	% w/w	0 - 11	
Max Slimes Capacity (Dry Tonnes)	tph	30.0	
Process Water Consumption	m^3/h	240.0	

Source: Consulmet (a), 2024

13.3.2 Main Plant Upgrade

As described in the introduction the Main Plant upgrade is broken into two phases. This section provides details of the technical considerations on which the upgrade was based. The two phases are contained within distinct scopes of work.

The Main Plant upgrades include:

- Phase 1
  - Replacement of secondary crusher
  - Installation of log-washer
- Phase 2
  - A new 100 tph primary DMS.
  - A closed-circuit quaternary crushing circuit on the primary DMS coarse tailings stream.
  - The existing DMS will be repurposed as a secondary concentrator post the quaternary crushing circuit.
  - Removal of as many jet pump systems as possible to ease the strain on the operation and minimise impact points to limit diamond damage.
  - Final recovery upgrades to cater for additional sinks generated by the new primary DMS.

Table 13-3 summarises the design criteria have been applied to the Main Plant upgrade.

Table 13-3: High-level process design criteria used in the Main Plant upgrade project

Description	Units	Value	Comment
General Operating Parameters			
Area 101 – Infield Crushing & Screening Plant with New Log-washer	tph	120.0	Limit the combined feed through both ROM addition points to 120 tph in order to not overload the coarse x-ray technology (XRT) circuit.
Area 102 – Main plant	tph	100.0	
Operating Philosophy			CONTOPS
ROM Specific Gravity	t/m^3	2.71	
BCOS	mm	1.6	
Crusher CSS			
A101 – Primary Jaw Crusher	mm	50.0	
A101 – Secondary Cone Crusher (Existing CSS)	mm	22.0	
A101 – Secondary Cone Crusher (New CSS for Upgrade Project)	mm	25.0	Increased due to simulation done by P. Rider in 2018 (Consulmet (a), 2024, Appendix E) in order to reduce the risk of diamond breakage of larger stones.
A102 – Tertiary Cone Crusher (Existing CSS)	mm	10.0	
A102 – Tertiary Cone Crusher (New CSS for Upgrade Project)	mm	15.0	
A111 – Quaternary VSI Crusher	mm	N/A	
DMS Parameters			
A201 – Secondary DMS Yield (Design)	%	0.5	
Feed Size Fraction	mm	-8.0 +1.6	
A202 – Primary DMS Yield (Design)	%	2.0	
Feed Size Fraction	mm	-15.0 +1.6	
Coarse Tailings Size Fraction (Feed to Quaternary Circuit)	mm	-15.0 +8.0	
Fine Tailings Size Fraction (Final Tailings)	mm	-8.0 +1.6	
Sinks Size Fractions to Recovery			Size fractions based on Recovery Clarification Note (Consulmet (a), 2024, Appendix F)
Fines	mm	-2.0 +1.6	
Middlings	mm	-5.0 +2.0	
Coarse	mm	-15.0 +5.0	

Source: Consulmet (a) 2024

13.3.3 Technology Considerations

Quaternary Crusher Selection

In order to maintain industry acceptable reduction ratios, and based on the 2018 LIMN simulation done by P. Rider (Consulmet (a), 2024, Appendix C), Consulmet opted for the following crusher selections for the main plant:

- Infield primary crushing: Jaw crusher (existing – no change)
- CSS = 51 mm
- Secondary crushing: Cone crusher (new crusher)
- CSS = 25 mm
- Tertiary crushing: Cone crusher (existing crusher – CSS change only)
- CSS = 15 mm
- Quaternary crushing: VSI (new crusher – see below)
- F^{100} = 15 mm to P^{100} = 8 mm

The various options for quaternary crushing in this size range are:

- Cone crusher
- HPGR
- VSI crusher

The advantages and disadvantages of the various options are shown in Table 13-4.

Table 13-4: Advantages and disadvantages of the various crushers in a quaternary application

Description	Advantage	Disadvantage
Cone Crusher	Medium cost – capital expenditure (CAPEX) & operating expenditure (OPEX). Lower power consumption. Commonality of technology with secondary and tertiary crushers. Technological complexity – lower than HPGR. Product PSD is fairly consistent and is not completely dependent on feed PSD.	High recirculating loads due to minimum CSS of 10 mm, whilst requiring a product size of -8 mm. High wear rates at these small CSS. Hydraulic oil sealing arrangement is problematic at small CSS due to fines ingress. Multiple cone crushers would have to be applied to handle the mass balance.
HPGR	High degree of liberation. Mean time between failures is lower than other crushers (on average).	High technological complexity – requires highly skilled instrumentation technicians, artisans and operators. High cost – CAPEX and OPEX. Compressed / cake-type product requiring disagglomeration post crusher. High fines generation requires larger slimes handling facilities. Product PSD is difficult to predict and can vary based on feed PSD and mineralogy. Highest power consumption.
VSI	Lowest cost – CAPEX and OPEX. Lowest power consumption. Low technological complexity.	Product PSD is difficult to predict and can vary based on feed PSD and mineralogy. High wear rates on the rotor wear parts, although commercially lesser than other options.

Source: Consulmet (a) 2024

With capital cost being a limiting factor in the design, Consulmet selected the VSI as a quaternary crusher for the Meya Mine plant upgrade. This selection is supported by the fact that another mine in close proximity to Meya Mine project, treating a similar ore body, has successfully installed and is operating two VSI crushers in a quaternary capacity.

In order to cater for the high wear rate and mean time between failures, Consulmet has designed the VSI circuit to be bypassed and the material to be stockpiled for future treatment if the VSI circuit is off-line for any reason. All modelled mass balances show a recirculating load of less than 100% but Consulmet has designed for a 250% recirculating load to cater for any fluctuations in material hardness. In addition, any excess buildup in the circuit can be purged via the secondary DMS.

Diamond Value Management – Jet Pumps

Diamond Value Management (DMV) considerations applied to process design for the Main Plant upgrade were largely focussed on Diamond Damage, Process Efficiency and Liberation. The assessment of the existing Jet Pump systems addressed the damage and efficiency concerns.

As Meya Mining regularly has a higher incidence of Type IIa diamonds in their mineralised material, which are highly brittle and prone to breakage, diamond value management principles must be rigorously applied to the Meya Mine projectplant upgrade design.

One of the areas commonly perceived to be a source of damage to these diamonds is jet pumps, and it is for this reason, together with improving operational performance that all the inter-plant jet pumping systems on the main plant will be replaced with conveyors as described in the following sections.

The DMS sinks transfer system from the sizing screen to the recovery buildings will remain as jet pump transfer system due to the absence of a suitable alternative. In order to minimise the possibility of diamond damage, the initial plant design included the following measures, which will be carried through to this project phase:

- Oversizing jet pump mixing chambers to ensure sufficient space for particle passage.
- Oversizing the diffuser to suit.
- Using larger discharge pipelines to suit diffuser and using heavy duty pulp hoses as the material of construction.
- Oversizing and rubber lining breaker boxes at jet pump system discharge points using softer rubber than currently installed.
- Limiting the percentage solids in the jet pump by using a tube feeder to feed the jet pump.
- Minimising motive water pressures and line velocities.

During the detailed design phase, the primary DMS sinks jet pump transfer system to the existing sinks sizing screen will be reviewed. If the final layout allows, this jet pump system will be replaced with a pipe conveyor. However, it should be noted that pipe conveyors are subject to length constraints (generally a maximum of 24 m as friction becomes excessive at longer conveyor lengths) and have a much higher maintenance requirement than jet pump systems. There is also an increased security risk when using pipe conveyors. Consulmet has successfully used pipe conveyors in various applications on previous projects, however the use of jet pumps to transfer DMS sinks to the recovery is standard practice within the industry.

While there is no direct evidence proving that jet pumps are the cause of diamond breakage, concerns exist due to factors such as high velocities, collisions, or abrasive forces that can potentially damage brittle Type II diamonds. However, by implementing proper design measures, operational practices, and considering the characteristics of Type IIa diamonds, the risks can be controlled and reduced.

13.4 Conclusions and Recommendations

The proposed scope of work will provide marked improvements in both the efficiency and operability of the plant. The testwork and simulations that have been carried out to date provide evidence of the improvements that can be achieved.

The process design is based on a combination of site data and Consulmet best practice. It is noted that sampling was carried out as the Meya exploration and geological assessments were ongoing. As such it is recommended that a final review of the geology be conducted and if found to significantly deviate from the current design basis that the simulations be redone, and the design basis updated accordingly.

The risk of not including the NIR waste sorting stages, will result in high volumes of granite waste being treated by the crushing and main processing plant which will increase the wear rates of critical components resulting in higher operating costs. The exclusion of the NIR Sorters will also increase the risk of diamond breakage from the hard granite rock in the crushers and will reduce the hourly diamond grade and revenue recovered due to increased dilution of the feed.

To maintain a steady state operation between the waste sorting, secondary crushing and main processing plant operation, the use of strategic stockpiles has been implemented. This approach will also maximise throughput at the required processing treatment rate.

It may also be useful to consider variations to the quaternary crushing circuit to consider the cost benefit of the recirculating load. This exercise can be easily completed when necessary.

It is recommended that follow-up simulations based on the latest geological data be carried out to confirm the preliminary findings and that the process design basis be adjusted as needed based on more recent data.

14 Mineral Resource Estimates

14.1 Data Used for Estimation

During March and April 2024 Meya Mining provided Z Star Mineral Resources (Pty) Ltd with numerous data files including spreadsheets, *pdf* files and *dxf* files that were assigned to two major categories: Geology and Resource Information (Figure 14-1).

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

Source: Z Star, 2024

Figure 14-1: Data files provided by Meya Mining on 19 April 2024

Early in June 2024 data was provided to Z Star for the update of the 3D model that included data from recently drilled holes (Drillholes MMDD-128 to MMDD-1235) and these data were appended to the previous drill hole data:

- *COLLAR_MASTER_240531_GV checked.xlsx*
- *SURVEY ALL HOLES_240531_GV.xlsx*
- *Geology Kimb including IW_240604.xlsx*

The following BHIDs have no associated X, Y, Z, coordinate values and were therefore ignored: MMDD-095, MMDD-107, MMDD-117 and MMDD-120.

The following BHIDs were duplicated within the collar file but with blank X, Y, Z, coordinate values and were therefore ignored:

- MMDD-05
- MMDD-034

MMDD-003 was duplicated in the collar file but with differing MAX DEPTHs and it is assumed that this may be related to a wedging within the same collar. Only the hole with EOH depth 120.4 m was used.

MMDD-086A collar co-ordinates indicate a start-of-hole at relative elevation of 115.585 m. It is assumed that this is a typographic error and should be 415.585 m, closer to the collar elevation of MMDD-086.

Confirmation of the relative elevations of BHIDs MMDD-004, MMDD-013 and MMDD-014 is suggested as these seem visually erroneous in comparison to the surrounding topography.

Some changes were made to the survey data, e.g. several maximum hole depths (EOH field) were exceeded within the survey data and these were ignored and any down hole data or intervals at greater depths honoured. Holes with collars but without survey data were excluded.

- *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. There are 59 intersections in Main and 22 in the North Dyke and the average kimberlite thickness is greater in Main (3.2 m versus 0.76 m for North). The Main dyke is dominated by Kimb1 (92%) whereas the North dyke has a more even distribution of all three kimberlite types.
- *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. Only five of the rock-types contain >5% of the records and Granite is frequently intersected (42%).
- *Density_230421_GV Cleaned.xlsx*: This file includes the density data used for this project with 2,304 wet and dry density measurements in 81 boreholes. The statistics for dry density vary from a minimum of 1.68 t/m^3 (Leached Granite) to a maximum of 3.30 t/m^3 with a mean value of 2.73 t/m^3 for all lithological types.

Diamond data for the Meya River deposit includes several files containing 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). Meya Mining has excavated a number of bulk samples and one site falls within the Meya River Domain situated directly adjacent to the Koidu Mine. Z Star was provided with four Excel™ spreadsheets with information related to the two Meya River dyke bulk samples. 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.

The bulk sample size frequency distribution data are summarised in Table 14-1. The data for MBS2_1 excludes the 476 carat Meya Prosperity stone and the MBS2 Dyke – Audit stones.

Table 14-1: 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	1,680
+12	437	69	506	471	46	517	348	1,461
+11	1,263	293	1,556	1,407	138	1,545	973	4,072
+9	2,481	951	3,432	2,857	371	3,228	2,192	8,299
+7	1,661	918	2,579	1,910	339	2,249	1,697	5,528
+6	1,681	1,425	3,106	1,934	485	2,419	2,346	6,075
+5	587	894	1,481	539	237	776	1,461	2,540
-5	66	412	478	60	54	114	758	971
Total	**9,061**	**5,058**	**14,119**	**10,103**	**1,726**	**11,829**	**10,406**	**31,633**
+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
+13	409.47	58.06	467.53	448.23	34.86	483.09	318.63	1,339.60
+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	1,491.19
+9	521.20	194.86	716.06	604.77	77.72	682.49	458.89	1,786.34
+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	**2,843.56**	**760.75**	**3,604.31**	**2,964.33**	**320.32**	**3,284.65**	**2,410.75**	**9,182.24**
Mass	8,285			8,768			24,445	75,940
Kimberlite	5,037			5,755			5,732	17,508
Chpt (Dilute)	34	9	44	34	4	37	10	12
Chpt (Undilute)	56	15	72	52	6	57	42	52

Source: Z Star, 2024

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

- *MR ROM Sample Trench_Data_230627.xlsx:* 297 records from 22 September 2017 to 01 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 (0.25 cts/stn) recovered from 84,196 t at elevations between 290 m amsl and 390 m amsl.
- *MR ROM UG _Data_230627.xlsx:* Includes 67 Main Plant records from 28 November 2022 to 6 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 (0.23 cts/stn) recovered from 22,342 t at three elevations.
- *MR ROM UG_Data_240313.xlsx:* Includes 199 Main Plant records from 28 November 2022 to 29 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 (0.29 cts/stn) were recovered from 75,298 t from elevations between 275 m amsl and 355 m amsl.

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.

- *Meya Mine project_Master sample inventory_20230713.xlsx:* This file contains the micro diamond data provided to Z Star and there are two main components:
  - *Meya Mine 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 Mining has 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 de-survey 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. Similarly, de-surveying 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 0.01 m buffer and then increasing it to 1 m, 2 m, 5 m, 15 m and finally 100 m. 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 are summarised in Table 14-2.

Table 14-2: 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	1,314.85
Stone Count	1,265	2,284	247	71	184	148	4,199
Sample Count	49	68	29	6	27	32	211
+4.750 mm	0	0	0	0	0	0	0
+3.350 mm	0	0	0	0	0	0	0
+2.360 mm	3	0	0	0	0	0	3
+1.700 mm	4	3	0	0	0	1	8
+1.180 mm	3	5	2	1	0	1	12
+0.850 mm	7	12	3	0	1	1	24
+0.600 mm	26	52	2	1	2	5	88
+0.425 mm	47	83	7	3	4	1	145
+0.300 mm	134	183	20	6	18	14	375
+0.212 mm	186	334	46	8	33	24	631
+0.150 mm	322	617	67	16	57	40	1,119
+0.106 mm	533	995	100	36	69	61	1794
Grade stns/8 kg	30.71	35.02	14.04	29.20	8.47	9.14	25.55

Source: Z Star, 2024

14.2 Estimation Methodology

Following discussions between Z Star and Meya geologists a general approach to estimating a mineral resource was agreed as explained in a Z Star technical note (Z Star, 2024). 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 Star 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 Star 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 Star 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.

14.3 3D Wireframe Models and Volume

Quantify Mine PTY Ltd ("QM"), subcontracted to Z Star, was tasked to recreate the latest wireframe interpretations of the Meya River deposit, and in doing so, obtain an understanding of the modelling architecture so-as to be able to include newly available data and update/extend the modelled volumes at depth. The accuracy of the modelling in the volumes around the currently mined pit as well as underground development, were investigated and improved where possible.

Like the previous Meya River 3D model, the three main kimberlitic lithologies, i.e. KIMB1, KIMB2 and MIB3 are not incorporated into this latest model. This model includes the same methodology as before, i.e. utilising the mineral resource width that includes the percentage kimberlite (KIMB1, KIMB2 and KIMB3) and the percentage internal waste. The method is described in the May 2024 Z Star report (Duggan, SP, Bush, DE & Lohrentz, C, 2024).

The previous 3D volume model comprised six wireframes representing:

- Fault Block 1 Main and North Dyke
- Fault Block 2 Main and North Dyke
- Fault Block 3 Main Dyke
- Fault Block 4 Main Dyke interpretations

The latest model has retained the same domains as illustrated by Figure 14-2.

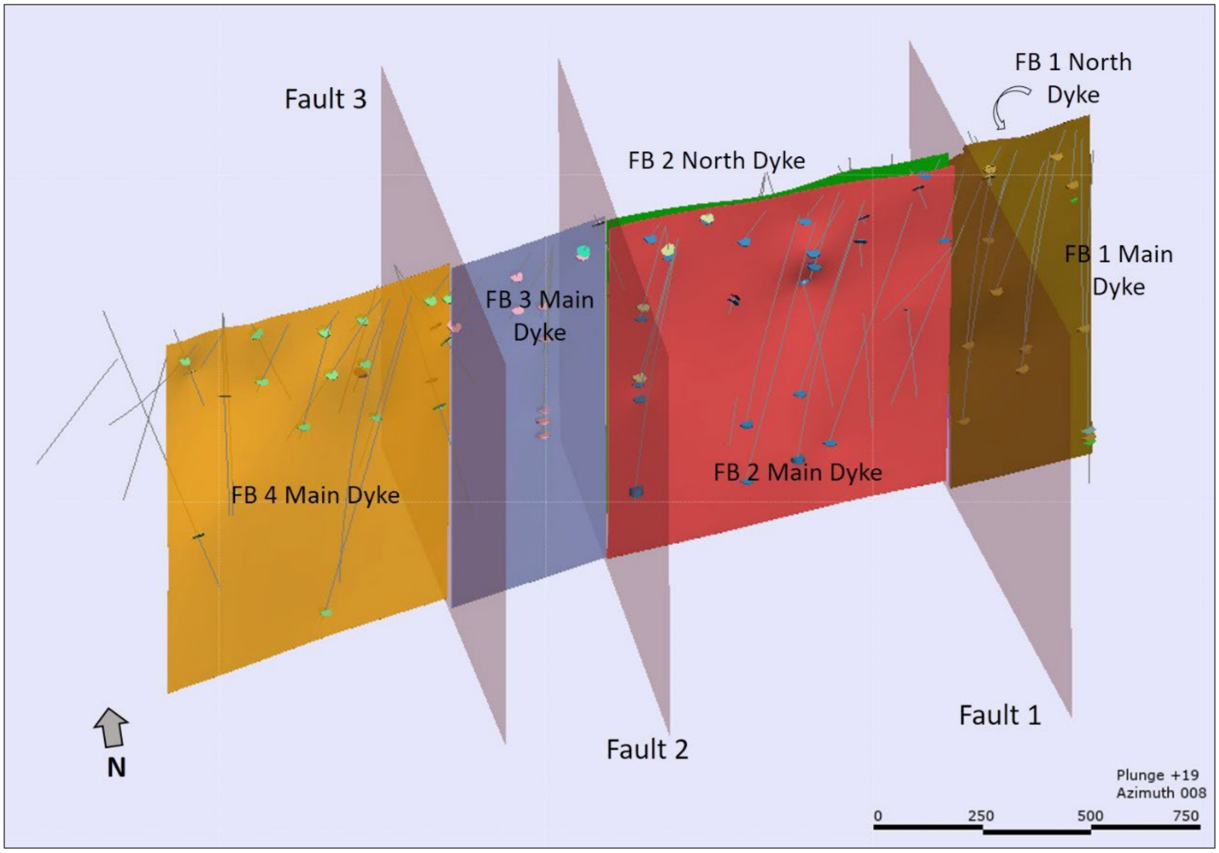
A topographic surface was generated from the drill collar elevations with a corrected elevation point for MMDD-086A. The relative elevations of BHIDs MMDD-004, MMDD-013 and MMDD-014 appear to be erroneous in comparison to the surrounding topography and confirmation is required from Meya to ensure accuracy/correctness of the generated topography wireframe.

In the absence of surface mapping indications or representative wireframe interpretations, the three Faults 1, 2 and 3 (from East to West) defining the individual Fault Blocks were digitised so-as to match the edges of the respective fault blocks. Using these faults, each of the dyke intersections categorised as Main, North, North 2 and South were attributed to one of the four Fault Blocks, North 2 and South were excluded from the previous Meya River model.

Each of the groupings were modelled using the Leapfrog™ vein tool and associated explicit editing techniques to truncate these against the individual faults, or where they overlap or cross-over. Thus in case such as Fault Block 1, the Main and North dykes merge at depth.

While the dykes' geometries are all near vertical and fairly regular, a single sample intersection within the Fault Block 1 North Dyke resulted in a kink or undulation that is interpreted as geologically unlikely. Thus this sample, from Drillhole MMDD-047, between 53.5 m and 55.1 m was ignored and the near-vertical geometry of the dyke imposed.

Pit mapping outlines of the Fault Block 1 Main and North Dykes (at a relative elevation of 375 m amsl) were used to digitise accurately surveyed outcrop and apply this to the respective modelled volumes.



Source: Z Star, 2024

Figure 14-2: Meya River Dyke 3D wireframe models

14.4 Density and Tonnage Estimate

The statistics for dry density vary from a minimum of 1.68 t/m^3 (Leached Granite) to a maximum of 3.30 t/m^3 with a mean value of 2.73 t/m^3 for all lithological types. By exception checking identified 14 records as problematic (eight records without “from” and “to” fields were deleted and six records where fields were swapped were amended).

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.

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 previously. 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: 0.1 m, 1 m, 2 m, 5 m, 10 m ,15 m and 100 m.

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

The calculation of an estimated dry density was made for each domain and 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 14-3).

Table 14-3: Meya River mineral resource volumes, densities and tonnages

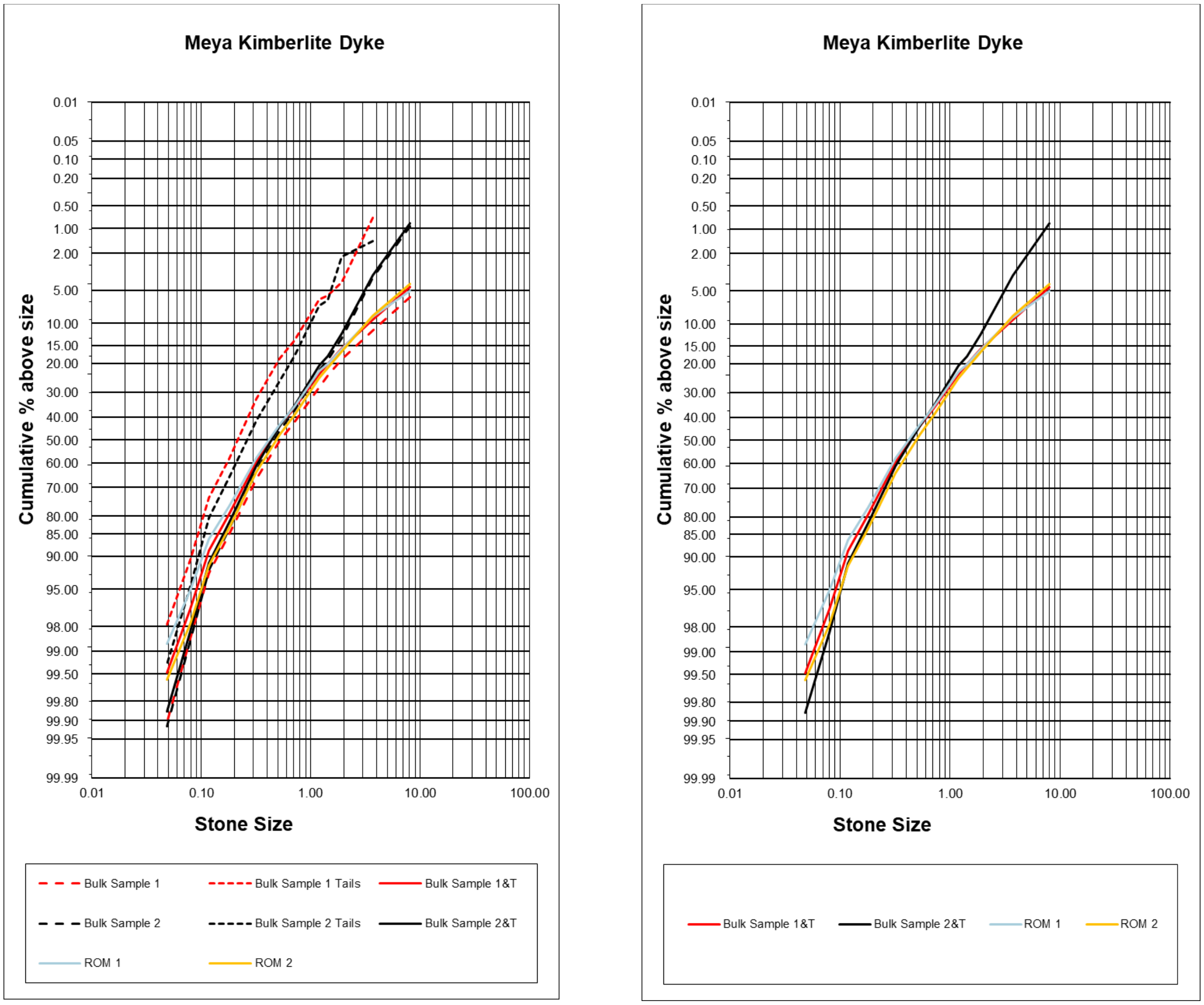
Domain	Volumes (m^3)	Density (t/m^3)	Tonnes
FB1 Main	562,700	2.80	1,574,800
FB1 North	375,700	2.79	1,048,400
FB2 Main	649,600	2.84	1,846,700
FB2 North	97,700	2.69	263,000
FB3 Main	216,400	2.80	604,900
FB4 Main	300,500	2.92	876,600
Total	**2,202,600**	**2.82**	**6,214,400**

Source: Z Star, 2024

14.5 Diamond Grade Analysis and Estimation

Once the diamond data was analysed by Z Star 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 are plotted in Figure 14-3.

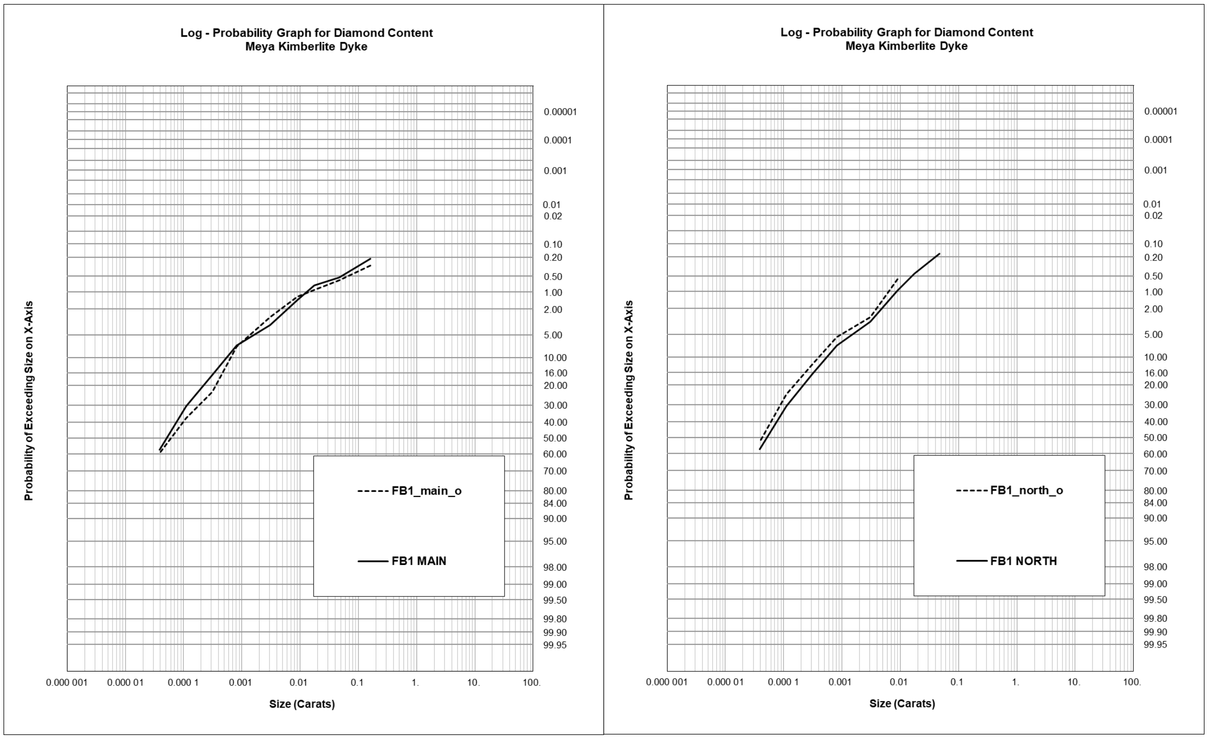


Source: Z Star, 2024

Figure 14-3: 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.
- Bulk sample MBS2_1: Has a size frequency distribution broadly similar to the two ROM production parcels.



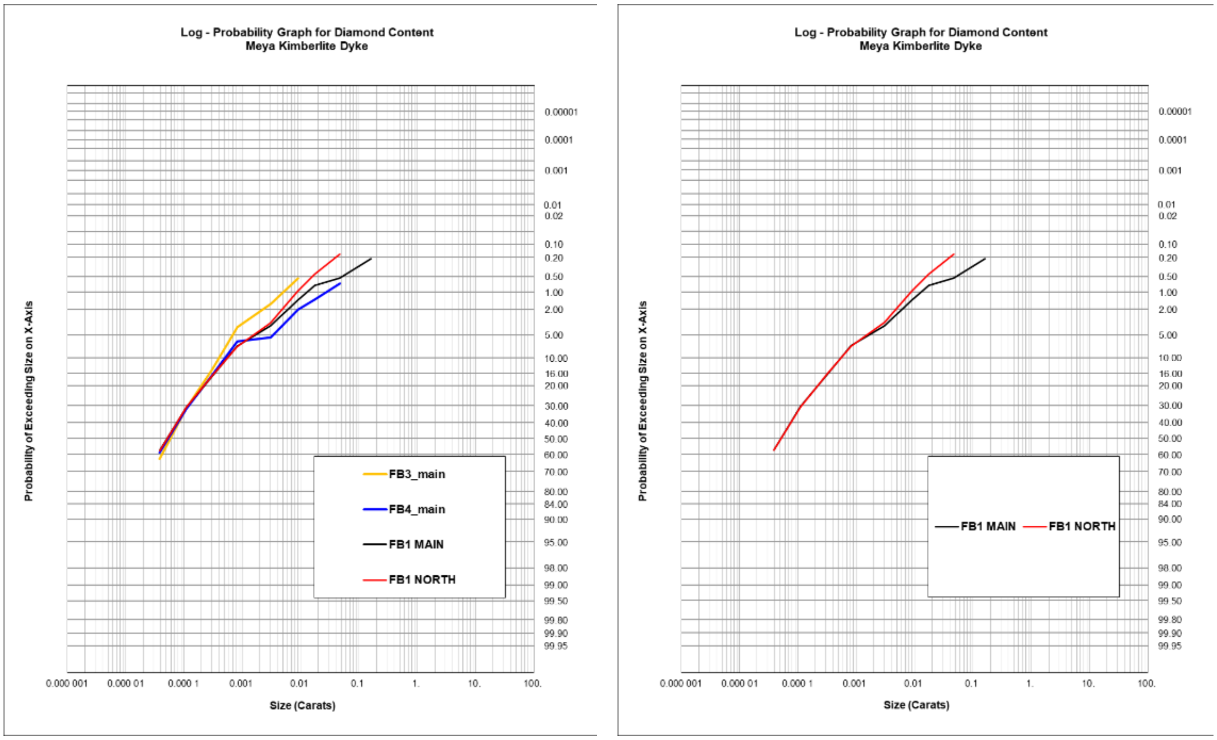
Source: Z Star, 2024

Figure 14-4: Outlier micro diamond samples in FB1 Main (left) and FB1 North (right)

The micro diamond data from the Meya River Dyke are plotted in Figure 14-4 and Figure 14-4.

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 14-4, 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 Figure 14-5 (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.

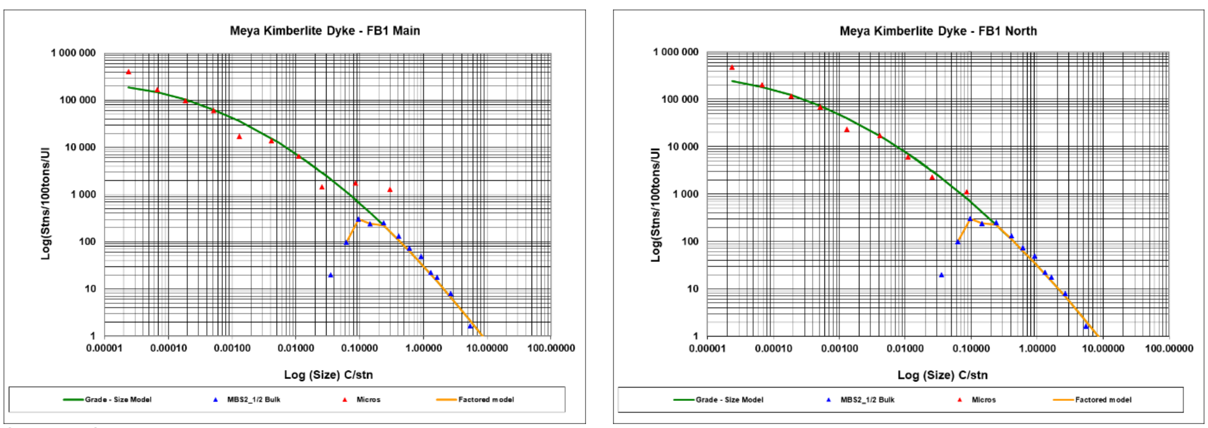


Source: Z Star, 2024

Figure 14-5: Micro diamond size frequency distributions

The stone size frequency distributions of the FB1 Main and North dykes are plotted in Figure 14-5 (right) and other than at the large stone extremity show similar distributions. It is evident from the diamond data that the difference in stone size distributions is due to three stones in the +2.36 mm 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.



Source: Z Star, 2024

Figure 14-6: 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 14-6, 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 64 cpht were estimated at a 1.6 mm 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 14-6: 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 1.6 mm 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 & Boxer (1989). The translation factors for the Main and North dykes are listed in Table 14-4 and are used to determine grade in cpht for FB2, FB3 and FB4 (Figure 14-3).

The undiluted zonal grade estimates for the various FB domains are summarised in Table 14-5. 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 14-4: Deakin and Boxer factors for the Main and North dykes

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

Source: Z Star, 2024

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 14-5. 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.

Table 14-5: Undiluted grade (1.6 mm bottom cut off) estimates (cpht) for Meya River dyke FB domains

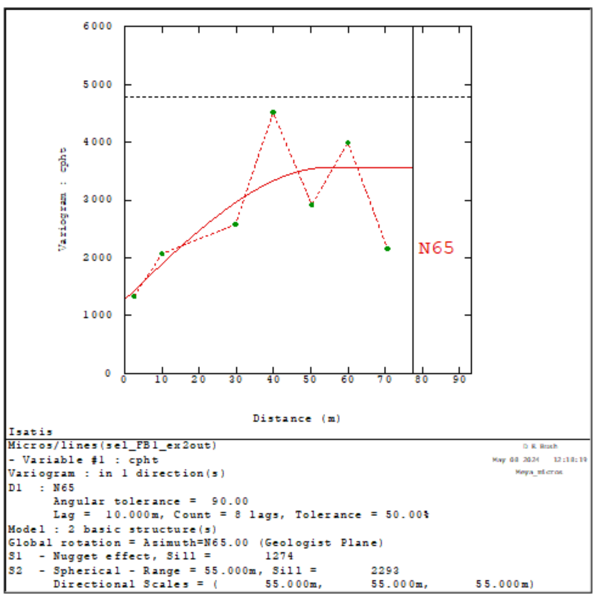
Domain	Grade Size	Intersections	Trench	Drillholes	Min	Max	Mean	Mean Declustered
FB1_main	64	48	17	8	8	278	70	64
FB1_north	64	67	49	6	7	411	65	65
FB2_main		29		14	0	126	39	41
FB2_north		6			9	123	68	68
FB3_main		27		9	0	47	23	21
FB4_main		32		14	0	66	25	24

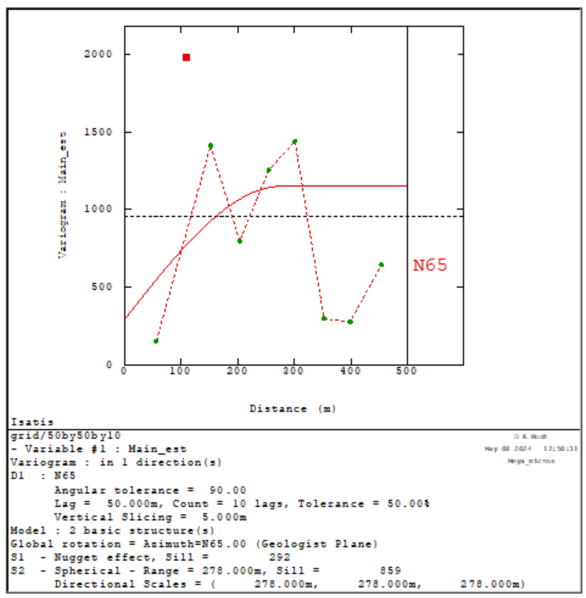
Source: Z Star, 2024

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 55 m (Figure 14-7: 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 variogram calculated from the kriged estimates which generated a longer range (Figure 14-7: 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.



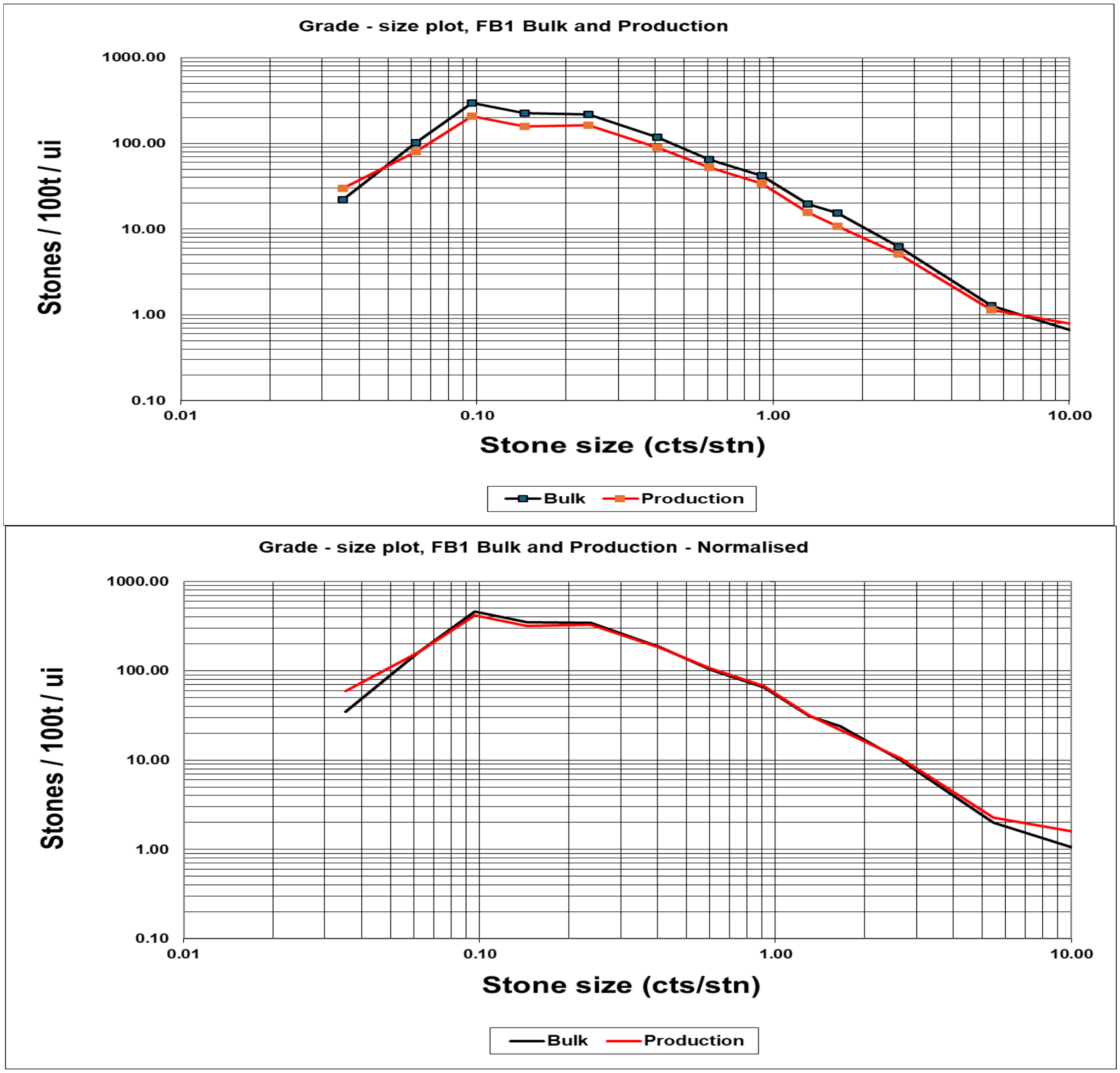


Source: Z Star, 2024

Figure 14-7: Variogram of combined FB1 micro diamond grade (left) & declustered micro diamond grade (right)

The production data (ROM 1 and ROM 2) 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 14-3).

Grade size curves of the production data (Figure 14-8: 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 14-8: bottom) the two curves almost overlap with minor differences at the smaller and larger sizes.



Source: Z Star, 2024

Figure 14-8: Production parcels, grade size curves (top) and normalised (bottom)

14.6 Size Frequency Distributions and Revenue Modelling

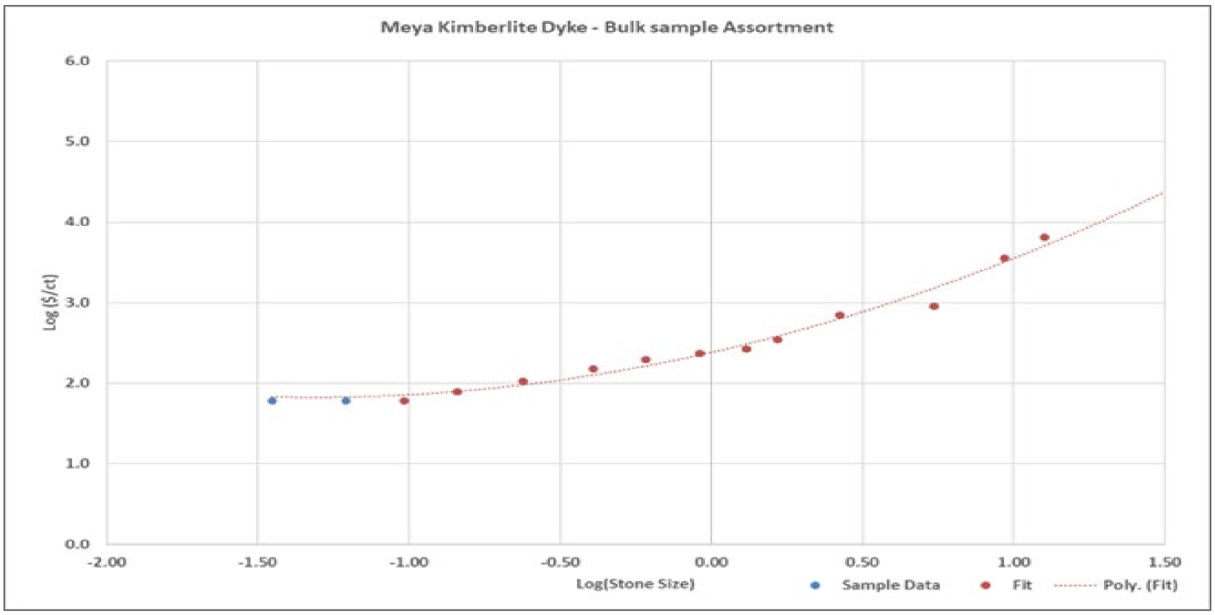
The size frequency distributions for the FB1 Main and North domains are obtained directly from the grade size curves shown in and are listed in Figure 14-6 and Table 14-6.

Table 14-6: Size frequency distribution models for the FB1 Main and North dykes

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**	

Source: Z Star, 2024

The assortment is modelled from the bulk sample data and particularly from the data summaries by G. Viviers (2020). 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.



Source: Z Star, 2024

Figure 14-9: Assortment modelling FB1 Main and FB1 North bulk samples

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 14-6 and an average price of US$383 and US$381 estimated for FB1 Main and FB1 North, respectively (Figure 14-9).

14.7 Mineral Resource Classification

The Z Star approach to classifying diamond deposits involves geology, volume models, and drilling accuracy, alongside estimating grade, revenue, and density models. Key to understanding the Meya River Dyke Mineral Resource's uncertainty is the volume model, based on varying drillhole intersections. Kimberlite dykes, like those in West and South Africa, show inconsistent widths, affecting volume estimation.

Drillhole positions relative to estimation domains reveal decreased sampling density below 250 m amsl, with few exceptions. Volume data is based on different drilling from MiDa data, highlighting gaps in deeper FB2 Main areas. Meya geologists and SRK have thoroughly documented the geology, though drillhole spacing remains a concern. Density data is limited, necessitating a zonal methodology with inherent uncertainty.

Despite methodological agreements between Z Star and Meya, kimberlite types (KIMB1, KIMB2, KIMB3) aren't coded in grade and revenue data, complicating estimation. The undiluted grade variable was estimated with a zonal methodology due to insufficient variography data, typically associated with Inferred confidence. Two revenue estimates exist for the Main and North dykes, but they don't account for kimberlite subdivisions, adding uncertainty.

At the adjacent Koidu Mine, the Meya River dyke's FB1 domains have sufficient drilling for confident 3D volume estimation above 250 m amsl, with good diamond yields from upper portions. A halo around bulk sample trenches defines an Indicated grade and revenue zone, while lower sections and other domains are classified as Inferred. The uncertainty increases with depth due to reduced drilling density, but exclusion from the resource is unwarranted.

The FB1 domains above 250 m amsl are classified as Indicated, while lower portions and other domains are Inferred. Significant dilution must be considered for the grade estimate before mineral reserve compilation.

No part of the Meya River mineral resource is considered by Z Star to have no Reasonable Prospects for Eventual Economic Extraction (RPEEE) at this time.

The Meya River Mineral Resource meets the minimum requirement of having Reasonable Prospects for Eventual Economic Extraction (RPEEE). The initial mine design and schedule, undertaken by Meya’s mine planning team, consist of Fault Block 1 (average kimberlite grade 64 cpht) and Fault Block 2 (average kimberlite grade 41 cpht) which will be mined to a vertical depth of 800 m. These two blocks exceed the break-even kimberlite mining grade which is estimated ~~at~~ by Meya to be 29 cpht (Table 14-7). The mine plan schedule resulted in a seven year life of mine, showing a post-tax $NPV_{10\%}$ of US$92.6M.

Table 14-7: Cut-off calculations for the Meya River Dyke Domain

Parameter	Units of Measurement	Mined	Kimberlite Mined
Overhead Costs	$US / tonne	1.2	3.5
Mining Cost	$US / tonne	19.0	55.0
Processing	$US / tonne	5.0	14.0
Security	$US / tonne	1.0	3.0
Total Operational Cost	$US / tonne	26.0	75.5
Royalty, Export, Community, Marketing	$US / tonne	5.0	15.0
Capital	$US / tonne	7.5	22.0
Total Cost	$US / tonne	38.5	112.5
Average Dyke Diamond Price	$US / carat		382
Processing Recovery	%		97
Break-Even Mining Grade	Carats per hundred tonnes	10	29
Stope Width	Metres	2	2
Average Resource Grade	Carats per hundred tonnes	16	44
Dyke Width	Metres	1.07	0.8

Source: Meya Mining, 2024

14.8 Mineral Resource Statement

The estimation methodology utilised 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. The mineral resource figures by classification category are included in Table 14-8 and Table 14-9.

The depleted (existing pit surface and underground working volumes removed as of April 2024) Meya River Dyke Indicated Mineral Resource as of the 6th of June 2024 (including internal waste dilution) comprises 158,130 m^3 at an average dry density of 2.77 tonnes per cubic metres (t/m^3) resulting in 438,220 tonnes. At an average grade of 37 carats per hundred tonnes (cpht) the Indicated mineral resource comprises a total of 160,400 cts at a bottom cut-off of 1.6 mm with a value of US$61.4M (US$383/ct).

Table 14-8: Meya River Indicated Mineral Resource, effective date 06 June 2024

Meya River Dyke Indicated Mineral Resource as of 6 June 2024							
Domain	**Volume (m^3)**	**Tonnes**	**Density (t/m^3)**	**Carats**	**Grade (cpht)**	**US$/ct**	**Value ($M)**
FB1 Main Upper	119,230	331,960	2.78	122,200	37	$383	$46.8
FB1 North Upper	38,900	106,260	2.73	38,200	36	$381	$14.6
Total Indicated	**158 130**	**438,220**	**2.77**	**160,400**	**37**	**$383**	**$61.4**

Source: Z Star, 2024

The Inferred Mineral Resource as at the 6th June 2024 (including internal waste dilution) comprises 2.3M m^3 at an average dry density of 2.83 t/m^3 resulting in 6.42 Mt. At an average grade of 32 cpht the

Inferred mineral resource comprises a total of 2.08 Mct at a bottom cut-off of 1.6 mm with a value of US$797.3M (US$383/ct).

Table 14-9: Meya River Inferred Mineral Resource, effective date 06 June 2024

Meya River Dyke Inferred Mineral Resource as of 6 June 2024							
Domain	**Volume (m^3)**	**Tonnes**	**Density (t/m^3)**	**Carats**	**Grade (cpht)**	**US$/ct**	**Value ($M)**
FB1 Main Lower	414,390	1,164,900	2.81	547,900	47	$383	$209.8
FB1 North Lower	230,960	652,050	2.82	287,900	44	$381	$109.7
FB2_Main	974,960	2,768,100	2.84	846,000	31	$383	$324.0
FB2_North	122,790	330,960	2.70	112,000	34	$381	$42.7
FB3_Main	206,660	575,240	2.78	103,300	18	$383	$39.6
FB4_Main	317,820	927,840	2.92	186,800	20	$383	$71.5
Total Inferred	**2,267,580**	**6,419,090**	**2.83**	**2,083,900**	**32**	**$383**	**$797.3**

Source: Z Star, 2024

The declared mineral resource figures are at a 1.6 mm bottom cut-off. The figures have been rounded.

The mineral resource estimate was prepared Sean Duggan and David Bush, Principal Mineral Resource Analysts (Pri.Sci.Nat.) of Z Star Mineral Resources (Pty) Ltd, an independent consultancy. Sean Duggan David Bush are Qualified Persons within the meaning of National Instrument 43-101.

The mineral resource figures in the above table include any future declaration of a mineral reserve and do not demonstrate economic viability.

The classification of the Meya mineral resource 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.

14.9 Conclusions and Recommendations

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.

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.

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

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 must ensure sufficient sampling to test these issues.

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.

15 Mineral Reserve Estimates

At this exploration stage, there are no Mineral Reserves established for the Meya Mine project.

16 Mining Methods

16.1 Summary

A conceptual level LHOS mine plan has been developed for the Meya River Dyke *Fault Block 1 (FB1)* and *Fault Block 2 (FB2)*. The mine designs extend down to a depth of approximately 800 m below surface, covering a strike length of approximately 1,300 m and containing a total of 7.39 Mt of mineralised material at an average diluted grade of 0.19 carats per tonne for 1,397 thousand carats of contained diamonds. A total of 74.6 km of lateral development drifts are included in the mine designs, including a total of 12.9 km in main access declines.

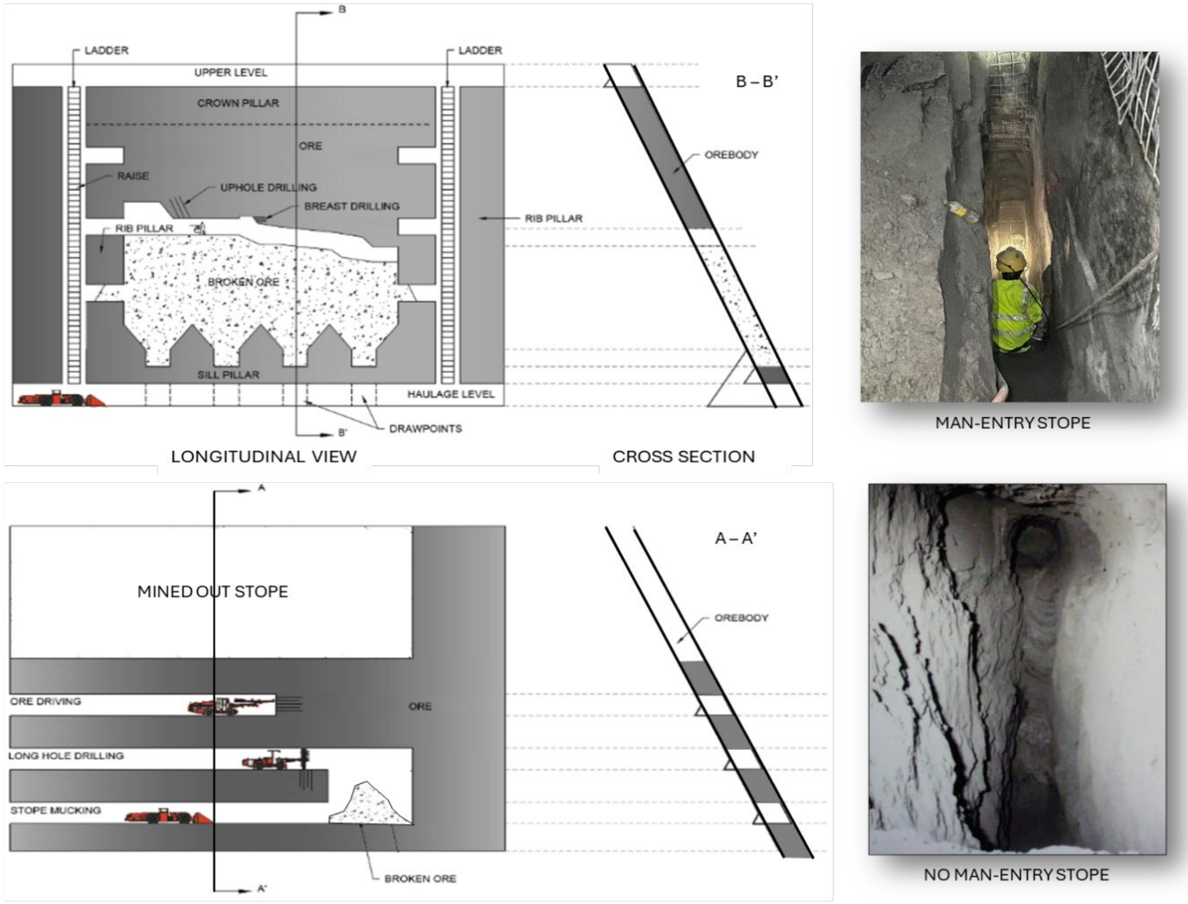
The LOM schedule has a duration of 82 months (6.8 years) at a target monthly production rate of approximately 120 kt of mineralised material with monthly contained diamonds ranging between 21 and 28 thousand carats per month at full production (excluding ramp-up and slow-down periods).

The mine designs are based on a resource estimate by Z Star Resources, dated 6 June 2024. The total mass of kimberlite in the mine plan is categorised as follows: 3.5% is classified as Indicated Mineral Resources, while 96.5% is classified as Inferred Mineral Resources.

16.2 Mining Method Selection

The selection of an appropriate mining method for the Meya River Dyke involved a comprehensive evaluation of several potential underground mining options and benchmarking of kimberlite dyke mines mined in the past. During Phase 1, between 2020 and 2022, various methods were assessed, including LHOS, Avoca, Modified Avoca, Mechanised Cut and Fill, and Shrinkage Mining. The assessment considered crucial factors such as safety, cost-effectiveness, and productivity.

Even though most of the kimberlite dykes mined in the past were mined using shrinkage method. This method is labor intensive, inherently unsafe and cannot achieve high productivity. After careful consideration, the LHOS method emerged as the most suitable option for the Project. This method utilises open stoping without rock backfill, incorporating rib pillars left at regular intervals along the strike. The LHOS method was found to offer the lowest total operating and capital costs amongst the evaluated options. It is also the method that is more suitable for mechanisation and safer than other options evaluated. For comparison of mining methods – see Figure 16-1.



Source: This report, 2024

Note: Shrinkage mining method (top) and fully mechanised LHOS method selected for Meya mine

Figure 16-1: Schematics of highly labour-intensive SLS and LHOS methods for Meya mine

A key factor in recommending LHOS was the dyke-only orebody geometry of the Meya River Dyke. Unlike many kimberlite deposits that occur as pipes, this project presents a narrow, steeply dipping kimberlite dyke orebody. This distinctive geometry, coupled with Meya's management's focus on optimising capital and operating costs, made LHOS an attractive choice.

The LHOS method allows for fully mechanised mining activities, employing modern trackless mobile equipment throughout the operation. This approach aligns well with the project's objectives for efficiency and cost-effectiveness.

The LHOS design for Meya River Dyke incorporates several key features:

- Multiple stopes will be mined simultaneously within the same stope block to achieve the desired production rate.
- Stopes will be progressed in a staggered fashion, with the highest stopes always being the furthest advanced.
- Rib pillars will be left in place to provide support, eliminating the need for rock backfill.
- Crown pillar will separate underground mining activities from the surface.

- Stope mining width will vary based on dyke width, with a minimum designed width of 2.0 m to ensure efficient mineralised material extraction and equipment operation. This minimum width also helps to capture the full geological wireframe while managing dilution.

16.3 Geotechnical Considerations

Based on the drillholes wallrock and kimberlite intersections and on surface and underground development observations at Meya and neighbouring Koidu property, the In-situ Rock Mass Rating (IRMR) (Laubscher & Jakubec, 2000) conditions for both country rocks and kimberlite dykes could be characterised as competent, good (IRMR class 2B-3A) to very good (IRMR class 1B-2A). It is estimated that 10-15% of the rock mass will be faulted or weathering susceptible kimberlite (Figure 16-2).

Source: This report, 2024

Note: Showing granite (left) and jointed fault zone (right)

Figure 16-2: Example of typical competent kimberlite dyke and granite and jointed fault zone in drillcore

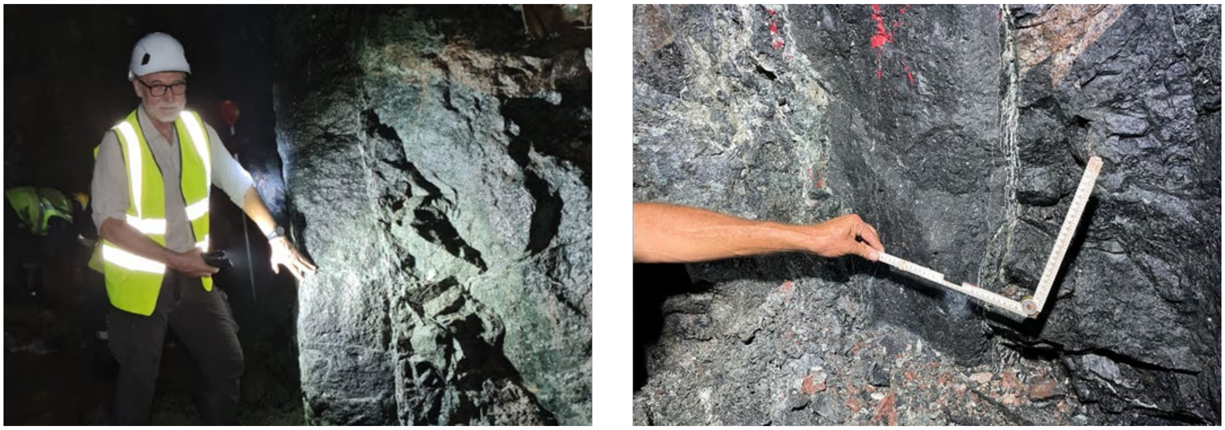
Uniaxial compressive strength (UCS). The granite country rock has an estimated UCS of approximately 180 MPa, with fracturing unlikely to be extensive except in the dyke contact zone. The main sub-vertical joint set in the granite is sympathetic to the kimberlite dyke (Figure 16-3).

Source: This report, 2024

Note: Showing granite (left) and sub-vertical joint set sympathetic to the kimberlite dyke (right)

Figure 16-3: Example of access development in competent granite and sub-vertical joint set

UCS of competent kimberlite dyke (Figure 16-4) is estimated mainly >80 MPa and generally kimberlite exhibits very low weathering susceptibility.



Source: This report, 2024

Figure 16-4: Example of competent kimberlite dyke from underground development

To ensure stability, undercutting of granite rock walls should be avoided, and sidewalls of level drives have to be supported with mesh and bolts. A 10 m crown pillar is predicted to remain stable with appropriate support measures, including a concrete cap on surface, welded mesh reinforced shotcrete, and full column cement grouted cable anchors. In order to cover current uncertainty in fresh rock surface conditions, the mine design excluded any stoping within 30 m of the surface. Sill pillars must be included where multiple mining stopes are vertically established. Although rib pillars may deem to be unnecessary on regular basis and in some instances impractical due to scaling and disintegration tendencies of kimberlite, they were included in mine design at this PEA level of confidence.

A minimum width of 12.5 m is recommended for the boundary pillar between Meya and Koidu, with cement grouted long anchors and shotcrete required for long-term stability. Based on numerical modeling, a minimum middling distance of 15 m between the north dyke and the main decline is advised to prevent stress interaction. Ground support recommendations for the decline include split sets (1.8 m to 2.2 m in length) installed in the hanging wall and side walls, welded mesh installation, and prompt support installation after blasting. These measures are designed to ensure safe and stable underground operations throughout the mine's life. Additional cable bolting or shotcrete may be needed at large intersections or when transiting through the fault zones.

16.4 Resource Model

The resource model was provided by Meya in the form of:

- 3D wireframes in *dxf* format
- Resource estimate table where kimberlite to waste ratios, densities and grades for each wireframe are specified.

The model was developed by Z Star and is dated 6 June 2024. The model contains wireframes for four individual fault blocks, labelled FB1 through FB4. The preliminary economic assessment and mine designs are conducted on the FB1 and FB2 only. The FB1 and FB2 wireframes both comprise of two parallel wireframes which are referred to as “Main” and “North”.

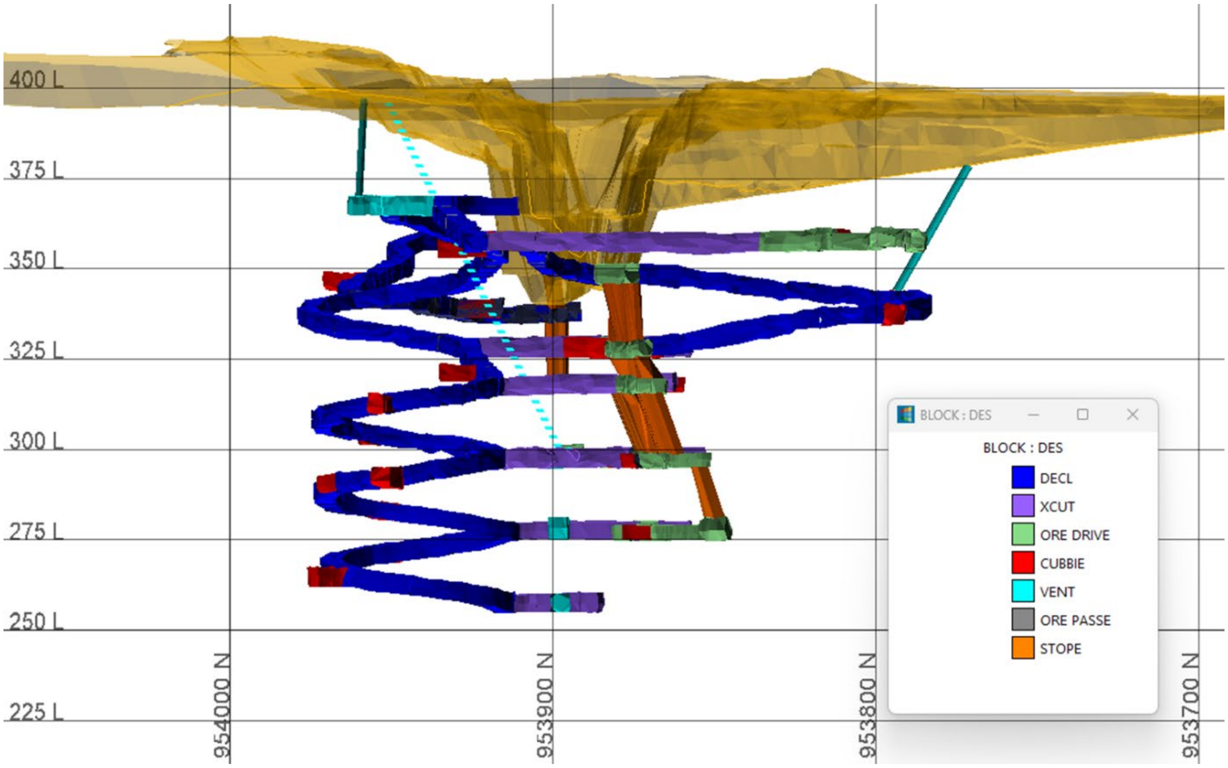
16.5 Mining Method

EXT Mine Projects AB (“EXT”) has prepared a conceptual level mine design and schedule for the long hole open stoping LHOS mining method under the supervision of SRK’s Jarek Jakubec. A longitudinal, top-down configuration of LHOS without backfill was chosen as it allows for efficient mechanised mining of the sub-vertical narrow dykes while maintaining a reasonable resource recovery.

As of the effective date of the report, Meya Mine project has more than 3,800 m development completed and three stopes in production (Figure 16-5 and Figure 16-6).

Source: This report, 2024

Figure 16-5: Meya Mine project portal (left) and development jumbo (right)



Source: This report, 2024

Figure 16-6: Cross-section of current Meya Mine project development

16.6 Stope Optimisation

Stope shapes were generated using Deswik™ Auto Stope Designer (ASD). The resource model wireframes and associated resource grade estimates were combined into a Deswik Geomodel for input. Stope levels were grouped vertically into blocks of six at 20 m vertical height each, separated by 6 m high sill pillars. The main design parameters are presented in Table 16-1.

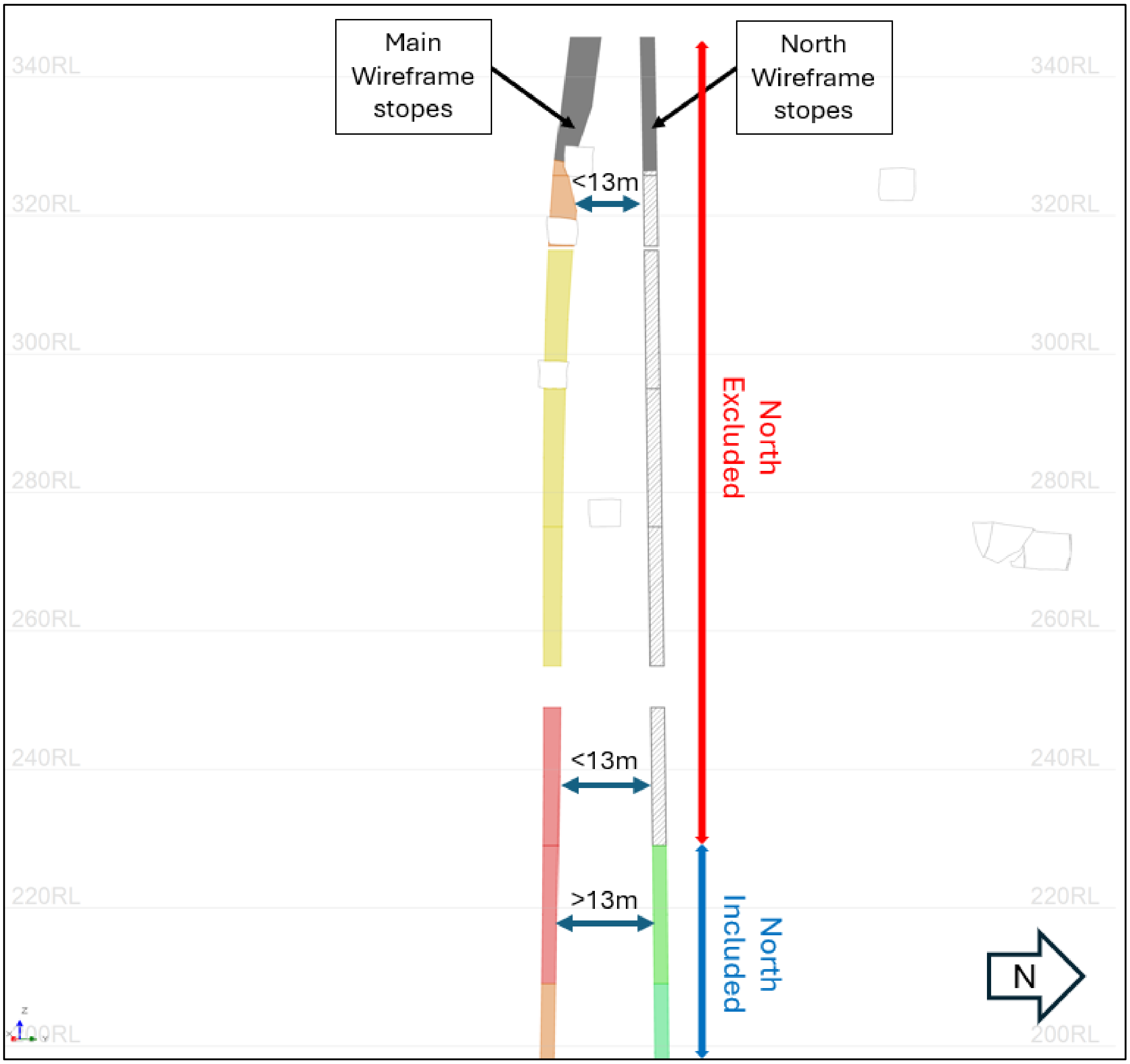
Table 16-1: Stope optimisation parameters

Parameter	Value
Level Spacing	20 m
Stope Width	Minimum 1.8 m
Dilution	0.1 m on each side (HW and FW)
Effective Minimum Stope Width	2.0 m
Stope Length	20 m, minimum 10 m
Cut-off Grade	0.02 cts/t*

Source: This report, 2024

Note: *Cut-off grade was set low to capture all stopes possible in a first pass. Incremental COG applied in the mine plan is 0.06 cts/t.

A cut-off grade of 0.02 cts/t was initially used for the ASD run, with an incremental cut-off grade of 0.06 cts/t applied in the final mine plan. Stope volumes within 30 m from ground surface were excluded to account for a crown pillar. Sacrificial rib pillars, each 6 m long, were designed at approximately every 100 m along strike. A minimum pillar criterion of 13 m was applied to parallel stopes (Figure 16-7).



Source: This report, 2024

Figure 16-7: Minimum pillar between parallel stopes (cross section looking west)

After applying all design criteria, the resulting mineable inventory shown in Table 16-2.

Table 16-2: Tonnes and grade contained in mineable inventory stopes

Inventory	Unit	Domain		Total / Average
		FB1	FB2	
Total Mass	Mt	2.17	3.80	5.98
Total Grade	cts/t	0.31	0.19	0.23
Diamonds Contained	cts	677.4	726.6	1404.0
Kimberlite Mass	Mt	1.06	1.77	2.83
Waste Mass	Mt	1.12	2.03	3.15
Kimberlite % of Total Tonnes	%	48.6%	46.6%	47.3%

Source: This report, 2024
Note: Reported at a cut-off grade of 0.06 cts/t.

Key observations from the stope optimisation process are as follows.

- 95% of the stopes have a grade above 0.15 cts/t, indicating a positive contribution to operating cashflow for the majority of the tonnes.
- 28% of the stopes fall within the 0.15 to 0.16 cts/t grade range, primarily consisting of 2 m wide stopes in the FB2 main wireframe.
- For stopes above 0.16 cts/t cut-off, tonnes are distributed relatively evenly up to a maximum grade of 0.45 cts/t.
- 83% of total stope tonnes are designed at a width of 2.0 m, generally capturing the geological wireframe.
- Stopes wider than 2 m account for 17% of the total stope tonnes, with a maximum width of 4.7 m.

The FB2 North wireframe stopes, containing 377 kilotonnes (kt) of mineralised material at an average grade of 0.12 cts/t, were excluded from the current mine plan in favour of accelerated mining of the higher-grade FB2 Main wireframe stopes. Further evaluation of these excluded stopes should be conducted as additional exploration and infill drilling data becomes available.

16.7 LHOS Mine Design and Mine Sequence

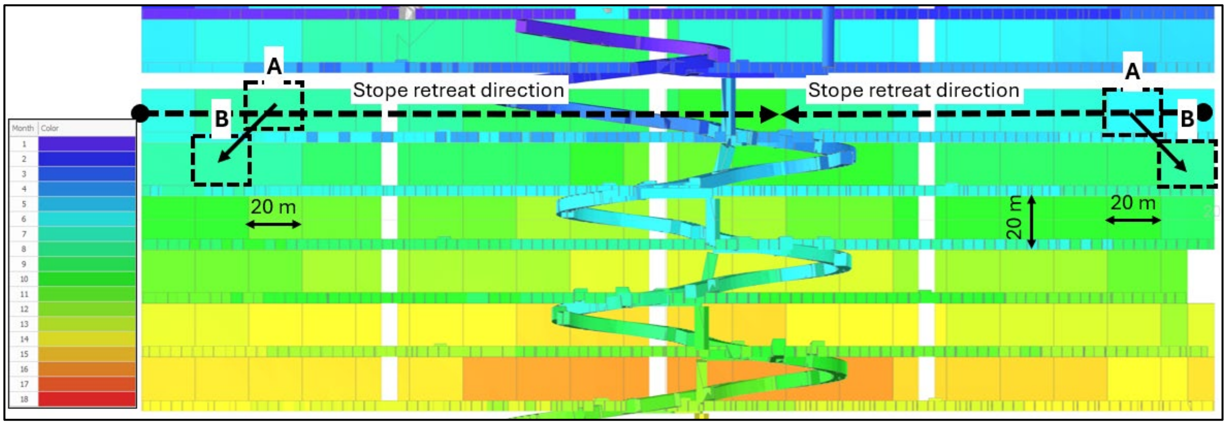
The mineable inventory stopes were used as the basis for a conceptual mine design for a longitudinal, top-up mining sequence with open stopes without backfill. The different considerations for the designs are described in the following sub-sections.

16.7.1 Stope and Level Configurations

The level spacing is typically 20 m, with a few exceptions in FB1 where the existing tunnels govern the level spacing, as described in the previous section. The stopes will be drilled as up-holes with a typical hole length of 16 m (assuming 4 m high ore drives).

16.7.2 Stope Sequencing

The stopes are scheduled in a top-down mining sequence starting with the outermost (relative to the access drift located at center of the orebody) stope on the upper level and retreating towards the central access. The stopes on the lower level are allowed to start once the upper level has retreated far enough that a minimum lateral offset of 20 m is always maintained between the stope brows on the upper and lower levels. The stope sequence is shown in Figure 16-8.



Source: This report, 2024

Notes:

1. Long section looking north
2. Stope on upper level (A) must be taken prior to lower level stope (B)

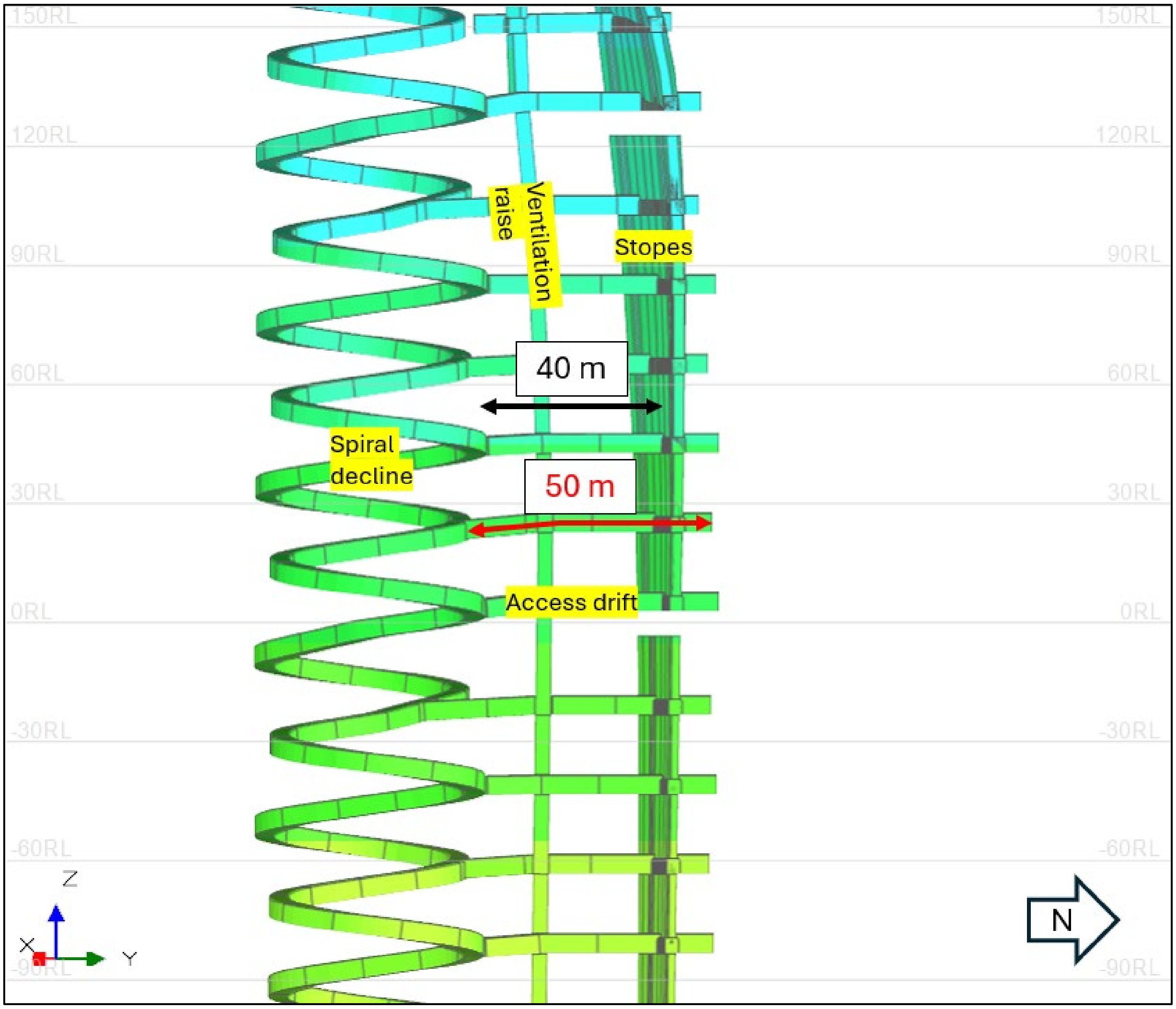
Figure 16-8: Stope retreat sequence (coloured by month) and level dependencies

16.8 Development and Infrastructure Design

16.8.1 Mine Access

The FB1 mine will be accessed through a central spiral decline on the north side of the orebody which starts at the bottom of the existing decline. The FB2 mine will be accessed from the FB1 mine via an access ramp developed in a western direction on the south side of the orebody. The access ramp will connect to the FB2 spiral decline located in the centre of the FB2 orebody. Both central declines are designed at an average gradient of 13% and a curve radius of 25 m and have level access drifts every 20 vertical m to provide access to production levels. The main decline has an allowance of 10% on top of the designed metres to allow for miscellaneous drifts such as sumps and remuck stations. The decline is offset by some 40 m from the orebody, and the level access drifts are on average 50 m long, as shown in Figure 16-9.

The levels are designed flat with no gradient. This should be revised in later stages of the study to provide efficient water runoff. An overview of the mine designs is shown in Figure 16-10 and Figure 16-11.

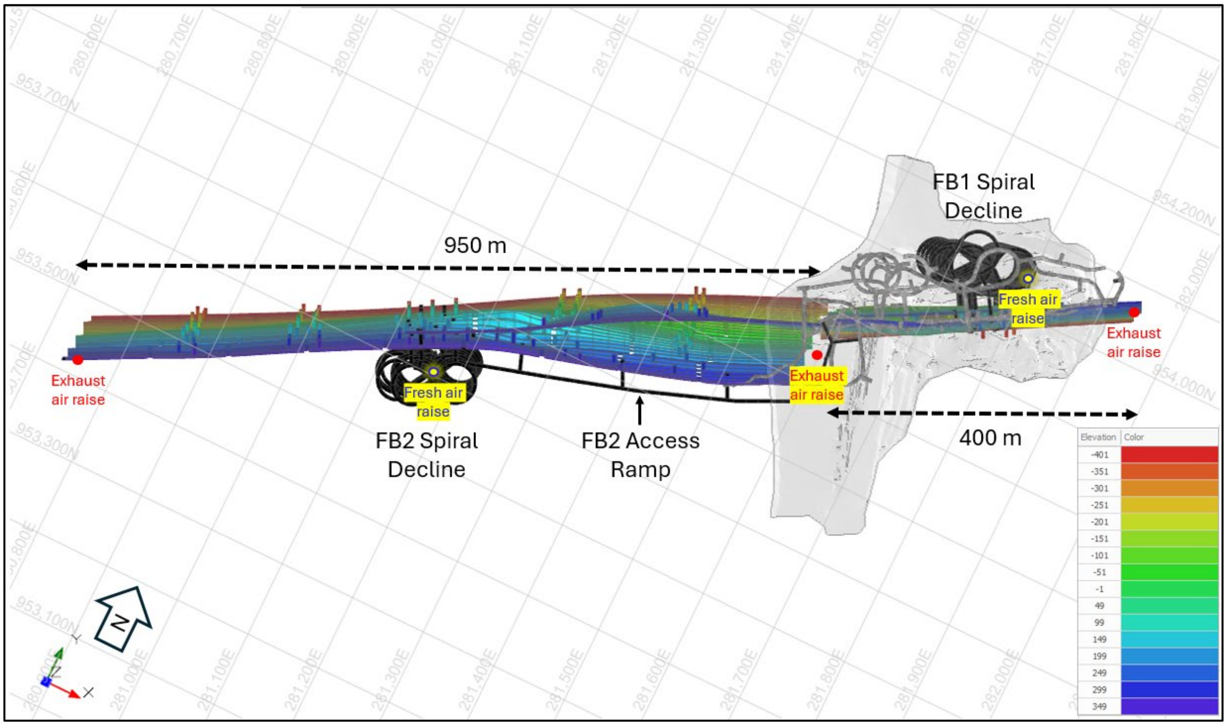


Source: This report, 2024

Notes:

1. Section view looking west
2. Levels coloured by elevation where hotter colours indicate lower elevations
3. Design example from FB2

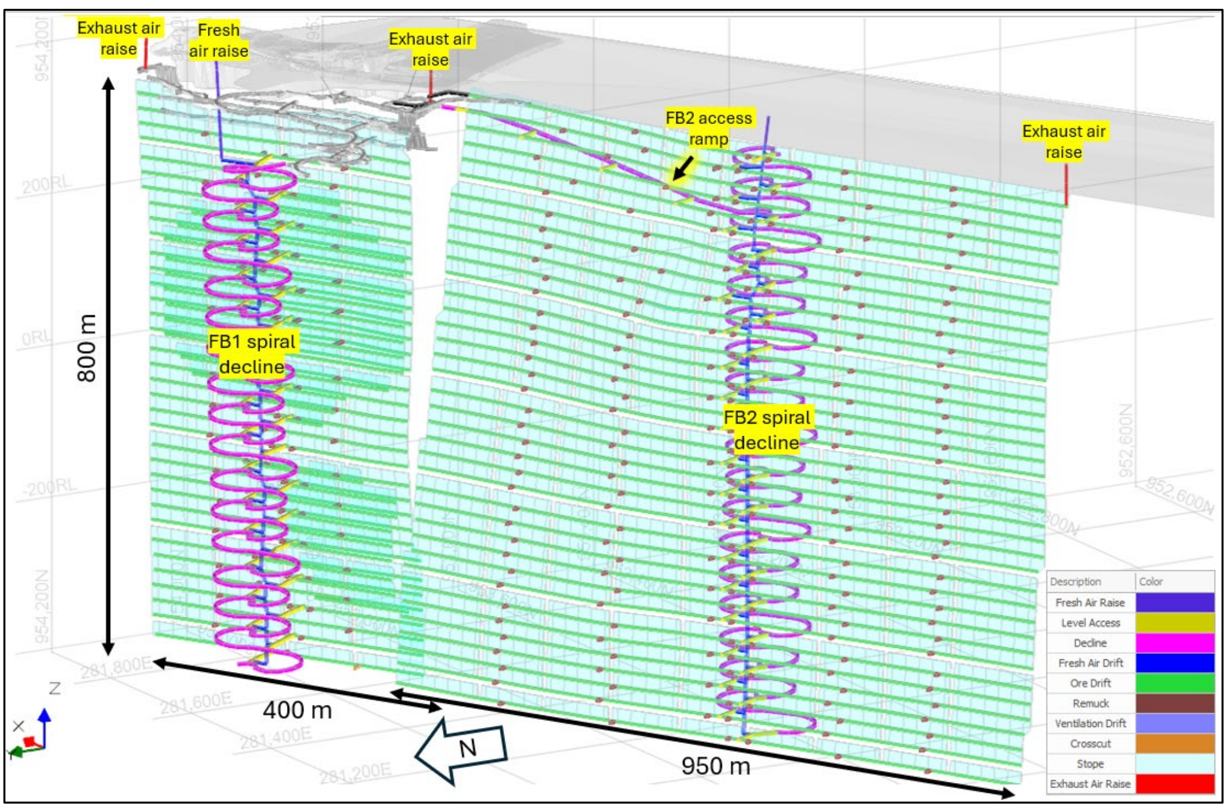
Figure 16-9: Decline design and stand-off distance from orebody



Source: This report, 2024

Notes: Levels coloured by elevation where hotter colours indicate lower elevations

Figure 16-10: Mine design for FB1 and FB2, plan view



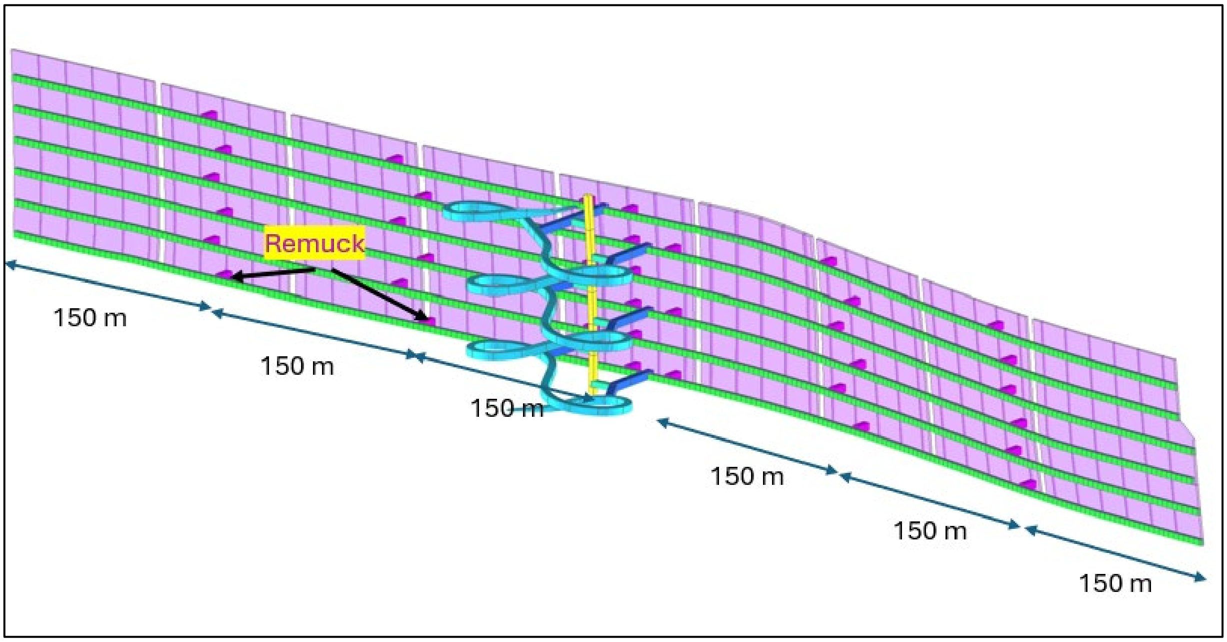
Source: This report, 2024

Notes: Mine design elements coloured by development type

Figure 16-11: Mine design for FB1 and FB2, long section (isometric view)

16.8.2 Material Handling System

Material handling will be done by load-haul-dump (LHD) loaders and trucks. LHD's are mucking material at the development and production faces and loading onto trucks at a nearby remuck for truck haulage via the decline to surface. Remucks at 10 m lengths are designed at approximately 150 m spacing in the ore drives on the levels to limit the LHD hauling distances, as shown in Figure 16-12. The trucks will have to fit into the ore drive to access the farthest remuck on the levels. The ore drives are generally very straight which is beneficial from a trucking perspective. Further studies should focus on the trade-off between truck size and ore drive width to find the best balance between productivity, costs and dilution. Remucks for the decline are considered through a 10% factor added to the designed metres.



Source: This report, 2024

Notes: Design example from FB2

Figure 16-12: Isometric view of the material handling system with remucks in ore drives

16.8.3 Dewatering System

The underground dewatering system is designed based on a total expected water ingress of approximately 2,093 m^3/day by the end of year two. Consulmet has allowed for an additional 35% duty in the design (relating to 2,832 m^3/day or 118 m^3/h) to cater for any inefficiencies, inaccuracies, and uncertainties.

A cascading pumping philosophy is proposed, whereby dewatering will be provided in each sill, pumping to main decline pumps, which in turn pump to the main decline pumps on a higher level, until all the water has been removed from the underground mining. The design includes two main declines – FB1 and FB2 – with dewatering infrastructure provided for both.

The base case uses direct drive vertical spindle pumps (VSP) with steel sumps in the main declines and on the sills. FB1 decline pumps are provided with 100% redundancy (duty / standby pumps) and will be located at approximately 40 m intervals. HDPE piping with quick couplings will be utilised for most applications.

16.8.4 Process Water Distribution

The process water requirements for underground operations total 440 m^3/day, with the main usage being development and production drill rigs. Process water will be distributed using gravity feed to each development/production sill drive through a header tank placed on top of the crown pillar (Level 405) above the portal inlet.

16.8.5 Electrical Distribution

The electrical distribution for the underground mining development will be split into two main power distribution boards, feeding the FB1 and FB2 declines separately. The FB2 decline will receive power from 1 off 1.9 megavolt-amperes (MVA) T1900 Kohler diesel generator in Year 1 and an additional 1.9 MVA generator for Year 2.

Each decline will have its own dedicated 11 kV feeder to supply the 315 kilovolt-amperes (kVA) mini substations on each development level. The mini substations will have MV feeders and LV feeders, with the LV feeders supplying equipment at the crosscut (main decline pumps & ventilation fans).

16.8.6 Underground Lighting

The main decline lighting will be supplied from the first mini substation in both declines. The sill drives lighting will be supplied from the secondary mini substation.

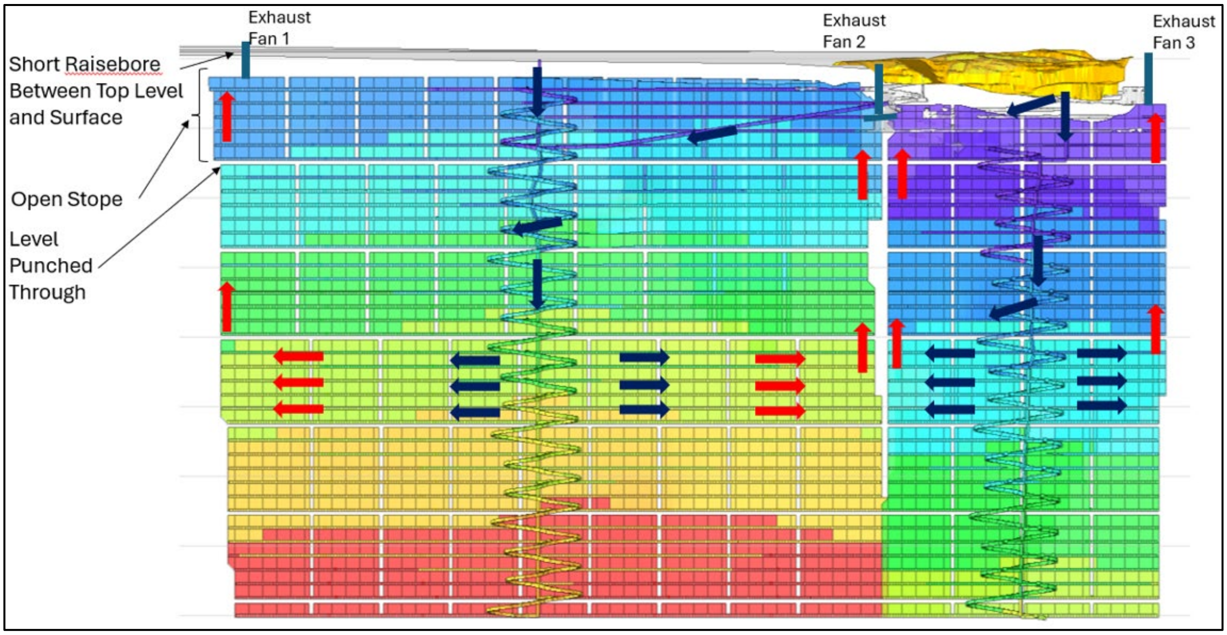
16.8.7 Motor Starter Panels

The pumps on the main decline will include two starter panels on the modular skid. The mini substation will also accommodate the ventilation starter panels.

16.8.8 Ventilation

Fresh air will be supplied by a total of two fresh air ventilation raises with the raises located close to each of the spiral declines. Fresh air will be drawn into the mine by fans located on the active production level and pushed in ducts to the development or stope front. Exhaust fans will pull air out from the mine via three exhaust air raises located at the peripheries of the orebody which will provide clearing of diesel engine and blasting fumes as well as provide a flow of fresh air down through the main decline. The exhaust raises will be connected to surface to the uppermost production level, and the first few rings of the innermost stope on each level immediately below the sill pillar will have to be extended vertically an additional 6 m to establish connection to the exhaust air circuit.

The ventilation concept highlighting air flows and location of surface raises is shown in Figure 16-13.



Source: This report, 2024

Figure 16-13: Ventilation layout (section view looking north, arrows indicate airflows)

16.9 LHOS Mine Schedule

The mine designs have been scheduled as high-level LOM schedules using the Deswik™ Sched software.

16.9.1 Assumptions

The schedule parameters and constraints used in the design are summarised in Table 16-3.

Table 16-3: Schedule assumptions

Parameter	Value	Details / Notes
Development Rate (Decline)	120 m/month	Per heading
Development Rate (Lateral)	90 m/month	Per heading; includes ore drives and level development
Stope Production Rate	350 t/d	Per stope front; average rate including drilling & blasting, mucking, ventilation, etc. (equivalent to ~4 m of lateral advance per day)
Global Stope Rate	85 kt/month	4 stopes per day @ 700 t/d
Global Lateral Development	1,080 m/month	Excluding decline
Global Development Rate	Max 1,400 m/month	Including decline
Stope Mining Dilution	10%	
Stope Mining Recovery	98%	
Ore Drive Dilution	5%	
Ore Drive Recovery	100%	
Rib Pillars	6 m	Every 100 m along strike (design solids cut with rib pillar)
Sill Pillars	6 m	Every 120 m vertically

The stopes were scheduled at a rate of 350 tpd which is the equivalent of an average stope brow advance rate of 3.6 m per day, or equal to cycling an average of three rings per day at a drill ring burden of 1.2 m. The stopes adjacent to each rib pillar are delayed by four days to allow time for re-slotting of the stope.

The development rate for the decline and the drives were estimated using the assumptions listed in Table 16-4. The estimated cycle time is 9.7 hours and 13 hours for the ore drive and decline, respectively.

Table 16-4: Development drifting cycle time estimate

Cycle	Unit	Decline	Ore Drive
Size	m	5x5	3.5 x 4
Round Length	m	3.8	3.3
Activities			
Drilling	h	2.2	1.6
Charging	h	2.4	2.1
Ventilation	h	1.0	1.0
Mucking	h	4.1	2.1
Scaling	h	1.2	0.9
Media / Mapping	h	0.5	0.5
Bolt+Mesh	h	1.6	1.4
Sum	**h**	**13.0**	**9.7**
Hours/Tunnel Metre	**h/m**	**3.4**	**2.9**
Capacities (Includes Mob/Demob)			
Drilling	m/h	122	102
Charging	holes/min	0.5	0.4
Ventilation	h/round	0.5	0.5
Mucking	ton/h	61	61
Scaling	m^2 /h	57	46
Media / Mapping	h/round	0.5	0.5
Bolt+Mesh	pieces/h	6	7

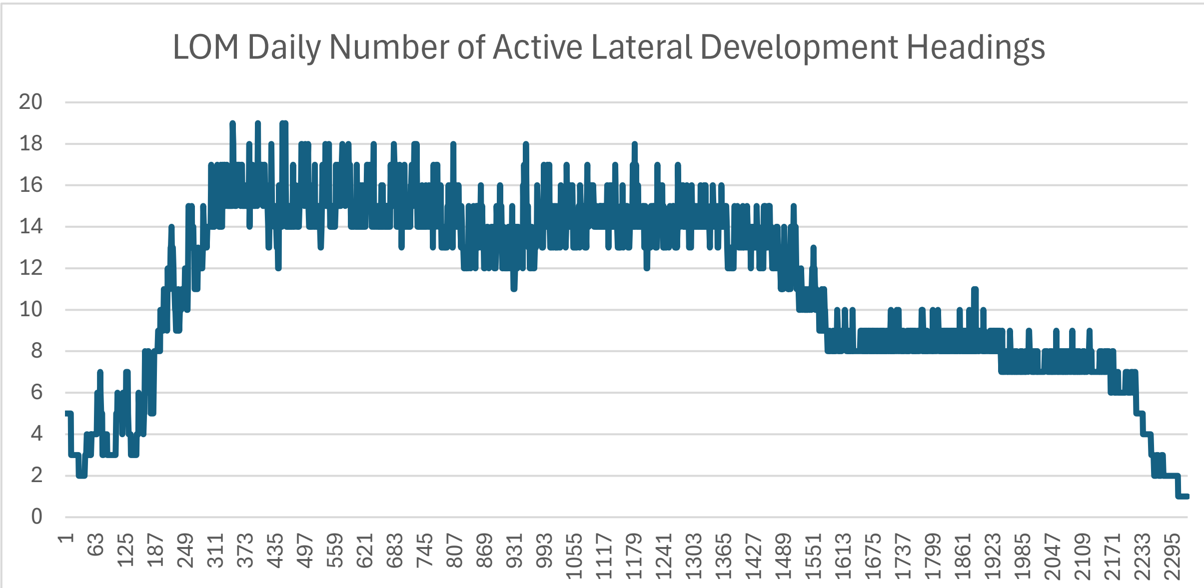
Source: This report, 2024

The global development was verified by a simulation where:

- Tunnel advancement was simulated in a scheduling application. using the cycle times in Table 16-4, the planned mobile fleet (drill jumbos, LHD, hauling trucks etc.) and a blasting calendar with three blasts per day and work hours 24/7.
- The result was approximately 1,500 m tunneling in 20 days.
- Using an inefficiency factor of 50% the real duration is about 30 days. which is what is needed to achieve the LOM plan.

In the LOM schedule, the total number of active development headings typically varies between 12 and 18, with an average of 15 while FB1 and FB2 mines are both mined together. Once FB2 is mined, the number of headings drops to between eight to ten. The number of daily active headings across the LOM schedule is shown in Figure 16-14.

The rate of the lateral development is crucial to achieving the target mining rates for Meya, and it is important to further verify these rates and to continue working towards setting up efficient development crews on site.



Source: This report, 2024

Figure 16-14: LOM schedule daily active development headings

A 10% dilution factor has been added to the stopes and a 5% dilution factor was added to the ore drives. The 10% dilution factor on the stopes brings the minimum effective stope width from 2.0 m to 2.2 m. A 98% mining recovery factor was used for the stopes and a 100% recovery factor was used for the ore drives.

A maximum stope production rate of 1,400 tpd was used for FB1 while 2,100 tpd was used for FB2.

16.9.2 Schedule Results

A summary of the total LOM schedule physicals in shown in Table 16-5. These ROM mineralised material mass and grades are different to the figures reported in Section 16.5 due to the added mining modifying factors and due to replacing the bottom 4 m of each stope shape with a 3.5 m wide ore drive, which increases the percentage of waste rock dilution within the designs for all stopes less than 3.5 m wide.

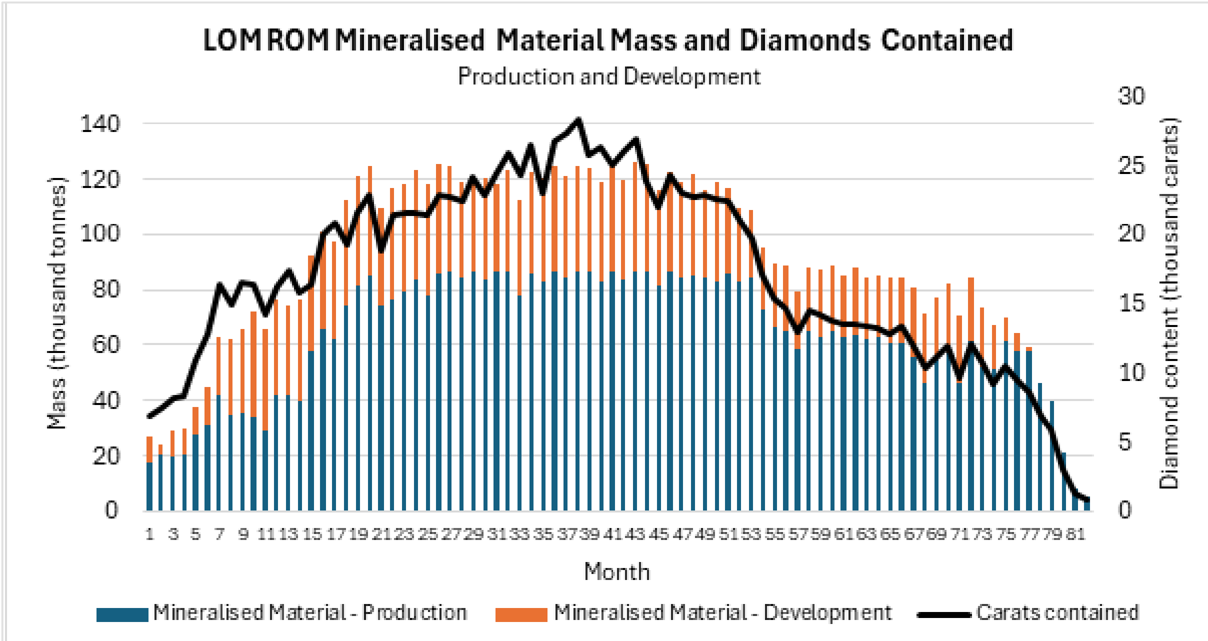
Table 16-5: LOM schedule totals

Item	Unit	Value
Tonnes Rock Total	**kt**	**8,762.9**
Total ROM Mineralised Material	kt	7,394.2
Stope ROM Mineralised Material	kt	5,181.2
Development ROM Mineralised Material	kt	,2212.9
Total ROM Mineralised Material Diamond Grade	cts/t	0.19
Total Diamonds Contained	cts	1,397.3
Kimberlite Mass	kt	2,812.0
Kimberlite Diamond Grade	cts/t	0.50
Kimberlite Mass % of Total ROM	%	38.0%
Measured % of Total Kimberlite Mass	%	0.0%
Indicated % of Total Kimberlite Mass	%	3.5%
Inferred % of Total Kimberlite Mass	%	96.5%
Tonnes Waste Rock	**kt**	**1,368.8**
Lateral Development	**m**	**74,586**
Decline	m	12,891
Access Drifts	m	3,626
Ore Drives	m	52,938
Miscellaneous	m	5,131
Vertical Development	**m**	**1,540**
Fresh Air Raise – Raise Bore	m	254
Fresh Air Raise – Drop Raise	m	1,146
Exhaust Air Raise	m	139

Source: This report, 2024

Note: Figures reported including mining factors; Totals may differ due to rounding.

The monthly ROM mineralised material mined is illustrated in Figure 16-15. These results indicate an average of approximately 120 kilotonnes per month (ktpm) of ROM mineralised material is achieved when FB1 and FB2 are mined together at target rate, stoping accounts for 85 kt and development accounts for 35 kt. Average monthly diamond contained is approximately 23k carats at target production rate, with a peak at 28k carats as the highest-grade areas are mined. The ROM mineralised material production rate drops from 120 ktpm to 70 ktpm after the 53rd month as production in FB1 comes to an end. It is assumed that the available stope fronts in FB2 will not be enough to cover the tonnage drop from FB1.

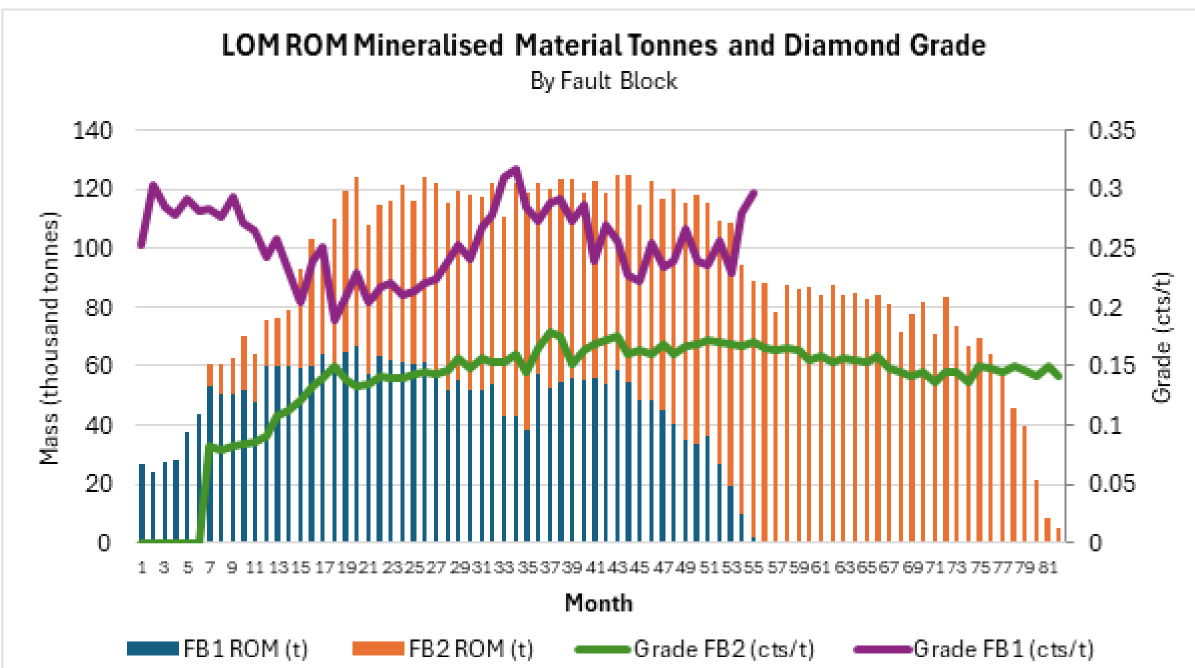


Source: This report, 2024

Notes: Tonnes and carats reported including mining factors but excluding processing factors

Figure 16-15: LOM schedule ROM mineralised tonnes and diamond carats contained

The ROM mineralised material tonnes and grade by Fault Block (FB1 and FB2) are shown in Figure 16-16. The last mineralised material in FB1 is mined in the 55th month after which the tonnes decrease.

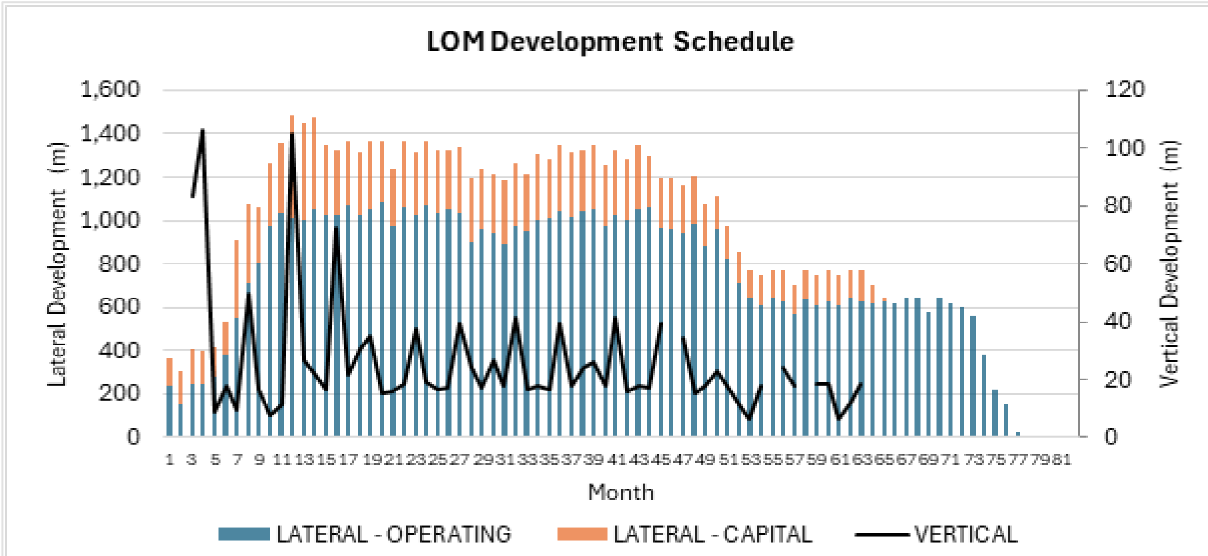


Source: This report, 2024

Notes: Tonnes and carats reported including mining factors but excluding processing factors

Figure 16-16: LOM schedule ROM mineralised material by fault block

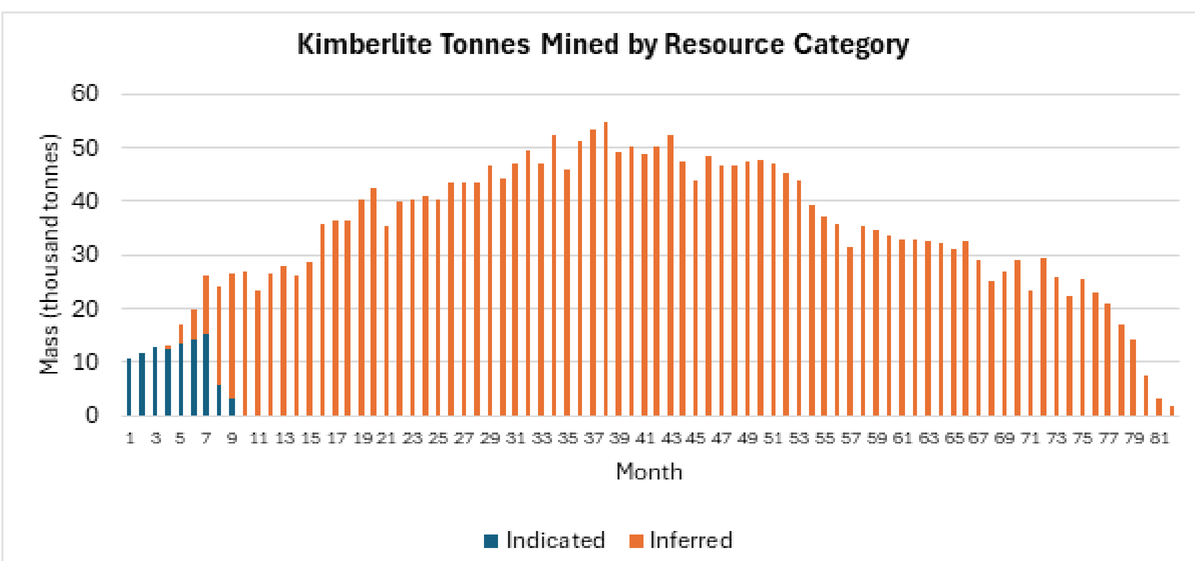
The development schedule is designed to optimise the progress of declines while maintaining balance with production capacity. A development rate of approximately 1,400 m per month was used in the schedule to maintain a balanced progress with time and resources. The lateral and vertical development schedule is shown in Figure 16-17.



Source: This report, 2024

Figure 16-17: LOM schedule development schedule

The majority, 96.5%, of the total kimberlite tonnes mined are in the Inferred resource category. The remaining 3.5% is classified as Indicated resource category and is mined during the first nine months of production in the upper levels of FB1. The LOM schedule ROM mineralised material mined by resource category is shown in Figure 16-18.



Source: This report, 2024

Figure 16-18: LOM schedule mineralised material mined by resource category

Summary annual LOM schedule is shown in Table 16-6.

16.10 Underground Mining Equipment

The following equipment is planned for the Meya River underground operations:

- Drilling Equipment
  - Six development drill rigs
  - Five production longhole drill rigs
  - Three rock bolters
- Loading and Hauling Equipment
  - Five LHD units for development and production
  - Ten haulage trucks
- Ancillary Equipment
  - One shotcrete rig with two trans mixers
  - Four scalers
  - Three working platforms
  - Four water trucks
  - Two site wheel loaders
- Support Equipment
  - Five emulsion charging trucks
  - Ten pickup trucks
  - Eight rescue chambers
- Miscellaneous Equipment
  - Two water treatment plants
  - Two explosive storage facilities
  - Twelve ventilation fans
  - Twenty pumps for dewatering
  - Twenty electrical transformers

This equipment list is designed to support the planned production rate and development schedule (Table 16-6). The fleet size is based on achieving approximately 1,400 m of tunnelling per month at peak development rates.

Table 16-6: LOM schedule physicals by year

Item		Total	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Total Material Moved	**kt**	**8,762.9**	**344.0**	**1,363.7**	**1,727.3**	**1,763.1**	**1,563.7**	**1,145.6**	**820.5**
Total ROM Mineralised Material	**kt**	**7,394.2**	**255.8**	**1,016.1**	**1,438.3**	**1,461.5**	**1,359.4**	**1,023.8**	**804.1**
Stope ROM Mineralised Material	kt	5,181.2	178.2	597.9	990.3	1,017.1	983.6	745.1	633.8
Development ROM Mineralised Material	kt	2,212.9	77.6	418.2	447.9	444.4	375.9	278.7	170.2
Total ROM Mineralised Material Grade	cts/t	0.19	0.28	0.21	0.19	0.21	0.19	0.16	0.14
Total Carats	kcts	1,397.3	70.8	208.9	267.0	311.6	256.5	161.8	115.8
Kimberlite	kt	2,812.0	111.1	358.7	507.2	605.5	540.2	394.5	282.5
Kimberlite Grade	cts/t	0.50	0.64	0.58	0.53	0.51	0.47	0.41	0.41
Kimberlite % of Total ROM	%	38.0%	43.4%	35.3%	35.3%	41.4%	39.7%	38.5%	35.1%
Waste in ROM Mineralised Material	kt	4,582.1	144.7	657.4	931.1	856.1	819.3	629.3	521.5
Tonnes Waste Rock from Development	**kt**	**1,368.8**	**88.1**	**347.5**	**289.1**	**301.5**	**204.3**	**121.8**	**16.4**
Lateral Development	**m**	**74,586**	**3,240**	**15,572**	**15,209**	**15,349**	**12,204**	**8,588**	**4,424**
Decline	m	12,891	966	3,286	2,878	2,878	1,850	1,033	-
Access Drifts	m	3,626	220	796	785	879	605	342	-
Ore Drives	m	52,938	1,741	10,241	10,524	10,596	8,972	6,678	4,186
Miscellaneous	m	5,131	313	1,249	1,022	996	777	535	239
Vertical Development	**m**	**1,540**	**226**	**416**	**265**	**293**	**201**	**139**	**-**
Fresh Air Raise – Raise Bore	m	254	135	119	-	-	-	-	-
Fresh Air Raise – Drop Raise	m	1,146	49	200	265	293	201	139	-
Exhaust Air Raise	m	139	41	98	-	-	-	-	-

Note:
1. Figures are presented including mining factors; the totals might not add up due to the rounding errors
2. Year 1 represents 7 months of production (June through December)

17 Recovery Methods

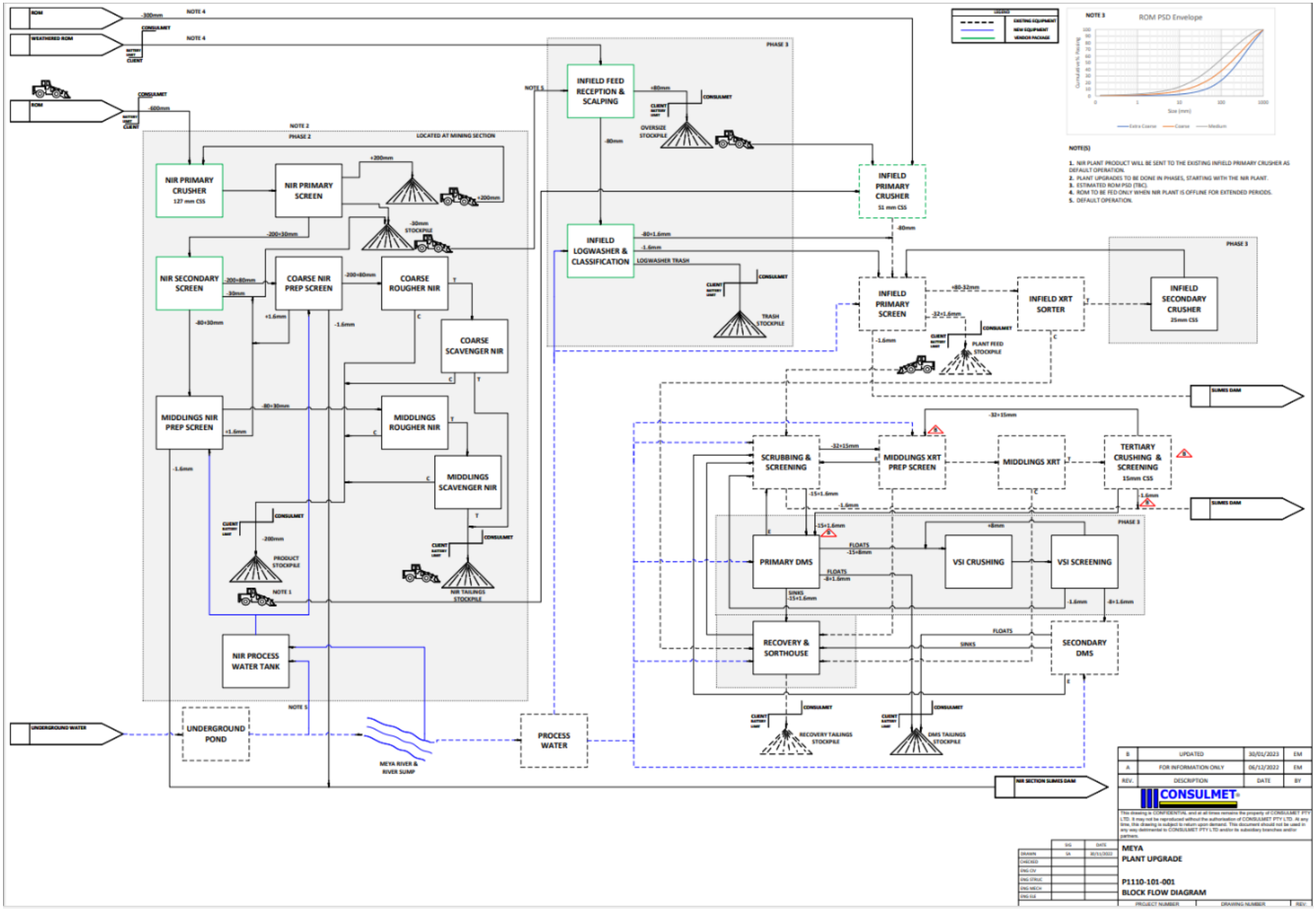
The processing plant design was undertaken by Consulmet (Pty) Ltd, Johannesburg, South Africa. Meya currently operates a sampling plant that needs to be upgraded to reach the production rates that have been benchmarked. To achieve the desired increase in production rates, Consulmet has proposed two distinct scopes of work based on DMV principles, the reuse of existing processing assets, minimising wear and tear and removing processing bottlenecks as introduced in Section 13.

Consulmet proposed processing plant design was based on prior processing of plant simulations of the Meya mill feed, using a range of PSDs, and metallurgical testing of kimberlite mineralised material samples.

The proposed diamond recovery methods for the Meya consist of two main components: the NIR Waste Sorting Plant and the upgraded Main Plant. The NIR Waste Sorting Plant is designed to pre-concentrate the mill feed before it enters the main processing plant. The Main Plant upgrade involves modifications and additions to the existing processing facility to improve efficiency and diamond recovery.

17.1 Process Plant Flowsheet

The proposed flowsheet diagram is shown in Figure 17-1.



Source: Consulmet (a) 2024

Figure 17-1: Proposed flowsheet

17.2 Processing Plant Description

17.2.1 NIR Waste Sorting Plant

The NIR Waste Sorting Plant is designed to process run-of-mine (ROM) kimberlite mineralised material at a rate of 200 tph (dry tonnes[1]). ROM material is fed into the hopper and screened. Oversize material (+200 mm) is removed and returned to the ROM hopper. The -200 mm to +32 mm fraction is processed through the NIR sorting machines, while the -32 mm fraction is sent to the log-washer circuit in the main plant.

The NIR plant will be located near the mining site and will be considered a standalone plant, with all required ancillary services (air, water, power, etc.) being supplied as part of this plant.

The ROM is screened at 75 mm before being fed to the primary crusher. The crusher product together with the -75 mm material is screened to create a coarse (-200 mm to +80 mm)[2] and middling (-80 mm to +32 mm) fraction that is washed on respective feed prep screens before being fed to a rougher and then a scavenger NIR Sorter. The -32 mm material is stockpiled for feed to the Main Plant. The NIR sorter product streams are stockpiled (two separate stockpiles) for feed to the main plant. The NIR sorter tailings is also stockpiled.

NIR product is routinely removed from both stockpiles and used to feed the existing infield crushing and screening plant (Area 101), while the discard stockpile is regularly emptied and disposed of. Crushing and screening plant feed stockpiles are all located on the same side of the NIR plant, for ease of operation during load out of this material.

Raw water is supplied from a take-off point on the underground pond water line pumping to the river sump, and discharges into the process water tank. Back up raw water is supplied from the river sump by a floating raw water pump. Process and area wash water is supplied to the various parts of the NIR plant by the process water pump. Filtered water and compressed air required by the sorters is also provided.

Power is provided to the NIR Waste Sorting Plant by generator. The NIR machines are supplied with a UPS and water chiller as part of their complete operating package.

17.3 Main Plant Upgrade

The products from the NIR Waste Sorting Plant, being both the NIR product and the -30 mm fractions, are the feed stock to the main plant. The +30 mm NIR product will be fed to the existing infield plant circuit, whilst the -30 mm fraction is the feedstock for the new log-washer circuit. The infield circuit will be upgraded in two phases as detailed below. The remainder of the main plant upgrades are all planned for Phase 1. Figure 17-2 illustrates a conceptual Plant Upgrade model.

Both, existing and new circuits are described in the following sections.

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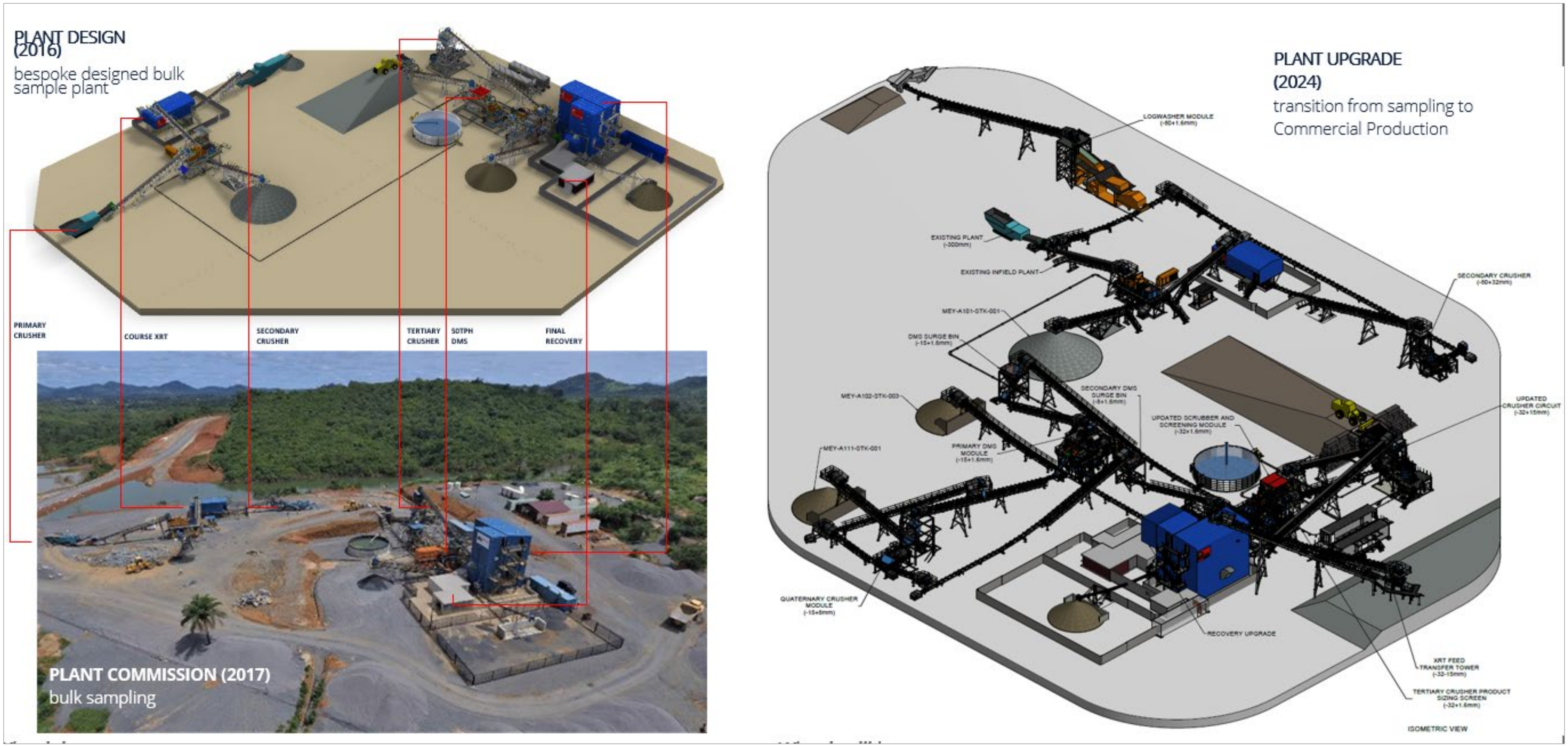
[1] The mass balance calculations are based on ROM moisture of 8%(w/w).
[2] The BCOS of the Coarse NIR feed can be adjusted between 80 mm and 70 mm to accommodate variations in the ROM PSD. This ensures that the middlings NIR sorter is not overfed



Source: Consulmet (a), 2024

Figure 17-2: Conceptual main plant upgrade general arrangement

17.3.1 Phase 1

Area 101 – Infield Crushing, Screening & Coarse XRT

The +32 mm NIR product or competent ROM (if the NIR plant is offline for extended periods), is fed into the existing mobile track mounted crushing plant at a rate of 70 tph to 80 tph. The crushing unit can run at up to 120 tph but will be limited to the lower feed rate when the new log-washer circuit is operational, this is to ensure that the downstream circuits – mainly middlings XRT are not overloaded. The combined crushed and log-washer product is limited to 120 tph.

The crushed mineralised material discharges onto the wet double deck primary screen which separates the mineralised material into three size fractions:

- Fraction 1: from -80 mm to +32 mm
- Fraction 2: from -32 mm +1.6 mm
- Fraction 3: -1.6 mm

The screen oversize gravitates into the coarse XRT feed hopper, whilst the screen middlings reports to the -32 mm plant feed stockpile. Screen undersize is pumped by the existing primary screen effluent pump to the new desliming cyclone. The cyclone overflow reports to the new log-washer process water tank while the underflow reports to the log-washer product screen underpan. A tie-in to the slimes lines from the primary screen effluent pump will allow the existing infield circuit to run until the new log-washer circuit has been installed or is offline for any reason.

Material sized between -80 mm and 32 mm is fed to the coarse XRT machine, where concentrate is ejected and is transferred to the coarse XRT secure dock lock system. The dock lock is transferred to the final recovery by hand, under security supervision. The XRT waste is still processed through a secondary crushing stage, however, the existing mobile secondary crushing unit will be replaced by the static secondary crushing circuit with a 25 mm CSS. Crusher product is returned to the existing primary screen feed conveyor creating a -32 mm to +1.6 mm feed stockpile and a -80 mm to +32 mm size fraction that is returned to the coarse XRT, secondary crusher circuit.

Log-Washer Circuit

The -32 mm NIR product or weathered ROM (if the NIR plant is offline for extended periods), is fed into the new vibrating twin grizzly unit at a rate of approximately 60 tph. Oversize (+80 mm) is stockpiled in a concrete load out bunker stockpile, whilst undersize (-80 mm) is fed (via a feed bin) to the scrubbing and screening area, which includes a log-washer, and produces washed mineralised material from 32 mm to +15 mm, from -15 mm to +1.6 mm and -1.6 mm fractions. Process water is supplied to the existing primary screen by the existing Area 101 process water pump, fitted with a new impeller and motor. Fresh process water is also added to the log-washer process water tank, as make up water and as screen spray water on the log-washer product screen. The existing primary screen effluent is deslimed and used as pulping water for the log-washer prep screen and log-washer.

17.3.2 Phase 2

Area 102 – Main Plant

Material is fed from the -32 mm plant feed stockpile by a front-end loader into the main plant feed hopper with a 65 mm static grizzly. Oversize is stockpiled and returned to the infield crushing plant, while undersize reports to the scrubbing and screening area. Feed to the scrubber is controlled at 100 tph.

This area produces three size fractions:

- Fraction 1: from -32 mm to +15 mm
- Fraction 2: from -15 mm to +1.6 mm
- Fraction 3: -1.6 mm slimes fraction

The slimes fraction is pumped by the scrubber product effluent pump, fitted with a new motor, to the existing slimes dam.

The fraction sized -32 mm to +15mm reports to the middlings XRT sorter which in turn feeds the tertiary crusher. The crusher product is screened, returning the +15 mm material to the middlings XRT and the -15 mm material to the scrubbing and screening area.

Material sized between -15 mm and +1.6 mm from both the scrubber product screen and the tertiary crusher product screen reports to the primary DMS at a rate of 100 tph.

Primary DMS coarse tailings (from +15 mm to -8 mm) is fed to the quaternary crushing circuit, whilst the primary DMS fine tailings (-from 8 mm to +1.6 mm) is discarded to stockpile.

Process water is supplied to the plant from the process water tank by the process water pumps which are fitted with new impellers and motors. Make up water is supplied from the raw water dam by the raw water pump.

Area 111 – Quaternary Crushing

The quaternary crushing circuit will be fed by the coarse primary DMS tailings (-15 mm +8 mm) and will be crushed to -8 mm in a closed circuit. During detail design phases, the option to have an open circuit will be explored, by which feed material to this circuit, will only see the crusher unit once and then go out of the circuit, as discard. This may be necessary, to prevent buildup of hard material in the circuit, thereby preventing overfeeding of the the secondary DMS circuit.

The Quaternary crusher product material is conveyed to the secondary DMS.

Primary DMS effluent is pumped to a de-grit cyclone. Overflow from this cyclone is used as process water in the quaternary crushing circuit, to limit the amount of fresh water required in the plant. Cyclone underflow gravitates to the quaternary crusher product chute and is used as additional pulping water prior to the quaternary product sizing screen. A portion of the quaternary area process water is diverted to the scrubber product screen as additional pulping water.

Area 301 – Existing Final Recovery Circuit

The only change to the existing recovery flowsheet is the removal of the single particle sorter at Meya's request and the upgrading of the recovery effluent water pump to a larger model to cater for the increased effluent water due to the new recovery. No further changes will be made to the existing recovery flowsheet, and it will continue to treat the fines fraction through the double pass Flow sort machine.

Area 302 – New Diamond Recovery Circuit

The new diamond recovery will utilise a Tomra COM 300 FR sorter which can recover Type IIb diamonds, which are regularly found in Meya Mining. The COM 300 FR sorter is not guaranteed to recover diamonds below 2 mm and all -2 mm concentrate will continue to be treated through the existing Flow sort machine. The Flow sort and COM 300 FR sorters will be used to audit each other on an ad hoc basis.

Middlings and coarse sinks from the secondary DMS concentrate sizing screen are batch jet pumped to the recovery dewatering screen. Each size fraction discharges from the dewatering screen and is stored in its own hopper via a flopper gate in the discharge chute.

From the hoppers, material is extracted by a two-channel feeder, which feeds directly into a two-channel infrared drier. The material is dried in its own channel and cooled before discharging into its own dry material hopper. Using a two-channel feeder and drier ensures that there is no contamination of the size fractions throughout the process.

From the dry material hoppers, each fraction is batch fed to the new Com 300 XRT sorter. The concentrate is contained in a dock lock system and is transferred to the existing sort-house under security supervision, as required. The XRT tailings discharge directly into the existing recovery tailings transfer system.

17.4 Power Supply

The power supply system for the Meya Mine project is designed to support both the NIR Waste Sorting Plant and the Main Plant.

17.4.1 NIR Plant Power Supply

One containerised 1.9 MVA diesel generator is required to be dedicated to the NIR plant. The generator is matched to the units that Meya Mining has already ordered and will form part of the larger integrated power generation facility. It should be noted that these 1.9 MVA units are rated to a constant load of only 1,250 kilowatts (kW) and it is therefore near the limit of power required for the plant, as is. Until this generator is integrated into the larger generator circuit, adding on any additional drives to the plant will not be possible. This generator will eventually form part of the comprehensive power plant for the complete integrated electrical reticulation for the NIR plant, Infrastructure and Underground requirements.

The power supply will consist of a 2 MVA step-up transformer at the generator position, which will increase the voltage from 400 V to 11 kV. For the short term, this will be a direct connection, with safety protection (i.e., fuses and links) and in future, the connection will be to the mega volt (MV) switchgear.

The new 1,200 m overhead powerline will then supply 11 kV all the way to the river pump and to the NIR plant. From the MV overhead power lines, a 2 MVA step-down transformer will supply power to the NIR plant and at the river another step-down transformer will supply power to the river pump panel.

Any concrete works required for the electrical generation and distribution will be detailed by Consulmet and be installed by the local concrete team.

17.4.2 Main Plant Power Supply – Phase 1

The total installed kW's on the Infield plant is designed to increase to 624 kW. The existing two 500 kVA generators from the main plant will be moved and installed to supply sufficient power to the Infield plant section. They will be replaced with new generators at the Main plant. The existing 375 kVA generator will be redundant and can be utilised elsewhere as required.

A 6 m shipping container will be supplied with a new MCC for the new equipment. The existing MCC will be moved and installed into this container and the existing weatherproof structure will be repurposed as a control station. A control panel will be fitted with an HMI and will be installed in the weatherproof structure to provide stop/start control of the equipment.

The existing MCC control system is hardwired and will be replaced with an PLC and will be controlled by an HMI. The reason for changing to PLC is for the condition monitoring required at the log-washer and the process control, crusher safety interlocks and the condition monitoring of the Kawasaki cone crusher. The addition of the PLC will also result in a more consistent system architecture.

17.4.3 Main Plant Power Supply – Phase 2

As per the existing plant, all upgrades will be tied into the existing PLC controller, with the equipment being interlocked by the software. The upgrades to the plant will utilise the existing SCADA to stop / start the plant.

The design caters for a 24 hour continuous operation and sufficient lighting has been catered for. General area flood lighting has been excluded, but flood lighting of the specific load out / stockpile areas, are catered for.

A 12 m shipping container will be supplied with the MCC, for the new equipment installed inside. This container will be placed in the position of the existing two 500 kVA generators. The new MCC will be integrated into the existing PLC and SCADA. The existing PLC and SCADA will be upgraded to accommodate the new equipment and process. The existing control room will still house the upgraded SCADA and the plant will be operated from there.

Cables will mostly reside on cable racks, but some underground runs, with proper demarcation, might be required.

Consulmet has allowed for two-off 1,000 kVA diesel generators that will replace the existing two 500 kVA generators. If the plant is running at low loads, then one generator can be stopped. Two generators also allow for more maintenance flexibility. Running one large generator at low loads is not good practice. The generators will be supplied with a synchronisation panel and a DB to supply the new plant, as well as the existing plant MCC's.

17.5 Water Supply

Water availability on site remains a challenge during the dry season. The raw water dam (located on the left side of the plant when driving in with the access road) is occasionally almost empty, requiring a plant shutdown in order to be refilled. This is due to limited pumping capacity from the transfer dam on the right side of the plant (this transfer dam receives slimes run off water and rainwater). An additional pump will be installed in the transfer dam by the site team to ensure the raw water dam remains full.

The initial plant and TSF designs allowed for: 1) water to be pumped directly from the Meya River to the plant and 2) for a proper return water circuit. The pipeline from the river was installed but is not currently serviceable (an investigation and quotation to get this line operational has been done by Consulmet). The return water circuit has not been installed.

The NIR plant design assumes that most water will be supplied to this portion of the plant from the underground portal pond with make-up water being supplied from the Meya River. When Consulmet visited the NIR plant location in May 2023, the underground portal pond was very low, as was the Meya River. The NIR plant requires approximately 230 m^3/h of fresh water from these sources and based on the evidence, this might be a challenge to source during the dry season. The main plant will also require an additional 250 m^3/h to cater for the increased throughput and additional processing steps. The assumption of adequate water from the river, must be confirmed and alternative options, including water recovery methods, will need to be investigated.

It is noted that the opposite challenge would be expected during the wet season, with excess water requiring disposal.

Similarly, the Primary DMS effluent also reports to a dewatering cyclone. The overflow is used in the quaternary crushing circuit, further reducing the raw water requirement of the plant.

17.6 Plant Performance

The plant performance is underpinned by two key factors. These are the life expectancy of the plant and the overall asset utilisation which is an indication of the plant availability and utilisation. Both factors are heavily dependent on regular, timely and effective maintenance practices in line with OEM guidelines.

17.6.1 Life of Plant and Maintenance

The life of plant (LOP) of 15 years is applicable to the scope of supply comprised in the NIR Waste Sorting Plant and the Main Plant upgrades as laid out above. The anticipated LOP is based on strict adherence to maintenance requirements as laid out by OEMs. It must be noted that with preventative maintenance and regular engineering inspections, plant life can be extended. Adversely, the absence of adequate maintenance can cause a reduction in LOP.

17.6.2 Utilisation and Maintenance

Consulmet took into consideration industry standard of 81% for overall asset utilisation for plant performance before deriving an appropriate plant utilisation figure for Meya. The industry standard is based on the following two key assumptions:

1. 90% plant availability
2. 90% plant utilisation

Achieving this asset utilisation depends on:

- Well-maintained equipment.
- Sufficient quantities of skilled personnel.
- Adequate spares inventory at the mine site and/or easy access to available spares and consumables.
- Regular and preventative maintenance, in line with the OEM specifications and requirements.

The Meya plant will integrate new equipment and modules with an existing processing plant that has been operational since 2016/2017. Given this consideration, the remote location of the plant, and the time and capital requirements to build adequate spares inventory, Consulmet recommends that the utilisation figure should be adjusted lower.

Consulmet recommends an overall utilisation of 75% for the Meya Mine project, which is considered achievable and realistic.

Achieving the proposed 75% utilisation goal will depend on:

- Operating the plant within the specific OEM specifications.
- Regular preventative maintenance in accordance with the OEM recommendations.
- Provision of necessary spares and consumables (oils, grease and lubricants) on site.

These details are captured within the OEM data packs that were and will be supplied with the existing plant and future expansions.

A key consumable is the ferrosilicon (FeSi) required in the DMS modules. Typical consumption rates of FeSi are 500 gpt to 600 gpt of DMS feed. This consumption rate is directly dependent on the type of mineralised material being treated:

- It could be lower for competent material
- It is accurate for porous and flakey material.

17.7 Assumptions

The following assumptions have been made in developing the process plant design:

- Equipment is sized according to the medium and ex. coarse PSDs, Consulmet (a), 2024, Page 9.
- It is assumed that plant feed will fall within the specified PSD bracket, material outside the PSD bracket will influence the plants throughput capability.
- Top feed size as specified on the various PFD’s.
- BCOS of 1.6 mm. Pumping calculations have been checked to cater for a BCOS of 1.6 mm.
- Slimes line distances and elevations catered for, without survey data available.

- 1 x Slimes line of 100 m to TSF
- No reticulation (including valves) on the TSF has been included.
- No cross-land piping supports have been included as it is assumed that the piping will lie on the ground. As well as no crossings / culverts.
- No dust suppression has been allowed for.
- The new MCC will be elevated on civil plinths.
- The plant will be 400 V, 50 hertz (Hz).
- Consulmet Standard paint spec and colour system has been allowed for, for structural steel and platework. Vendor equipment will be provided with vendor standard paint specifications.
- Civil design based on ground compaction of 200 kilopascal (kPa) bearing pressure.
- No redundancy has been allowed for unless specifically stated.
- Free access to the plant construction area 24/7.
- Work over weekends is allowed without special permission or permits.
- Work during commissioning will be allowed when the plant is filled with live material.
- Consulmet standard safety file will be used for the Project.
- Consulmet Standard Engineering specifications apply.

17.8 Battery Limits

Consulmet's scope includes:

- Handling plant feed from the top of the feed bin for the infield plant and from the top of the ROM bin for the main plant
- Processing through to product discharge at stockpiles
- Slimes handling up to the discharge point at the slimes facility
- Process water system from the existing process water dam
- Electrical supply systems from the generators

Consulmet's scope does not include:

- Anything before the feed enters the top of the feed bins
- Anything after the product is discharged to stockpiles
- Slimes management after discharge at the slimes facility
- Water supply before the existing process water dam
- Potable water supply (explicitly stated as not provided for)
- Power generation before the generators

18 Project Infrastructure

18.1 Introduction

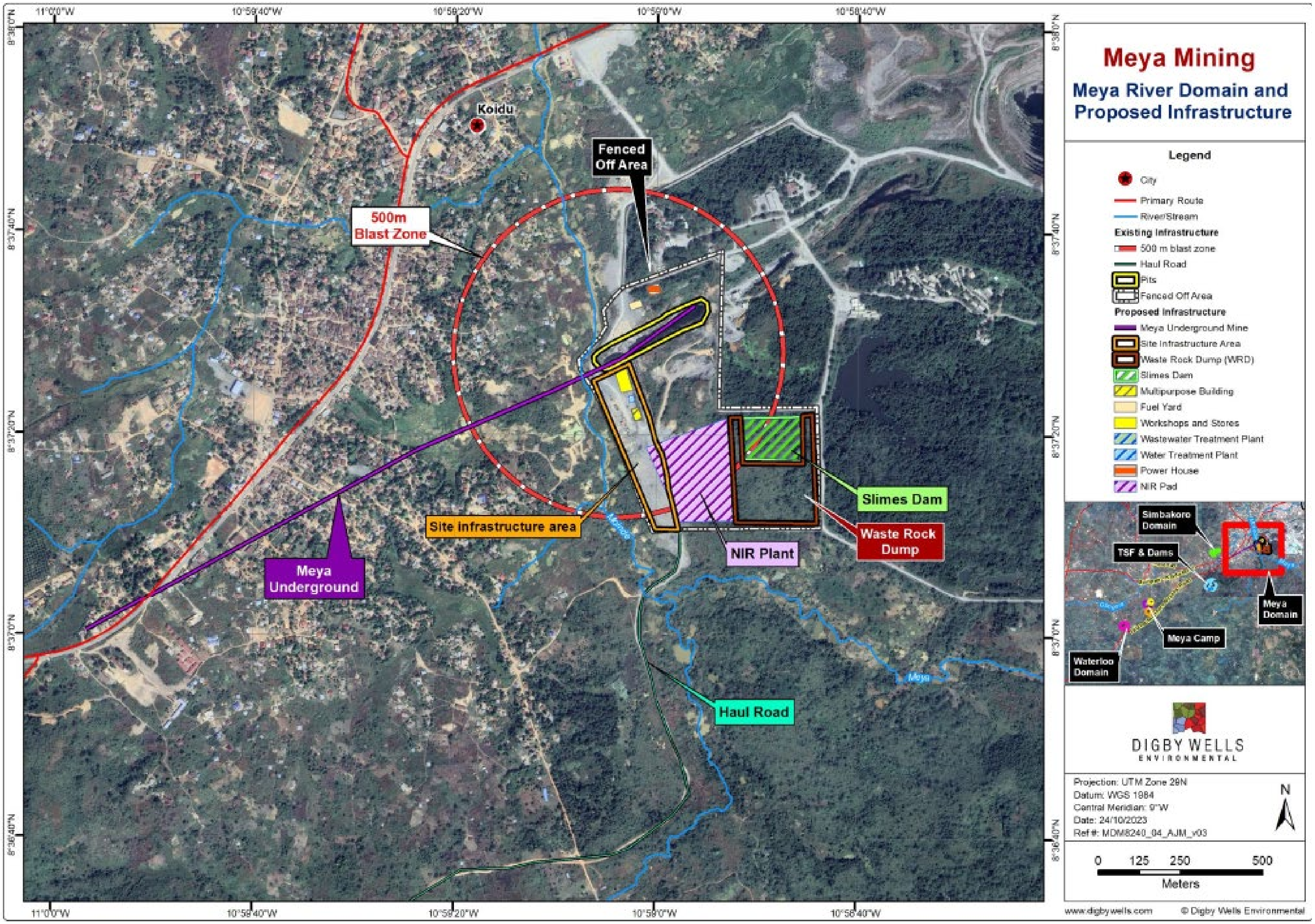
An illustration showing the overall mine layout and the proposed positions of all the various facilities described in this section of the report is provided in Figure 18-1. Services between the various facilities have been based on the distances and locations as indicated on this illustration. This includes the design and materials required for potable water-, sewerage- and power distribution.

All internal and interbuilding plumbing, piping and valves associated with the various buildings as well as the water treatment and waste treatment, have been catered for. The layout and positions of the various buildings and plants need to be finalised and agreed upon. Distances currently allowed for in terms of piping are estimates and are detailed further in this document.

The infrastructure requires a relatively flat, stable terrain for installation, with a bearing capacity of 150 kPa. Consulmet is equipping each building with a concrete slab flooring area, to allow efficient cleaning and to protect the founding conditions from water ingress, emanating from rain.

All earthworks and required equipment to facilitate earthworks, have been excluded and no geotechnical investigation or reporting has been included. Leveling and compaction of the installation pad/footprint is the client's responsibility.

Aggregates, sand, bricks and cement for concrete construction have not been catered for and will be provided by Meya Mining. The reinforcing, chemical anchors or holding down bolts, shutters, hand tools and supervision, will be part of the Consulmet scope of supply. Meya Mining must provide the local labour (skilled and unskilled) and the larger equipment required. Clean construction water, as well as construction power supply, will be Meya Mining responsibility.



Source: Digby Wells, 2024

Figure 18-1: Proposed site layout

18.2 Site Layout and Buildings

18.2.1 Currently Present Buildings on Site

The Meya mine has a current range of containerised buildings, a brick-and-mortar very important person (VIP) accommodation unit and a brick-and-mortar kitchen / mess facility. All the buildings are in good condition and include:

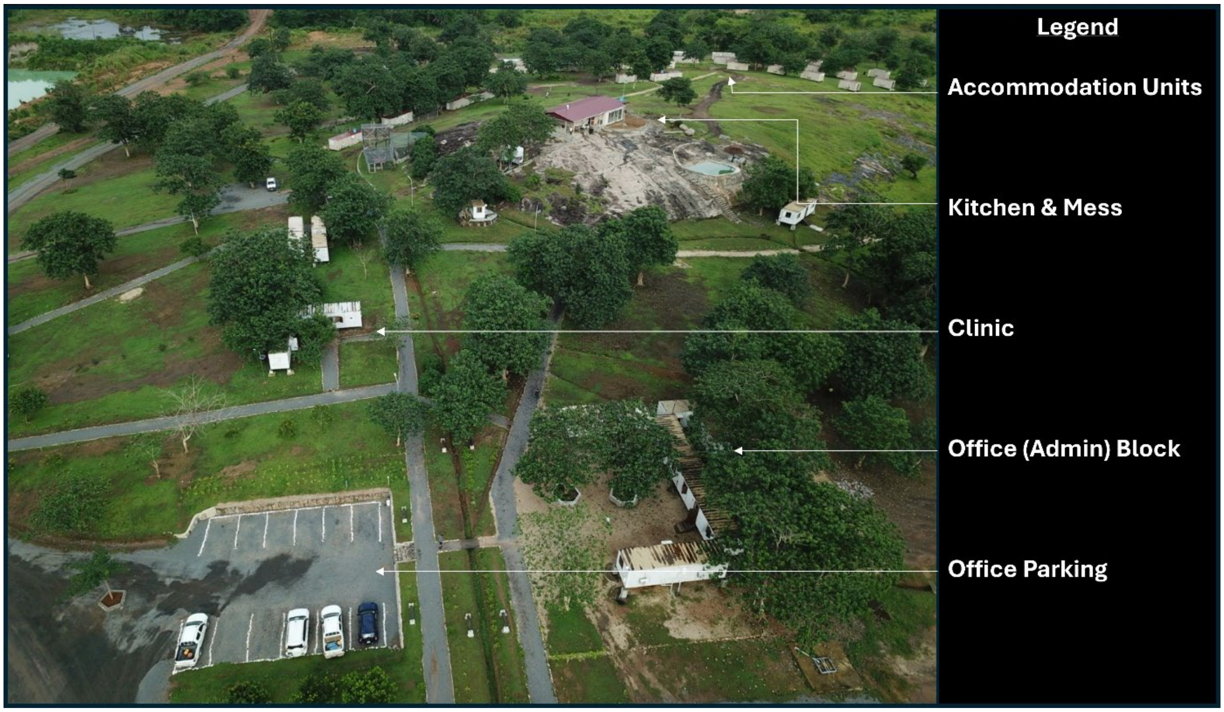
- Security offices and gate control
- Accommodation units
- Kitchen and mess facilities
- Administration offices
- Medical clinic with ambulance station and helipad for emergency transport
- Underground mine site lamp room
- DMS plant and associated offices
- A final recovery building and associated offices
- Workshops, stores, diesel storage facility
- Explosive magazine for non-bulk explosives and a bulk explosives storage facility

Accommodation Units

Meya currently has a range of 6 m and 12 m fitted accommodation containers totaling 46 in number. These units are airconditioned and each contain an ensuite toilet, basin and shower. Additionally, an air conditioned four-sleeper brick and mortar VIP accommodation unit with ensuite toilet, basin and shower facilities has been constructed. The camp accommodation caters for 65 personnel.

Administration Buildings

The current administration buildings are 6 m to 12 m fitted and airconditioned containerised units. A total of 14 offices are located at the main administrative area, whilst separate offices are provided at the blasting services, supply chain and engineering facilities (Figure 18-2).



Source: This report, 2024

Figure 18-2: Meya site administration and accommodation units layout

Kitchen and Mess Facilities

A brick-and-mortar kitchen and mess facility has been constructed within the camp area. The kitchen caters for three meals per day for camp residents and senior administrative staff. A laundry facility is included with automatic washing and drying machines catering for camp residents.

An additional local kitchen facility provides one meal per day to non-resident employees.

Medical Clinic

The Meya mine has a small, modern, containerised medical clinic and pharmacy that is equipped to handle minor to moderate injuries and to stabilise patients with severe injuries. The clinic is equipped with a modern four-wheel drive ambulance and is staffed by two advanced life support (ALS) paramedics, supported by a four-member nursing staff with a local doctor on call retainer. For very serious injuries, the mine can transport patients by ambulance to the nearest hospital in Koidu City (10 km) or Freetown (350 km).

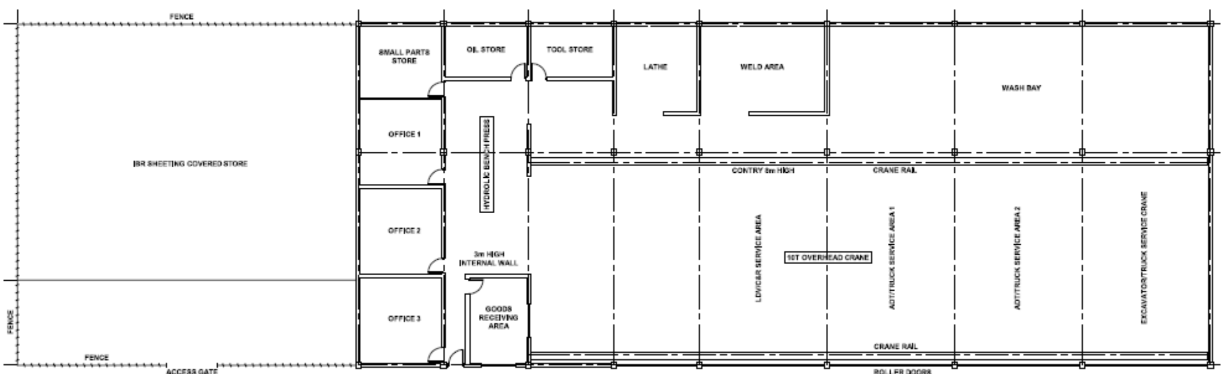
18.2.2 Proposed Expansion of Infrastructure

Following additions to the infrastructure are proposed as part of the Meya River underground project.

Second-Hand Refurbished Workshop and Stores Area

The updated workshop and stores area (Figure 18-3) is planned to cater for the following items:

- Offices
- Small parts and spares stores
- Goods receiving area
- Oil store with automatic lubrication dispensing system
- Tool store
- Wash Bay
- Covered open stores (300 m²)
- Open fenced mine store area (400 m²)
- Machine shop and various work areas
- Mining equipment and LDV service bays (Excavator service bay / Loader and dumper service bay / Light vehicle service entrance and inspection bay)



Source: Consulmet (c) 2024

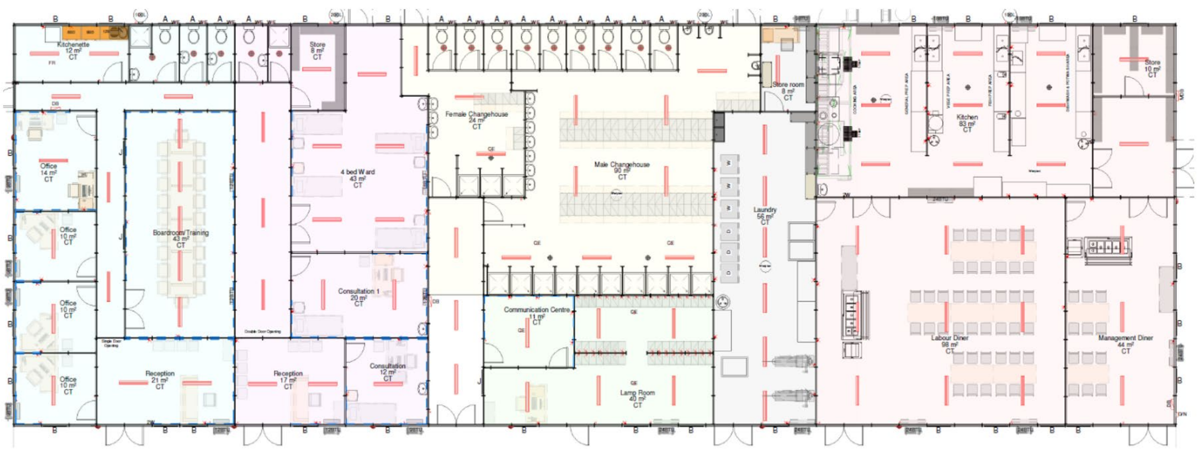
Figure 18-3: Proposed layout of the new workshop and stores area

The workshop includes the provision of a fire suppression system in line with standard design practice. Consulmet has selected a system that is economical and caters for the remote location. Consulmet's supply will include fire hydrant reels placed strategically to accommodate the floorspace and standard fire extinguishers for the offices area. Additional items considered in the scope include two 5000 l supply tanks, with booster pump to provide pressure to the hydrants. An emergency exit is also catered for.

Prefabricated Multi-Purpose Building

A new, prefabricated building (Figure 18-4) is proposed for the site, to accommodate the NIR Waste Sorting plant, underground mining activities and the workshop facility. This addition is required due to the distance from the main plant and the main camp. The multipurpose building therefore comprises facilties that are over and above the existing infrastructure at the main plant and is planned to include the following items:

- Admin offices
- Clinic
- Change rooms
- Lamp room
- Communication centre
- Kitchen
- Mess areas (management and labour)
- Laundry room
- Basic furniture and equipment



Source: Consulmet (c) 2024

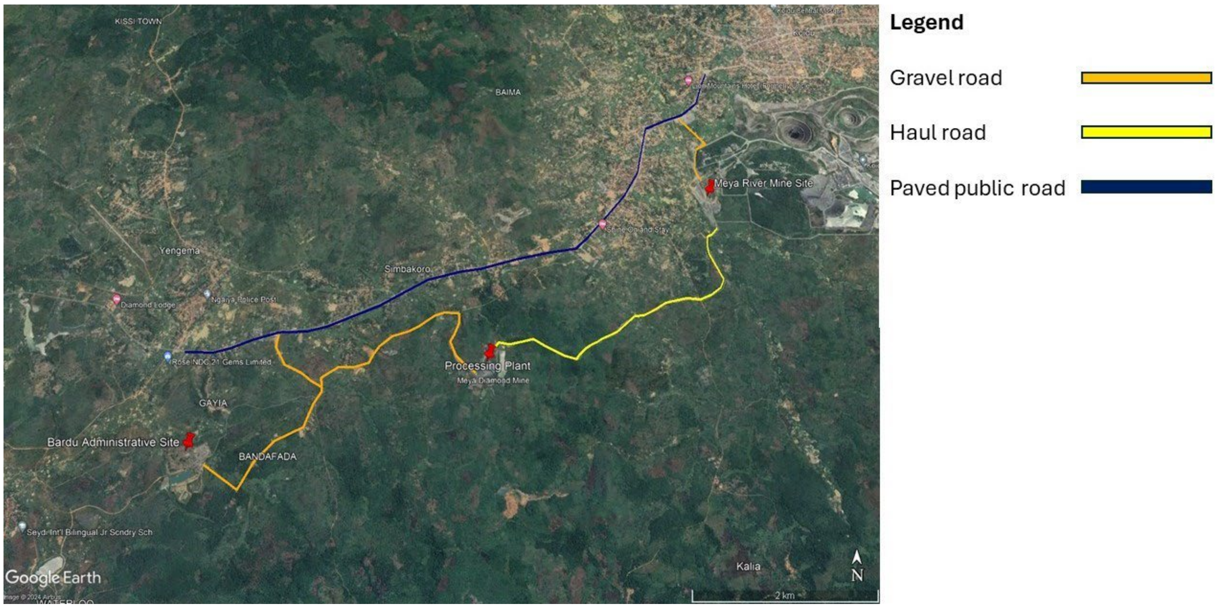
Figure 18-4: Proposed layout of the multipurpose building

Consulmet has based the water and wastewater circuits in the multipurpose building on estimates that encompass reasonable use i.e. accounting for requirements based on existing Meya personnel.

18.3 Site Roads

All internal roads at the mine site are gravel based and are suitably wide for two-way traffic, whilst a paved section of public road allows quick communication between remote sites (Figure 18-5). Roads are in good condition, are graded regularly and have a safe driving surface. Light and medium vehicle road gradients are generally below 11%, with the underground portal access / egress being at 14%. Road safety signs are deployed where applicable and boom gates prevent unauthorised access in applicable areas. Water trucks (9,000 litres) are used for dust suppression in the dry season. Safety berms are used where required on corners and bends, and where potential drop-offs exist. Meya Mining has constructed a site exclusive heavy vehicle haul road between the Meya underground mine site and the processing plant (4 km). The haul road has boom gate access control, is wide enough for two direction heavy vehicle travel, has one steep section (400 m) of steep gradient (20%). The haul road is generally restricted to articulated dump truck (ADT) hauling. The following distances are relevant:

- Bardu administrative site to Meya mine site – 10 km (gravel and paved)
- Bardu administrative site to processing plant site – 5 km (gravel)
- Meya River mine site to processing plant site (haul road) – (gravel)



Source: This report, 2024

Figure 18-5: Meya road access

18.4 Logistics

Meya's supply chain department is responsible for procurement and related logistics. Supply chain systems run off a SAGE™ database system.

The mine site is situated approximately 350 km inland from the Freetown city, port and airports. Imported supplies are transported by road from either the port or airport, whilst local supplies are either sourced from Freetown or within Koidu city which is located approximately 10 km from the mine site logistical stores. Transport from Freetown, the port and airport, is generally provided by 3rd party transporter or the clearing agent. The roads from Freetown and the airport are paved and in excellent condition allowing delivery of containers and parcels within 12 hours.

Local supplies from Koidu city are generally delivered by the supplier or collected by Meya Mining's 3 t delivery trucks. Meya Mining has included a 20 t HiAb truck in its capital requirement going forward.

Meya Mining operates a main logistic store at the Bardu administration site (receiving, storage and dispatch), stores dispatch to the mine site and processing plant are transported by road to the onsite departmental logistics stores for further storage or dispatch.

18.5 Telecommunications

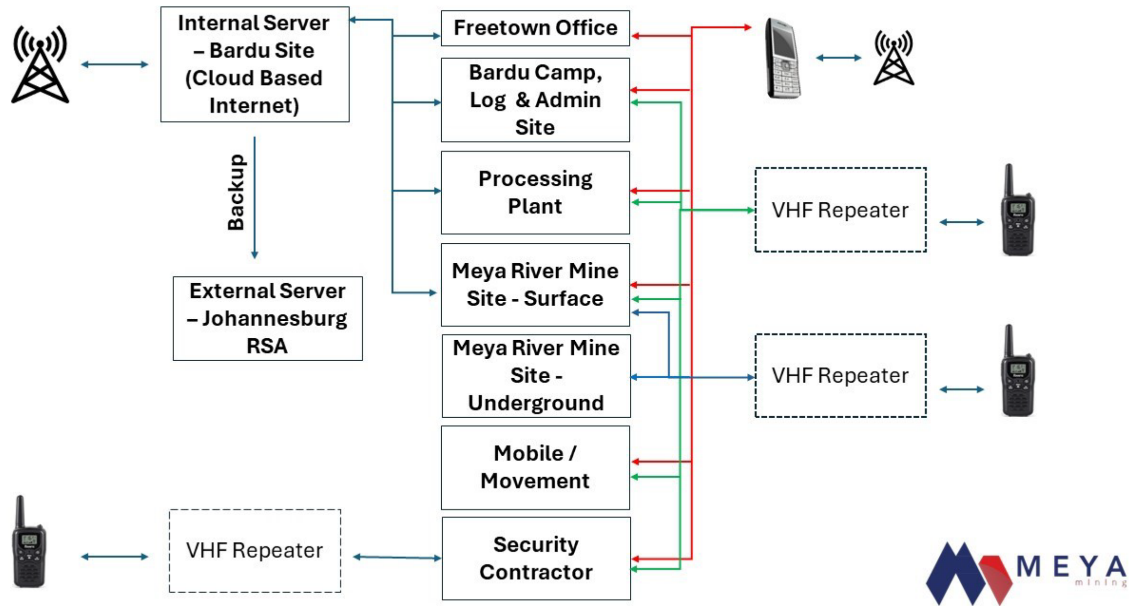
The mine site has three main methods of modern communication: internet, cellular phone and very high frequency (VHF) radio (Figure 18-6).

Internet service is currently provided by Africell SL and is Global System for Mobile Communications (GSM) based utilising links to cellular towers in close proximity to the mine site. Meya Mining intends to subscribe to the Starlink Satellite internet service during 2024. An internal server is located at the Bardu camp. Administration and logistics centre at the mine with active server backup to Johannesburg, South Africa hosted by service provider First Consulting Alliance (FCA). Meyamining.com is the registered domain utilised by Meya for internet communication and is currently cloud based with 40+ plus users. All mine site locations (apart from underground) and the Freetown office are currently connected, with either WiFi or ethernet, with an internet link at the plant site providing login, to the plant SCADA operating system, for service provider Sync Systems. Meya Mining intends to extend internet to the underground infrastructure in the near future, utilising the currently installed Strata Leaky Feeder system.

Cellular phone service is currently provided by Africell SL (optional ORANGE) with good tower coverage of the mine site, Freetown and the main logistics routes in Sierra Leone. Africell provides a GSM service as well as 3G data connectivity. Meya uses the cellular service for voice calls, messaging and internet as well as social media platform-based work group communications.

Surface radio communications is by means of VHF. All mine sites are covered by Meya Mining’s VHF repeater station located on high ground north of the plant site, whilst the security contractor (G4S) maintains a VHF repeater, on a separate network, at the Bardu administration site. Meya currently employs one base station unit and thirty handheld VHF radio units amongst the various sites and mobile units whilst G4S utilises one base station and 20 handheld VHF radios.

Underground radio communication at the Meya River mine site is by means of VHF via a STRATA / HYTERIA Leaky Feeder system. All mining levels have coverage whilst the immediate surface area is also covered through a VHF repeater. One base station unit and thirty handheld units are currently deployed underground. Meya intends to deploy 20 vehicle mounted base station units in the near future. The STRATA Leaky Feeder system is compatible with digital upgrades (StrataConnect and DigitaBridge Plus+), which will enable Meya to add digital / data connections going forward.



Source: This report, 2024

Figure 18-6: Meya communications plan

18.6 Security

Meya's Security Department, headed by the Head of Security, consists of three divisions:

- Access Control and Loss Prevention Security
- Operations Support Security
- Industrial Security

Each division is led by a Security Manager.

18.6.1 Access Control and Loss Prevention Security (ACLPS)

The department administers the ROM security contractor, G4S Secure Solutions SL ("G4S"). G4S are responsible for access control to all mine sites as well as loss prevention (fuel, stores, escorts etc.) (Figure 18-7). G4S is equipped with a radio control room (see telecommunications section), are stationed at all access / egress / strategic points and utilise a four-wheel drive patrol vehicle. G4S currently deploy one 126 personnel working 24/7 on a rotational shift basis and are headed by a Senior Security Officer reporting to Meya's ACLPS manager.

Source: This report, 2024

Figure 18-7: Bardu administration site access control

18.6.2 Operations Support Security (OSS)

The department administers the Government of Sierra Leone (GoSL) provided detachment of fifteen armed personnel of the Sierra Leone Police, Operations Support Division (OSD). The detachment of OSD is headed by an Inspector of Police and work with Meya's OSS manager and assistant manager. The department is responsible for the following.

- Deterrent presence
- Supporting the G4S contractor where required
- Escort of valuables in transit

18.6.3 Industrial Security (ISS)

The department is responsible for security of all aspects of the diamond recovery, transport, valuation for Kimberley Process Certification (KPC) and export, i.e. chain of custody. The department currently consists of six Meya direct hire expatriate personnel headed by the ISS manager. The red area final recovery access and reporting protocols function on a three key, three signatory system whereby a member of the ISS team, a member of the metallurgy department and a member of the GoSL (Mines Compliance Officer) needs to be present to access the red area, conduct sorting, grading and storage functions and to sign off on all diamond recovery reporting registers (Figure 18-8). Key functions are as follows.

- Audit mineralised material stockpiles
- Audit tracer tests in processing plant
- Access control to caged DMS concentrate bins (red area)
- Access control to the coarse XRT concentrate module (red area)

  - 70 m length, 2.4 m high Clearvu security fence, gate entrance / exit
  - Biometric and Proximity card access to coarse XRT concentrate room
  - Transport of secure concentrate container from coarse XRT module to sort house
- Biometric and proximity card access to the final recovery pink and red area
  - 140 m length, 2.4 m high Clearvu security fence, turnstile entrance / exit
    - Containerised sort house (red)
    - Reinforced concrete grading and storage house – CAT5 door and safe (red)
    - Containerised XRT module (pink)
    - Containerised Flowsort X-ray module (pink)
    - Final Recovery tailings yard (red)
- Biometric and proximity card access control to coarse XRT concentrate module (red area)
  - Transport of secure concentrate container from coarse XRT module to sort house
- Supervise daily sorting and audit daily recovery reports
- Supervise and audit diamond storage
- Supervise and audit recovery consolidations
- CCTV monitoring, archiving – security cameras in general plant area and red and pink areas
- Operate a drone-based surveillance system covering the processing plant surrounds, approaches and the mineralised material haul road

Source: This report, 2024

Figure 18-8: Processing plant security layout descriptions

18.7 Water Management

Water availability on site remains a challenge during the dry season. The raw water dam (located on the left side of the plant when driving in with the access road) is occasionally almost empty, requiring a plant shutdown in order to be refilled. This is due to limited pumping capacity from the transfer dam on the right side of the plant (this transfer dam receives slimes run off water and rainwater). An additional pump will be installed in the transfer dam by the site team to ensure the raw water dam remains full.

The initial plant and TSF designs allowed for water to be pumped directly from the Meya River to the plant and for a proper return water circuit. The pipeline from the river was installed but is not currently serviceable (an investigation and quotation to get this line operational has been done by Consulmet). The return water circuit has not been installed.

18.7.1 Water Treatment Plant (WTP)

A WTP is proposed to be installed by Consulmet as shown in Figure 18-9 to cater for the supply of potable water to the multipurpose building and workshop, as well as clean water for cleaning of the NIR sorters. Allowance in terms of water supply volumes has been made in accordance with the assumed Consulmet quantities.

Source: Consulmet (c), 2024

Figure 18-9: Example of a typical WTP

- The actual process required is based on the water samples provided by Meya Mining, and the test results obtained for each of the samples.
- The current design is based on two of the three available water sources, namely the Meya River and Koidu inflow (Wessie's dam).
- The portal sump is not preferred and is currently excluded from the design due to the complex treatment process required to achieve the minimum requirements for potable water.

The preliminary treatment plant design and process was completed to such a level, as to achieve the below water quality, that is aligned with South African National Standards (SANS) minimum requirements for potable water (Table 18-1).

Table 18-1: Estimated water quality based on preliminary design of WTP

Characteristic	Unit	Value	Characteristic	Unit	Value
pH		6 to 8	Zn	mg/L	0.1
Colour	mg/L	43	Al	mg/L	0.01
E-coli	mg/L	133	Co	mg/L	0.02
Coliform	mg/L	5.5	Cu	mg/L	0.06
Turbidity	NTU	17	Mn	mg/L	0.1
Fe	mg/L	1.03	Ni	mg/L	0.1
Ca	mg/L	20	CN	µg/L	2
Mg	mg/L	8	Pb	µg/L	1
Cl	mg/L	3	Cr	mg/L	0
Na	mg/L	4	As	µg/L	0
Ammonia as N	mg/L	0.04	Hardness	mg/L as CaCO3	1.2
Fe	mg/L	0.4	TOC	mg/L	44
Cd	µg/L	0.3	TDS	mg/L	0.43
K	mg/L	5	Nitrates + Nitrites	mg/L	6
SO4	mg/L	26	Conductivity	mS/m	22

Notes:
1. mg/L - milligrams per litre
2. µg/L - micrograms per litre
3. mS/m - milliSiemens per meter
4. NTU - Nephelometric Turbidity unit

- The current design caters for 24 m³ a treatable inflow a day, based on 24 hours a day. The facility will initially be run until the water product storage is full. Thereafter it can be run on an as needed basis or hours a day.
- The current size (based on 50 personnel in the area) will allow for a slight, overall increase per capita and will cater for surge periods during construction and future, within reason. If never needed, additional water can be bottled and used elsewhere.
- All design, engineering, manufacturing, for the complete containerised treatment plant, has been allowed for.
- The entire plant will be controlled by a standalone controller system.
- Consulmet proposes a semi-automatic system, as there will still be operator intervention required.
- Civils design, supply and installation supervision have been included, and can be broken down onto the following:
  - Civils for complete plant and storage tanks.

  - Total civils quantity based on preliminary design – 9 m³.
  - Rebar, hold down bolts, formwork, construction materials have been included.
  - Hand tools and basic installation tools as well as construction materials have been allowed for.
- On average, filter media (108 kg) and disinfectant (500 kg) will last for a full year of operation depending on the plant usage and proper storage of the media.
- Supply pumps (one on duty and one on standby), with piping, for two sources (four off pumps total) have been allowed for.
- All supply and distribution piping and valves allowed for, for 300 m. And it is assumed that the plant will be situated within 50 m of the power supply and the rest of the infrastructure.
  - The summarised process flow is as follows.
    - Supply pumps from the water source (Koidu inflow or Meya River)
    - Feed holding tank
    - 6 m containerised water treatment processing plant
    - Treated water usage / storage tank

18.7.2 Wastewater Treatment Plant (WWTP)

Consulmet proposes a WWTP, as depicted in Figure 18-10. The WWTP is currently specified for all sewage produced by the multipurpose building, and workshop buildings.

Source: Consulmet (c), 2024

Figure 18-10: Example of a typical WWTP

- The process will consist of the following steps:
  - All sewerage will report to a centralised underground holding sump / or manhole.
  - From here it will periodically be pumped to the containerised facility.

  - The first step will be Screening of this wastewater.
  - Followed be a Sequential batch reactor (SBR), which consists of the following steps:
    - Filling – during which the reactor receives raw sewage.
    - Aeration – during which a service aerator is switched on and mixes air into the sewage, therefore starting the biological reactions and breaking down the raw sewage.
    - Settling – during which the mixed liquor separates to form a clear liquid layer in the top part of the reactor with the settled sludge in the bottom of the reactor.
    - Decant – during which the clear water layer is drained from the reactor. The amount of water being drained from the reactor is equal to the amount of raw sewage that can be filled into the reactor during the filling step.
    - Idle – during which the reactor is on standby and waits for the other reactor to finish with the filling step.
    - Process products coming from the treatment plant, will be:
      - Plastics and other non-dissolvable items, to be disposed of as normal waste.
      - Sludge – to be dried and discarded. If operated correctly, there will be minimal risk of bad odors.
      - Clean water – this should report to a maturing pond, after which it can be disposed of to natural areas. If this is deemed a political risk, this water can be reported to a conditioning stage, before being pumped back into the river.
      - Disinfection
- It is recommended to position the plant no less than 100 m from the closest building, but also not much further, in order to accommodate pipe angles. The position of the plant will have to be discussed if deviating from this stated position, to enable Consulmet to accurately cost the system. For this proposal, Consulmet has catered for a position exactly on 100 m.
- Typical treated effluent
  - Considering that the raw sewage would be of a domestic nature (not industrial), the following effluent quality, in line with the General standard for Sewage effluent, can be expected (Table 18-2).

Table 18-2: Estimated effluent quality

Characteristic	Unit	Value
pH		5.5-9.5
Oxygen Absorbed		<10
Chemical Oxygent Demand mg/l: < 75	mg/L	<75
Free and Saline Ammonia	mg/L	<10
Suspended Solids	m/L	<25
Soap, Oil, Grease (with input limit of 40 mg/l)	mg/L	<2.5
Residual Chlorine (after 1 hour)	mg/L	0.1
Nitrate	mg/L	10-20
E-coli Count		0 per 100 ml
Temperature		Below 30℃

It is noted that treated effluent / grey water, can be released into a maturation pond (as a safety step), followed by a natural water cycle such as a river. If the plant is operated correctly, the grey water is of environmentally acceptable quality to be discharged directly into the river. The maturing pond is merely a safety step if incorrect operation is conducted.

- A semi-automatic system is proposed, as there will still be operator intervention required.
- The current size (based on 50 personnel) will allow for a slight, an overall increase per capita and will cater for surge periods during construction and future, within reason. The only change to cater for is the slightly larger drying beds which have been catered for.
- All design, engineering, manufacturing, for the complete containerised treatment plant, has been allowed for.
- The entire plant will be controlled by a standalone controller system.
- Civils design, supply and installation supervision have been included, and can be broken down onto the following:
  - Civils for the complete treatment plant, including storage tanks and drying beds.
  - Total civils quantity based on preliminary design – 15 m³.
  - Rebar, hold down bolts, formwork, construction materials have been included.
  - Hand tools and basic installation tools as well as construction materials have been allowed for.
- The summarised process flow is as follows:
  - Raw storage catchment sump
  - Raw storage cutter feed pump
  - Rotating screen
  - 6 m containerised SBR plant
  - Civil drying beds

18.8 Power Supply

18.8.1 Electrical

To reduce the initial capital outlay, the electrical supply to the infrastructure buildings and plants will be from the 11 kV overhead power line (OHPL) that is fed from the NIR plant generator and step-up transformer. This generator and step-up transformer will form part of the overall power plant at a later stage as mentioned in the NIR waste treatment plant proposal. When the switchgear has been completed at the generator facility, the power generation and distribution, will be a overall function through the means of the switchgear.

The OHPL will connect to a mini substation via fused links and suitably rated cable for the 11 kV supply. The mini substation will contain a step-down transformer and breakers to distribute the 400 V to the required loads. This mini-substation will be similar to the underground mini-substations. All cabling from the mini substation to the various buildings has been included, based on estimated lengths of cable. The layout and positions of the various buildings and plants need to be finalised and agreed upon. Distances currently allowed for in terms of cabling are estimates and are detailed further in this document.

Lighting will be provided in the buildings, as well as on the outside and around the power reticulation plant to allow for area lighting. This area lighting consists of lighting masts with floodlights mounted on them. The design caters for 24 hours of continuous operations and sufficient inter building and area lighting have been catered for.

All the infrastructure will be properly wired and suitably earthed with lightning protection that conforms to the SAN 10142-01 specifications (wiring of premises).

The LV supply cables will be buried in order to allow for ease of traffic flow (both vehicular traffic and foot traffic). The cables will be properly demarcated, and a drawing will be provided of the routing of all the underground cables, after installation.

18.8.2 Power Supply To Infrastructure Buildings

The NIR plant generator that is used to supply power to the infrastructure is matched to the units that Meya Mining has already ordered and will form part of the larger integrated power generation facility. The generator model is the T1900 unit, from Kohler. To minimise the initial cost a dedicated infrastructure generator has not been catered for, as the initial demand will be supplied by the one NIR generator. The specific tools and equipment installed and used in the various buildings and workshops, may necessitate a larger power demand.

Any concrete works required for the electrical generation and distribution, will be detailed and supervised by Consulmet and be installed by the local concrete team.

18.8.3 Power Reticulation Plant Civils, and Electrical Supply / Distribution

In total, the power generation facility will consist of a total of six 2 MVA generators. The basis for the recommended generator sizing is shown in Table 18-3. The generator loading is optimised at 65% in accordance with best practice resulting in a total required power generation of 11.35 MVA.

Currently, Meya Mining has directly procured two of these generators and the NIR proposal caters for a third. The current infrastructure needs can be met with these three generators, but it should be noted that there will be an additional generator required during Phase 2 / Year 2 of the underground development. Two additional generators have been catered for commercially within the Phase 2 budget. The sixth generator will be required in Year 3 and has not been catered for commercially.

Provision for the bulk of the plant power supply has already been addressed in the NIR and Underground proposals and only the civil portion remains.

- 1 off – 315 kVA mini sub (similar concept to the underground mini-subs)
- LV cabling (400 m)
- MV cable (100 m)

Table 18-3: Estimated power loads

Description	Estimated Load (kVA)
Streetlights	16
Pumps	1,416
Fans	1,955
Existing Equipment	1,048
NIR Plant	1,238
River Pump	188
Drill Rigs	900
Admin	80
Change House	80
Workshop	120
Fuel Depo	80
Canteen	80
Store	80
Clinic	80
Total	**7,361**
Total Generating Power Required[1]	**11,325**

Note: [1.] Total power generation is determined by applying a 65% factor to the total estimated power draw

For area lighting, Consulmet has allowed for a mast with flood light at the power reticulation area, and similar for the infrastructure buildings. Consulmet has further allowed for ten off flood lights that will be positioned on the outside of the workshop, multipurpose building, and water treatment plants.

Civils design, supply and installation supervision have been included, and can be broken down into the following:

- Civils for six 2 MVA containerised generators
- Civils for six 2 MVA step up transformers
- Civils for one substation container
- Total civils quantity based on preliminary design – 80 m³

- Rebar, hold down bolts, formwork, construction materials will be included.
- Hand tools and basic installation tools as well as construction materials will be allowed for.

18.9 Surface Mobile Equipment

The major surface fleet components are:

- Two Epiroc FlexiROC D50 hydraulic down-hole percussion drills
- One Epiroc PowerRoc T50 top-hammer percussion drill
- Two Volvo EC750Dl excavators
- One Volvo EC480D excavator
- One Volvo EC380D excavator (with hydraulic hammer)
- Five Volvo A40F articulated dump trucks
- Three Volvo L120Gz wheel loaders
- Two Dressta TD25M crawler dozers
- One SDLG 9220 motor-grader
- One Terex RC 40 rough terrain crane
- One Volvo BL71 tractor-loader-backhoe

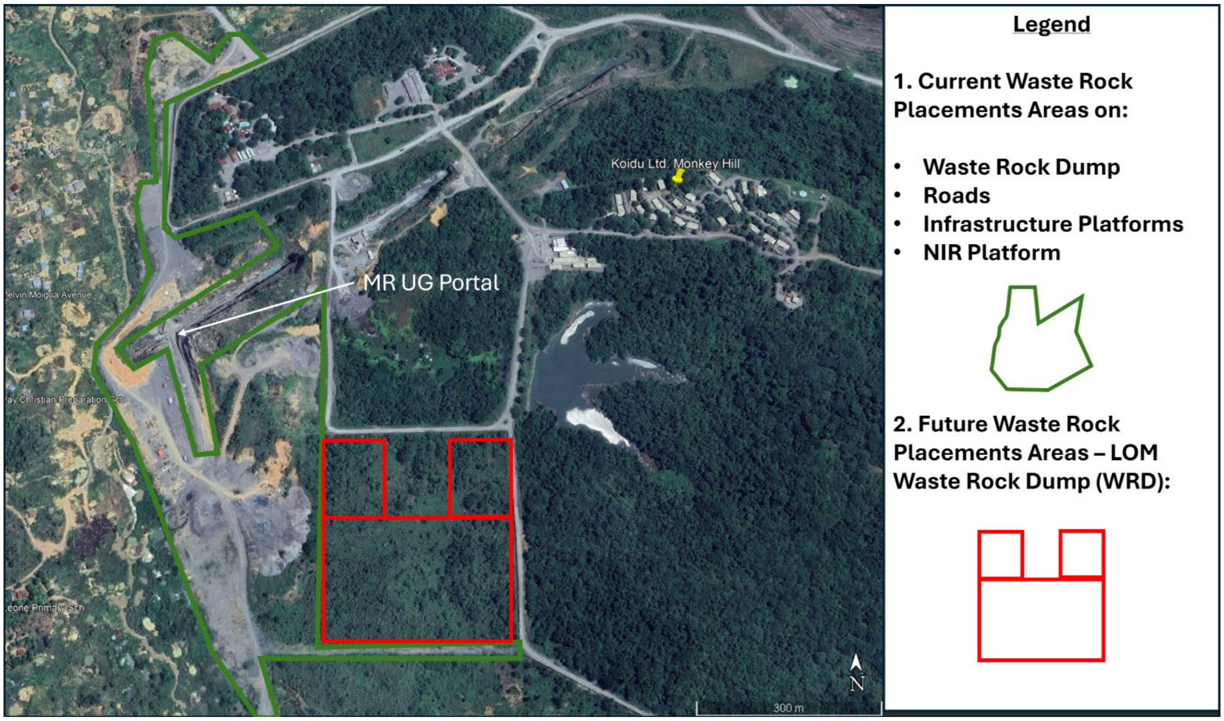
The major underground fleet components are:

- Two Epiroc ST7D50 scooptram loaders
- Two Epiroc MT436B articulated mine trucks
- Two Epiroc T1D boomer development drill rigs
- One Epiroc S1D boomer development drill rig
- One Epiroc S7D production / stoping drill rig
- Two Volvo EW60C wheeled excavators (with hydraulic hammer / scaler)
- One Magni TH 5.5 telehandler
- One Rockcrete Antlia concrete spraying machine
- One Development emulsion charging unit (BME contract)
- One Production (up-hole) emulsion charging unit (BME contract)

18.10 Waste Rock Storage

Waste rock mined on development drives and recovered from post NIR process will be deposited on the waste rock dump (WRD). The WRD is situated at the Meya River mine site adjacent to the NIR Plant location. The WRD will continue to be from the existing facility which has been established since the open pit exploration (bulk sample) phase. The WRD has a capacity of 6 Mt, is 20 m high and covers a surface area of 20.2 hectares (ha).

Waste rock has been utilised to create roads and surface platforms, for infrastructure and the NIR plant, in the vicinity of the underground portal.



Source: This report, 2024

Figure 18-11: Current waste rock placement around the Meya River site and location of future WRD

18.11 Tailings Storage Facility

Consulmet conducted a high-level assessment of the slimes and tailings handling in collaboration with ETS (Consulmet (a), 2024). ETS has been involved with the proposed mine and tailings mine waste planning since 2016.

The following is noteworthy:

- Proposed mine waste placement location is approximately 350 m away from the mineral processing plant.
- The selected site would be able to accommodate 20 to 30 years of mine waste (slimes and tailings), depending on production rates.
- No fatal flaws have been identified, meeting with Global International Standard on Tailings Management (GISTM) implementation, i.e. design and management.

On-site implementation of the GISTM standard would require:

- Confirming final capacity requirements.

- Extensive geotechnical investigation to foundation and tailings materials as well as confirmation of material behaviour.
- Detailing on:
  - Earthworks
  - Underdrainage
  - Water management
  - Operational practice and management
  - Construction quality assurances
  - Sourcing of construction material and skill

The proposed site is in the valley next to the mineral processing plant position. This valley, waste facility would contain both mine waste streams, i.e. tailings and slimes. The coarse tailings would be used for the outer "skin" containing the slimes.

Characteristics of this configuration are as follows:

- Water from the upstream catchment area needs to be diverted into the adjacent drainage line. Basic calculations confirming this possibility have been carried out.
- Deposition of tailings and slimes would take place concurrently. This would require operational planning and diligent execution.

The impact of the water diversion, removal from one drainage line to another, on flood lines, economic activity and environment needs to be confirmed.

Mine waste storage facility is one of the long-term mining legacies. The social and environmental impacts would require evaluation as per GISTM protocol.

A detailed risk calculation has not been completed. However, the following is noteworthy:

- The location is in a low seismic zone.
- Mine waste is typical kimberlite diamond waste. Expected material behaviours characteristics are known.

It would be possible to implement mine waste placement within acceptable risk profile, with the application of GISTM protocols.

19 Market Studies and Contracts

The QPs have relied on the independent diamond industry commercial and technical due diligence report prepared for Meya Mining in 2024 by WWW International Diamonds Consultants Limited (“WWW”), further referred to as WWW report (WWW, 2024). Following presents a summary of the WWW report (WWW, 2024). The entirety of this report covers the time period up to and including 30 April 2024 and does not purport to cover any information relating to the international diamond trade after this date.

19.1 Summary

The global diamond industry experienced a challenging 2023, with oversupply and weak demand exerting downward pressure on rough and polished prices. Despite a price correction, rough prices demonstrated resilience, nearing pre-pandemic levels. However, escalating costs, inflationary pressures, and higher interest rates significantly impacted the profitability of mining companies.

Underwhelming retail consumption, particularly in China, led to a buildup of polished inventories. Geopolitical tensions, notably Group of Seven (G7) sanctions on Russian diamond exports, further exacerbated uncertainties. While the mechanisms remain unclear, disruptions to Russian supply could significantly alter market fundamentals.

WWW International Diamond Consultants forecasts gradual macroeconomic improvements, with recessionary risks subsiding as inflation moderates. However, recovery hinges on restoring consumer confidence, especially in lagging markets like China.

Looking ahead, WWW forecasts the potential for a supply deficit as by the early 2030s production is expected to decline to below 100 million carats, where junior miners ought to be able to capitalise on the reduced supply into the market.

For Meya Mining, rough production is primarily sold through competitive tenders organised by KOIN International DMCC (“KOIN”) in Dubai. Remaining goods are sold to Diarough (DA Trading DMCC), a related party of the majority shareholder, governed by a purchase agreement on a buyer of last resort basis (i.e. as a final “backstop”) – always subject to a guaranteed minimum price. This mitigates all sales risks for Meya Mining by adopting a different, mixed approach that WWW believe caters for downside protection and upside benefit. Having the backstop of direct offtake sales (as set out under the purchase agreement) in a weaker market ensures liquidity as a constant source of cash flow to feed mining finance, workers, energy and general operating expenditures.

The KOIN tender process involves preparing assortments, inviting vetted participants, and operating a blind "best bid" system. This approach has proven effective according to WWW, with Meya's latest KOIN tender achieving an average price of US$328.04 per carat, a 7.7% premium over WWW's valuation.

WWW considers the KOIN tender process efficient, transparent, and designed to maximise revenue for Meya's fine rough diamond production.

19.2 Market Outlook

As reported at the end of April 2023, the the global diamond industry experienced challenging market conditions throughout 2023, characterised by a supply/demand imbalance that exerted downward pressure on rough and polished prices. Rough diamond prices declined by approximately 15% compared to January 2023 levels, while the polished market saw a 16.5% year-on-year price depreciation.

Despite this correction, rough prices have shown resilience, reaching levels nearly on par with those observed immediately preceding the onset of the COVID-19 pandemic in early 2020. A confluence of factors, including escalating operating costs, high inflation rates, and increased borrowing costs due to higher interest rates, have added to the burden for diamond mining companies.

On the demand side, underwhelming retail consumption failed to meet initial forecasts, resulting in a buildup of polished inventories across midstream sectors. To mitigate the impact of oversupply, major participants like the Indian diamond industry implemented temporary import restrictions coinciding with the Diwali holiday period in late 2023.

Geopolitical tensions, most notably sanctions imposed by the G7 nations aimed at curbing Russian diamond exports, have injected further uncertainties into market dynamics. While the specific mechanisms and efficacy of these sanctions remain unclear, any disruption to Russian supply channels could significantly alter prevailing supply and demand fundamentals.

Despite the challenges, WWW's outlook suggests gradual improvements in macroeconomic conditions, with recessionary risks subsiding as inflation moderates towards central bank targets across major economies. However, the diamond industry's recovery trajectory hinges on the restoration of consumer confidence, particularly in major markets such as China where demand has lagged expectations.

Looking ahead, WWW forecasts the potential for a supply deficit as by the early 2030s production is expected to decline to below 100 million carats, where junior miners ought to be able to capitalise on the reduced supply into the market.

19.3 Meya Diamond Sales Methods

As at the date of WWW report (WWW, 2024), Meya rough diamond production is sold through two mechanisms:

- Periodic tender sales run by KOIN International DMCC in Dubai. KOIN has conducted around 15 sales for Meya Mining so far, including 4 in 2023; and
- Any remaining diamonds that are not sold through KOIN, are sold to Diarough, a related party of Sterling Global Trading – the majority shareholder of Meya Mining always based on a guaranteed reserve price agreed prior to the tender process run by KOIN.
  - The QPs note that this sales arrangement is governed by the terms of a rough diamond purchase agreement, which has been independently analysed by WWW in detail.
  - It is QPs understanding that the terms of the agreement as reviewed by WWW considered to be within industry norms, providing Meya Mining a steady stream of cashflow.

KOIN has conducted approximately 15 individual tender sales for Meya Mining to date, with four sales completed in 2023 alone. The typical tender process involves several key steps:

1. KOIN prepares assortments of Meya's rough production by categorising the diamonds into relevant parcels designed to drive maximum competition and bidder interest.
2. Around 200 participating diamond buyers/companies are invited to attend and bid on these parcels. KOIN has established know-your-customer and anti-money laundering procedures for vetting attendees.
3. The tender operates a blind "best bid" system, where each parcel is awarded to the highest bidder submitting a sealed bid.
4. Following the tender event, KOIN remits payments to Meya Mining based on a defined schedule.

The tender process run by KOIN is deemed efficient, transparent and designed to maximise revenue for Meya's unique production. KOIN follows industry best-practices laid out by the Dubai Diamond Exchange forum.

19.4 Meya Diamond Prices

As per WWW's independent rough diamond valuation in March 2024, Meya's latest tender through KOIN achieved an average price of US$328.04 per carat. This is considered a very reasonable number in current market conditions, coming in at 7.7% above WWW's own "fair market price" valuation of the same parcel.

The premium achieved through the competitive KOIN tender process highlights the effectiveness of this approach in maximising revenue for Meya's rough diamond production.

WWW considers tender sales to be the most efficient and transparent method, fundamentally enhancing the revenue potential for Meya's fine rough diamond production.

19.5 Risks and Opportunities

Despite certain trading difficulties faced by commodity markets all over global economies, the outlook for the international diamond trade remains positive. Longer term, market fundamentals are unchanged and point to strong future price growth as demand comfortably outstrips future supply, in particular with the closing down of certain Canadian and African mining operations by the end of this decade and a general reduction of global rough diamond supply, resulting in carat production dipping below 100 million carats in the early 2030s. Exploration trends and prospector capital continues to be at record lows, with any new high class diamond mine only likely to come into production in 8-10 years' time. In line with the overall state of dwindling natural diamond supply, Meya would stand to benefit from its position as a developing diamond project.

Demand for natural diamond jewellery will continue to grow in line with wealth creation and increases in population, especially in the growth Asian markets. Recurring data over the past number months from natural diamond jewellery brands, maisons (including luxury watches) is positive – brands are reporting year-on-year growth, supported by high-net worth buyers. Across the diamond retail's big three markets: the United States, China and India, it is likely that economic growth will be boosted by a growing consumer base.

The EU and G7 group of countries are considering implementing further sanctions against Russia – diamonds are this time on the table for discussion. Product sanctions in their essence are a disruptive mechanism and could further undermine the image of natural diamonds. The obvious winners will be African and Canadian producers who will seek to capitalise on this shortage of supply with new tools for marketing their “non-sanctioned” product. It is worth noting that Russian rough diamond supply accounts for approximately 30% of world diamond production by carat volume, and the economies comprising the G7 (including the EU) currently account for approximately 70% of the world’s diamond jewellery sales.

Material risks to the diamond industry, like with most of the world’s commodities, are connected to external geo-political and macro-economic factors outside of its control. Macro-economic pressure on global economies and consumers persists, with a combined dual-threat of high inflation and stubbornly-high interest rates impacting the ability to save personal income. It is expected that pressures on demand for a discretionary product such as natural diamonds ought to abate once inflation lowers further and Central Banks begin to cut interest rates.

Synthetic or “lab-grown” diamonds (“LGD”) may also be seen as a threat to natural diamond demand and pricing. LGD are well-known to be trading on the wholesale markets at more than a 90% discount to their natural diamond equivalent. LGD are also in infinite supply, a major fundamental divergence to the natural diamonds which are dwindling in supply over the next decade. It is forecast that the majority of LGD consumer demand will be “incremental” to global jewellery demand – that is to say, LGD are forming a standalone consumer category of personal consumption, and not deemed to be “taking away” market share from natural diamond equivalents.

20 Environmental Studies, Permitting, and Social or Community Impact

20.1 Introduction

Meya Mining appointed Digby Wells Environmental ("Digby Wells") with CEMMATS Group Limited ("CEMMATS") to undertake an Environmental and Social Impact Assessment Update for the underground development of the Meya River Domain (the Project) in the Kono District, Sierra Leone. The 2017 ESIA was undertaken by CEMMATS for bulk sampling.

Meya Mining has an existing Large-Scale Mining Licence obtained in July 2019 (No. ML 2/2019) covering a concession area of 130 km^2 and a licence period of 25 years, expiring in 2044. The 2023 ESIA process took place to updgrade an Environmental Impact Assessment Licence for commercial underground mining of the Meya River Domain.

Baseline surveys of the physical and biological environment of the Project area included:

- Climate, topography and drainage, visual, air quality, blasting, noise, biodiversity, aquatics, wetlands, soils land capability and land use, surface water, groundwater and geochemistry.

Table 20-1 summarises all permits and licences held by Meya Mining as of the effective date of this report.

Table 20-1: Meya Mining current list of permits

Certificate / Licence	Renewal Frequency	Next Renewal Date
Large-Scale Mining Licence (ML 2/2019)	Every 25 years	July 2044
Blaster's Certificate	Every 5 years	March 2026
Certificate of Authorisation – Local Content	Every 3 years	October 2026
Environmental Impact Assessment Licence	Annually	November 2024
Large-scale Blasting Licence	Annually	April 2024
Mine Manager's Certificate of Competence	Annually	April 2024

20.2 Key Assessment Findings

The Project area falls within the tropical savanna climate zone which is characterised by high temperatures throughout the year.

20.2.1 Visual Impact Assessment

The Project areas' existing sense of place can be described as relatively disturbed, particularly by mining and other anthropogenic activity. Considering the existing sense of place, along with the results generated as part of this Visual Impact Assessment (VIA), the anticipated impacts that will result from the development of the Project are minimal in nature. The viewshed modelling indicates that the construction and operation of the proposed infrastructure will be primarily visible to residents near tothe Zone of Visual Influence (ZVI) and motorists.

The proposed infrastructure with the largest environmental significance will be the proposed WRD, whilst the Slimes Dam, NIR Plant, and Site Infrastructure Area, will also be visible to sensitive receptors.

An effective method of mitigation will be to limit the visual exposure of the waste rock dump, through concurrent rehabilitation, reshaping, and levelling of areas. The slimes dam can be vegetated on the sides as areas become available. Dust suppression and well-positioned vegetation screens will also help limit potential visual impacts on sensitive receptors

20.2.2 Air Quality

Baseline air quality was assessed in terms of Sierra Leone EPA Act of 2022, WHO Ambient Air Quality guidelines (2021) and South African National Dust Control Regulations (2013). Dust sampling commenced in June 2023 and continued for six months, in accordance with the American Standard Test Method (ASTM) 1739-98 (2017) requirements. Prior to mitigation, baseline air quality is likely to experience exceedances in the daily Nitrogen Dioxide and monthly dust fallout levels during the operational phase. Exceedances have been predicted for the $PM_{2.5}$ and PM_{10} for specific monitoring locations. As a result, the ambient air quality at some of the selected receptors will not be compliant with the World Health Organisation (WHO) guidelines. The haul road represented the highest contributing activity to the particulate emissions.

Proposed mitigation measures include:

- The use of dust suppressants on exposed surface areas, access and haul roads, where practicable.
- The setting and enforcement of speeds limits for mining vehicles on-site.
- Minimising of the Project footprint as far as practicable.
- The undertaking of air quality monitoring to identify impacts and to allow the implementation of corrective actions if impacts are identified.

Implementation of the proposed mitigation measure reduced the significance of the air quality related impacts to a negligible level.

Blasting

Blast Management and Consulting ("BMC") were appointed by Digby Wells to review and assess possible impacts of blasting operations on the surrounding environment and to propose suitable mitigation measures where necessary. The effects of blasting operations were evaluated on surface within 500 m of the planned underground operations.

The predicted levels of ground vibration for one specific Point of Interest (POI) are greater than the permitted levels and will require specific mitigations in the way of adjusting charge mass per delay to reduce the levels of ground vibration. The POI is comprised of community houses (POI04). Mitigation measures will be required near POI04.

Potential mitigation measures include the following:

- Review of blast designs to reduce the charge mass per delay with adding additional timing numbers or applying electronic initiation systems to have better control on firing sequence of blastholes; and

- Photographic inspections to be done on POIs.

Implementation of the recommended mitigation measures reduced the potential significance of the impacts to an acceptable level.

20.2.3 Noise Assessment

The baseline characterisation of the Project area encompassed a baseline noise assessment to determine the existing acoustic environment at noise sensitive receivers. The approach used in determining the ambient noise levels was based on the methodology described in the World Bank Group (WBG) / International Finance Corporation (IFC), General Environmental Health & Safety (EHS) Guidelines – Noise Management, 2007 (IFC – EHS guidelines). Measurements were taken over a twenty-four (24) hour period at each measurement location. Measurements considered day- and night-time noise characteristics at the NSRs.

Future noise emissions were then simulated using the Conservation of Clean Air and Water in Europe (CONCAWE) calculation method for noise dispersion modelling for the construction and operational phases of the Project (SANS, 2004). Predicted future noise impacts from the construction and operational (day and night-time) phase activities indicated that:

- Seventy three percent (73%) of the noise sensitive receptors are predicted to experience negligible impacts during both the day and night-time for the construction and operational phases; and
- The remaining 27% of noise sensitive receptors are predicted to experience significant noise impacts during both the day and night-time for the construction and operational phases.

The community/group's response to noise impacts from the construction phase (day and night) indicates that the Project can expect "widespread" to "sporadic" complaints from the noise sensitive receivers/community.

Recommended mitigation measures include:

- Where possible construction activities should be restricted to daylight hours.
- Construction machinery, equipment and vehicles should be switched off when not in use and not left idling unnecessarily.
- Where possible acoustic enclosures should be installed for noise generating sources such as generators.
- If possible, utilise ROM stockpiles as temporary berms between communities and the Project.
- Noise monitoring and the development of a mechanism to record and respond to noise complaints.

20.2.4 Surface Water Assessment

Water quality results were benchmarked against the WHO (2022) drinking water guidelines, Sierra Leone mine effluent discharge guidelines (2013) and IFC mine effluent discharge (2007) guidelines.

The baseline surface water quality within and near the Project area showed minimal contamination levels, with most parameters within the stringent standard. Exceptions were Aluminium, Iron, Manganese, turbidity, and total suspended solids which exceeded the guidelines. Total and faecal coliform counts exceeded the stringent water quality guidelines in two sample locations, deeming them unsuitable for drinking. The floodline assessment revealed that the majority of the proposed infrastructure is within 1 in 50 and 1 in 100-year floodline for 24-hour rainfall events. This includes the proposed infrastructure at the Meya River Domain and some portions of the Meya River Pit and WRD.

A monthly average site-wide water balance was developed. The water requirement will predominantly be met through underground mine dewatering. The groundwater inflows into the dyke zones are estimated to average 4,400 m^3/ day for the Meya River Dyke Zone. No rainwater seepage is expected into the dykes as there is no obvious catchment and the trenches will be filled in with waste material. The individual dyke zone mines will be dewatered at the rate of 42 L/s as it is assumed that about 5% of available underground water will be taken out of the mine as moisture in the mineralised material and about 10 kl/day will be lost into the ventilation system. A monthly average of 134,20 m^3 is required for underground operation industrial water use (i.e. production drilling, dust allaying and face preparation). 40,260 m^3/month will be pumped to the in field NIR plants to be used as process water. A monthly average of 105,945 m^3 of excess water will be available for discharged into natural watercourses. A zero-discharge approach is impractical as high levels of water from underground workings do not correspond to high levels of demand for water. Excess water will therefore be discharged to the environment after settling in excavated ponds which will be purpose-built and strategically placed.

The proposed site infrastructure area (NIR plant, power plant and slimes dam) is completely within the floodwater way, while only some portion of the Meya River pit and the WRD are affected. To alleviate the impact of 1 in 100-year flooding, it is proposed that a berm with a height of approximately 3.5 m be constructed around the Meya River pit and site infrastructure area. The stormwater conveyance infrastructure will be developed to accommodate a 1:100-year flow in 24 hours, and all clean water will be routed around the dirty catchment area. The contaminated runoff from the dirty catchments will be stored in the settling ponds/raw water dam for use in the NIR plant.

Two boreholes were drilled by Meya Mining in 2018, on Boroma Road (BH1) and Cemetery Road (BH2). Between 2019 and 2021 elevated Nitrate (NO_3) and *Escherichia coli* (E. coli) concentrations were detected in BH1 and BH2 boreholes. In 2019 Meya Mining adopted the WHO recommended chlorine treatment to treat high nitrate and bacterial concentrations in the boreholes. Analysis of samples collected during the 2023 hydrocensus showed slightly elevated NO_3 concentrations at BH2 and no faecal coliforms within the groundwater samples.

The following potential impacts on surface water were identified:

- Sedimentation and siltation of nearby surface waterbodies due to eroded disturbed soils during construction, maintenance and decommissioning phase.
- Potential contamination from hydrocarbon (fuel, oil and grease) spillages and leaks from moving vehicles and storage facilities will likely impact water resources.
- Furthermore, potential decanting can be expected from the underground during rainfall season and seepages from the slimes dams, settling/ raw water dam and WRD will likely be the main source of contamination and this would impact on surface water quality.

The following mitigation measures are recommended:

- Surface water quality monitoring should continue to timeously detect pollution sources to implement mitigation measures at source before pollutants spread to other areas.

- A berm with a height of approximately 3.5 m be constructed around the Meya River pit and infrastructure area.
- Possible decant and seepage should continually be monitored after closure of the mine and water from settling ponds/ raw water dam should meet the water quality discharge limits stipulated in the Sierra Leone and IFC effluent discharge guidelines prior to discharge into the environment.

20.2.5 Groundwater

In March 2023, Digby Wells conducted a geophysics survey in the communities around the Meya River Domain. Geophysics data informed the location of the drilling targets for the boreholes to be drilled and aquifer testing which still needs to commence.

This groundwater assessment is a preliminary impact assessment based on the available information. An updated impact assessment will be conducted following the completion of the borehole drilling, aquifer testing and numerical modelling. The following limitations apply to this preliminary groundwater impact assessment:

- To date no borehole have been drilled or aquifer tested thus little aquifer parameter based on hydraulic testing were available;
- An updated, integrated, site-covering numerical groundwater flow model has not been completed for the Project to date, since this can only be completed after the hydrocensus, drilling and aquifer testing is completed. As a result, the following data gaps are noted:
  - The extent of the dewatering cone has not defined.
  - The dewatering volumes required to ensure dry working conditions for the underground mine are quantified, but inputs and assumptions for the calculations are not provided.
  - The groundwater level recovery period once dewatering ceases has not been defined.
- The geochemical assessment has not been completed. As a result, the following data gap are noted:
  - The waste rock and tailings material have not been characterised and it is unknown if there is potential contamination that could emanate from these materials.
- An updated numerical mass transport model has not been completed for the Project as this model required the geochemical sample results. As a result, the following data gap are noted:
- The extent of potential contamination plumes has not been simulated and are not defined.

A hydrocensus survey was undertaken by CEMMATS in April 2023 to sample the groundwater quality of eight community boreholes, and the data was analysed by Digby Wells. The main usages of groundwater are for domestic purposes, as evidenced by the hydrocensus. Shallow groundwater levels were recorded with groundwater levels ranging from 0.5 to 5.3 metres below ground level (mbgl). Groundwater flow is in north-easterly direction towards the Moinde River. The groundwater level data indicates there is a good correlation (a correlation of 99%) between groundwater levels and topography indicating groundwater flow (within the shallow aquifer) will generally follow topographical gradients.

Two main aquifer units are found within the Project area:

- The regional geology of the Project area is mainly granites and gneisses. The crystalline rocks are overlain by saprolite and lateritic lithologies that comprise the upper weathered aquifer. Based on the available borehole logs the weathered aquifer has an average thickness of ~15 m; and
- Underlying the weathered aquifer is the underlying fractured aquifer. The fractured aquifer is the dominant type of aquifer in the Project area. Structures and dykes intruded in the granite will act as preferential groundwater flow paths (Meya Mining, 2021). With a relatively low hydraulic conductivity (expected range ~3 x 10^{-3} m to 2 x 10^{-2} m/day) in these granitic rock formations, groundwater flow is through limited structural fractures.

During the 2023 hydrocensus, two groundwater samples were collected from the boreholes drilled by Meya Mining at BH1 and BH2. The samples were sent to Element Laboratory for analysis and the water quality were compared to the WHO Drinking Water Quality Guideline Limits (2022).

Evaluations indicated the following:

- Neutral conditions were observed with pH ranging from 6.6 to 6.9
- Low electrical conductivity (EC) was observed with EC ranging from ~16 to ~46 millisiemens per metre (mS/m)
- The groundwater indicated a magnesium bicarbonate water type
- The hardness of the water ranges from soft to slightly hard:
  - Soft (0-50 mg $CaCO_3$/l): BH1- Boroma Road
  - Slightly hard (100-150 $CaCO_3$/l): BH2- Cemetery Road
- The nitrate as NO_3 concentration in BH2 (60.3 mg/l) exceeded the WHO drinking guideline value for drinkable water of 50 mg/l.
- Microbiological analysis indicated:
  - No faecal coliforms within the sampled groundwater.
  - Total coliform bacteria are frequently used to assess the general hygienic quality of water and comprise a heterogeneous group of bacteria. BH1- Boroma Road and BH2- Cemetery Road indicated counts of total coliform. As no faecal coliforms were detected the total coliform count indicates coliforms that are not of faecal origin.

Meya Mining has adopted the recommended WHO chlorine treatment measurements to treat the high nitrate levels in the boreholes for a 10,000 L tank measurement since 2019 as a result of the elevated NO_3 concentrations in 2019.

20.2.6 Geochemistry

Due to delays in collection of geochemistry samples, the geochemistry assessment had not been completed at the time of the 2023 ESIA submission. It is proposed that the detailed geochemistry assessment be completed as part of the pending lender compliant ESIA.

20.2.7 Baseline Biological Environment

Biodiversity

The Project Area of Influence (AoI) is situated in the Guinean Montane Forest and Western Guinean Lowland Forest ecoregions. Four vegetation types were observed within the AoI, there were farmbush and forest regrowth, closed moist forest, riparian vegetation (riverine, stream and swamp) and dry savanna. Seven globally threatened flora species and Species of Conservation Concern (SCC) were observed in the Project area.

Eighteen mammal species were recorded in the AoI during the baseline surveys. SCC included patas monkey (*Erythrocebus patas*), spot-nose monkey (*Cercopithecus petaurista*) and the straw-coloured fruit bat (*Eidolon helvum*). All 3 species are listed as Near Threatened (NT) by the IUCN Red List of Threatened Species (IUCN). According to local residents, western chimpanzees (*Pan troglodytes verus*) were observed around the vicinity of the Meya Mining Concession Area (MMCA) during the dry season survey. The western chimpanzee is listed as Critically Endangered (CR) by the IUCN Red List of Threatened Species. This species does not inhabit the concession area, but according to the local residents, small groups of chimpanzees make foraging incursions into the concession area, especially areas with contiguous closed forest which may include locations along the haul road.

A total of 165 bird species were observed during the baseline surveys with the only SCC being the hooded vulture (*Necrosyertes monochas*) (CR).

A total of 27 amphibian and 10 reptile species were observed during the baseline surveys. Species of Conservation Concern (SCC) include African dwarf crocodile (*Osteolaemus tetraspis*) which was observed in the Bardu Pit near the campsite and the gaboon viber (*Bitis gabonica*). Both species are listed as Vulnerable (VU) by the IUCN.

Extensively modified habitat and increased turbidity associated with artisanal mining was observed in the rivers upstream and downstream of the Project. This was identified as a limiting factor of aquatic ecosystems throughout the Project area. High turbidity decreases the health of the aquatic ecosystem by decreasing sunlight penetration, reducing the growth of submerged aquatic vegetation, reducing oxygen production, and limiting the oxygen available for aquatic life. The sample site in the Return Water Dam (RWD) was noted to be contaminated by hydrocarbons (fuel and oils). Ten fish species were recorded in the Project area, no fish of SCC were recorded.

Additional surveys are needed to confirm the presence of western chimpanzees in the MMCA and near the haul road.

Wetlands

Wetlands cover an area of 165 ha within the MMCA. The health of the wetlands ranged from largely modified (Class D) to critically modified (Class F). Factors that have contributed to the degraded state of the wetlands include artisanal mining activities, slash and burn agriculture and impacts from existing mine infrastructure. Wetland sensitivity ranged from very low to moderate. Less impacted wetlands were found to provide higher levels of ecosystem services. Mitigation measures were recommended to mitigate impacts on remaining wetlands and natural habitats.

Soils

The major soil forms in the AoI are dominated by Lithosols with Plinthic Ferralsols towards the west. Semi-degraded and undisturbed areas dominate the AoI covering an area of 107 ha, indicating natural/undisturbed soil. The second largest land use after natural areas was wetlands covering 35 ha and mining covering 9.3 ha. The soils were found to be very acidic to slightly acidic, with low electrical conductivity, and low organic carbon percentages. Boron and Mercury concentrations were high in the soils which may lead to toxicity in plants. The contaminated samples were likely from an anthropogenic source around the RWD. Geochemical analysis is required to identify if the source of contamination is from Meya Mining's tailings or waste rock.

20.2.8 Baseline Social Environment

Household (HH) surveys, Focus Group Discussions (FGD) and Key Informant interviews (KII) were undertaken in April and May 2023 in the Koakoyima community in the Tankoro Chiefdom which is within 2 km of the Projects AoI and the closest community to the 500 m blast zone. A total of 300 households were surveyed indicating a low dependency ratio and high potential local workforce with 86% within the working age bracket of 21-60.

The dominant ethnic group was Temnes (34%) with the majority of the households practising Islam (75%) followed by Christianity (25%). The data revealed that 40% of the household heads had never received any formal education and 3% had received informal education in learning to read Quran, only 5.3% attended tertiary education. The majority of the households's primary incomes were from mining (41%), business (25.3%) and farming (8.67%) with 7.33% reported as unemployed.

The most common health issue was malaria (66%) and the common cold/flu (30%), whilst 98% of the household heads reported being aware of HIV/AIDS. The households's water sources were unprotected wells (81.6%), boreholes, pipe borne water and water bought in packages. Pit latrines were used by 92% of the households with only 7% having access to flush toilets and 1% using streams/rivers or bush. Battery-operated Light Emitting Diode (LED) lights are used by the majority of the households at 52.2%, 21% depend on the national grid electricity and 10% on solar powered lighting.

Concerns were raised over previous relocations of cultural heritage resources within the Project area (Cemetery and the Secret Society Shrines). Four years ago, the community stakeholders relocated the Boroma Cemetery to a location near to the haul road. During the community engagement stakeholders raised concerns about disturbance to the cemetery due to the movement of haul tracks along the haul road. The community also raised concerns about the potential threat of flooding of the cemetery. Meya Mining should engage with the community to discuss potential relocation of the cemetery to a more suitable, mutually agreed location.

Concerns were also raised about the female shrines. The Secret Society Shrines were relocated due to their proximity to the haul road. There is a perception in the local communities that the delay in the implementation of the new female shrines is due to Meya Mining. However, the rituals associated with the new female shrines were conducted by Meya Mining in October 2021, after which it was concluded by the chief that the new site was unsuitable, due to its proximity to the village. Meya Mining is currently awaiting a decision from the chiefdom on a more suitable location. It would be advantageous for Meya Mining to engage with the local community to mitigate any concerns and provide updates on the status of the shrine sites.

ESIA Report Conclusions

Based on the outcomes of the impact assessment and effective implementation of identified mitigation and management measures by Meya Mining, the Project is not expected to result in significant irreversible/fatal-flaw environmental or social impacts that will outweigh the continuation of socio-economic benefits from mining. For the Project to remain successful the prescribed Environmental and Social Management Plan (ESMP) must be implemented to avoid/minimise negative impacts and enhance positive impacts. It is recommended that periodic auditing by an independent auditor be undertaken to ensure the Project activities are undertaken in accordance with the objectives and commitments which have been set out in the ESMP. The recommendations include:

- Placing infrastructure in already disturbed areas to limit site clearing and habitat loss.
- Investigate the flora and fauna in the Project area further involving physical evidence of fauna and develop and implement a Biodiversity Action Plan (BAP), especially for SSC.
- Conduct continuous monitoring of noise emissions and air quality, including gaseous emissions and dust emissions. Implement management measures to prevent the impacts.
- Construct a berm/channels with a depth of approximately 3.5 m around the Meya River Pit to prevent flooding and develop stormwater conveyance infrastructure to separate clean and dirty water. Surface runoff from the WRD and infrastructure is considered contaminated (dirty) water.
- Consider relocation or reconsider the design of the WRD and new slimes dam as they will directly impact wetlands, or implement buffer zones or community engagement with communities who rely on these wetlands to provide compensation.
- Ensure regular engagement is undertaken with the communities, extend stakeholder engagement beyond the Koakoyima community to ensure grievances are recorded and addressed.
- Address the cultural heritage specific concerns and issues.
- Implement a buffer zone around the aquatic ecosystems, regularly monitor water quality upstream and downstream of the mining activities, and prevent contamination by treating the water being pumped from underground before any discharge into the environment.
- Implement the detailed management plans developed for Meya Mining and the Project including the Mine Rehabilitation and Closure Plan (MRCP), Stormwater Management Plan (SWMP), Waste Management Plan (WMP), Influx Management Plan (IMP) and Stakeholder Engagement Plan (SEP).

20.3 Environmental and Social Management Plan

To manage the abovementioned impacts and other less severe impacts that were identified during the ESIA process, an ESMP was developed that includes mitigation measures aimed at avoiding or limiting the consequences and probability of negative impacts. This includes the development and implementation of various measures and associated monitoring to ensure the effectiveness of implementation.

20.4 Mine Closure and Rehabilitation Plan (MCRP)

As part of the ESIA, Digby Wells compiled an initial Mine Closure and Rehabilitation Plan (MCRP) and associated Closure Cost Estimate (CCE) for the proposed Project. The MCRP was informed by the specialist studies and the results of environmental and social baselines and identified impacts. Additionally, the following information was reviewed:

- Mine Reclamation and Closure Plant, CEMMATS, 2019
- Environmental and Social Impact Assessment Study for The Meya Mining Project In Kono District, CEMMATS, 2017
- Meya Mining - Internal Mine Plan, CEMMATS, 2017

20.4.1 Significant Closure-Related Risks

The most sensitive receptors to the closure related risks of the Project include the following:

- Downstream sensitive landscapes and communities: Failure of the TSFs. Measures should be implemented to ensure construction, management and closure according to accepted engineering standards and aligned with the International Standard, including measures to eliminate water storage on the upper surface post closure.
- Surrounding communities, sensitive landscapes, fauna and flora: Mining and rehabilitation activities should be closely integrated and geared to reducing risks and achieving closure objectives. Detailed end land use planning should be conducted to guide rehabilitation activities.
- Mine employees: Once mining operations cease, employees face the risk of job losses, leading to an increase in unemployment and poverty in the area. Approved partners should be used to reskill employees, to enable them to find alternative employment and to explore opportunities for alternative industry/livelihoods.

20.4.2 Closure Objectives

Meya Mining aims to establish a safe, stable, and non-polluting, post-mining landscape that is sustainable over the long-term while achieving the desired end land use. The following initial objectives for rehabilitation and closure are retained from the Meya Mine Reclamation and Closure Plan (2019). These should be revisited refined during subsequent closure plan (CP) updates as required:

- To return the land to a land capability similar to that which existed prior to mining, or as close as possible thereto.
- To ensure pit walls are made safe by shaping them to a 1:3 slope (18.43°) and constructing a berm wall around the relevant pits.
- To demolish all mine infrastructures that cannot be utilised by subsequent land users or any third party. Once demolition has occurred prompt topsoil application and revegetation should take place. Where buildings can be used by a third party, arrangements will need to be made to ensure their long-term sustainable use.
- To clean up all spills on site.
- To ensure that all wetlands within the Project site impacted on by the relevant mining activities are rehabilitated such that they restore and improve the health and functioning of the whole wetland system prior to the existence of mining.

- To annually assess the closure impacts thereby ensuring progressive and integrated closure throughout the life of the Project.
- To leave a safe and stable environment for both humans and animals and make their condition sustainable.
- To maintain and monitor all rehabilitated areas following re-vegetation.
- To involve all relevant stakeholders, authorities and communities in the mine closure process.
- To allow for the mine to leave the surrounding community in a more economically sustainable manner than prior to mining.

20.4.3 Closure Actions

The proposed closure measures are presented in the Table 20-2.

Table 20-2: Closure and rehabilitation measures

Closure Domain	Proposed Closure Actions
Area 1: Plants and Related Infrastructure	▪ Demolish and remove all concrete structures ▪ Demolish and remove prefabricated buildings ▪ Dismantle and remove steel structures ▪ Decontaminate the plant ▪ Doze rubbles to designated area ▪ Place and spread 300mm topsoil ▪ Rip soil to alleviate compaction ▪ Establish vegetation
Area 2: WRD	▪ Place and spread 300 mm topsoil ▪ Rip soil to alleviate compaction ▪ Reshape the WRD to have 1:3 slopes ▪ Establish vegetation
Area 3: TSF and Slimes Dams	▪ Old TSF: – Reshape the slopes to be free draining – Place and spread 300mm growth material – Rip soil to alleviate compaction – Establish vegetation. ▪ New slimes dam: – Reshape the slopes to be free draining – Add cladding cover – Place and spread 300mm growth material – Rip soil to alleviate compaction – Establish vegetation; and – Assume no reshaping required due to design (construction utilises topography of the area) ▪ Slimes dam: – Reshape the slopes to be free draining – Add cladding cover – Place and spread 300mm growth material – Rip soil to alleviate compaction – Establish vegetation.
Area 4: Water Management Infrastructure (RWD)	▪ Demolish and doze RWD wall ▪ Shape and level the area ▪ Place and spread 300 mm topsoil ▪ Rip soil to alleviate compaction ▪ Establish vegetation
Area 5: Camp and Associated Infrastructure	▪ Demolish and remove all infrastructure ▪ Place and spread 300 mm topsoil ▪ Rip soil to alleviate compaction

Closure Domain	Proposed Closure Actions
	▪ Establish vegetation
Area 6: Linear Infrastructure	▪ Infrastructure: – Demolish & remove all infrastructure – Place and spread 300 mm topsoil – Rip soil to alleviate compaction – Establish vegetation ▪ Roads (haul and mine portal) ▪ All roads will be ripped and revegetated
Area 7: Underground Portal and Ventilators	▪ Demolish & doze concrete from sumps ▪ Dismantle medium steel ventilation duct ▪ Seal the underground portal ▪ Rip soil to alleviate compaction ▪ Establish vegetation

20.4.4 Closure Cost Estimate

The CCE was undertaken in support of the requirements for mine closure. The preliminary CCE was undertaken using third party rates from Digby Wells' database. Digby Wells relied on the available information from Meya Mining for the development of a CCE model for the Project. This information was reviewed to inform the CCE model for scheduled closure of planned activities and disturbances.

The general costing assumptions include the following:

- No costs are included for current disturbances, as the surface included in this assessment is proposed and not yet constructed.
- The CCE only accounts for demolition and rehabilitation at scheduled closure.
- The CCE does not account for any value recovered from the sale of plant, steel, or other material;
- The CCE is based on information received from Meya Mining. Any changes (addition or removal) in the planned mine layout plans or design parameters will have implications on the CCE.
- The CCE excludes subsidence monitoring. It is assumed that the quantitative risk assessment to determine potential areas of risk and associated measures will be completed during the operational period. Measures (if any) should be incorporated into the CP in future updates.
- No social-related closure costs have been included.
- A 12% allowance has been included for Preliminary and General Costs (P&Gs).
- A contingency of 10% is included to allow for unforeseen costs associated with contractors or rate increases.
- The CCE does not include any taxes.
- No legal due diligence was done as part of this assessment.
- No materials balance was compiled as part of this assessment.

The total estimate amounts to US$4,332,501 for scheduled closure (LoM) (excluding taxes and including P&Gs and Contingencies at 12% and 10%, respectively). The unscheduled CCE will be developed based on implementation in subsequent annual updates.

20.4.5 Closure Cost Recommendations

The following recommendations are made to improve the CP and CCE in future updates:

- A detailed material balance should be undertaken to ensure the WRDs are rehabilitated to be free draining and the TSF/slime dams are adequately capped, as per a detailed closure capping design to be developed.
- Detailed landform designs and infrastructural layout plans need to be developed beforehand, to ensure precise calculation of the CCE.
- The option of using the WRD as backfill or selling the material to a contractor should be investigated, as this will decrease residual risk associated with this waste facility.
- Geohydrological modelling based on the closure period must be undertaken to inform the post-closure water treatment measures required, to enable the required provisioning to be made for both the immediate and planned closure scenarios.
- Quarterly groundwater monitoring should take place to determine possible changes in groundwater flow and groundwater quality, which are to be used in updating the geohydrological model for the site.
- A post-mining land use plan should be developed early in the Project life cycle to inform the closure measures and site relinquishment criteria.
- There should be regular interaction and communication with local stakeholders, so that their requirements can be taken into consideration in the rehabilitation process, and particularly the post-mining land use plan development.
- Invasive alien plants should be removed on an on-going basis.
- Conduct an annual update of the CP and CCE to refine closure and rehabilitation measures and costs as more information becomes available.
- Monitoring and maintenance of the rehabilitated areas should take place on an annual basis for at least five years post-closure and should also be implemented during the operational period. This enables corrective rehabilitation to be implemented during operations and reduces the residual risk associated with post-closure vegetation establishment failure.

20.5 Key Assessment Findings

20.5.1 Physical Environment

There are potential major impacts relating to hydrology and water quality, biodiversity, soil erosion, water and soil pollution and ground water levels. Mitigation measures to limit the extent of impacts have been identified and are planned for implementation.

20.5.2 Biological Environment

Flora and fauna within the Project area will be cleared in areas of disturbance. However, if well managed according to the mitigation measures recommended, biodiversity will be conserved.

20.5.3 Socio-Economic Environment

Possibly the most critical aspect is the potential displacement of communities currently residing within the Project area as a result of future potential mining activities. An appropriate resettlement policy framework has been put in place as a basis for formulating a resettlement action plan.

Discussions and meetings with stakeholders during the public consultation and disclosure process indicated general acceptability and enthusiasm for the Project. Local authorities within the Project area surveyed expressed their opinions, concerns and general willingness for full co-operation and support.

20.5.4 ESIA Report Conclusions

The 2017 ESIA study concluded there were no adverse impacts identified which would render it unadvisable for the Meya Mine project to proceed. It was considered possible to contain or minimise the impacts observed and predicted through the implementation of mitigation measures outlined in the ESIA report.

The 2023 ESIA concluded that the Project is not expected to result in significant irreversible/fatal-flaw environmental or social impacts that will outweigh the continuation of socio-economic benefits from mining. The Meya Mine project is likely to have positive impacts in the areas of job creation, improving the quality of life of some of the local people and, on the national scale, boosting income generation and economy.

It was stated important that environmentally friendly practices are adopted and implemented to ensure that exploration impacts are kept to a minimum, and this should lay the groundwork in ensuring that during future potential mining, best practices and environmental compliance measures are enforced.

20.6 Environmental, Health and Safety and Social Management Plans

Management plans for the Meya Mine project ESIA were reported by CEMMATS in October 2017. These comprise:

- Environmental, Health and Safety Plan
- Waste Management Plan
- Emergency Response Plan
- Resettlement Policy Framework
- Community Development Action Plan
- Public Consultation and Disclosure Plan

Management, mitigation, monitoring and implementation measures are developed for the following monitoring plans:

- Climate
- Fauna and flora
- Noise
- Groundwater

- Air quality
- Surface water

21 Capital and Operating Costs

Cost estimates for the Meya Mine project are based on contributions from the following parties:

- EXT for mining costs (under the supervision of SRK)
- Consulmet for processing and infrastructure costs
- Meya Mining for general and administrative (G&A) costs

The mining cost estimates were developed by EXT with an accuracy of +50%/-20%. Processing and infrastructure costs were developed by Consulmet and provided to Meya Mining as quotes. G&A costs were provided by Meya Mining based on local experience from neighbouring operations.

Summary life of mine capital costs are shown in Table 21-1. It is assumed that any of the operational equipment that carries residual value at the end of the life of mine will be sold for approximately US$2.7M based on the current depreciation schedule, thereby reducing the Project's capital cost to US$96.8M.

Further, it is noted that Meya Mining has invested US$3.4M of the total cost of the NIR plant and Main Plant upgrade which are therefore considered 'sunk cost' and are excluded from the Project valuation.

Summary life of mine operating costs are shown in Table 21-2.

Table 21-1: Summary LOM capital cost estimates

Description	Cost (US$)
Equipment / Machinery	$27,276,816
Raiseboring	$10,007,159
Decline Material and Crew	$27,563,646
UG Water and Air	$1,750,000
Mining Cost Contingency	$6,659,762
NIR – Plant	$5,800,000
Plant Upgrade Phase II	$7,907,150
Surface Infrastructure	$3,214,661
Owners Costs	$772,000
Plant SIB	$4,500,000
Closure Costs	$4,000,000
Subtotal	**$99,451,193**
Equipment Residual	-$2,663,698
Total Capital Costs	**$96,787,495**

Table 21-2: Summary LOM operating cost estimates

Description	Cost (US$)
Ore drives and long holes material and crew	$123,899,858
NIR processing	$11,638,659
MP processing	$29,417,380
Power Generation	$5,280,000
Dewatering	$993,750
Stockpile rehandling	$984,608
G&A	$25,832,138
Total Operating Costs	**$198,046,393**

21.1 Capital Cost Estimates

21.1.1 Mining

The capital expenditures for mining are divided into categories as shown in Table 21-3.

Table 21-3: LOM summary of mining capital costs

Item	Cost (US$)
Equipment and Machinery	$27,276,816
Raise Boring	$10,007,159
Capital Development (Decline Material, Labor and Staff)	$27,563,646
Underground Water and Air	$1,750,000
Contingency @ 10%	$6,659,762
Total	**$73,257,382**

Following assumptions were used in developing mining costs for Meya River underground operation.

- Good rock quality with rock bolts and mesh are the main reinforcement.
- Rounds are charged with emulsion.
- Labour force adjusted to the tunnelling production rate, with no excess personnel on site.
- Shifts covering production 24 hours a day, 7 days a week.
- 144 paid hours per week.
- Skilled and trained workers and staff.
- Normal water conditions underground with no extraordinary de-watering equipment.
- Sufficient electric power available on site.
- Sufficient and clean process water for tunnel equipment available on site.
- Average hourly salary cost of US$9/hr.
- Average monthly salary cost of US$1,400/month.

- Previously purchased machines, as presented in this chapter, can be used and are in good condition.
- Site infrastructure such as workshops, roads, water, electricity, personnel cabins, and offices are already in place and not included in the cost model.

Equipment and Machinery

The estimated number of equipment units is based on 300 m of tunnel per month per drill rig. The mobile fleet is sized to achieve the current schedule with a maximum of approximately 1,400 m of tunnelling per month. Unit prices are partly based on quotations provided by Meya Mining. The mobile equipment fleet is considered preliminary; it may change as the study progresses and due to actual mining conditions (Table 21-4).

Table 21-4: Mobile fleet tunneling

Item	Count	Cost/Unit (US$)	Cost (US$)
Drill Rigs	6	724,978	$4,349,868
Emulsion Charging Truck	5	500,000	$2,500,000
Rockbolter	3	687,410	$2,062,230
Shotcrete Rigg + 2 Transmixers	1	600,000	$600,000
LHD Development/Production	5	734,980	$3,674,898
Scaler	4	73,115	$284,460
Working Platform	3	400,000	$1,200,000
Longhole Drill Rigg	5	872,847	$4,364,235
Hauling Trucks	10	1,003,892	$10,038,920
Water Truck	4	100,000	$400,000
Site Wheel Loader	2	350,000	$700,000
Subtotal			**$30,174,611**
Other Tunnel Related Equipment			
Water Treatment Plant	2	100,000	$200,000
Explosive Storage	2	20,000	$40,000
Emulsion Truck Tent	2	50,000	$100,000
Fans	12	80,000	$960,000
Storage	2	50,000	$100,000
Containers	12	5,000	$60,000
Tunnel Surveillance System	2	50,000	$100,000
Pickups	10	60,000	$600,000
Rescue Chambers	8	30,000	$240,000
Pumps	20	10,000	$200,000
Pumps Other	20	5,000	$100,000
Electrical Supplies	20	10,000	$200,000
Transformers	10	30,000	$300,000
Electricity Other	20	5,000	$100,000
Subtotal			**$3,300,000**
Total			**$33,474,611**

Some of the equipment is assumed to be already on site, based on input from Meya Mining. The capital cost for this equipment has been deducted from the total cost, bringing the estimate for mobile fleet to US$27.3M and is summarised in Table 21-5.

Table 21-5: Summary of equipment considered as present on Meya Mine site for the purpose of estimate

Item	Count	Cost/Unit (US$)	Cost (US$)
Haul Truck	2	$1,003,892	$2,007,784
Development Rig	3	$724,978	$2,174,934
Production Rig	1	$872,847	$872,847
Scaler	2	$71,115	$142,230
Charging Unit	2	$500,000	$1,000,000
Total			**$6,197,795**

Surface Ventilation Facilities

Buildings and equipment for ventilation are included in the capital costs (Table 21-6). Roads and sufficient electrical power are assumed to be available.

Table 21-6: Surface ventilation facilities cost estimate

Item	Count	Cost/Unit (US$)	Cost (US$)
Exhaust	3	$250,000	$750,000
Fresh Air	2	$250,000	$500,000
Total			**$1,250,000**

Underground Dewatering

Normal water conditions are assumed, with a water recipient from dewatering available. A lump sum of US$0.5M has been allocated for pump stations and related equipment.

Vertical Development

Vertical shafts for ventilation will be developed using raise boring techniques. The total cost of raise boring is estimated at US$10.0M (Table 21-7).

Table 21-7: Vertical development cost estimate

Vertical Development	Meters	Cost/Unit (US$)	Cost (US$)
Raise Boring for Ventilation	1,540	$6,500	$10,007,159

Decline

The cost for decline development includes labour, staff, and material (consumables, built-in materials, spare parts, fuel, power, etc.). The total cost for decline development is estimated at US$27.6M (Table 21-8). Following inputs from Meya Mining have been used in the cost estimate.

- Average salary cost US$9/hr, based on Meya Mining input. Mix of local and external.
- Average salary cost US$1,400/month, based on Meya input. Mix of local and external.

Table 21-8: Decline development cost estimate

Ramp tunnel	Meters	Cost/Unit (US$)	Cost (US$)
Consumables, Built-in Material, Media Infrastructure	12,891	$1,722	$22,197,224
Labour	12,891	$373	$4,810,123
Staff	12,891	$43	$556,300
Total			**$27,563,646**

It is assumed that at the end of the life of mine, functional equipment used in the underground operations will be sold at its residual value, currently estimated at US$2.7M.

21.1.2 Processing

Capital costs allocated to processing consists of three main components:

1. NIR Waste Sorting Plant
2. Main Plant upgrade
3. Sustaining Capital

Near Infrared Waste Sorting Plant

Meya Mining submitted a Statement of Work for a 200 tph NIR Waste Sorting Plant to Consulmet, who compiled an accepted proposal comprising all testwork results and design criteria.

The capital cost estimates for the NIR Plant, as per Consulmet's proposal, are summarised in Table 21-9.

Table 21-9: Summary processing capital cost estimates for the NIR plant

Item	Cost (US$)
Full Project Scope of Supply	$6,592,564
Full Mechanical and Electrical Installation	$648,086
Transport of Supplies to Site	$317,058
Power Supply to Plant	$858,590
Escalation	$772,616
Total (excluding VAT and duties)	**$9,188,914**

Meya Mining has already paid US$3.4M with order placement to initiate the effective date and facilitate long lead time equipment procurement. This amount is considered a sunk cost and is excluded from the Project valuation.

Main Plant Upgrade

Meya Mining submitted a "Main Plant Upgrade" Statement of Work to Consulmet, who compiled an accepted proposal broken into two phases:

- Phase 1: Replacement of the secondary crusher and installation of a log-washer
- Phase 2: New 100 tph primary DMS

The capital cost estimates for the Main Plant upgrade, as per Consulmet's proposal, are summarised in Table 21-10.

Table 21-10: Summary processing capital cost estimates for main plant upgrade

Item	Cost (US$)
Full Project Scope of Supply	$5,743,373
Full Mechanical and Electrical Installation	$1,105,955
Transport of Supplies to Site	$472,108
Escalation	$585,714
Total (Excluding VAT And Duties)	**$7,907,150**

Sustaining Capital

Meya Mining's capital budget allocated US$4.5M for plant sustaining capital to cater for all exclusions and other unplanned maintenance requirements.

21.1.3 Infrastructure

Surface Infrastructure

Meya Mining requested Consulmet to provide a proposal for the Phase 1 Mine Infrastructure project, situated within the existing footprint and for underground operations.

Consulmet’s infrastructure scope includes civil designs and supplies for all buildings and plants, civil work for the power generation plant and subsequent reticulation, complete steel structures, prefabricated buildings supply, and electrical feed and distribution to the infrastructure buildings.

The capital cost estimates for infrastructure are summarised in Table 21-11.

Table 21-11: Summary infrastructure capital cost estimates

Item	Cost (US$)
Full Project Scope of Supply	$2,304,201
General supervision, Mechanical and Electrical Installation	$472,989
Transport of Supplies to Site	$280,981
Escalation	$156,490
Total (Excluding VAT and Duties)	**$3,214,661**

Underground Infrastructure

Consulmet's underground engineering proposal provides solutions for an underground dewatering system, operational water supply and electrical generation and distribution network, and for the underground mining equipment. The design is based on the information provided by Meya Mining, being the underground development design details and the equipment / vehicle details, received.

Costs of the underground infrastructure are incorporated into the mining capital cost estimates.

21.1.4 Owners Costs

Meya Mining's capital budget allocated US$772,000 for owners costs, which include:

- Support vehicles
- Ambulance
- Surface workshop (tools, equipment, services etc.)
- Survey equipment
- Environmental
- Administration, surface engineering and logistics infrastructure

21.1.5 Closure

Closure costs are estimated at US$4M and are assumed to be spent at the end of the mine life. No provision has been made for bonds or any other financial instruments securing these costs during operations.

21.2 Operating Cost Estimates

21.2.1 Mining

The following estimates have been made for the operational expenses associated with the mine plan. The total operating costs for ore drives, long holes material, crew, and major repairs is estimated at US$123.5M as shown in Table 21-12.

Table 21-12: Mining LOM operating costs brealkdown by major category

Category	Cost (US$)
Ore Tunnels	$96,128,745
Longhole Drilling	$25,906,113
Major Repairs	$1,865,000
Total*	**$123,899,858**

Note: Totals might not add up due to the rounding error

Ore Drives

The cost for ore drive development (Table 21-13) includes labour, staff, and material (consumables, built-in materials, spare parts, fuel, etc.). The average cost per working hour is assumed to be US$9 for the tunnel crew, and US$1,400/month for staff. These assumptions are based on input from Meya Mining.

Table 21-13: Ore drive development cost estimate per metre

Category	Length (m)	Cost/Unit (US$)	Cost (US$)
Material	61,695	$933.61	$57,598,950
Labour	61,695	$565,88	$34,338,695
Staff	61,695	$67,67	$4,191,100
Total*			**$96,128,745**

Note: Totals might not add up due to the rounding error.

Long Holes for Stopes

The cost for long hole drilling in stopes is estimated at US$17.5/m. This estimate encompasses expenses for fuel, explosives, drill steel, and other related costs. The total length of long hole drilling is projected to be 1,480,349 m, resulting in a total cost of US$25.9M for this operation.

It is important to note that labour and Load-Haul-Dump (LHD) equipment costs are not included in this figure, as they are already accounted for in the ore drive operating costs.

Major Repairs of Mobile Fleet

The estimate for major repairs of the mobile fleet is calculated as a percentage of the total fleet value. Approximately 6% of the purchased value is allocated for this purpose, which includes equipment already on site. With a total fleet value of US$33.5M, the estimated cost for major repairs amounts to US$1.9M. This provision aims to maintain the mobile fleet in good working condition throughout the life of the mine, contributing to operational efficiency and minimising downtime due to equipment failures.

21.2.2 Processing

Processing at Meya Mine Project will be executed using a Near Infrared Sorting Plant (NIR) and the Main Plant. The NIR will separate the waste from the kimberlite, whilst the main plant will concentrate the diamond-bearing material and recover diamonds. The following plant capacity is assumed at steady state:

- NIR Plant: 4,200 tonnes/day (175 t/hour)
- Main Plant: 2,500 tonnes/day (105 t/hour)

The operating cost estimates for processing assume a unit operating cost of US$1.6/t NIR feed and US$6.5/t of Main Plant feed. Life of mine processing operating costs are summarised in Table 21-14.

Table 21-14: Summary processing operating cost estimates

Item	Cost (US$)
HR Engineering and Infrastructure Cost	$10,545,108
Fuel	$10,901,835
Ferrosilicon 150	$1,568,638
Volvo L120 FEL	$1,172,814
Main Plant Spares & Maintenance	$5,986,684
NIR Plant Spares & Maintenance	$5,641,949
Light Vehicle	$291,871
Consulmet Operating Agreement	$4,947,141
Total*	**$41,056,038**

Note: Totals might not add up due to the rounding error.

21.2.3 Infrastructure

Infrastructure and underground engineering costs include power generation, electric reticulation, ventilation, water reticulation and dewatering, which are based on the planned schedule and are calculated from first-principle estimates.

The operating cost estimates for infrastructure that are not included in the mining costs are summarised in Table 21-15.

Table 21-15: Summary infrastructure operating cost estimates

Item	Cost (US$)
Power Generation	$5,280,000
Dewatering (Pumping)	$993,750
Total*	**$6,273,750**

Note: Totals might not add up due to the rounding error.

21.2.4 Stockpile Rehandling

Stockpile rehandling cost is assumed at US$1.5/t of stockpile material, totaling US$1.0M over the life of mine.

21.2.5 General and Administrative

G&A operating costs are estimated at US$25.8M and include the following items.

- Human Resources (Administrative, logistics, camp, medical, community)
- Support vehicles
- Medical
- Transport
- Camp & Maintenance
- Office
- Insurance
- Licence Fees (EPL, Environment, Blasting)
- Duties, Clearing, Other
- Rentals
- Permits & General

22 Economic Analysis

22.1 Introduction

The economic analysis for the Meya Mine project was prepared by SRK. The analysis is based on mineral resources which includes inferred mineral resources. Mineral resources that are not mineral reserves do not have a demonstrated economic viability and are not supported at least by a pre-feasibility study.

22.2 Methodology

The economic analysis was performed using a discounted cashflow model developed using MS Excel®. The model is a strict cashflow model that utilises working capital estimates to adjust cashflow timing; however, does not otherwise estimate intermediate stocks and cost-of-goods sold nor attempt to "match" expenditure and revenue for the purposes of deriving accounting measures such as profit or earnings. The cashflow model uses 2024 US dollars ($), monthly discounting at a base-case discount rate of 10% and a valuation date of 19 August 2024.

Depreciation and working capital are estimated using a 2% US CPI.

22.3 Inputs to the Technical-Economic Model

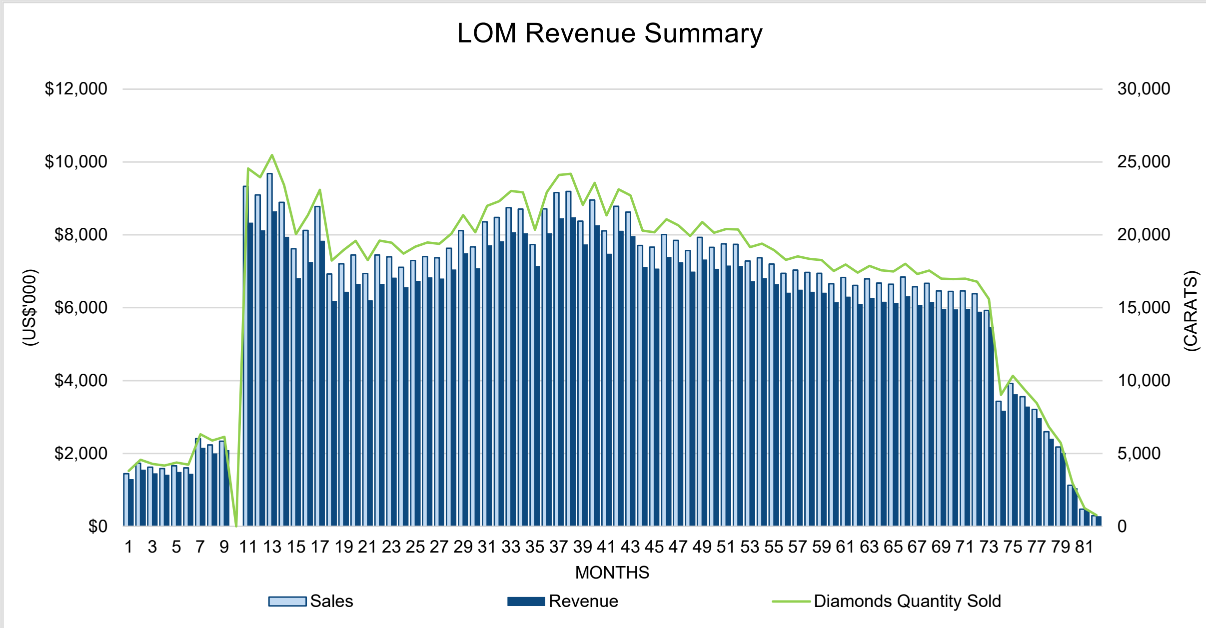
Following inputs form the basis for the model.

- Mine schedule and costs associated with mining were developed by EXT and reviewed by SRK.
- Operating and capital costs for processing and infrastructure were provided by Consulmet.
- Diamond recoveries were developed by Consulmet.
- Diamond prices were provided by Meya Mining and agreed on with SRK.
- Costs associated with royalty, export fees, community development, and marketing were provided by Meya Mining.

Details are provided in the various sections elsewhere in this report, including Mineral Processing (Section 13), Mineral Resource Estimates (Section 14), Mining Methods (Section 16), Recovery Methods (Section 17), Project Infrastructure (Section 18), Diamond Valuation (Section 19) and Capital and Operating Cost Estimates (Section 21).

22.4 Revenue

Revenue estimates are based on a static diamond price of US$380 per carat. Monthly gross revenue estimates are illustrated in Table 22-1 and annual gross revenue estimates are shown in Table 22-1.



Source: This report, 2024

Figure 22-1: Monthly gross revenue estimates

Table 22-1: Annual gross revenue estimates

Item	Units	Total	2024	2025	2026	2027	2028	2029	2030	2031
Sales Price	US$/carat	$380	$380	$380	$380	$380	$380	$380	$380	$380
Quantity Sold	Carats	1,364,220	31,729	211,102	237,294	272,563	241,404	214,536	150,629	4,963
Gross Sales	**US$'000**	**$518,403**	**$12,057**	**$80,219**	**$90,172**	**$103,574**	**$91,733**	**$81,524**	**$57,239**	**$1,886**

22.4.1 Marketing and Other Costs

Cost inputs associated with royalty, export fees, community development, and marketing are deducted from the gross sales amounts s follows.

- Royalty – 6.50% of gross sales
- Export Fees – 0.25% of gross sales
- Community Development – 1% of gross sales
- Marketing – 3.00% of gross sales for the first 300,000 carats only, zero afterward.

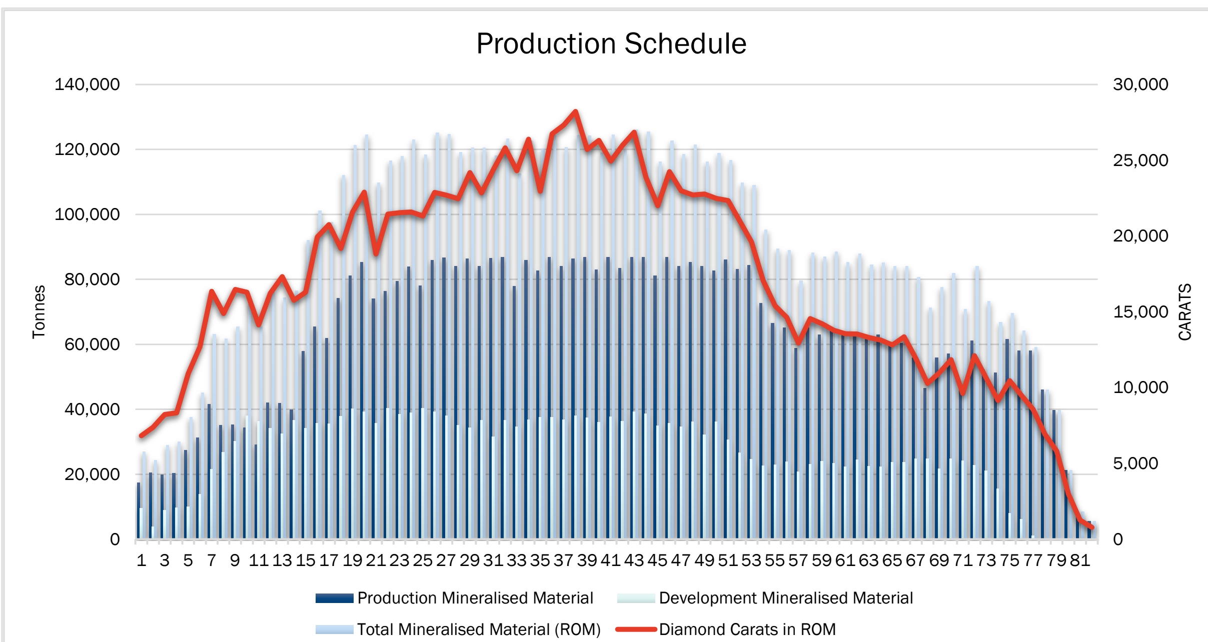
Annual net revenue estimates are shown in Table 22-2.

Table 22-2: Annual net revenue estimates

Revenue	Units	Total	2024	2025	2026	2027	2028	2029	2030	2031
Sales Price	US$/carat	$380	$380	$380	$380	$380	$380	$380	$380	$380
Quantity Sold	carats	1,364,220	31,729	211,102	237,294	272,563	241,404	214,536	150,629	4,963
Gross Sales	**US$'000**	$518,403	12,057	$80,219	$90,172	$103,574	$91,733	$81,524	$57,239	$1,886
Royalty	US$'000	$33,696	$784	$5,214	$5,861	$6,732	$5,963	$5,299	$3,721	$123
Export Fees	US$'000	$1,296	$30	$201	$225	$259	$229	$204	$143	$5
Community Development	US$'000	$5,184	$121	$802	$902	$1,036	$917	$815	$572	$19
Marketing	US$'000	$3,423	$362	$2,407	$655	$0	$0	$0	$0	$0
Subtotal RECM	**US$'000**	$43,600	$1,296	$8,624	$7,643	$8,027	$7,109	$6,318	$4,436	$146
Percent of Gross Sales	%	8%	11%	11%	8%	8%	8%	8%	8%	8%
Total Revenue	**US$'000**	$474,804	$10,761	$71,595	$82,528	$95,547	$84,624	$75,206	$52,803	$1,740

22.5 Mine Development and Production Schedule

Monthly mine development and production schedule is illustrated in Figure 22-2. Annual and life of mine (LOM) summary mine development and production schedule is shown in Table 22-3.



Source: This report, 2024

Figure 22-2: Monthly development and production schedule

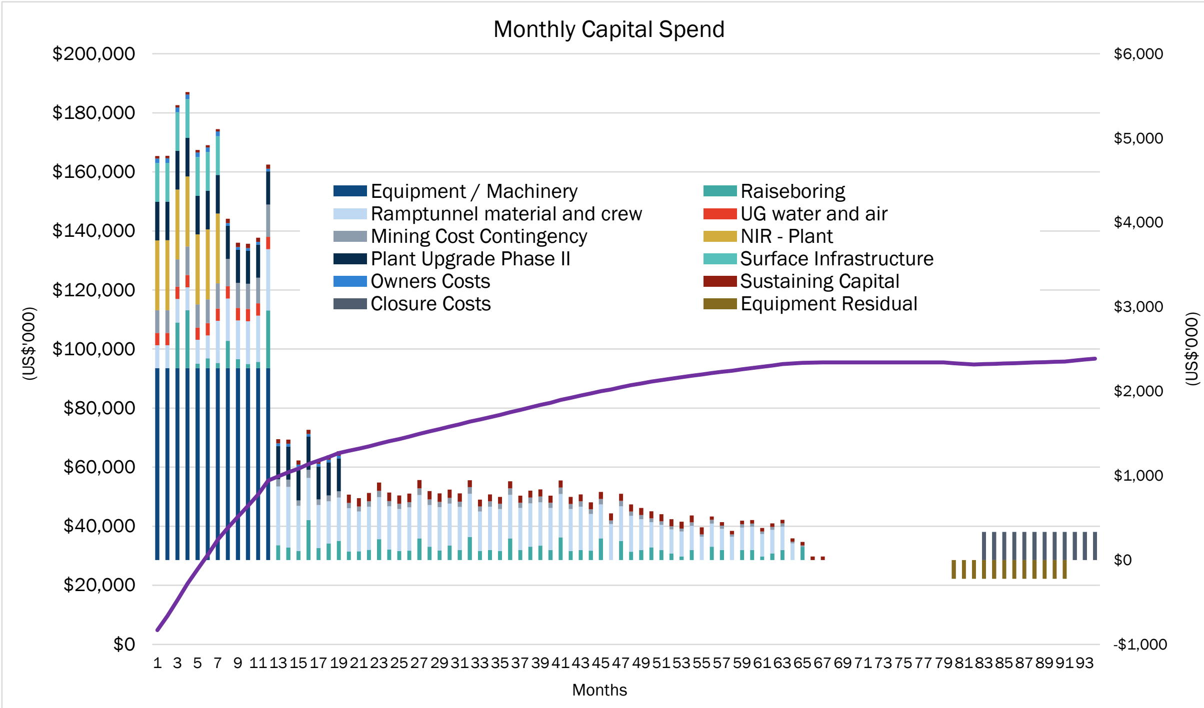
Table 22-3: Annual and LOM summary mine development and production schedule

Item	Units	Total	2024	2025	2026	2027	2028	2029	2030	2031
Mining										
Production Mineralised Material	Tonnes	5,181,223	178,236	597,949	990,321	1,017,139	983,571	745,091	633,848	35,067
Development Mineralised Material	Tonnes	2,212,939	77,607	418,188	447,940	444,403	375,855	278,715	170,230	0
Total Mineralised Material (ROM)	Tonnes	7,394,162	255,843	1,016,137	1,438,261	1,461,542	1,359,426	1,023,806	804,078	35,067
Kimberlite	Tonnes	2,812,041	111,147	358,740	507,199	605,461	540,162	394,519	282,540	12,273
Diamond Grade in ROM	Carats/t	0.19	0.28	0.21	0.19	0.21	0.19	0.16	0.14	0.14
Diamond Quantity in ROM	Carats	1,397,350	70,775	208,862	267,039	311,567	256,479	161,754	115,842	5,032
Lateral Development - Operating	Meters	61,695	2,274	12,286	12,331	12,471	10,354	7,555	4,424	0
Lateral Development - Capital	Meters	12,891	966	3,286	2,878	2,878	1,850	1,033	0	0
Vertical Development - Capital	Meters	1,540	226	416	265	293	201	139	0	0
Processing										
NIR Feed	Tonnes	7,274,162	33,000	1,038,000	1,296,000	1,296,000	1,296,000	1,296,000	984,094	35,067
Main Plant Feed	Tonnes	4,525,751	140,673	615,517	763,213	812,392	799,164	790,694	583,501	20,596
Total Diamonds Recovered	Carats	1,364,220	31,729	211,102	237,294	272,563	241,404	214,536	150,629	4,963

22.6 Capital and Operating Costs

22.6.1 Capital Costs

Capital costs were estimated using a combination of first-principles models and budgets as detailed in Section 21.1. Monthly LOM capital costs by cost centre are illustrated in Figure 22-3. Annual and LOM capital cost summary is summarised in Table 22-4.



Source: This report, 2024

Figure 22-3: Monthly capital cost summary

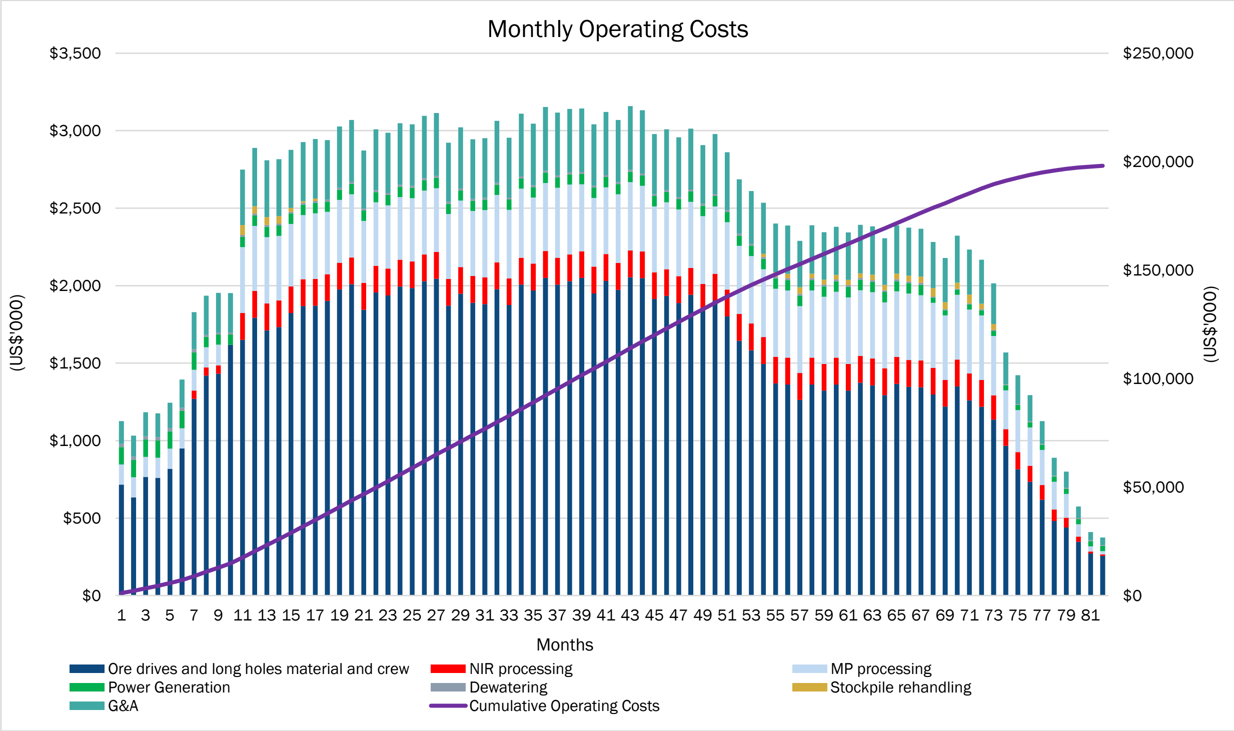
Table 22-4: Annual and LOM capital cost summary

Item	Total (US$'000)	2024 (US$'000)	2025 (US$'000)	2026 (US$'000)	2027 (US$'000)	2028 (US$'000)	2029 (US$'000)	2030 (US$'000)	2031 (US$'000)	2032 (US$'000)
Equipment / Machinery	$27,277	$15,911	$11,365	$0	$0	$0	$0	$0	$0	$0
Raiseboring	$10,007	$1,466	$2,706	$1,721	$1,907	$1,303	$903	$0	$0	$0
Decline Material and Crew	$27,564	$2,146	$6,714	$6,053	$6,067	$4,219	$2,365	$0	$0	$0
UG Water and Air	$1,750	$1,021	$729	$0	$0	$0	$0	$0	$0	$0
Mining Cost Contingency	$6,660	$2,054	$2,151	$777	$797	$552	$327	$0	$0	$0
NIR – Plant	$5,800	$5,800	$0	$0	$0	$0	$0	$0	$0	$0
Plant Upgrade Phase II	$7,907	$3,200	$4,707	$0	$0	$0	$0	$0	$0	$0
Surface Infrastructure	$3,215	$3,215	$0	$0	$0	$0	$0	$0	$0	$0
Owners Costs	$772	$386	$386	$0	$0	$0	$0	$0	$0	$0
Sustaining Capital	$4,500	$200	$600	$1,200	$1,000	$1,000	$500	$0	$0	$0
Closure Costs	$4,000	$0	$0	$0	$0	$0	$0	$0	$3,000	$1,000
Equipment Residual	-$2,664	$0	$0	$0	$0	$0	$0	$0	-$2,664	$0
Total Capital Costs	**$96,787**	**$35,400**	**$29,359**	**$9,752**	**$9,771**	**$7,074**	**$4,094**	**$0**	**$336**	**$1,000**

22.6.2 Operating Costs

Operating costs were estimated using a combination of first-principles models and budgets as detailed in Section 21.1. Monthly LOM operating costs by cost centre are illustrated in Figure 22-4.

Annual and LOM capital cost summary is summarised in Table 22-5. Unit operating costs are shown in Table 22-6.



Source: This report, 2024

Figure 22-4: Monthly operating cost summary

Table 22-5: Annual and LOM operating cost summary

Cost Centre	Total (US'000)	2024 (US'000)	2025 (US'000)	2026 (US'000)	2027 (US'000)	2028 (US'000)	2029 (US'000)	2030 (US'000)	2031 (US'000)
Ore Drives and Long Holes Material and Crew	$123,900	$5,914	$20,793	$23,384	$23,969	$21,357	$16,074	$11,535	$874
NIR Processing	$11,639	$53	$1,661	$2,074	$2,074	$2,074	$2,074	$1,575	$56
MP Processing	$29,417	$914	$4,001	$4,961	$5,281	$5,195	$5,140	$3,793	$134
Power Generation	$5,280	$780	$800	$800	$800	$800	$800	$400	$100
Dewatering	$994	$150	$150	$150	$150	$150	$150	$75	$19
Stockpile Rehandling	$985	$0	$259	$0	$0	$47	$408	$270	$0
G&A	$25,832	$1,172	$4,150	$4,705	$4,841	$4,443	$3,697	$2,647	$177
Total Operating Costs	**$198,046**	**$8,982**	**$31,813**	**$36,074**	**$37,114**	**$34,065**	**$28,342**	**$20,295**	**$1,361**

Table 22-6: Unit LOM operating cost summary

Cost Centre	Total (US$'000)	US$/t ROM	US$/t Plant Feed	US$/carat recovered
Ore Drives and Long Holes Material and Crew	$123,900	$16.8	$27.4	$90.8
NIR Processing	$11,639	$1.6	$2.6	$8.5
MP Processing	$29,417	$4.0	$6.5	$21.6
Power Generation	$5,280	$0.7	$1.2	$3.9
Dewatering	$994	$0.1	$0.2	$0.7
Stockpile Rehandling	$985	$0.1	$0.2	$0.7
G&A	$25,832	$3.5	$5.7	$18.9
Total Operating Costs	**$198,046**	**$26.8**	**$43.8**	**$145.2**

22.7 Working Capital

A working capital allocation was included in the cash flow model. It is assumed that all of the working capital can be recovered at Project termination, thus, the sum of all working capital over the LOM is zero in nominal terms.

Working capital estimates are based on the following assumptions:

- Accounts payable – 60 days
- Accounts receivable – 15 days
- Inventory – 60 days

22.8 Tax and Tax Depreciation

Sierra Leone has a corporate tax rate of 25%. Tax depreciation was estimated at 40% for the first year and 20% thereafter on a declining balance basis for all capital except closure costs. Tax depreciation was modeled in inflation-adjusted terms.

Meya Mining has accumulated tax losses of US$82.3M. These losses can be carried forward and used to offset up to 50% of annual taxable income in future years until the full amount is exhausted, subject to Sierra Leone's tax regulations.

Corporate tax payment over the life of mine is estimated at US$28.8M.

22.9 Financing Costs

No project financing costs are included in the discounted cash flow model. No costs associated with funding any required closure bonding are modelled.

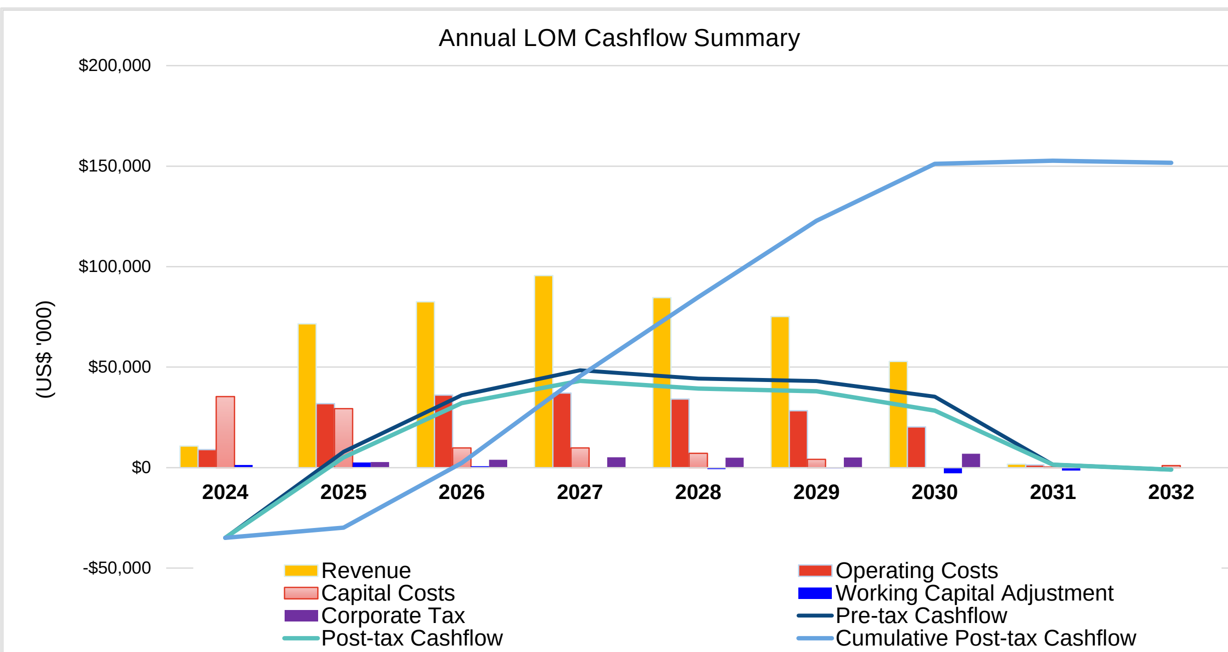
22.10 Project Valuation Summary

The preliminary economic analysis indicates the potential for the Project to generate a post-tax NPV of US$95.1M at a 10% discount rate, and post-tax IRR of 65%. Payback is projected to occur in Year 2.

The financial analysis of the Project is summarised in Table 22-7. Monthly cashflow summary is illustrated in Figure 22-5 and in .

Table 22-7: Project key outcomes summary

Metric	Unit	Values
Life of Mine	years	6.8
Diamonds Quantity Mined	Carats	1,397,350
Diamonds Quantity Recovered & Sold	Carats	1,364,220
Royalty, Export Fees, Community Development, Marketing	US$'000	$43,600
Revenue	US$'000	$17,691
Site Operating Cost	US$'000	$198,046
Operating Margin	%	53%
Capital (Initial and Sustaining)	US$'000	$99,451
Working Capital	US$'000	-$494
Pre-Tax Cashflow	US$'000	$180,464
Pre-Tax IRR	%	75%
Pre-Tax NPV @ 10% Discount Rate	US$'000	$115,121
Corporate Tax @ 25%	US$'000	$28,775
Post-Tax Cashflow	US$'000	$151,689
Post-Tax IRR	%	65%
Post-Tax NPV @ 10% Discount Rate	US$'000	$95,137



Source: This report, 2024

Figure 22-5: Annual cashflow summary

Table 22-8: Annual cashflow summary

Item	Total	NPV	2024	2025	2026	2027	2028	2029	2030	2031	2032
Units	(US'000)	(US'000)	(US'000)	(US'000)	(US'000)	(US'000)	(US'000)	(US'000)	(US'000)	(US'000)	(US'000)
Gross Sales	**$518,403**	**$381,948**	**12,057**	**$80,219**	**$90,172**	**$103,574**	**$91,733**	**$81,524**	**$57,239**	**$1,886**	**$0**
Royalty	$33,696	$24,827	$784	$5,214	$5,861	$6,732	$5,963	$5,299	$3,721	$123	$0
Export Fees	$1,296	$955	$30	$201	$225	$259	$229	$204	$143	$5	$0
Community Development	$5,184	$3,819	$121	$802	$902	$1,036	$917	$815	$572	$19	$0
Marketing	$3,423	$3,075	$362	$2,407	$655	$0	$0	$0	$0	$0	$0
Subtotal RECM	$43,600	$32,676	$1,296	$8,624	$7,643	$8,027	$7,109	$6,318	$4,436	$146	$0
Total Revenue	**$474,804**	**$349,272**	**$10,761**	**$71,595**	**$82,528**	**$95,547**	**$84,624**	**$75,206**	**$52,803**	**$1,740**	**$0**
Mining	$123,900	$93,255	5,914	20,793	23,384	23,969	21,357	16,074	11,535	874	0
NIR processing	$11,639	$8,417	53	1,661	2,074	2,074	2,074	2,074	1,575	56	0
MP processing	$29,417	$21,456	914	4,001	4,961	5,281	5,195	5,140	3,793	134	0
Power Generation	$5,280	$4,061	780	800	800	800	800	800	400	100	0
Dewatering	$994	$765	150	150	150	150	150	150	75	19	0
Stockpile rehandling	$985	$674	0	259	0	0	47	408	270	0	0
G&A	$25,832	$19,294	1,172	4,150	4,705	4,841	4,443	3,697	2,647	177	0
Total Operating Costs	**$198,046**	**$147,921**	**$8,982**	**$31,813**	**$36,074**	**$37,114**	**$34,065**	**$28,342**	**$20,295**	**$1,361**	**$0**
Operating Cashflow	**$276,757**	**$201,350**	**$1,778**	**$39,782**	**$46,455**	**$58,433**	**$50,559**	**$46,864**	**$32,508**	**$379**	**$0**
Equipment / Machinery	$27,277	$26,119	$15,911	$11,365	$0	$0	$0	$0	$0	$0	$0
Raiseboring	$10,007	$8,184	$1,466	$2,706	$1,721	$1,907	$1,303	$903	$0	$0	$0
Ramptunnel material and crew	$27,564	$22,061	$2,146	$6,714	$6,053	$6,067	$4,219	$2,365	$0	$0	$0
UG water and air	$1,750	$1,676	$1,021	$729	$0	$0	$0	$0	$0	$0	$0
Mining Cost Contingency	$6,660	$5,804	$2,054	$2,151	$777	$797	$552	$327	$0	$0	$0
NIR - Plant	$5,800	$5,664	$5,800	$0	$0	$0	$0	$0	$0	$0	$0
Plant Upgrade	$7,907	$7,388	$3,200	$4,707	$0	$0	$0	$0	$0	$0	$0
Surface Infrastructure	$3,215	$3,139	$3,215	$0	$0	$0	$0	$0	$0	$0	$0
Owners Costs	$772	$727	$386	$386	$0	$0	$0	$0	$0	$0	$0
Sustaining Capital Costs	$4,500	$3,465	$200	$600	$1,200	$1,000	$1,000	$500	$0	$0	$0
Closure Costs	$4,000	$1,996	$0	$0	$0	$0	$0	$0	$0	$3,000	$1,000
Equipment Residual	-$2,664	-$1,362	$0	$0	$0	$0	$0	$0	$0	-$2,664	$0
Total Capital Costs	**$96,787**	**$84,862**	**$35,400**	**$29,359**	**$9,752**	**$9,771**	**$7,074**	**$4,094**	**$0**	**$336**	**$1,000**
Working Capital Adjustment	-$494	$0	**$1,298**	**$2,535**	**$686**	**$259**	**-$770**	**-$285**	**-$2,781**	**-$1,435**	**$0**
Pre-tax Cashflow	**$180,464**	**$115,121**	**-$34,920**	**$7,888**	**$36,016**	**$48,403**	**$44,255**	**$43,055**	**$35,290**	**$1,478**	**-$1,000**
Corporate Tax	$28,775	$20,885	$0	$2,788	$3,883	$5,189	$4,917	$5,083	$6,914	$0	$0
Post-tax Cashflow	**$151,689**	**$95,137**	**-$34,920**	**$5,100**	**$32,133**	**$43,213**	**$39,337**	**$37,972**	**$28,376**	**$1,478**	**-$1,000**

22.10.1 Sensitivity Analysis

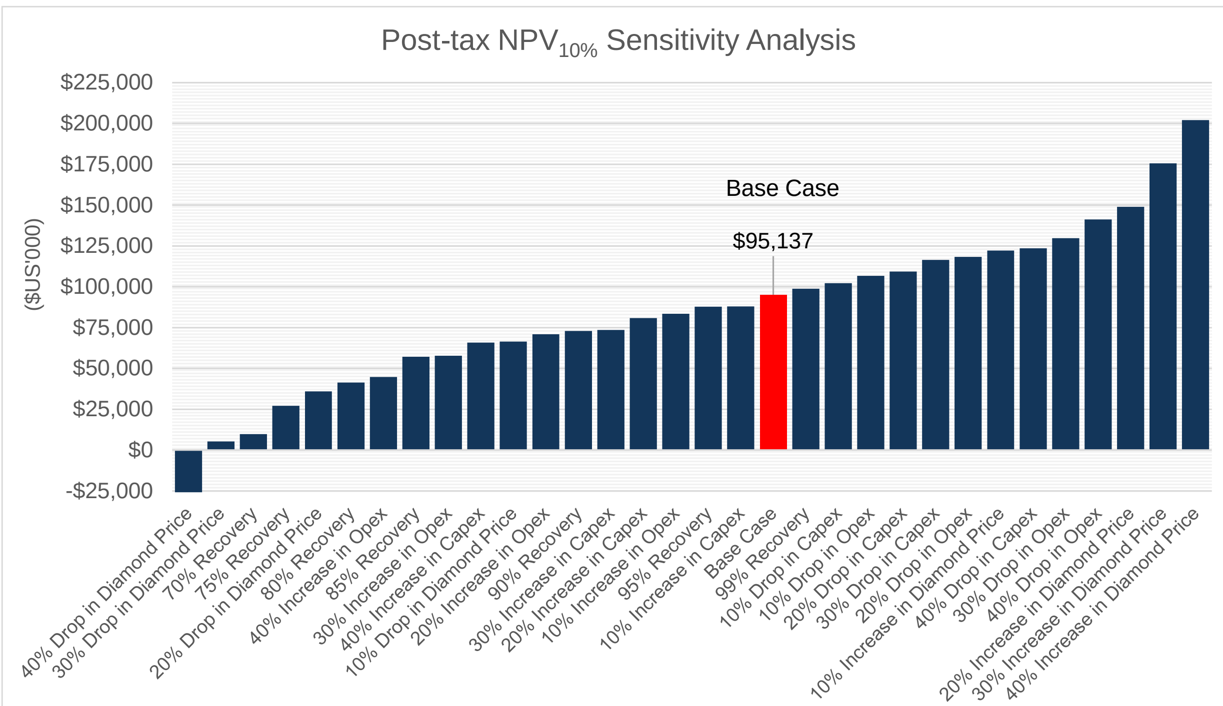
A sensitivity analysis has been conducted to evaluate the impact on post-tax NPV (at 10% discount rate). The model was flexed across a range of positive and negative change in revenues, operating and capital costs, and diamond recovery. The results of the sensitivity analysis are illustrated in Figure 22-6.

The chart shows that the Project's NPV is most sensitive to changes in revenue, followed closely by diamond recovery. This is typical for diamond mining projects and suggests that factors affecting revenue (such as diamond prices) and those affecting recovery have the largest impact on project value.

Operating costs appear to be the third most significant factor influencing NPV, after revenue and diamond recovery. This underscores the importance of cost control in maintaining Project value.

Capital costs seem to have a lesser impact on NPV compared to revenue and operating costs, but they still play a significant role.

The Project appears to maintain a positive NPV across a wide range of sensitivities, as evidenced by the chart showing most bars remaining in positive territory. This suggests that the Project is robust and can withstand some adverse changes in key parameters while still remaining economically viable.



Source: This report, 2024

Figure 22-6: Pareto chart of the $NPV_{10\%}$ sensitivity analysis

22.10.2 Breakeven Analysis

Sensitivity analysis was conducted to determine the individual changes in key value drivers that would result in a zero post-tax NPV10% for the Project. The breakeven adjustments required for each driver, when flexed independently, are as follows:

- Capital Costs – ~115% increase
- Operating Costs – ~70% increase
- Revenue – ~30% decrease

Additionally, a combined scenario analysis indicates that simultaneous changes in multiple variables could also result in a zero post-tax NPV. Specifically, it is estimated that an approximate 20% increase in both operating and capital costs, combined with a 20% decrease in project revenue, would result in a zero post-tax NPV.

22.11 Conclusions and Recommendations

The preliminary economic analysis of the Project indicates the potential for a positive economic outcome. It is recommended that the Project proceed to a PFS. A more detailed and precise economic analysis should be undertaken as part of that study. Further, it is recommended that the Project cashflows continue to be modelled on a monthly basis with a view to tying them more closely to budgeting forecasts and ultimately considering financing options at the FS stage.

PEAs are by nature preliminary and often incorporate inferred mineral resources. These resources are typically considered too geologically speculative to have economic considerations applied that would allow them to be classified as mineral reserves. The outcome of any PEA remains uncertain.

23 Adjacent Properties

The Meya License surrounds the adjoining 5 km^2 Koidu Kimberlite Project Mining Lease (Koidu Lease) to the north, south and west (Figure 23-1).

To be noted, Smillie et al. (2000) reported that in the 1990s, the Sierra Leone government began to receive overtures from small international mining firms, referred to as "juniors". There were three juniors mainly involved in Sierra Leone during the 1990s:

- Rex Diamond, with de facto headquarters in Antwerp and holding Sierra Leone concessions in Zimmi and Tongo fields.
- AmCan Minerals, which held various exploration licences in Sierra Leone and acquired a South African-owned firm, ArmSec International ("SL"), with connections to both the diamond and the security industries.
- Diamond Works, an outgrowth of Carson Gold and Vengold, companies promoted by Robert and Eric Friedland. In 1995, Diamond Works acquired Branch Energy Ltd, a private company registered on the Isle of Man. In 1995, Branch Energy secured a 25-year renewable lease to develop kimberlite diamond deposits at Koidu, and on exploration licences for other alluvial diamond properties. In the early 2000s, the Koidu Project was a 50/50 joint venture between Diamond Works and Magma Diamond Resources Limited ("Magma") over the Koidu K1 and K2 pipes and Dyke A kimberlites, with the joint venture company holding an 80% interest in the Project.

Koidu Holdings was formed in September 2003 as a joint venture between the previous mineral right holders Energem Resources Inc. and BSG Resources subsidiary Magma. After a number of changes in the shareholding structure, BSG Resources progressively increased its stake in Koidu Holdings to 100% by February 2007.

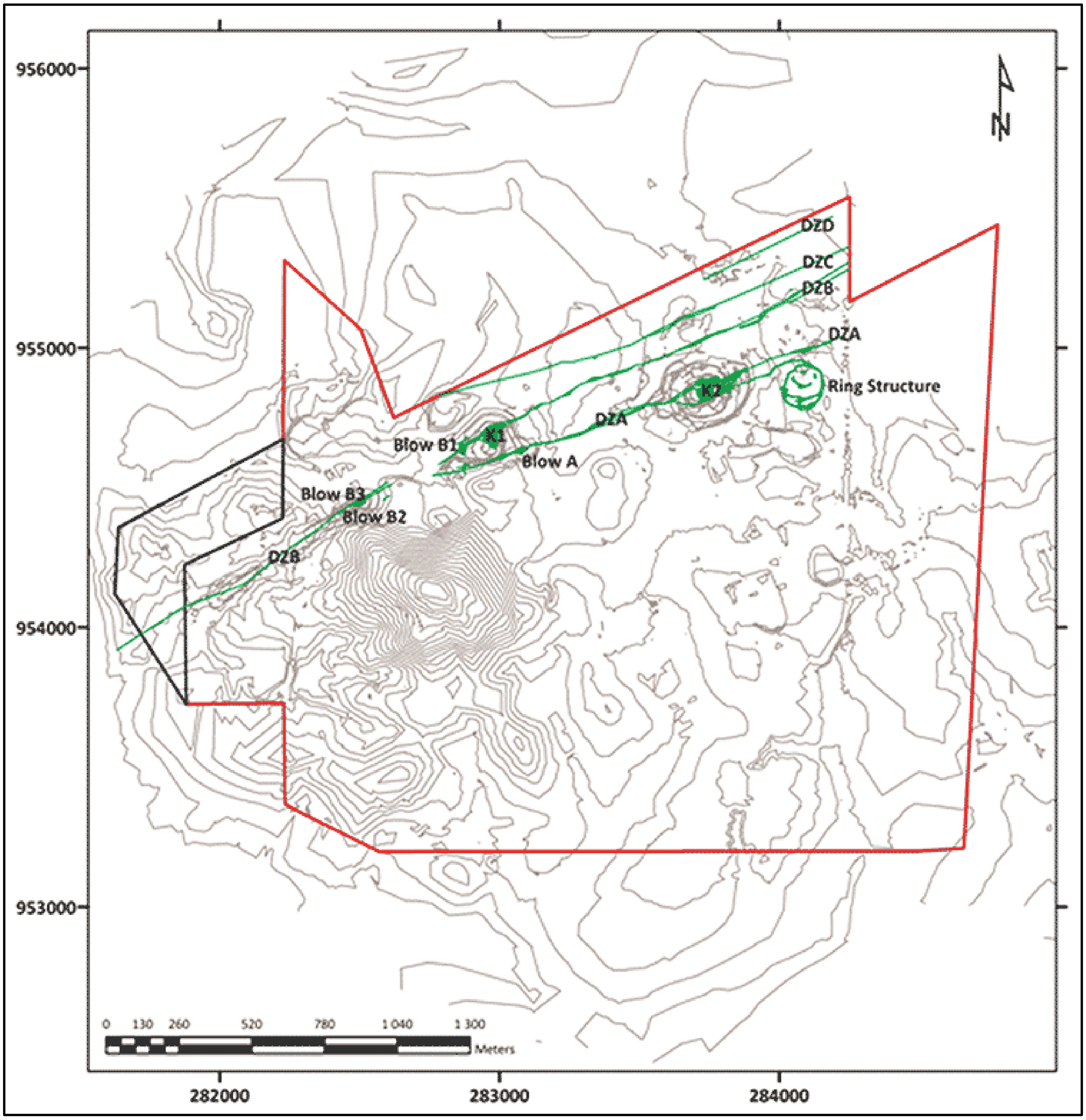
Koidu Holdings has been evaluating the kimberlite bodies within the Koidu Lease area since 2003, and obtained a new Mining Lease in September 2010, valid until 2030. It is estimated that the Koidu Lease deposits have produced more than 2 Mct over the past 15 years.

The latest feasibility study demonstrated that the optimal project plan for expansion of operations at Koidu was technically and economically viable. The US$200M Expansion Project 2011 to 2016 involved a five-year open pit mining phase of the two kimberlite pipes, transitioning to a 12-year underground mining operation on both pipes, as well as introducing a second underground mining operation in parallel to extract the kimberlite dykes and blows.

The plan included mining both kimberlite pipes by open pit methods, to a depth of approximately 310 m below surface for K1 (March 2011 to September 2016) and approximately 244 m below surface for K2 (from September 2010 to October 2015), at which time the transition to underground mining methods was made. Taking into account the additional production that could be derived by mining the kimberlite dykes and blows from underground, an optimal plant size of 180 tph was selected, mining at a rate of 100,000 tonnes of mineralised material per month and 1.4 Mt of waste per month.

The mine continued producing with the existing 50tph plant until the new 180 tph DMS processing plant, capable of treating 1.2 Mt of mineralised material per annum, was commissioned in June 2012.

Construction of the underground access commenced in early 2014 with the first mineralised material being extracted from underground in 2016.



Source: http://www.koiduholdings.com/operations-kkp-location.php#

Note: Area showing locations of dykes, pipes and blows, and ring structure (not evaluated)

Figure 23-1: Koidu kimberlite project mining lease

24 Other Relevant Data and Information

There is no other relevant data available about the Meya Mine project.

25 Interpretation and Conclusions

25.1 Geology

This report presents a maiden resource for the Meya River Dyke System of the Meya Mine project located in the Kono District of Sierra Leone. The work is based on the results from core drilling, bulk sampling and trial mining since the initiation of drilling in October 2016. This report has been completed as a PEA with an effective date of 19 August 2024.

Based on SRK's work completed to date, the following interpretations and conclusions have been made:

1. The current drill confirmed strike length of the kimberlite dyke system projected west from Koidu's Dyke Zone B or "DZB" is 10,808 m within the Meya Mining lease area and a total of 107 drill cores have been completed in this system. Currently, the entire strike length of the system has been subdivided into three geological zones or domains, starting with the Meya River Dyke System located in the far east adjacent to the Koidu Mine, the Bardu Dyke System in the center and the Waterloo Dyke System in the far west. The focus of this PEA study is on the Meya River Dyke System.
2. Within each of the three dyke zones, the dykes can be seen to be near vertical in orientation and dipping to the south. Thicknesses range from small cm segments to individual dyke widths of greater than 1 m, and the number of segments present with ore drive widths varies from two segments to greater than 12 segments. 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 different phases of kimberlite result from the emplacement of different batches of magma that are characterised by different grades and diamond values. These features are consistent with kimberlite dykes that have been investigated and mined from around the world.
3. The sub-vertical kimberlite dykes that comprise the Meya River Dyke System have been delineated by 71 core holes, indicating an approximate strike length of 2,696 m. This system has been modelled to a depth of 800 m below the surface. Based on core logging, mapping of the bulk sample surface and underground mining exposures, petrographic investigations, groundmass spinel compositions, microdiamond analysis results and macrodiamond recovery from bulk sampling, at least three different phases of kimberlite have been established by the QP and include KIMB1, KIMB2 and KIMB3.
4. The KIMB1, KIMB2 and KIMB3 rock types within the Meya River Dyke System are discrete dykes. They are characterised by different morphology and can be distinguished based on olivine populations, petrographic features, microdiamond results, groundmass spinel compositions, and country rock xenolith populations. The cross-cutting relationship shows that KIMB1 was emplaced before KIMB3, which can be seen to cross-cut KIMB1 in multiple underground exposures. The relationship of KIMB1 and KIMB3 to KIMB2 has not yet been established.
5. The Meya River Dyke Zone 3D Geology model currently includes three separate wireframe models for each of the phases of kimberlite identified – KIMB1, KIMB2 and KIMB3. These three wireframe models are further subdivided into three domains due to two major faults that have been identified and termed Fault Block 1 (FB1), Fault Block 2 (FB2) and Fault Block 3 (FB3).
6. The geological confidence with respect to the location of the dyke and the consistency of the mantle components within the various kimberlite phases in the Meya River Dyke System is considered moderate to high down within FB1 to -500 m, FB2 to – 300 m and FB3 down to -400 m from surface.

KIMB1 is geologically the most consistent dyke. The KIMB3 dyke often displays significant changes in thickness, position and internal dilution and the geological confidence of this dyke is less than that for KIMB1. The confidence in the KIMB2 dyke is the lowest of the three dykes due to the thin nature of this dyke and the highly irregular pierce point distribution within the current drilling density.

7. The Bardu Dyke Zone is presently modelled based on current wide-spaced drilling (+250 m centers) at ~4,070 m in strike length to a depth of 550 m below the surface. Based on the treatment of 2,608 survey tonnes of kimberlite, a grade of 0.38 cts/t has been established. A macrodiamond parcel of 1,059.35 cts was recovered from the primary processing and tailings retreatment.

8. The Waterloo Dyke Zone is currently modelled as a single dyke zone until more detailed studies are completed. Based on current wide-spaced drilling (+250 m centers), the dyke zone strike length is ~2,600 m in strike length and has been modelled to a depth of 550 m below the surface. Bulk sampling was not completed at Waterloo; however, a small parcel of 539 cts of diamonds was recovered from weathered kimberlite exposed while developing a bulk sample pit.

9. Simbakoro (historic Pol-K) is another dyke zone within the License, located to the northwest of the Meya River, Bardu and Waterloo Dyke Zones. Although Simbakoro has not yet been drilled by Meya Mining, underground bulk sampling and mining development work was completed by Stellar Diamonds. Meya Mining has extracted a small carat parcel from a partial bulk pit, totalling 1,267 cts.

10. 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. Both internal and external dilution exists in the dyke zones. Internal dilution is the country rock component or waste present as xenoliths within a particular dyke segment. The present internal dilution information is based on very limited exposure of the various dykes at the surface and very limited drill core intersections along the strike. The external dilution consists of in situ country rock between segments and immediately adjacent to the dyke zones that become mixed with the kimberlite during bulk sampling and potential future mining. It is possible that the dilution encountered in the drilling and bulk sampling to date is different between the presently available data points. Effectively managing dilution will be extremely important for this project.

    With respect to the continuity of geology, the dyke zones are currently drilled on very wide-spaced centers (> 250 m), and 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 characterised by higher dilution or lower grade. There will be areas within the dyke system where the dyke becomes wider and may develop into small blows or small pipes, as observed in these systems globally.

11. At this stage, the main geological opportunity within the present Meya License is the discovery of additional diamondiferous kimberlite. Many untested kimberlite dykes are located on the property, as reported by previous workers and mined by artisanal workers. In addition to the kimberlite dykes, it is possible that additional blows or pipes infilled with volcaniclastic kimberlite may be present. A historic discarded drill core from Simbakoro (historic Pol-K) was examined, and a rock classified as tuffisitic kimberlite was identified (now classified with updated terminology as Kimberley- type Pyroclastic Kimberlite or KPK). This is texturally the same rock type infilling the steep-sided pipes at the operating Koidu Mine.

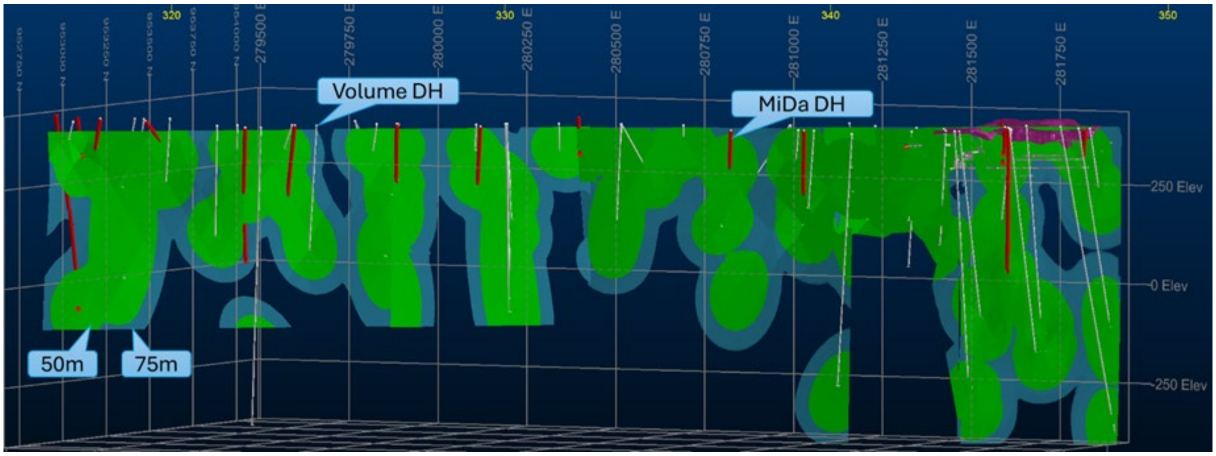
12. Recovery of the 476 ct Meya Prosperity diamond, classified as a Type IIa diamond, is considered extremely significant. The diamond was sold to Laurence Graff for US$16.5M. This diamond was recovered from the Meya River Dyke Zone bulk sample trench and unfortunately was broken during liberation and was originally > 500 ct. Other high-value Type IIa stones have been recovered from the Meya River Dyke Zone bulk sample, and the proportion of these stones is extremely encouraging. It is emphasised here that the average US$/ct value presented in this report has been calculated by excluding this stone, so there is upside potential in the US$/ct value for the Meya River diamonds.
13. It is important to appreciate that there are only three large mines in the world that produce super large (> 500 ct) Type IIa diamonds: the Karowe Mine in Botswana, the Cullinan Mine in South Africa and the Letšeng Mine in Lesotho. All these mines are liberating super large Type IIa diamonds from steep-sided pipes infilled with volcaniclastic kimberlite. The explosive fragmentation processes responsible for the development of these pipes and the fragmentation of the kimberlite that occurs within them has an impact on diamond breakage – particularly with more brittle Type IIa diamonds. The known kimberlites in the Meya License were emplaced as intrusive dykes and no explosive fragmentation was involved. The QP, therefore, considers it possible that any potential super large diamonds sampled by the kimberlite may have a better chance of transport and emplacement at the surface intact.
14. Due to the number of super large diamonds found in the artisanal fields within the License and in the immediately surrounding area, and because the only super large Type IIa diamond recovered from a primary kimberlite source in Sierra Leone (the Meya Prosperity) is from the Meya River Dyke Zone, it is the opinion of the QP that the probable source for these super large Type IIa diamonds is the Meya River Dyke Zone.

The largest diamond recovered in Sierra Leone is the Star of Sierra Leone at 968.9 ct. This stone was recovered within the Meya License area in 1972 within alluvial diggings extremely close to the now-delineated Meya River Dyke Zone. The QP considers it possible to recover diamonds greater than 1,000 ct from the Meya River Dyke Zone. The largest gem-quality diamond ever recovered from a kimberlite is the Cullinan from the Premier Mine in South Africa, and it was 3,106 ct; it is considered by many experts to be a fragment of a larger diamond based on the morphology of the diamond. It is recommended that the processing facility at Meya be configured to recover intact stones up to 5,000 ct at the front end.

25.2 Mineral Resource Estimates

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 indicates that there is a reduction of drilling and sampling density below approximately 250 m amsl in all domains although several holes in the FB1 Main domain have been drilled to a greater depth (~-250 m). 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 25-1. This figure also illustrates two possible spheres of influence related to the sampling, one at 50 m and the other at 75 m. This approach serves to highlight the gaps in the information at depth in particular in FB2 Main where there is a lack of drilling.



Source: This report, 2024

Figure 25-1: Illustration of drillholes used for volume and MiDa with ranges of influence of 50 m and 75 m

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 Mining 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 Star and Meya, 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 was 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, particularly in the upper portions above 250 m amsl 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 de-clustered grade a halo of approximately 150 m 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 250 m amsl, 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 Star 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 250 m amsl 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.

The general approach to estimating the Meya River Dyke Mineral Resource that was agreed to between Z Star and Meya Mining has resulted in satisfactory results. The primary focus has been to ensure an accurate volume model followed by the grade and revenue modelling and density modelling.

25.3 Mineral Reserve Estimates

No Mineral Reserves have been declared for the Meya Mine project as of the effective date of this report.

25.4 Mining Methods

The Meya River Dykes in the areas labelled as Fault Blocks 1 and 2 appear to be amenable to underground mining with an LHOS mining method.

In Fault Block 1 (FB1), most of the main dyke wireframe is included in the mine designs. In the north dyke wireframe, a portion of a kimberlite dyke wireframes that were closer than a critical pillar span were excluded. It is understood that in real operation, the judgement to include or exclude portion of the dyke will be based on the actual dyke geometry. Based on the geotechnical assessment, a minimum pillar criterion of 13 m was used for parallel stopes. This dimension needs to be verified during the initial mining of parallel dykes.

In Fault Block 2 (FB2), only stopes generated for the main dyke wireframe are included in the mine plan. There is an area in the FB2 north dyke wireframe which has stope designs containing 377 kt of mineralised material at an average grade of 0.12 cts/t for 45k carats of diamonds. This area was excluded from the current mine plan due to the relatively low grade assumption. It has to be understood that large diamond occurrences or frequency is currently unknown and pose significant upside potential and possible inclusion of this dyke in the future.

Crown pillars, rib pillars and sill pillars have been accounted for by excluding their volumes from the mine plan. Current location of the rib pillar is on a regular basis and in a real mining areas with narrow dyke will be preferentially allocated to the rib pillars. This is also potential opportunity to extract more mineralised material.

In FB1, 2.70 Mt of ROM mineralised material at a diluted diamond grade of 0.251 cts/t (676k carats of diamonds contained) is reported in the LOM plan. The corresponding figures in FB2 are 4.69 Mt at 0.154 cts/t (721k carats), for a total of 7.39 Mt at a 0.189 cts/t (1,397k carats) in FB1 and FB2 combined.

The resource estimate made by Z Star and dated 6th of June 2024, has 996k carats of diamonds in FB1 and 958k carats in FB2, which is equal to a resource estimate to mine plan conversion rate of in FB1 of 66% in FB1 and 73% in FB2 in terms of diamonds contained.

The stopes are designed to an effective minimum width of 2.2 m (including dilution factors) which together with an ore drive width of 3.5 m results in kimberlite making up 38.0% of the total mass of ROM mineralised material in the mine plan. Based on operational experience of LHOS in narrow gold vein deposits, effective minimum width could be reduced where dyke is smaller. This also poses an opportunity to increase ROM grade. Experience from narrow vein gold mines indicates that minimum width could be as low as 1 m.

Mining operations would be active for 82 months (6.8 years) and would produce an average of 120 kt of ROM mineralised material per month at full production. The diamonds contained in the ROM material typically range between 21k and 28k carats per month at full production rate. The production rates are lower after the 53rd month of the LOM schedule when the FB1 stopes are mined out.

Critical aspects of the life of mine plan include, but are not limited to:

- Development advance rates. This is critical to accessing stope fronts in a timely manner to ensure production targets are achieved.
- Stope production rates. Fast cycling of stopes will be required in order to achieve efficient mining operations.
- Stope dilution. The current effective stope width is considered achievable, however, industry-leading drilling and blasting practices have to be implemented in order to minimise overbreak and unplanned dilution, as well as potential breakage.

25.5 Recovery Methods

The proposed scope of work will provide marked improvements in both the efficiency and operability of the plant. The test-work and simulations that have been carried out to date provide evidence of the improvements that can be achieved.

The process design is based on a combination of site data and Consulmet best practice. It is noted that sampling was carried out as the Meya exploration and geological assessments were ongoing. As such it is recommended that a final review of the geology be conducted and if found to significantly deviate from the current design basis that the simulations be redone, and the design basis updated accordingly.

The risk of not including the NIR waste sorting stages, will result in high volumes of granite waste being treated by the crushing and main processing plant which will increase the wear rates of critical components resulting in higher operating costs. The exclusion of the NIR Sorters will also increase the risk of diamond breakage from the hard granite rock in the crushers and will reduce the hourly diamond grade and revenue recovered due to increased dilution of the feed.

To maintain a steady state operation between the waste sorting, secondary crushing and main processing plant operation, the use of strategic stockpiles has been implemented. This approach will also maximise throughput at the required processing treatment rate.

25.6 Infrastructure

The Meya Mine project benefits from existing infrastructure developed during bulk sampling operations. This includes site roads and a 4 km haul road, an operational DMS processing plant, offices, workshops and storage facilities, an accommodation camp, and a water supply system.

Consulmet was engaged to assess and propose additional infrastructure required for the underground development. The assessment identified the need for expanded power generation, comprising six 2 MVA diesel generators. An underground dewatering system is planned to manage water ingress. The ventilation system will be enhanced with additional raises and fans. Workshop facilities will be expanded to support increased maintenance requirements. The proposed NIR Waste Sorting Plant and upgrades to the main processing plant are key components of the infrastructure development plan.

These additions and upgrades are designed to support the transition from bulk sampling to commercial underground mining operations.

25.7 Environmental and Permitting

The 2023 ESIA update for the Meya Mine project provides a comprehensive analysis of the project's potential impacts and mitigation strategies. The assessment identified several key areas of concern, including potential impacts on air quality, noise levels, surface and groundwater resources, local biodiversity, and surrounding communities.

In terms of physical environmental impacts, the ESIA highlighted risks of sedimentation in nearby water bodies due to soil erosion, potential contamination from hydrocarbon spills and leaks, and changes to local hydrology from dewatering activities. Air quality and noise impacts were also assessed, with predictions of some exceedances in nitrogen dioxide levels and dust fallout during operations.

The biological assessment revealed the presence of several flora and fauna species of conservation concern within the project area. Notable findings include the potential presence of western chimpanzees in the vicinity of the mining concession, emphasizing the need for further surveys and careful management of biodiversity impacts.

Socio-economic considerations included the relocation of cultural heritage resources, such as a cemetery and female shrines, which have raised concerns among local communities. The assessment also noted the project's potential positive impacts on local employment and economic development.

The ESIA concluded that with effective implementation of the proposed mitigation measures outlined in the ESMP, the project is not expected to result in significant irreversible environmental or social impacts that would outweigh its socio-economic benefits. Key mitigation strategies include the construction of flood prevention measures, implementation of water management systems, and ongoing environmental monitoring programs.

An initial MCRP was developed as part of the ESIA, outlining closure objectives and actions for various project components. The estimated closure cost was calculated at US$4,000,000, which includes provisions for demolition, rehabilitation, and post-closure monitoring.

Overall, the ESIA provides a solid foundation for the environmentally and socially responsible development of the Meya Mine project. It emphasises the importance of ongoing stakeholder engagement, adaptive management, and regular updates to environmental and social management plans throughout the project's lifecycle.

25.8 Capital and Operating Costs

Mining and G&A cost estimates in this PEA are based on conceptual designs and high-level assumptions, reflecting the early stage of project development. The accuracy of cost estimates for mining specifically, at this stage, is in the range of -20% to +50%, in line with industry standards for PEA-level studies. Following risks are noted with regards to the capital and operating costs:

- Cost estimates may vary as the project progresses through more detailed studies and engineering phases.
- Factors such as changes in market conditions, commodity prices, and regulatory requirements could impact both capital and operating costs.
- The conceptual nature of the mine plan and process design introduces uncertainty in the cost estimates, particularly for major infrastructure and equipment.

25.9 Economic Analysis

The economic analysis indicates the potential for positive returns of post-tax $NPV_{10\%}$ US$95.1M over nearly seven years life of mine. Key performance indicators of the project are summarised in Table 1-4.

Table 25-1: Meya Mine project key performance indicators

Metric	Unit	Values
Life of Mine	years	6.8
Diamonds Sold	Carats	1,364,220
Royalty, Export Fees, Community Development, Marketing	US$'000	$43,600
Revenue	US$'000	$17,691
Site Operating Cost	US$'000	$198,046
Operating Margin	%	53%
Capital (Initial and Sustaining)	US$'000	$99,451
Working Capital	US$'000	-$494
Pre-Tax Cashflow	US$'000	$180,464
Pre-Tax IRR	%	75%
Pre-Tax NPV @ 10% Discount Rate	US$'000	$115,121
Corporate Tax @ 25%	US$'000	$28,775
Post-Tax Cashflow	US$'000	$151,689
Post-Tax IRR	%	65%
Post-Tax NPV @ 10% Discount Rate	US$'000	$95,137

The economic analysis was performed using a discounted cashflow model developed using MS Excel®. The basis of the cashflow was a monthly production schedule as described in Section 16.8 of this report. It is noted that the last three months of the developed schedule do not generate positive cashflows and were therefore excluded from the valuation. A minor discrepancy (~0.3%) between the carat quantities stated in the production schedule and those used in the economic analysis is expected.

The annual life of mine cashflow summary is illustrated in Figure 22-5. The annual cashflow summary shows positive cashflows throughout most of the project's life, with peak cashflows occurring in the middle years of operation.

A sensitivity analysis was conducted on the parameters such as diamond price, operating and capital costs, and diamond recoveries. Pareto chart showing results of the analysis is illustrated on Figure 22-6.

The chart shows that the Project's NPV is most sensitive to changes in revenue, followed closely by diamond recovery. This is typical for diamond mining projects and suggests that factors affecting revenue (such as diamond prices) and those affecting recovery have the largest impact on project value.

Operating costs appear to be the third most significant factor influencing NPV, after revenue and diamond recovery. This underscores the importance of cost control in maintaining Project value.

Capital costs seem to have a lesser impact on NPV compared to revenue and operating costs, but they still play a significant role.

The Project appears to maintain a positive NPV across a wide range of sensitivities, as evidenced by the chart showing most bars remaining in positive territory. This suggests that the Project is robust and can withstand some adverse changes in key parameters while still remaining economically viable.

26 Recommendations

26.1 Geology

Within the Meya River Dyke System, additional drilling is required within all phases, KIMB1, KIMB2 and KIMB3 with each of the fault blocks below the current moderate to high confidence geology levels. It is recommended that HQ core drilling is completed to -800 m, matching the drilling density that has been achieved in the upper portion of the dyke system. It will be a requirement to complete a petrographic investigation as well as undertake a microprobe analysis of the petrography samples to confirm that the kimberlite intersected at depth is similar to that encountered within the Meya bulk sample pit (MBS2) in support of diamond grade and value projections within the deeper portions of the dyke.

The Bardu kimberlite should be reexamined, and additional holes should be completed to the – 500 m level below the surface. The understanding of the detailed geology of the Bardu Dyke System has not been developed. Detailed petrography and groundmass spinel composition work is required to establish the continuity within the dyke and if other phases of kimberlite are potentially present. The Bardu kimberlite displays extreme variations in the mantle package it contains, and therefore, the diamond grade is expected to be highly variable within this system. Low-interest Intervals completely lacking olivine macrocrysts are present. However, other intersections are characterised by very high-interest mantle components.

It is a requirement to complete the bulk sampling at the Waterloo kimberlite that was started to obtain a macrodiamond parcel for diamond grade and value determination. This is considered a high-interest kimberlite based on the mantle components it contains. Additional HQ drilling to the -500 m below the surface is recommended based on the current geological information.

The Simbakoro dyke remains undrilled, and based on the limited information available from the partial bulk sample pit exposures, this dyke is also considered of high interest, and the small package of macrodiamonds is very encouraging in terms of size and quality. It is recommended that this kimberlite be drilled in a staged approach similar to the Meya River Dyke System initially to -50 m below the surface first to determine the full strike length of the kimberlite and the continuity of the kimberlite along strike in terms of juvenile components, dilution, dyke thickness and complexity (segment variability) and microdiamonds.

Due to the current focus on resource development and underground mining over the last few years, there has been a lack of exploration work conducted to add additional kimberlites to the drill-confirmed kimberlite inventory within the mining licence. It is highly recommended that a dedicated team of geologists within Meya be focused on exploration activities. There are active artisanal mining sites where kimberlite is being exposed within the licence, and these sites need to be documented and sampled. In addition, the recent airborne geophysics completed by the government should be purchased so that any potential new kimberlite targets may be investigated and drilled.

26.2 Mineral Processing and Metallurgy Testing

The proposed scope of work will provide marked improvements in both the efficiency and operability of the plant. The test-work and simulations that have been carried out to date provide evidence of the improvements that can be achieved.

The process design is based on a combination of site data and Consulmet best practice. It is noted that sampling was carried out as the Meya exploration and geological assessments were ongoing. As such it is recommended that a final review of the geology be conducted and if found to significantly deviate from the current design basis that the simulations be redone, and the design basis updated accordingly.

The risk of not including the NIR waste sorting stages, will result in high volumes of granite waste being treated by the crushing and main processing plant which will increase the wear rates of critical components resulting in higher working costs, also increase the risk of diamond breakage from the hard granite rock in the crushers and will reduce the hourly diamond grade and revenue recovered due to increased dilution of the feed.

To maintain a steady state operation between the waste sorting, secondary crushing and main processing plant operation, the use of strategic stockpiles has been used. This will also maximise throughput at the required treatment rate.

It may also be useful to consider variations to the quaternary crushing circuit to consider the cost benefit of the recirculating load. This exercise can be easily completed when necessary.

26.3 Mineral Resource Estimates

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.

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.

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

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 must ensure sufficient sampling to test these issues.

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.

26.4 Mining Methods

- Stope parameters
  - Verify minimum stope width and modifying factors to improve accuracy in the mine plan.
- Cut-off grade
  - With improved cost, price and operational assumptions – revisit the cut-off grade and develop plans for economical evaluation at different cut-off grades (trade-off study).
- Mine designs
  - Evaluate economic viability and technical feasibility of alternative mine design criteria, such as level spacings, decline positions, utilising backfilling, access points, etc.
- Mine scheduling
  - With additional experience gained through continuous mining, verify development and stope mining rates assumption.
  - Investigate mining rates in FB1 and FB2, and between the deep and shallow mining to identify the best strategy in terms of productivity and economics.
- Geotechnical considerations
  - With additional mining experience and improved geotechnical understanding, adjust the mine designs and schedules to reflect the actual ground conditions. This also includes optimising the stope dimensions, ground support, blast design, and potential use of backfilling.

26.5 Infrastructure

It is recommended that Meya Mining conduct a detailed review of the water management system, particularly focusing on the capacity of the proposed water treatment plant and wastewater treatment plant, to ensure they can handle potential increases in water inflow during underground operations.

Meya Mining should consider conducting a trade-off study between the proposed diesel generators and alternative power sources, such as solar or grid connection, to ensure the most cost-effective and sustainable long-term power solution.

A detailed maintenance and replacement schedule should be developed for all major infrastructure components to ensure their longevity and reliability throughout the life of the mine.

26.6 Environmental and Permitting

Based on the findings of the 2023 ESIA, several key recommendations are proposed to enhance the environmental and social performance of the Meya Mine project:

- **Environmental Management**: It is recommended to develop and implement a comprehensive Biodiversity Action Plan (BAP), with a particular focus on species of conservation concern identified in the project area. This should include additional surveys to confirm the presence and distribution of western chimpanzees in the mining concession area and near the haul road. Continuous monitoring programs for air quality, noise emissions, and water quality (both surface and groundwater) should be established and maintained throughout the project's lifecycle.

- **Infrastructure and Design**: To address potential flooding risks, it is advised to construct flood prevention measures around the Meya River Pit and develop a robust stormwater management system that effectively separates clean and dirty water flows. The design and location of the Waste Rock Dump and new slimes dam should be re-evaluated to minimize impacts on wetlands. If relocation is not feasible, implementation of adequate buffer zones and community compensation measures should be considered.
- **Social Engagement and Cultural Heritage**: It is crucial to expand stakeholder engagement efforts beyond the Koakoyima community to ensure broader representation of grievances and concerns. Particular attention should be given to addressing community concerns about the relocation of cultural heritage resources, especially the cemetery and female shrines. A dedicated cultural heritage management plan should be developed in consultation with affected communities.
- **Closure Planning**: It is recommended to develop a detailed post-mining land use plan early in the project lifecycle. This plan should inform closure measures and site relinquishment criteria, ensuring that rehabilitation efforts align with long-term community needs and environmental sustainability goals. Annual updates of the Closure Plan and Closure Cost Estimate should be conducted to refine rehabilitation measures and costs as more project information becomes available.
- **Geochemical and Water Management**: A comprehensive geochemical analysis should be undertaken to identify and characterize potential sources of soil and water contamination, particularly around the Return Water Dam. Based on these findings, a detailed water management strategy should be developed to mitigate any identified risks.
- **Ongoing Assessment and Adaptive Management**: Regular reviews and updates of the ESMP should be conducted to ensure its continued relevance and effectiveness. This should include periodic reassessments of environmental and social impacts as the project progresses, allowing for adaptive management strategies to be implemented as needed.
- By implementing these recommendations, Meya Mining can enhance its environmental and social performance, mitigate potential risks, and foster positive relationships with local communities throughout the life of the Meya River Domain underground mining project.

26.7 Costs and Economic Analysis

The preliminary economic analysis of the Project indicates the potential for a positive economic outcome. It is recommended that the Project proceed to a PFS. A more detailed and precise cost estimation and economic analysis should be undertaken as part of that study. Further, it is recommended that the Project cashflows continue to be modelled on a monthly basis with a view to tying them more closely to budgeting forecasts and ultimately considering financing options at the FS stage.

PEAs, such as one prepared for the Meya Mine project, are by nature preliminary and often incorporate inferred mineral resources. These resources are typically considered too geologically speculative to have economic considerations applied that would allow them to be classified as mineral reserves. The outcome of any PEA remains uncertain.

26.8 Recommended Work Program

The estimated cost for the recommended work described in Section 26 is approximately US$15M. These costs have not been included in the financial analysis and should cover the following:

- Additional drilling within all phases (KIMB1, KIMB2, KIMB3) of the Meya River Dyke System
- Exploration efforts for additional kimberlites within the mining license
- Sampling optimisation study for grade variations and discrepancies
- Geochemical analysis for potential soil and water contamination sources
- Detailed estimation of capital and operating costs, including supplier quotes and cost breakdowns
- Comprehensive hydrogeological study
- Additional geotechnical investigations:
  - Rock mass characterisation
  - Stability analyses for planned stopes and pillars
  - Refinement of potential ground support requirements
- Trade-off studies on mining equipment selection
- Refined closure and rehabilitation measures, including post-mining land use plan

Closure

This report, "NI 43-101 Independent Technical Report and Preliminary Economic Assessment for the Meya Diamond Mine Project, 2024, Sierra Leone", was prepared by the "Qualified Persons" and contributing authors listed below.

The Effective Date of this Technical Report is 19 August 2024.

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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References

ASTM, 2019: ASTM D1739 (Reapproved 2017), “Standard Test Method for Collection and Measurement of Dust fallout (Settleable Particulate Matter)”, 2019.

Barnett, W.P., 2008: The rock mechanics of kimberlite volcanic pipe excavation. Journal of Volcanology and Geothermal research 174, pp 29-39. Doi:10.1016/jvolgeores.207.12.021.

Barnett, W., Jelsma, H., Watkeys, M., Freeman, L., & Bloem, A, 2013: How Structure and Stress Influence Kimberlite Emplacement. Proceedings of the 10th International Kimberlite Conference, Volume 2. Pearson, DG, Grütter, HS, Harris, JW, Kjarsgaard, BA, O’Brien, H, Rao, NVC, Sparks, S (Eds.), pp. 51-65.

Basma & Macaulay, 2024: Opinion on Title. Legal letter prepared for Meya Mining Ltd on title opinion. 30 June 2024.

CEMMATS, Ltd, 2017: Environmental and Social Impact Assessment Study for the Meya Mining Project in Kono District. ESIA.

Clement, C.R., 1982: A Comparative Geological Study of Some Major Kimberlite Pipes in the Northern Cape and Orange Free State. Unpublished Ph.D. thesis, University of Cape Town, South Africa. 431 pages.

Clement, C.R. & Reid, A.M., 1989: The origin of kimberlite pipes: an interpretation based on the synthesis of geological features displayed by southern African occurrences. Geol. Soc. Australia. Spec. Pub., 14, 1, pp. 632-646.

Consulmet (a), 2024: Meya Mining Mineral Processing Project Proposal – Rev 6, JO-MEY-007 P3190-000-002, Consulmet (Pty) Limited, June 2024.

Consulmet (b), 2024: Meya Mining Underground Mining Infrastructure Proposal – Rev 7, PQ/MEY/009, Consulmet (Pty) Limited, June 2024.

Consulmet (b), 2024: Meya Mining Mining Support Infrastructure Proposal – Rev 5, PQ/MEY/010, Consulmet (Pty) Limited, June 2024.

Deakin, A.S. & Boxer, G.L., 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. 1117-1122.

Droop, G., 1987: A general equation for estimating Fe3+ concentrations in ferromagnesian silicates and oxides from microprobe analysis, using stoichiometric criteria. Mineral Mag 51, pp. 431-435.

Duggan, S.P., Bush, D.E. & Lohrentz, C., 2024: Meya River Kimberlite Dyke Diamond Resource Estimate (as of 29 March 2024). Z Star report, 15 May 2024.

Ferraris, R.D., 2017: A Diamond Damage and Diamond Characteristics Report on the Meya Diamond Project. Strictly Confidential, QTS Kristal Dinamika.

Ferraris, R.D. 2018a: A Diamond Report on the Meya Diamond Project. This report includes size frequency, valuation, breakage studies and diamond characteristics of the three samples sent to Antwerp in February 2018. Strictly Confidential, QTS Kristal Dinamika.

Ferraris, R.D., 2018b: Report on the March 2018 Export. This report includes size frequency and valuations of the three samples sent to Antwerp in March 2018. Strictly Confidential, QTS Kristal Dinamika.

Ferraris, R.D., 2018c: Report on the May 2018 Export. This report includes size frequency, valuations, results as well as observations of the breakage and characteristics of the three samples sent to Antwerp in May 2018. Strictly Confidential, QTS Kristal Dinamika.

Field, M. & Scott Smith, B.H., 1999: Contrasting geology and near-surface emplacement of kimberlite pipes in southern Africa and Canada. Proceedings of the Seventh International Kimberlite Conference, Cape Town, South Africa, 1, pp. 214-237.

Gernon, T.M., Field, M. & Sparks, R.S.J., 2012: Geology of the Snap Lake kimberlite intrusion, Northwest Territories, Canada: field observations and their interpretation. Journal of the Geological Society, 169, pp. 1-16.

Government of South Africa, 2013. National Dust Control Regulation in Government Notice 827 Government gazette 36974. Pretoria: Department of Environmental Affairs.

Grills, A., 2024: Meya Dyke Mineral Resource Estimation Process. Z Star Technical Note, 20 March 2024.

Gurney, J.J.& Kirkley, M.B., 1996: Kimberlite dyke mining in South Africa. Africa Geoscience Review, Vol. 3, No. 2, pp. 191-201.

Hall, P.K. (1968): The Diamond Fields of Sierra Leone. Bulletin No. 5, Geological Survey of Sierra Leone.

Harder, M., Nowicki, T., Hetman, C.M. & Abedu, B., 2013: Geology and Evaluation of the K2 Kimberlite, Koidu Mine, Sierra Leone, West Africa. Proceedings of the 10th International Kimberlite Conference: Volume 2. Pearson, DG, Grütter, HS, Harris, JW, Kjarsgaard, BA, O'Brien, H, Rao, NVC, Sparks, S (Eds.). pp. 191-208.

Hetman, C., Nowicki, T. & Moss, S., 2010: Geology and resource estimates for Dyke Zones A, B, C and D, Koidu Mine, Sierra Leone. Unpublished Mineral Services Canada Inc. Report MSC10/037R, prepared for Koidu Holdings S.A., 20 October 2010.

International Finance Corporation (IFC), 2007: Environmental Health and Safety Guidelines, General EHS guidelines: Environmental Noise Management.

International Finance Corporation (IFC), 2007: Environmental Health and Safety Guidelines, General EHS guidelines: Environmental Noise Management.

Environmental, Health and Safety Guidelines for Mining, S.L.: World Bank Group.

Kavanagh, J.L. & Sparks, R.S.J., 2011: Insights of dyke emplacement mechanics from detailed 3D dyke thickness datasets. Journal of the Geological Society, 168, pp. 965-978.

King, O.F., 1972: Sierra Leone kimberlites. A brief description of kimberlite occurrences in N.D.M.C. leases Yengema and Tongo. Unpublished internal report, National Diamond Mining Company (S.L.) Limited, p. 10.

MacGregor, I. D. & Carter, J. L., 1970: The chemistry of clinopyroxenes and garnets of eclogite and peridotite xenoliths from the Roberts Victor mine, South Africa. Physics of the Earth and Planetary Interiors 3, pp. 391–397.

MacFarlane, A., Crowe, M.J., Wilkinson, A.F. & Arthurs, J.W., 1979: The geology and mineral resources of northern Sierra Leone; Sierra Leone Geological Survey, Bull. 7.

Mitchell, R.H., 1986: Kimberlites: Mineralogy, Geochemistry, and Petrology, New York: Plenum.

Morel, S.W., 1979: The geology and mineral resources of Sierra Leone. Economic Geology, 74 (7): pp. 1563-1576.

Moss, S., Nowicki, T., Hetman, C., Freeman, L., & Abedu, B., 2012: Geology and evaluation of kimberlite dykes at Koidu, Sierra Leone. Extended Abstract No. 249, 10th International Kimberlite Conference, Bangalore, India.

Naidoo, P., Stiefenhofer, J., Field, M., & Dobbe, R., 2004: Recent advances in the geology of the Koffiefontein Mine, Free State Province, South Africa. Lithos 76: pp.161-182.

Patrick , D. & Forward, P., 2005: Review of a Portfolio of Exploration Properties held in Sierra Leone by Sierra Leone Diamond Company Limited. For Sierra Leone Diamond Company Limited. ACA Howe International Limited, January 21, 2005. Berkhamsted, Herts, UK.

Pollett, J.D., 1937: The Diamond Deposits of Sierra Leone. Bull. Imp. Inst., Vol. 35, No. 3, pp. 333-348.

Pollett, J.D. & Junner, N.R., 1930: Geological Survey field party comprising Mr. J.D. Pollett, Mr. N.R. Junner and assistants were conducting geologic mapping in the Kono District, January 1930.

Report of the Sierra Leone Truth & Reconciliation Commission, Volume Three B, 2004: Chapter One. Mineral Resources, their Use and their Impact on the Conflict and the Country. 520 pp. www.sierra-leone.org/Other-Conflict/TRCVolume3B.pdf.

Roeder, P. & Schulze, D., 2008: Crystallisation of groundmass spinel in kimberlite. J Petrol. 49(8), pp. 1473-1495.

SANS, 2004: Conservation of Clean Air and Water in Europe (CONCAWE) calculation method for noise dispersion modelling for the construction and operational phases of the project.

SANS, 2004: South African National Standard "The calculation of sound propagation by the CONCAWE method'", (SANS 10357), 1.2 Edition. Available [online] http://www.sabs.co.za.

Schlüter, T. & Trauth, M.H., 2008: Geological atlas of Africa: with notes on stratigraphy, tectonics, economic geology, geohazards, geosites and geoscientific education of each country. Springer. p. 220. ISBN 978-3-540-76324-6.

Scott-Smith, B.H., Nowicki, T.E., Russell, J.K., Webb, K.J., Mitchell, R.H., Hetman, C.M., Harder, M., Skinner, E.M.W. & Robey, J.V., 2013: Kimberlite terminology and classification. D.G. Pearson et al. (eds). Proceedings of the 10th International Kimberlite Conference, Vol. 2, Special issue of Jour. Geol. Soc. India.

Shee, S., 1984: The oxide minerals of the Wesselton Mine kimberlite, Kimberley, South Africa. In: Kornprobst J (ed), Kimberlites and Related Rocks. New York: Elsevier, 1, pp. 59-73.

Skinner, E.M.W., Apter, D.B, Morelli, C. & Smithson, N.K., 2004: Kimberlites of the Man craton, West Africa. Lithos 76 (1), 233-259.

Smillie, I., Gbierie, L. & Hazelton, R. 2000: Insights, The Heart of the Matter. Sierra Leone Diamonds and Human Security. Partnership Africa Canada. ISBN 0-9686270-4-8.

SRK, 2018: Independent Technical Report for the Meya Project, Sierra Leone. Internal technical report prepared by SRK: C. Hetman, J. Jakubec, K. Webb, M. Podolsky, W. Barnett, L. Zorzi, S. Moss, H. Coopersmith & D. Lagacé. June 2018.

Stiefenhofer, J., 2013: The use of chemical and metallurgical parameters to enhance the economic value of kimberlite resource models. Proceedings of the 5th Conference Diamonds – Source to Use.

van Straaten, B., Kopylova, M., Russell, J., Webb, K., & Scott-Smith, B., 2007: Discrimination of diamond resource and non-resource domains in the Victor North pyroclastic kimberlite, Canada. J Volcanol Geoth Res., 174, pp. 128-138.

Viljoen, K. S., Schulze, D.J. & Quadling, A.G., 2005: Contrasting Group I and Group II eclogite xenolith petrogenesis: petrological, trace element and isotopic evidence from eclogite, garnet-websterite and alkremite xenoliths in the Kaalvallei kimberlite, South Africa. Journal of Petrology, Volume 46, Issue 10, pp. 2059–2090.

Viviers, G., 2020: Meya Mining – Meya River Domain - SFD and Diamond Valuation. Internal report prepared for Meya Mining.

White, J., Sparks, R.S.J., Bailey, K., Barnett, W.P., Field, M. & Windsor, L., 2012: Kimberlite sills and dykes associated with the Wesselton kimberlite pipe, Kimberley, Souh Africa. South African Journal of Geology, Vol. 115, No. 1, pp. 1-32.

World Health Organisation, 2022: WHO global air quality guideline: Particulate matter (PM2.5 and PM10), ozone, nitrogen dioxide, sulfur dioxide and carbon monoxide. ISBN 978-92-4-003422-8 (electronic version). WHO European Centre for Environment and Health, Platz der Vereinten Nationen 1 D-53113 Bonn, Germany.

World Health Organisation, 2022: Guidelines for drinking-water quality, Switzerland: WHO.

Williams, H. R., 1977: African Archaean mobile belts and granite greenstone terrane. Nature, 266, pp. 163-164.

WWW, 2024: Commercial and Technical Diamond Industry Due Diligence Report. Report prepared for Meya Mining Ltd., 30 April 2024.

Acronyms and Abbreviations

Abbreviation	Description
%	Percent
°	Degrees
°C	Degrees Celsius
3D	Three Dimensional
ACLPS	Access Control and Loss Prevention Security
ADT	Articulated Dump Truck
Al	Aluminum
ALS	Advanced Life Support
Ammonia as N	Ammonia (Expressed as Nitrogen)
AoI	Area of Influence
As	Arsenic
ASD	Deswik Auto Stope Designer
ATSM	American Standard Test Method
BAP	Biodiversity Action Plan
BCOS	Bottom Cut-Off Size
BHIDS	Borehole Inflow and Decline Survey
BMC	Blast Management and Consulting
c, ct, cts, crt	Carat (1 Carat = 0.2g)
Ca	Calcium
CaCO3	Calcium Carbonate
CAPEX	Capital Expenditure
CAST	Consolidated African Selection Trust Ltd
CCE	Closure Cost Estimate
CCM	Cooperative Contract Mining
Cd	Cadmium
CEMMATS	CEMMATS Group Ltd
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
Cl	Chlorine
cm	Centimetres
CN	Cyanide
Co	Cobalt
CO2	Carbon Dioxide
CONCAWE	Conservation of Clean Air and Water in Europe
Consulmet	Consulmet SA (Pty) Ltd
CP	Closure Plan
cpcm or cts/m^3	Carats per Cubic Metre
cpht	Carats per Hundred Tonnes of Ore
cpsm or cts/m^2	Carats per Square Metre
cpt or cts/t	Carats per Tonne
CR	Critically Endangered
Cr	Chromium

Abbreviation	Description
CSS	Closed Side Setting
Cu	Copper
DB	Database (or Decibel)
DEC	Diamond Exploration Company
DFID	UK Department of Foreign and International Development
Diarough	Da Trading DMCC
Digby Wells	Digby Wells Environmental (Uk)
DMS	Dense Media Separation
DSFD	Diamond Size Frequency Distribution
DTC	Direct-to-Consumer (or Diamond Trading Company)
DVM	Diamond Value Management
DZB	Dyke Zone B
EC	Electrical Conductivity
E.Coli	Escherichia Coli
EDS	Energy Dispersive Spectroscopy
EHS	Environmental Health & Safety
EIA	Environmental Impact Assessment
EMP	Electron Microprobe
EOH	End of Hole
EPA-SL	Environment Protection Agency Sierra Leone
EPL	Exclusive Prospecting License
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ETS	Engineered Tailings Solutions
EXT	Ext Mine Projects AB
F100	Feed 100%
FB	Fault Block
FCA	First Consulting Alliance
Fe	Iron
FEL	Front End Loader
FeSi	Ferrosilicon
FGD	Focus Group Discussions
FS	Feasibility Study
g	Grams
G4S	G4S Secure Solutions SL
G7	Group of Seven
G&A	General & Administration
g/cc	Grams per Cubic Centimeter
GA	Geological Assessment (or General Arrangement)
Germinate	Germinate Sierra Leone Limited
GISTM	Global International Standard on Tailings Management
GoSL	Government of Sierra Leone
GSI	Geological Strength Index
GSM	Global System for Mobile Communications

Abbreviation	Description
ha	Hectares
HH	Household
hr	Hour
HiAb	Hydraulic Crane or Hydraulic Load Handling System
HPDE	High-Density Polyethylene
HPGR	High Pressure Grinding Rolls
Hz	Hertz
IFC	International Finance Corporation
IMP	Waste Management Plan
IRMR	Intact Rock Mass Rating
IRR	Internal Rate of Return
ISS	Industrial Security
IUCN	IUCN Red List of Threatened Species
JV	Joint Venture
K	Potassium
kg	Kilograms
KII	Key Informant Interviews
km	Kilometres
km2	Square Kilometres
KOIN	KOIN International DMCC
kPa	Kilopascal
KPC	Kimberley Process Certification
KPI	Key Performance Indicator
kt	Kilotonnes
ktph	Kilotonnes per Hour
kV	Kilovolt
kVa	Kilovolt-Amperes
kW	Kilowatt
L	Litre
L/s	Litre per second
LED	Light Emitting Diode
LGD	Lab-Grown Diamonds
LHD	Load-Haul-Dump
LHOS	Longhole Open Stoping
LIMS	Laboratory Information Management System
LOM	Life-of-Mine
LOP	Life of Plant
LV	Low Voltage
m	Metres
M, m	Million
M^3 , m^3	Cubic Metres
Ma	Million Years
Magma	Diamond Works and Magma Diamond Resources Limited
masl	Metres Above Sea Level

Abbreviation	Description
mbgl	Metres Below Ground Level
MCC	Motor Control Center
MCRP	Mine Closure and Rehabilitation Plan
Mct	Million Carats
Meya	Meya Mining Ltd.
Mg	Magnesium
mg	Milligram
mg/L	Milligram per Litre
mm	Millimetres
Mm^3	Million Cubic Metres
Mn	Manganese
MRCP	Mine Rehabilitation and Closure Plan
mS	Millisiemens (Unit of Electrical Conductivity)
mS/m	Millisiemens per Metre
Mt	Million Tonnes
Mtpa	Million Tonnes of Ore Per Annum
MV	Megavolt
MVA	Megavolt-Amperes
Na	Sodium
NDMC	National Diamond Mining Company
NDZ	North Dyke Zone
Ni	Nickel
NI 43-101	Canadian Securities Administrators National Instrument 43-101
NIR	Near-Infrared
NO_3	Nitrate
NPV	Net Present Value
NSR	Net Smelter Return
NT	Near Threatened
NTU	Nephelometric Turbidity Unit
OEM	Original Equipment Manufacturer
OHPL	Overhead Power Line
OPEX	Operating Expenditure
OSD	Operations Support Division
OSS	Operations Support Security
P&Gs	Preliminary and General Costs
P100	Product 100%
Pb	Lead
PEA	Preliminary Economic Assessment
PFD	Process Flow Diagra
PFS	Pre-Feasibility Study
pH	Potential of Hydrogen (Acidity / Basicity Level)
PLC	Programmable Logic Controller
POI	Point of Interest
ppm	Parts per Million

Abbreviation	Description
PSD	Particle Size Distribution
QA/QC	Quality Assurance & Quality Check
QC	Quaternary Crusher
QM	Quantify Mine Pty Ltd
QP	Qualified Person
ROM	Run of Mine
RPEEE	Reasonable Prospects for Eventual Economic Extraction
RQD	Rock Quality Designation
RWD	Return Water Dam
SANS	South African National Standards
SBR	Sequential Batch Reactor
SCADA	Supervisory Control and Data Acquisition
SCC	Species of Conservation Concern
SEM	Scanning Electron Microscope
SEP	Stakeholder Engagement Plan
SFD	Size Frequence Distributions
SIB	Stay In Business Capital
SiO2	Silicon Dioxide
SL	Armsec International
SLS	Sub-Level Stoping
SLST	Sierra Leone Selection Trust
SO4	Sulfate
SPS	Single Particle Sorter
SRC	Saskatchewan Research Council
SRK	Srk Consulting (Canada) Inc.
Stellar Diamonds	Stellar Diamonds Limited
SWMP	Stormwater Management Plan
SWOT	Strengths, Weaknesses, Opportunities, and Threats
t	Metric Tonne
t/m^3	Tonnes Per Cubic Metre
TDS	Total Dissolved Solids
tim	Time Interval Measurement (or Time-in-Motion)
TOC	Total Organic Carbon
tpd	Tonnes per Day
tph	Tonnes per Hour
Trustco	Trustco Resources (Pty) Ltd
TSF	Tailings Storage Facility
UCS	Uniaxial Compressive Strength
UG	Underground
µg	Microgram
µg/L	Microgram per Litre
UN	United Nations
UNAMSIL GIS	United Nations Mission In Sierra Leone Geographic Information System
US$	United States Dollar

Abbreviation	Description
US$/ct or US$/crt	United States Dollar per Carat
V	Volt
VHF	Very High Frequency
VIA	Visual Impact Assessment
VIP	Very Important Person
VSI	Vertical Shaft Impact
VSP	Vertical Spindle Pumps
VU	Vulnerable
WDS	Wavelength Dispersive Spectroscopy
WHO	World Health Organization
WMP	Waste Management Plan
WRD	Waste Rock Dump
WRD	Waste Rock Dump
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plan
WWW	WWW International Diamond Consultants Limited
XRT	X-Ray Transmission
Z* or Z Star	Z Star Mineral Resources (Pty) Ltd
Zn	Zinc
ZVI	Zone of Visual Influence

QP Certificates

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: "NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone" prepared for Meya Mining (the "Issuer") dated 27 August 2024, with an effective date of 19 August 2024 (the "Technical Report").

I, Jaroslav (Jarek) Jakubec, C.Eng., FIMMM., do hereby certify that:

1. I am a Corporate Consultant and Practice Leader with SRK Consulting (Canada) Inc. with an office at Suite #2600 – 320 Granville Street, Vancouver, British Columbia, Canada, V6C 1S9.
2. I am a graduate with a Master of Science Degree (M.Sc.) in Mining Geology from the Mining University in Ostrava (Czech Republic) in 1984. I have practiced my profession continuously since 1984 and I have 40 years' experience in mining. I have been involved in project management, mine design, due diligence studies, geological and geotechnical modeling around the world. I have direct operational experience while working with De Beers for Orapa and Lethalkane mines, and also conducted studies for Jwaneng, Koidu, Letseng, Cullinan, Kimberley, Catoca, Damtshaa, and Karowe which are similar to the Meya Mine project. I have been involved in diamond mine studies in Lesotho, Botswana, South Africa, Namibia, Zimbabwe, Brazil, Canada, Australia, and Russia. Additionally, I have completed over 160 mining projects in 34 countries and authored/co-authored over 30 publications. As a result of my experience and qualifications, I am a Qualified Person as defined in NI 43-101.
3. I am a Chartered Engineer (C.Eng.) with License #509147, and Fellow of the Institute of Materials, Minerals and Mining in the United Kingdom.
4. I have personally inspected the Meya Mine project site from the following dates: 11 to 16 February 2018, 05 to 10 November 2022, and 13 to 23 May 2023.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Sections 3, 12, 15, 16, 19, 21.1.1, 21.2.1, 22, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have had prior involvement with the subject property in the form of the Issuer's internal technical studies undertaken as a Corporate Consultant with SRK Consulting (Canada) Inc. since February 2018.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Vancouver, Canada.

"original signed"

Jaroslav (Jarek) Jakubec, C.Eng, FIMMM
SRK Consulting (Canada) Inc.

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: “NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone” prepared for Meya Mining (the “Issuer”) dated 27 August 2024, with an effective date of 19 August 2024 (the “Technical Report”).

I, Casey Michael Hetman, P.Geo. M.Sc., do hereby certify that:

1. I am a Corporate Consultant and Practice Leader with SRK Consulting (Canada) Inc. with an office at Suite #2600 – 320 Granville Street, Vancouver, British Columbia, Canada, V6C 1S9.
2. I have a Master of Science (M.Sc.) Degree in Geology from the University of Toronto in 1996 and Bachelor of Science (B.Sc.) Honours Degree from the University of Toronto in 1993. I have practiced my profession continuously since graduation. I have worked as a geologist continuously since my graduation and have been involved in diamond, gold and base metal projects ranging from grass roots exploration to advanced evaluation and mine planning activities globally. I have held positions ranging from Exploration Geologist to VP of Exploration and Corporate Consultant throughout my 30 years of industry experience.
3. I am a registered Professional Geoscientist in good standing with the Association of Professional Engineers and Geoscientists of British Columbia, License #30185, and the Association of Professional Geoscientists of Ontario, License #1260 and the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists, Licence # 1260.
4. I have personally inspected the Meya Mine project site from the following dates: 11 to 20 January 2017, 28 June to 07 July 2017, 11 to 16 February 2018, 05 to 09 May 2018, 18 to 24 Jul 2019, 09 to 13 July 2021, 09 to 21 February 2022, 01 to 06 May 2022, 09 to 15 September 2022, 29 to 30 November 2022, 13 to 23 May 2023, 25 September to 10 October 2023, 27 October to 26 November 2023, and 13 to 18 February 2024.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Sections 4, 5, 6, 7, 8, 9, 10, 11, 12, 23, 24, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have had prior involvement with the subject property in the form of the Issuer’s internal technical studies undertaken as a Corporate Consultant with SRK Consulting (Canada) Inc. since December 2016.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Vancouver, Canada.

“original signed”

Casey Michael Hetman, P.Geo., M.Sc.
SRK Consulting (Canada) Inc.

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: "NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone" prepared for Meya Mining (the "Issuer") dated 27 August 2024, with an effective date of 19 August 2024 (the "Technical Report").

I, Graham Trusler, M.Sc., B.Sc., do hereby certify that:

1. I am the CEO of Digby Wells Environmental with an office at 83 Victoria St, London, United Kingdom, SW1H 0HW.
2. I am a graduate with a Bachelor of Science (B.Sc.) Degree in Chemical Engineering and a Master of Engineering Degree from the University of Natal in 1986 and 1988 respectively. I have practiced my profession continuously since 1990. I have conducted ecological assessments across diverse ecosystems in countries such as South Africa, Namibia, Mali, Liberia, Botswana, Zambia, USA, DRC, Dominican Republic, and Tanzania. I have extensive experience with the management of the environmental and social aspects of mining projects such as the Meya Mine project. My relevant experience includes managing the environmental submissions for diverse and complicated mining projects in remote environments in developing countries and in integrating the findings of various specialist studies into a coherent whole taking into account the IFC performance standards related to mining projects.
3. I am a Professional Engineer registered with the Engineering Council of South Africa, Registration #920088.
4. I have not personally inspected the Meya Mine project site, and am relying on the input from a number of subject experts from Digby Wells Environmental who have spent time on the site.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Sections 4.3, 4.4, 20, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have had prior involvement with the subject property.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in London, United Kingdom.

"original signed"

Graham Trusler, M.Sc., B.Sc.
Digby Wells Environmental

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: "NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone" prepared for Meya Mining (the "Issuer") dated 27 August 2024, with an effective date of 19 August 2024 (the "Technical Report").

I, Philip John Rider, C.Eng., MIMMM, do hereby certify that:

1. I am an Associate Diamond Process Consultant with Consulmet SA (Pty) Ltd with an office at 15 Friesland Drive, Longmeadow Business Estate South, Modderfontein, Johannesburg, South Africa, 1644.
2. I am a graduate with a Bachelor of Science (B.Sc.) Honours Degree in Material Science & Technology from Bradford University in 1974. I have practiced my profession continuously since 1974. I have worked on mining projects in South Africa, Angola, Botswana, Namibia, India, Canada, Australia, and Russia and I have extensive experience with Cullinan, Kimberley, Orapa, Premier, Catoca, Jwaneng, Karowe, Liqhobong, Bateman, Luaxe, Ghaghoo, Luo, Bunder, Murowa, KDC, ADP, and Samada, such as the Meya Mine project. My relevant experience includes over 50 years of experience in the field of Diamond Processing Plants with intimate knowledge, justifying the use of new technology where appropriate. I am a committee member in the development of a diamond processing handbook and was project manager for a collaborative project with an Australian Research Centre to develop new knowledge on diamond liberation and diamond damage with an aim to develop a mine to mill type planning tool. I have consulted to Consulmet (Pty) Ltd on several projects since 2008 which have all been successfully completed which include BK11, Mothae, Letseng, Koidu, Gope, NADL, Mbada, Lerala, and Jaggerfontein mines.
3. I am a Professional Chartered Engineer (C.Eng.) registered with the UK Engineering Council License # 347095 dated 30 April 1985.
4. I have not personally inspected the Meya Mine project site in the last four years.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Sections 13.1 to 13.6, 13.8, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have had prior involvement with the subject property.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Johannesburg, South Africa.

"original signed"

Philip John Rider, C.Eng., MIMMM
Consulmet SA (Pty) Ltd

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: "NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone" prepared for Meya Mining (the "Issuer") dated 27 August 2024, with an effective date of 19 August 2024 (the "Technical Report").

I, Sean Duggan, Pri.Sci.Nat., M.Sc., do hereby certify that:

1. I am a Director and Principal Mineral Resource Analyst with Z Star Mineral Resource Consultants (Pty) Ltd. (Z*) with an office at 2 Ibis End, Lake Michelle, Noordhoek, Cape Town, South Africa, 7975.
2. I am a graduate with a Master of Science (M.Sc.) Degree in Mining Engineering (Geostatistics) from the University of the Witwatersrand in 1994, Bachelor of Science (B.Sc.) Honors Degree in Geochemistry from University of Stellenbosch in 1984, and a Bachelor of Science Degree in Geology from the University of Stellenbosch in 1983. I have practiced my profession continuously since 1985. I have worked on mining projects in Debswana, Angola, Namibia, Australia, Sierra Leone, Zimbabwe, Australia, DRC, South Africa, some of which are similar to the Meya Mine project. My relevant experience includes working at Anglo American in base metal and gold exploration and then progressing to the De Beers Marine team where I was responsible for developing the first deepwater diamond mine. I honed my mineral resource skills at Anglo American Minred and as Evaluation Manager at Namdeb (Pty) Ltd. I specialize in geostatistical mineral resource estimation and optimising sampling programmes and mineral resource database management. I chaired the 4th World Conference on Sampling and Blending and was on the organising committee of Geosynthesis11. As a Z* Principal Analyst, I've continued to work on diamond deposits but have also undertaken a number of base metal projects.
3. I am a Professional Natural Scientist registered with the South African Council for Natural Scientific Professions (SACNSP), Registration #400035/01. Additionally, I am also a member of the following associations: Geological Society of South Africa (GSSA), Geostatistical Association of South Africa (GASA), Geological Society of Namibia, and Society of Economic Geologists (SEG).
4. I have personally inspected the Meya Mine project site from 19 to 21 of July 2024.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Section 14, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have not had prior involvement with the subject property.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Cape Town, South Africa.

"original signed"

Sean Duggan, Pri.Sci.Nat., M.Sc.
Z Star Mineral Resource Consultants (Pty) Ltd.

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: "NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone" prepared for Meya Mining (the "Issuer") dated 27 August 2024, with an effective date of 19 August 2024 (the "Technical Report").

I, David Bush, Pri.Sci.Nat, DEA, CFSG, M.Sc., do hereby certify that:

1. I am a Director and Principal Mineral Resource Analyst with Z Star Mineral Resource Consultants (Pty) Ltd. (Z*) with an office at 2 Ibis End, Lake Michelle, Noordhoek, Cape Town, South Africa, 7975.
2. I am a graduate with a Master of Science (M.Sc.) Degree in Mineral Exploration from the Imperial College of Science and Technology, Royal School of Mines (London, England) in 1984; possess a Diplome d'Etude Approfondies (DEA) and Cycle de Formation Spécialisée en Géostatistique (CFSG) from Ecole Nationale Supérieure des Mines de Paris (Fontainebleau, France) in 1990; and a Bachelor or Science (B.Sc.) Honours Degree in Geology from University of the Witwatersrand (Johannesburg, South Africa) in 1981. I have practiced my profession continuously since 1981. I have worked on mining projects in South Africa, Botswana, Namibia, Zimbabwe, Angola, Sierra Leone, Canada, Australia, South America and Russia. I have experience with numerous mining projects such as Snap Lake and the Tongo and Tonguma Projects which are similar to the Meya Mine project. My relevant diamond experience includes grade and density estimation, size frequency distribution and assortment analysis and resource to reserve modifying factors.
3. I am a Professional Natural Scientist registered with the South African Council for Natural Scientific Professions (SACNSP), Registration #400071/00. Additionally, I am also a member of the following associations: Geological Society of South Africa (GSSA) and Geostatistical Association of South Africa (GASA).
4. I have not personally inspected the Meya Mine project site.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Section 14, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have not had prior involvement with the subject property.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Cape Town, South Africa.

"original signed"

David Bush, Pri.Sci.Nat., DEA, CFSG, M.Sc.
Z Star Mineral Resource Consultants (Pty) Ltd.

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: “NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone” prepared for Meya Mining (the “Issuer”) dated 27 August 2024, with an effective date of 19 August 2024 (the “Technical Report”).

I, Molojwa Bennett Herbet Keikelame, Pr.Eng. SAIMM, B.Sc., do hereby certify that:

1. I am a Consulting Engineer and Executive Director with Consulmet SA (Pty) Ltd, with an office at 15 Friesland Drive, Longmeadow Business Estate South, Modderfontein, Johannesburg, South Africa, 1644.
2. I am a graduate with a Bachelor of Science (B.Sc.) Degree in Chemical Engineering from the University of Cape Town in 2001. I have continuously practiced my profession for a total of 22 years. *I have worked on mining projects in South Africa, Namibia, Lesotho and Botswana and I have extensive experience with Koffiefontein Mine, De Beers Marine, Voorspoed Mine, Kimberley CTP, Venetia Mine, Letšeng Mine, Orapa/Letlhakane Mines and Jwaneng Mine mining projects such as the Meya Mine project.* My relevant experience includes six years with De Beers Marine (off-shore diamond mining and processing), one year with De Beers Consolidated Mines (in-land diamond mining and processing) and six years with Consulmet SA.
3. I am a Member of the Southern African Institute of Mining and Metallurgy (SAIMM), Member #709087, and a Member of the South African Institute of Chemical Engineers (SAICHE), Member #008099.
4. I have not personally inspected the Meya Mine project site.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Sections 16.7, 17, 21.1.2, 21.1.3, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have not had prior involvement with the subject property.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Johannesburg, South Africa.

“original signed”

Molojwa Bennett Herbet Keikelame, Pr.Eng. SAIMM, B.Sc.
Consulmet SA (Pty) Ltd

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: "NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone" prepared for Meya Mining (the "Issuer") dated 27 August 2024, with an effective date of 19 August 2024 (the "Technical Report").

I, Bevan Edward Jones, B.Sc., do hereby certify that:

1. I am a Consulting Engineer and Executive Director with SyncSystems (Pty) Ltd, with an office at 70 Concorde Road, Bedfordview, Gauteng, South Africa, 2008.
2. I am a graduate with a Bachelor of Science Degree (B.Sc.) in Electrical Engineering from the University of Natal. I have practiced my profession continuously since 1999. I have been involved in mining and material handling projects since 2006. I have experience with various commodities incl diamonds, iron ore, platinum and gold which are similar to the Meya Project. I have been involved in diamond mine studies in Sierra Leone, Angola, Zimbabwe, Botswana and Lesotho. Additionally, I have experience in petro-chemicals and as a result of my experience and qualifications, I am a Qualified Person as defined in NI 43-101.
3. I am a Professional Engineer with the Engineering Council of South Africa, License/Membership #202001155.
4. I have not personally inspected the Meya Mine project site.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Section 17.1, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have not had prior involvement with the subject property.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Bedfordview, South Africa.

"original signed"

Bevan Edward Jones, B.Sc.
SyncSystems (Pty) Ltd

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: “NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone” prepared for Meya Mining (the “Issuer”) dated 27 August 2024, with an effective date of 19 August 2024 (the “Technical Report”).

I, Jacobus Stephanus Koos Davel, ECSA, B.Ing. (Civil), do hereby certify that:

1. I am a Founder and Director with Engineered Tailings Solutions (ETS) with an office at 813 Richmond Street, Wingate Park, Pretoria, South Africa, 0153.
2. I am a graduate with a Bachelor Degree in Civil Engineering (B.Ing.) from Rand Afrikaans University in 1989 and a Bachelor of Administration (B.A.) in Political Science and Development Administration) from Rand Afrikaans University in 1978. I have practiced my profession continuously since 1986. I have worked on mining projects in South Africa, Angola, Zimbabwe, Zambia, Ethiopia, Sierra Leone, Senegal, Ghana, Kenia, Mali, Chile (copper), Namibia, Lesotho and Mozambique. and I have extensive experience with Kimberlite diamond sites i.e. Koffiefontein, Kimberley, Finch (Danielskuil) and KAO, Alluvial diamond site at the West coast of South Africa and along the Orange river. Kimberlite Mining sites outside South Africa include mining projects such as the Meya Mine project in Sierra Leone. My relevant experience includes the design of mine waste disposal systems and associated works, geotechnical engineering, hydraulic recovery/mining of mine waste, slurry and high pressure water pumping systems, site supervision and project management. I also have experience in technical and operational risk management and carrying of legal responsibilities and training covering above mentioned skills.
3. I am a Professional Civil Engineer registered at the South African Council for Engineers (ECSA), License #930513.
4. I have personally inspected the Meya Mine project site from the 13th to 17th of November 2022.
5. I have read the definition of “Qualified Person” set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects (“NI 43-101”) and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a “qualified person” for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Section 13.7, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have had prior involvement with the subject property.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Pretoria, South Africa.

“original signed”

Jacobus Stephanus Koos Davel, ECSA, B.Ing. (Civil)
Engineered Tailings Solutions

CERTIFICATE OF QUALIFIED PERSON

To accompany the Technical Report entitled: "NI 43-101 Technical Report for the Meya Diamond Mine Project, Sierra Leone" prepared for Meya Mining (the "Issuer") dated 27 August 2024, with an effective date of 19 August 2024 (the "Technical Report").

I, Pieter Steyn, M.Arch., SACAP, do hereby certify that:

1. I am a Director and Principal Architect with Blunt Architects with an office at 72 Lizann Avenue, 45 Gift Acres Estate, Lynnwood Ridge, Extension 12, Pretoria, South Africa, 0081.
2. I am a graduate with a Master's Degree (M.Arch) in Architecture from the University of Pretoria in 2004 and a Bachelor of Science Degree (B.Sc.) from the University of Pretoria in 2002. I have practiced my profession continuously since [2002]. I have worked on mining projects in Africa, and I have extensive experience with mining projects such as the Meya Mine project including Murowa Crown Jewel, Zimbabwe (2021), Sperrgebiet diamond mining, Namibia (2022), and Luaxe diamond mine project, Angola (2023). My relevant experience includes day to day operations as the Director of Blunt Architects, leading the planning and design of all the company's commercial projects. Since founding the company in 2004, I have worked at all levels of project involvement, ranging from Leading Project Architect to Project Manager, and upward to Principal-in-charge. I have over 19 years of architectural experience ranging Houses to Apartments, Educational, Industrial, Institutional, Medical, Offices, Retail, Religious, Residential, Urban and Warehouse developments, throughout South Africa. I have also completed training for the new SANS 10400XA & Rational Design as per SANS 204 and are deemed to be a competent person.
3. I am a Qualified Professional Architect registered with the South African Council for the Architectural Profession (SACAP), License #7732.
4. I have not personally inspected the Meya Mine project site.
5. I have read the definition of "Qualified Person" set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, affiliation to a professional association and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am independent of the issuer as defined in Section 1.5 of NI 43-101.
7. I am a co-author of the Technical Report, responsible for Section 18.2.2, as well as relevant content in Sections 1, 25, 26, References, and Date and Signature of the Technical Report, and I accept professional responsibility for those sections of the Technical Report.
8. I have not had prior involvement with the subject property.
9. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the portions of the Technical Report for which I am responsible contains all scientific and technical information that is required to be disclosed to make the portions of the Technical Report not misleading.
10. I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

Dated this 27th of August 2024 in Pretoria, South Africa.

"original signed"

Pieter Steyn, M.Arch., SACAP
Blunt Architects