NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada

Effective Date: June 30, 2026
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Report prepared by Micon International Limited

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1 SUMMARY

1 Overview

Micon International Limited (Micon) has been retained by Albany Graphite Corp., (AGC) a wholly owned subsidiary of Zentek Ltd. (Zentek or the Company) to prepare a Preliminary Economic Assessment (PEA) and an updated 2026 Mineral Resource Estimate (MRE) for the Albany Graphite Project (the Project or the Property), in accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101). The Property is located in northern Ontario, Canada.

The primary purposes of this Technical Report are to:

- Present an independent updated MRE for the Project based on exploration work and diamond drilling completed to June 30, 2026, and the associated PEA results; and,
- To make recommendations on the work programs to move the Project to the next development stages with a short-term goal of paving the way for a Preliminary Feasibility Study (PFS).

The Report has been prepared by Charley Murahwi, P.Geo., Oktay Erten P.Eng., Mohsin Hashmi, P.Eng., Richard M. Gowans, P.Eng., Garth Liukko, P.Eng., Becky Humphrey, CEnv, MIMMM, Sepehr Aryan, P.Eng., and Morwenna C. Rogers, who are Qualified Persons (QPs) as defined by NI 43-101. Micon and the QPs are independent of AGC and Zentek. Micon QPs, Mohsin Hashmi P.Eng., and Charley Murahwi P.Geo., accompanied by Adil Aissautov Ph.D, completed a site visit to the Albany Graphite Project on June 15, 2026.

The material in this Report was derived from published material researched by Micon and its QPs, as well as data, professional opinions and unpublished material submitted by the professional staff of Zentek and/or its consultants. Much of these data came from reports prepared and provided by Zentek.

This Report is intended to be used by Zentek subject to the terms and conditions of its agreement with Micon. That agreement permits Zentek to file this Report as a Technical Report with the Canadian Securities Administrators pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities laws, any other use of this Report, by any third party, is at that party's sole risk.

2 Introduction

2.1 Issuer

The Albany Graphite Project is 100% owned by Albany Graphite Corp. (AGC), a wholly-owned subsidiary of Zentek Ltd. Zentek is a Canadian intellectual property development and commercialization company advancing a portfolio of graphene-enabled and advanced material technologies across clean air, next-generation materials, and critical minerals. Albany is the company's principal critical minerals asset.

AGC owns 100% of the Property but the Property is subject to two separate royalties (0.75% and 2%) as described in Section 4 of this Report.

Zentek Ltd. is a Canadian listed company on the Toronto Venture Exchange (TSXV:ZEN) and on the OTCQX Best Market in the United States (OTCQX:ZTEKF) from September 2, 2026.

3 Property Description and Location

The Project is located north of Lake Superior and southwest of James Bay, Canada, within the Porcupine Mining District of northern Ontario, Canada (Figure 1.1). It is centred on 682,400 mE and 5,544,514 mN, UTM Zone 16, NAD 83; and consists of 521 claim units for a total area of 9,760 ha.

Figure 1.1: Location of the Albany Graphite Project

Source: Micon, 2026.

4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Albany Graphite Project is located approximately 30 km north of Highway 11 in northern Ontario. The Property is accessible by helicopter during summer months and by forestry roads and winter roads during winter conditions. Water access is available via the Nagagami River, and existing logging roads extend to within approximately 9 km of the deposit.

The region experiences a continental climate with warm summers and cold winters, allowing mineral exploration activities to be conducted throughout most of the year. Winter conditions typically support seasonal access and diamond drilling from January through to March, while future mining operations could operate year-round with appropriate infrastructure.

The Town of Hearst, located approximately 68 km southeast of the Project, serves as the primary service centre and provides accommodation, medical services, fuel, mining supplies, and aviation support. Additional mining services, equipment, and skilled labour are available from Timmins, a major mining centre approximately 260 km southeast of Hearst.

There is currently no permanent infrastructure on the Property; however, the Project benefits from the proximity to established regional infrastructure, including power transmission lines and a natural gas pipeline located along Highway 11 approximately 30 km south of the deposit, as well as rail infrastructure approximately 70 km away. The Property is considered to have sufficient area to support potential mine development, subject to the acquisition of additional surface rights and completion of engineering, environmental, and permitting studies.

The Project is situated near the southern boundary of the James Bay Lowlands, an area characterized by flat terrain, extensive wetlands, muskeg, and thick overburden averaging approximately 44 m in thickness. The Nagagami River forms the eastern boundary of the Property, while the Pitopiko River traverses the Property area. The region is largely forested and wetland-dominated, with no significant bedrock exposure due to extensive overburden cover.

5 History

The Albany Graphite Project comprises Claim Block 4F of the larger Albany Project in northern Ontario. The broader property package was assembled in 2009-2010 by Eveleigh Geological Consulting Inc. (EGC) and Cliffs Natural Resources Exploration Canada Inc. (CNRECI) to evaluate geophysical targets prospective for Cu-Ni-PGE mineralization. Historical exploration in the area was limited due to extensive overburden cover, lack of bedrock exposure, and challenging access conditions.

Previous operators, including Algoma Ore Properties Ltd., Shell Canada Explorations Ltd., and others, completed regional geophysical surveys and limited drilling programs between 1959 and 1978. Their work identified several magnetic anomalies associated with an intrusive complex beneath the Paleozoic cover rocks. Drilling confirmed the presence of syenitic intrusive rocks and anomalous niobium values, while a 1978 Shell drill hole intersected graphitic syenite breccia within what is now recognized as the Albany graphite system.

Modern exploration targeting was aided by Ontario Geological Survey airborne magnetic datasets and geological interpretations released in 1999 and 2008. At Zentek's initial public offering in 2010, the Albany Project was owned 25% by Zentek and 75% by CNRECI. In November 2012, Zentek acquired a 100% interest in Claim Block 4F, which hosts the Albany graphite deposit. In April 2023, ownership of the Project was transferred to Zentek's wholly owned subsidiary, Albany Graphite Corp.

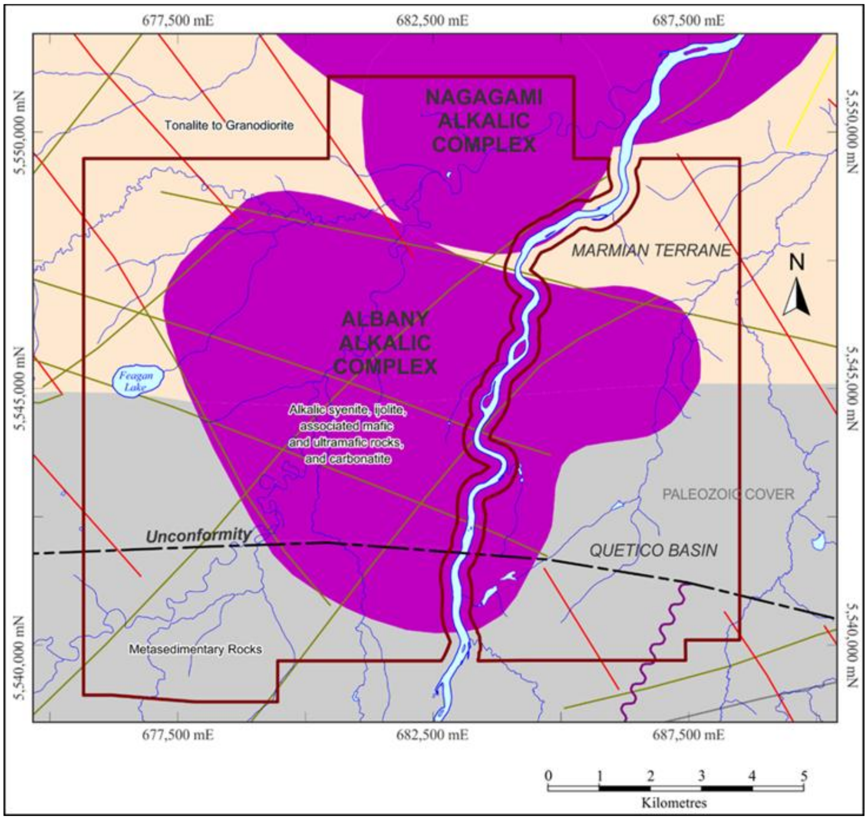
No historical mineral resource estimates have been prepared by previous owners, and no historical mining production has occurred on the Property.

6 Geological Setting and Mineralization

6.1 Regional Setting

The Albany graphite deposit is hosted in the Albany Alkalic Complex (AAC) located in the Superior Province of the Canadian Shield, at the terrane boundary between the Quetico Sub-Province to the south and the Marmian Sub-Province to the north as shown in Figure 1.2.

Figure 1.2: Geological Setting of the Albany Graphite Project



Source: SLR 2023 (after Zentek 2013).

6.2 Property Geology

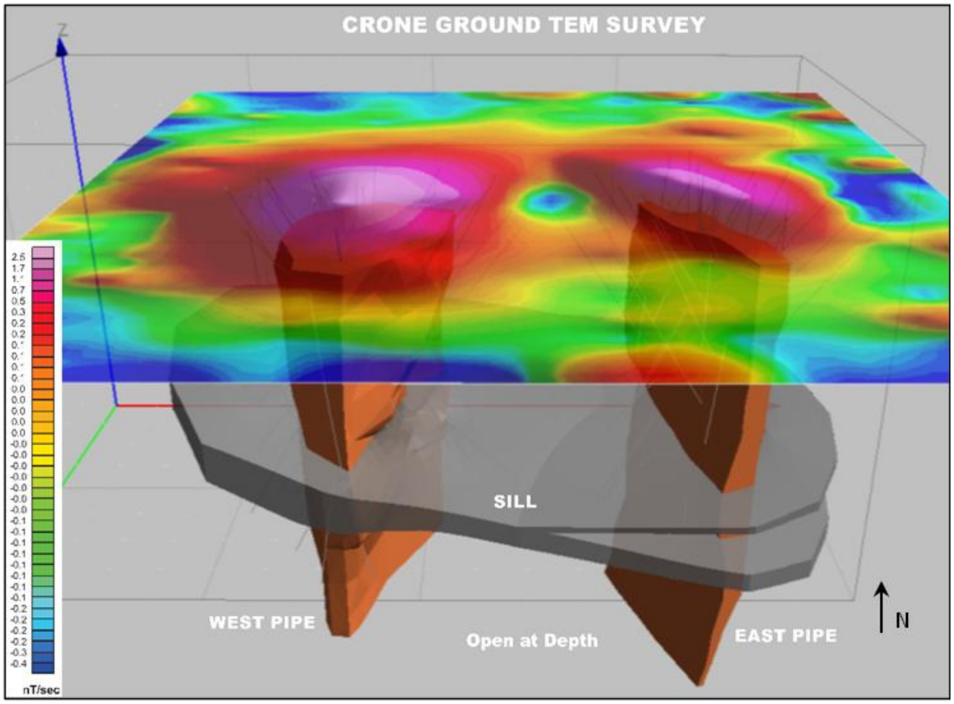
The Albany graphite deposit is centred on Claim Block 4F. The area is covered by a layer of overburden (ranging from 28 m to 55 m, averaging 44 m) and there are no surface exposures of bedrock. Due to lack of rock exposures, no surface geological mapping projects are reported for the area.

However, initial and on-going work by Andrew Conly of Lakehead University in Thunder Bay suggests that the dominant rock type is a syenite. The AAC appears to be cross-cut by northwest-trending middle-to-late Precambrian diabase dykes suggesting that it predates the dyke swarm.

6.3 Mineralization/Deposit Types

The Albany graphite deposit is comprised of two breccia pipes referred to as the East and West Pipes which show high electrical conductivity as shown in Figure 1.3.

Figure 1.3: Albany Deposit Outlay



Source: Zentek 2013

The deposit is interpreted as having been formed from CO_2-rich fluids that evolved due to pressure-related degassing of syenites of the AAC. The West Pipe consists of a single mineralized zone, which encompasses graphitic breccia and some lower grade graphitic overprint in some marginal areas. The East Pipe consists of two mineralized zones: graphitic breccia and a low-grade halo.

The high conductivity shown by the Albany graphite deposit is characteristic of a high degree of crystallinity typical of formation from hydrothermal C-O-H fluids at high temperature and pressure.

Preliminary petrography indicates that the graphite-hosting breccias range in composition from diorite to granite and are generally described as "syenite". Graphite occurs both in the matrix, as disseminated crystals, clotted to radiating crystal aggregates and veins and along crystal boundaries, and as small veins within the breccia fragments. In addition to graphite, the matrix consists primarily of quartz, alkali feldspar, and plagioclase feldspar with minor phlogopite and amphibole and trace amounts of pyrite-pyrrhotite and magnetite. The stockwork graphitic veins can be several centimetres wide while the veinlets and hairline fractures are millimetre and submillimetre scale. Breccia fragments are dominantly massive to weakly foliated syenite (>95%) with minor to trace chlorite-biotite-rich schist fragments, and mafic to intermediate dyke fragments. Occasional solid graphite fragments and rare altered fragments of unknown origin were also observed. Syenite breccia fragments are angular to subangular to subrounded and generally range in size from 3 cm to 30 cm. Dyke and graphite fragments vary between 1 cm and 5 cm in size.

6.4 Status of Exploration

The Albany deposit area and its immediate environs have been adequately covered by geophysical prospecting/exploration. Several geophysical anomalies in the greater area remain to be tested by drilling. Whilst further discoveries outside the Albany deposit cannot be ruled out, the immediate best way to increase the resource is via deeper drilling of the Albany deposit itself as it is still open at depth.

7 Mineral Processing and Metallurgical Testing

The flowsheet selected for this PEA comprises traditional processing technologies to recover a graphite flotation concentrate followed by high temperature pyrometallurgical treatment to produce high-purity graphite products. The concentration process, which includes crushing, grinding and flotation, was developed from a number of bench and pilot scale testwork programs undertaken by SGS Mineral Services (SGS), Lakefield, ON, Canada. The pyrometallurgy purification process adopted for the PEA is based on testwork completed by American Energy Technologies Co. (AETC), Wheeling IL, USA.

The mineral processing flowsheet comprises conventional crushing and grinding, rougher flotation and multi stages of flotation cleaning and intermediate regrinding concentrate to produce a graphite concentrate containing over 85% total carbon. The purification process consists of ultra-high temperature thermal treatment to produce speciality graphite products with purities up to 5N (99.999% C).

Mineral processing testwork has been completed using composite samples representing both the East and West deposits. It is the QP's opinion that the samples used were a good representation of the mineralization occurring within the two deposits. The QP also notes that there appears to be no material deleterious elements or compounds measured in the samples. The samples utilized for downstream purification testing were produced by the mineral processing pilot plant campaigns operated by SGS Lakefield.

East Pipe samples tended to be higher grade than the West Pipe samples and flotation testwork indicated better carbon recoveries for this higher-grade mineralization. The flotation test results showed a significant negative concentrate grade / recovery relationship, although recoveries for all types of mineralization tended to be over 80% with graphite concentrate grades of up to 90% C(t) or higher. For the purposes of the PEA an average beneficiation circuit graphite recovery of 86% has been selected with a final flotation concentrate grading 87% C(t).

8 Mineral Resource Estimates

The Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2019) and the CIM Definitions Standards for Mineral Resources and Mineral Reserves (2014) were employed in the estimation and reporting, respectively. Kriging and inverse distance weighting methods were used for block grade interpolations.

The parameters and assumptions used to estimate mineral blocks which offer Reasonable Prospects for Eventual Economic Extraction (RPEEE) via open pit and underground exploitation are summarized in Table 1.1.

Table 1.1: Economic and Technical Assumptions/Parameters for the Albany Graphite MRE

Parameters	Units	2023 MRE Values	2026 June Scoping Study
Graphite Price	US$/t	8,000	23,485
Open Pit Cut-Off Grade*	% Cg	1.22	1.48
UG Cut-off Grade	% Cg	1.76	1.77
Recovery	%	90.6	86
Concentrate Grade	%	83.4	87
Payable Graphite	% Cg	100	100
Transportation & Offsite Cost	US$/t	1,478.00	Variable – US$265 avg.
Open Pit Mining Cost	US$/t	–	3.8 (Rock), 4.3 (Overburden)
UG Mining Cost	US$/t	–	60 (Rock)
Processing Cost	US$/t	14.30	16.40
G&A Cost	US$/t	6.43	10.00
Processing Throughput	kt/d	–	2.35 (850 kt)
Royalties	%	1.25	1.25
Overall Slope Angle (Rock)	°	43.5	50
Overall Slope Angle (Overburden)	°	18.5	18.5
Open Pit Minimum Mining Width	m	10	15
Discount Rate	%	5	5

The estimated open pit (OP) and underground (UG) mineral resources are tabulated in Table 1.2. A complete breakdown of the resources by zone is provided in Section 14 of this Report.

Table 1.2: Summary of the Albany Project Mineral Resources Effective Date June 30, 2026

Mining Method	Resource Category	Cut-Off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
Open Pit	Indicated	1.48	23.1	4.14	957,075
	Inferred	1.48	9.35	2.73	254,747
Underground	Indicated	-	-	-	-
	Inferred	1.77	3.94	3.23	127,383
Total Indicated		**1.48**	**23.1**	**4.14**	**957,075**
Total Inferred		**Variable**	**13.3**	**2.88**	**382,130**

Notes:

1. The effective date of the MRE is June 30, 2026.
2. The Micon QPs with responsibility for the MREs are Oktay Erten, P.Eng. and Charley Murahwi, P.Geo.
3. CIM Best Practice Guidelines and Definitions Standards were employed in the estimation and reporting.
4. Mineral Resources are estimated using a long-term weighted average price of US$23,485/t Cg, and an exchange rate of US$1.00 = CD$1.33.
5. Bulk density is 2.62 t/m^3 and 2.61 t/m^3 for West Pipe domains 20 and 21, respectively, and 2.59 t/m^3 and 2.63 t/m^3 for East Pipe domains 10 and 14, respectively.
6. Open pit mineral resource estimates are constrained by a pit-shell generated in Datamine NPVS software above a cut-off grade of 1.48% Cg.
7. Underground mineral resource estimates are constrained within underground reporting shapes to demonstrate RPEEE and reported above a cut-off grade of 1.77% Cg.
8. The pit optimization parameters used are: pit slope = 50°, metallurgical overall recovery = 86%.
9. Totals may not sum due to rounding.

8.1 Uncertainties/Risks

Factors that may affect the MRE in this Report include fluctuations in the price of graphite products, and hinges on the metallurgical recoveries and bulk density assignments. In addition, it is the QP's opinion that the factors set out below could affect the MRE:

- The confidence assumptions and methods used in the mineral resource classification which is subject to refinement with additional drilling.
- Economic assumptions used in the cut-off grade determination.
- Input and design parameter assumptions that pertain to the open pit mining constraints.
- Assumptions as to the continued ability to access the Project site, retain mineral and surface rights titles, maintain the operation within environmental and other regulatory permits, and maintain the social licence to operate.

To mitigate risks related to metallurgy and bulk density, additional detailed investigations involving further testing and even pilot plant tests are recommended prior to undertaking advanced economic studies. Risks associated with fluctuations in the price of graphite products are uncontrollable; however, a conservative long-term graphite price has been considered in the MRE.

8.2 Opportunities

The following opportunities have been considered for the Albany Graphite Project:

- Resource growth in both the short and long term. Although narrowing with depth, the deposits maintain a reasonable thickness from surface to the current intersection depth (of between 550 m and 700 m) and remain open at depth.
- The Project proximity to major transportation infrastructure should reduce potential development/construction and other operating costs.

9 Mining Methods

The Albany Graphite Project is envisioned as a conventional owner-managed, contractor-operated open pit operation, selected on the basis that the two mineralized graphite breccia pipes (East Pipe and West Pipe) outcrop near surface. Mining will comprise conventional drilling and blasting, with production hydraulic excavators and front-end loaders loading haul trucks that deliver material to the primary crusher, Run of Mine (RoM) stockpile, or Waste Rock Management Facility (WRMF) depending on the material type. Mine operations are planned on 7 m operating benches with 14 m double bench pit configuration.

Open pit optimization was completed using the Lerchs-Grossmann algorithm in Datamine NPVS, adopting a 48.5° inter-ramp slope in rock (double-benched) and a conservative overburden slope. The selected Revenue Factor 62 pit shell captures more than 95% of the Base Case NPV (~US$6,345 million) while maintaining robust economics through pricing downturns. The pit is developed in three mining phases to prioritize higher-grade mill feed, maintain practical pushback widths, minimize and manage overburden stripping, and support consistent mill-feed blending.

The mine plan contains approximately 25.9 Mt of mineralized material at 3.99% Cg at an elevated cut-off grade of 1.48% Cg, with an overall strip ratio of approximately 6.6:1 and an average total material movement of 6.2 Mt/a over the Life of Mine (LoM). The LoM sequence includes a 36-month pre-production period (incorporating 24 months of pre-stripping), followed by 28 years of open pit mining and 2 years of low-grade stockpile processing, for a total processing life of approximately 30 years.

Over the LoM, approximately 25.9 Mt at 3.87% Cg is processed, containing 1,002 kt of graphite and producing 862 kt of recovered graphite. Concentrate production is constrained by market demand to a steady-state limit of 34.5 kt/a at 87% Cg concentrate before recovery. Mining is supported by a benchmarked mining fleet pairing an 8 m^3-class excavator and 6 m^3-class front-end loader with a 65 t-class haul truck fleet, peaking at approximately 120 site personnel. Overburden and waste rock are stored in an integrated WRMF immediately north of the pit, with drainage, seepage, and potential Acid Rock Drainage (ARD) management accounted for given the river-constrained site footprint.

10 Recovery Methods

The Albany Graphite Project PEA process design is based on conventional processing technologies and a flowsheet that has been developed from numerous bench and pilot scale testwork programs. The process plant design throughput is 2,500 t/d comprising single primary and fine crushing circuits, two parallel comminution and flotation circuits with single concentrate dewatering and tailings pumping systems. The dried flotation concentrate will be transported to a separate purification facility comprising four parallel thermal purification modules with a total high purity graphite production capacity of 30,000 t/a.

The graphite beneficiation facility will receive mineralization from the open pit mine haul trucks. The mined material will be crushed and conveyed to storage bins where it will be reclaimed and transported to the main mill building where it will feed two parallel mill and flotation circuits. The facility has been designed to treat 2,500 t/d on average, nominally operating 24 hours per day and 7 days per week.

The mineralization will be sufficiently reduced in size in the grinding circuit to liberate the graphite and flotation circuits shall be used to selectively recover the liberated graphite. Tailings from the flotation circuit will be pumped to the Tailings Storage Facility (TSF) while graphite concentrate will be dewatered and loaded into bulk bags for transportation to the thermal purification facility where it will be processed into high-quality specialized graphite products.

The preliminary design of the purification circuit was undertaken by AETC of Wheeling, IL, USA, who also completed testwork using samples of Albany Graphite flotation concentrate.

The purification plant will comprise a number of parallel identical independent modules, each with a production capacity of 7,500 t/a of graphite. The construction of these modules will be staged to correlate with the high purity product marketing strategy.

The purification plant is designed to ultimately produce 30,000 t/a of high purity specialized graphite products. The process developed by AETC has been designed to produce a up to 7 distinct graphite products including 99.999% C nuclear grade powder, synthetic diamond material (99.99% C), high grade (>99.99% C) Coated Spherical Purified Graphite (CSPG) products and high-grade graphite for conductive coatings and paints.

The technology is based on high temperature thermal purification using a fluidized bed reactor (FBR) in an inert atmosphere. This thermal purification resistively heats the material to 2,800^{0}C under a nitrogen atmosphere and at this temperature, almost all the impurities will boil off, resulting in carbon purity values upwards of 99.9995 wt% C.

11 Project Infrastructure

11.1 Site Layout and Infrastructure

The Project infrastructure has been conceptually developed to support the open-pit mining and concentrator operations and includes site access and service roads, mine and concentrator support facilities, electrical power supply and distribution, communications, fuel and explosives storage, water management, tailings management, and other ancillary facilities. Mine and concentrator infrastructure will be integrated where practical, with common facilities including the Administration Building, Main Dry, maintenance and warehouse facilities, and other site services. The Project will require an approximately 35 km access road connecting the site to the existing road network and an approximately 40 km, 115 kV transmission line to provide electrical power. The estimated average Project electrical load at full production is approximately 9 MW.

A preliminary site water balance and water-management strategy have been developed for the PEA. The Project is expected to have a net-positive water balance, with the majority of process make-up water recycled from the TSF. Freshwater requirements are expected to be supplied from the Pitopiko River, subject to further investigation and applicable permitting. Surface run-off, pit inflows, and other site waters will be collected and managed through a network of ditches, channels, culverts, sumps, ponds, and associated water-management infrastructure. Surplus contact water is expected to require treatment prior to discharge, while non-contact water will be managed through appropriate settlement and separation measures. The current water balance and estimated pit inflows are preliminary and will require refinement through additional hydrological and hydrogeological investigations during the next phase of Project development.

The Project also includes a perimeter embankment TSF developed through staged raises over the LoM and an off-site carbon purification facility, preliminary assumed to be a brownfield industrial site in Ontario with existing infrastructure, for production of approximately 30,000 t/a of purified graphite product. The overall infrastructure layouts and design criteria are PEA-level and will require further development and confirmation through geotechnical, hydrogeological, environmental, and engineering investigations during the PFS.

11.2 Tailings Management and Reclaim Water

The PEA has adopted a conventional slurry tailings management system, with tailings pumped approximately 1.3 km from the process plant to the proposed TSF. Tailings will be distributed using a relocatable perimeter pipeline and rotational spigotting system to promote controlled deposition and management of the reclaim pond. The conceptual TSF has an approximate footprint of 1.0 km by 0.5 km and is expected to accommodate approximately 10 million m^3 of tailings over the life of the Project.

Tailings will be transported at a flow rate of around 264 m^3/h through a provisionally selected 250 mm OD High-Density Polyethylene (HDPE) pipeline, with a conceptual pumping duty of roughly 70 m Total Dynamic Head (TDH). Water will be recovered from the TSF reclaim pond and returned to the process plant through an approximately 0.3 km, 250 mm OD HDPE pipeline. A nominal reclaim-water design flowrate of 225 m^3/h has been adopted based on the Project water balance and process operating schedule.

The conventional slurry tailings and reclaim-water systems are considered appropriate for PEA-level design and cost estimation. The design will be refined during subsequent project stages following tailings characterisation, geotechnical investigation, detailed topographical survey, hydraulic modelling and further hydrological and water-balance assessment.

12 Market Studies and Contracts

Market analysis for the Albany Graphite Project was based on independent studies prepared by AppEco Inc. (July 2026) and American Energy Technologies Co. (AETC) (June 2026), which evaluated demand, supply, and pricing for high-purity and ultra-high-purity graphite products within North America and other allied jurisdictions. The analyses focused primarily on nuclear, defence, aerospace, battery, and specialty industrial markets.

The Project is intended to target higher-value graphite markets requiring 4N, 4N+ and 5N purity products rather than conventional commodity graphite applications. Bench-scale testwork has demonstrated the ability to produce graphite exceeding 99.999% carbon purity; however, commercial-scale production and customer qualification have not yet been demonstrated.

Demand growth in allied markets is forecast to remain strong, supported by increasing requirements from battery, defence, aerospace, and advanced nuclear applications. Combined nuclear and defence/aerospace demand is projected to grow at approximately 7.3% annually through 2035. Global graphite supply remains heavily concentrated in China, while qualified allied-origin supply of ultra-high-purity graphite is limited, creating a potential market opportunity for new suppliers.

Pricing for ultra-high-purity graphite products is not transparent and is generally established through negotiated contracts following customer qualification. For the purposes of the PEA, product pricing assumptions were derived from observed nuclear-grade graphite prices and were held constant in real terms throughout the mine life. The assessment assumes average realized prices of US$20,541/t for 4N graphite, US$19,300/t for 4N+ graphite, and US$50,000/t for 5N graphite, resulting in a weighted average realized price of approximately US$23,500/t of finished graphite product. No country-of-origin premium was included in the economic evaluation.

Albany Graphite Corp. has not commenced commercial production and, as of the effective date of the report, has no offtake agreements, customer contracts, or agreed product prices. The economic assessment therefore relies on projected pricing and market assumptions that remain contingent on successful scale-up, qualification, and market acceptance of the Project's products.

13 Environmental Studies, Permitting and Social or Community Impact

The Albany Graphite Project is located on traditional lands of Constance Lake First Nation (CLFN) and is characterized by extensive surface waterbodies and forest cover. The Project site is constrained by the Nagagami River to the east and the Pitopiko River to the west. The Nagagamasis Provincial Park, a protected area which forms the eastern boundary of the Property, incorporates the Nagagami River and Nagagamasis Lake further to the south. The Project area has a humid continental climate with warm summers and cold winters. Snow cover is prevalent during the winter season and watercourses typically freeze between November and May.

The Project is based on 521 Mining Claims within the Pitopiko River Area and Feagan Lake Area of the Porcupine Mining District of Ontario. The Project is still at exploration stage, and therefore no application has yet been made to convert any of the Mining Claims into Mining Leases.

The Project is subject to the laws and regulations of the Federal Government of Canada and the provincial Government of Ontario. The Canadian government is actively promoting mining of critical minerals and graphite is listed as one of six priorities in Canada's Critical Minerals Strategy. In 2025 the Project received a grant from the Ontario Government's Critical Minerals Innovation Fund (CMIF). The Government of Ontario has recently developed a One Project, One Process (1P1P) Framework, which aims to provide a more efficient and integrated approach for mine permitting and which will incorporate the Environmental Assessment (EA) process.

Two phases of environmental studies have been undertaken for the Project to date in 2011-2014 and 2019-2020. Fieldwork was undertaken in collaboration with representatives from CLFN and included hydrology, aquatics and fisheries, and vegetation and wildlife surveys. The Property provides suitable caribou habitat and there is potential that it may provide connectivity between two known herds of Pagwachuan caribou. In addition to recreation and tourism activities associated with Nagagamasis provincial park, traditional hunting and fishing activities are undertaken in the local area and there are two designated traplines on the Property.

There are two CLFN Reserves in proximity to the Property and CLFN is considered to be the closest community to the Project, in addition to the town of Hearst which is associated with the logging industry. Zentek has established and maintained a long-standing partnership with CLFN and a series of formal agreements are in place that establish governance, collaboration, and a framework for long-term project development.

The Project will be designed to limit potential environmental impacts as far as possible and enhance socio-economic benefits. A full review of environmental and social impacts will be undertaken as part of the future environmental assessment process. The most significant challenges are likely to be water and waste management, and further studies are needed to evaluate the risk to caribou. A preliminary Closure Plan has not yet been developed, but will be prepared as part of the future permitting process.

14 Capital and Operating Costs

Capital and operating cost estimates for the Albany Graphite Project were developed from the Project design criteria and engineering work completed for the open-pit mine, concentrator, site infrastructure, tailings and water-management facilities, off-site infrastructure, and the proposed graphite purification facility which is not planned to be located at the Albany Project site. For estimating purposes, capital and operating costs have been based on the assumption that the facility will be constructed at an existing brownfield industrial site elsewhere in Ontario where the necessary infrastructure, utilities, and supporting services are already available.. The estimates were prepared using vendor quotations, historical and benchmark information, empirical factors, and first-principles calculations, as appropriate. The Project concept includes open-pit mining and production of an approximately 87% graphitic carbon concentrate at the Albany site, followed by transportation of the concentrate to the proposed purification facility for conversion into 4N, 4N+ and 5N graphite products.

The capital cost estimate is classified as an AACE Class 5 estimate, reflecting the conceptual level of project definition. A contingency allowance of 25% was applied to applicable equipment, building, and infrastructure costs. The estimated accuracy of the overall capital cost is approximately ±50%, expressed relative to the estimate inclusive of contingency. This accuracy range is separate from the contingency allowance and reflects the uncertainty associated with the current level of engineering definition, quantities, equipment selection, installation requirements, indirect costs, execution strategy, and schedule assumptions.

Total pre-production capital is estimated at US$817 million, comprising approximately US$602.5 million in direct costs, US$212.0 million in owner's and indirect costs, and US$2.5 million associated with the initial closure and rehabilitation surety provision. The principal pre-production expenditures include US$99.3 million for mining, US$74.9 million for the concentrator, US$26.4 million for tailings and water management, US$18.8 million for Albany site infrastructure, and US$382.6 million for off-site infrastructure, including the initial phase of the proposed graphite purification facility.

Life-of-project sustaining and expansion capital is estimated at approximately US$1,162 million. This amount includes subsequent expansion and sustaining expenditures for the graphite purification facility, replacement and sustaining expenditures for the concentrator and mine infrastructure, ongoing owner's costs, contingency, and additional closure surety requirements. On the basis presented in the economic analysis, total project capital expenditures, including initial capital, sustaining capital, and closure and rehabilitation costs, are estimated at approximately US$2,063 million.

Operating costs were estimated from the labour, equipment, materials, consumables, power, fuel, maintenance, transportation, and administrative requirements associated with the proposed mining and processing plans. Open-pit mining is assumed to be performed by contractors. Total life of Project operating expenditures are estimated at approximately US$6,666 million, equivalent to US$260.69/t of mill feed. The unit operating cost includes US$28.26/t of mill feed for mining, US$11.72/t for concentration and milling, US$9.91/t for general and administrative expenses, US$4.13/t for concentrate transportation, and US$206.67/t for graphite purification.

The purification facility represents the largest component of operating expenditures, with estimated life-of-project costs of approximately US$5,353 million. Life of Project mining costs are estimated at US$646.0 million, concentrator costs at US$303.5 million, general and administrative costs at US$256.6 million, and concentrate transportation costs at approximately US$107.0 million. The open-pit mining cost is estimated at US$3.74/t mined, while the concentrator operating cost is estimated at US$11.72/t of mill feed.

The cost estimates exclude federal and provincial taxes, financing costs and capitalized interest, force majeure events, major labour disruptions, contaminated-soil or hazardous-waste remediation not presently identified, significant changes in labour productivity or foreign-exchange rates, and the costs of future pre-feasibility, feasibility, or value-engineering studies. Consequently, actual Project costs may vary materially from the estimates as Project engineering, permitting, procurement, construction planning, and operating assumptions are advanced.

15 Economic Analysis

A discounted cash flow analysis was prepared for the Albany Graphite Project using the production schedule, capital and operating cost estimates, graphite product recoveries and selling prices, taxation assumptions, and other technical and economic parameters developed for the PEA. The analysis incorporates both the Albany mine and concentrator site and the proposed graphite purification facility which was assumed to be constructed at an existing brownfield industrial site elsewhere in Ontario where the necessary infrastructure, utilities, and supporting services are already available.

. All monetary amounts are expressed in United States dollars unless otherwise indicated. Currency conversions use an assumed exchange rate of CD$1.33 per US$1.00, and project net present values were calculated using a 5% discount rate. Financing costs, sunk costs, and corporate obligations not directly attributable to the Project were excluded.

The economic analysis assumes an overall Project life of approximately 35 years, including a 30-year mine life. The mine plan provides approximately 25.9 Mt of mill feed grading an average of 3.87% graphitic carbon. At an average open-pit production rate of approximately 2,703 t/d and an assumed beneficiation recovery of 86.0%, the Project is forecast to produce approximately 990,000 t of concentrate grading 87% graphitic carbon. Following purification at an assumed recovery of 96.4%, total production is estimated at approximately 832,000 t of saleable 4N, 4N+, and 5N graphite products over the Project life.

The base case economic analysis uses a weighted-average graphite product selling price of US$23,485/t. The assumed selling prices are US$20,541/t for 4N graphite, US$19,300/t for 4N+ graphite, and US$50,000/t for 5N graphite. On this basis, estimated gross life-of-project revenue is approximately US$19.54 billion. These product-price assumptions are material to the economic results and will require additional support through market studies, product qualification, and potential customer or offtake arrangements as the Project advances. Table 1.3 shows a summary of the pre- and post-tax economic analysis results.

Table 1.3: Summary of Economic Analysis Results

Parameter	Unit	Value
Discount Rate	%	5
Pre-Tax Cashflow	US$ million	10,878
Pre-Tax NPV	US$ million	4,179
Pre-Tax IRR	%	27.70
Pre-Tax Payback Period	Years	4.4
Post-Tax Cashflow	US$ million	9,895
Post-Tax NPV	US$ million	3,855
Post-Tax IRR	%	27.40
Payback Period	Years	4.4

Sensitivity analyses were completed using variations of ±25% in graphite product selling prices, operating costs, and capital costs. Both pre-tax and post-tax NPV and IRR are most sensitive to changes in graphite product selling prices. The pre-tax NPV and IRR sensitivity tables are shown in Figures 1.4 and 1.5 whereas the post-tax NPV and IRR sensitivity tables are shown in Figures 1.6 and 1.7.

Figure 1.4: Pre-Tax NPV Sensitivity – Discount Rate 5% per annum

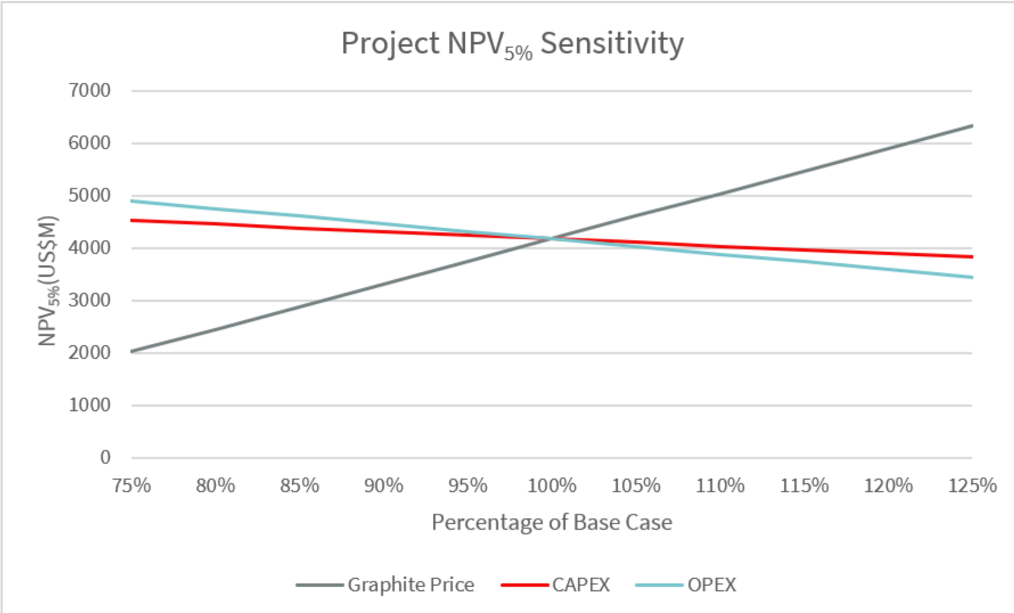


Figure 1.5: Pre-Tax IRR Sensitivity

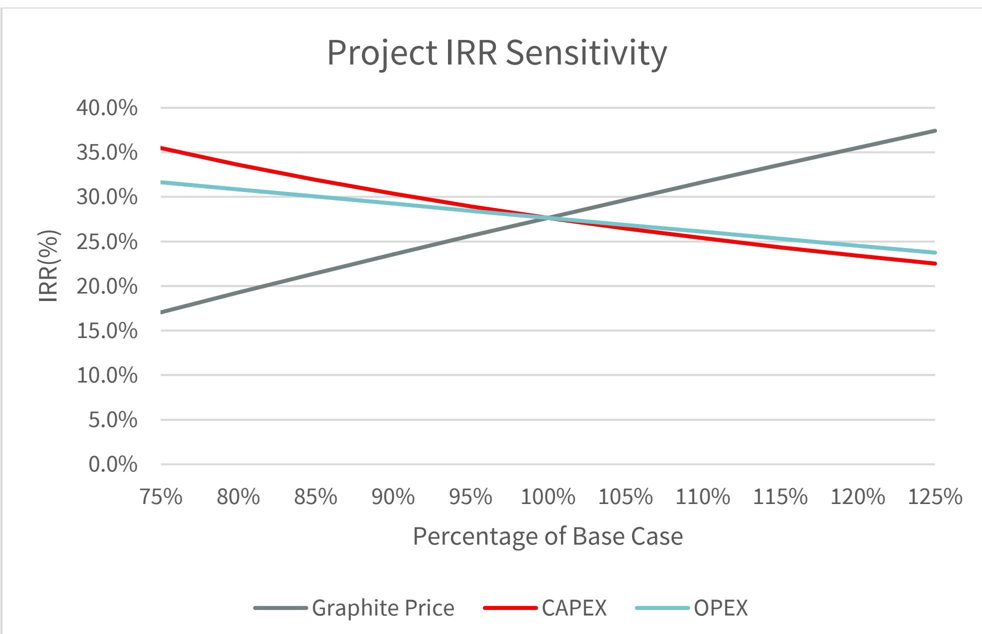


Figure 1.6: Post-Tax NPV Sensitivity – Discount Rate 5% per annum

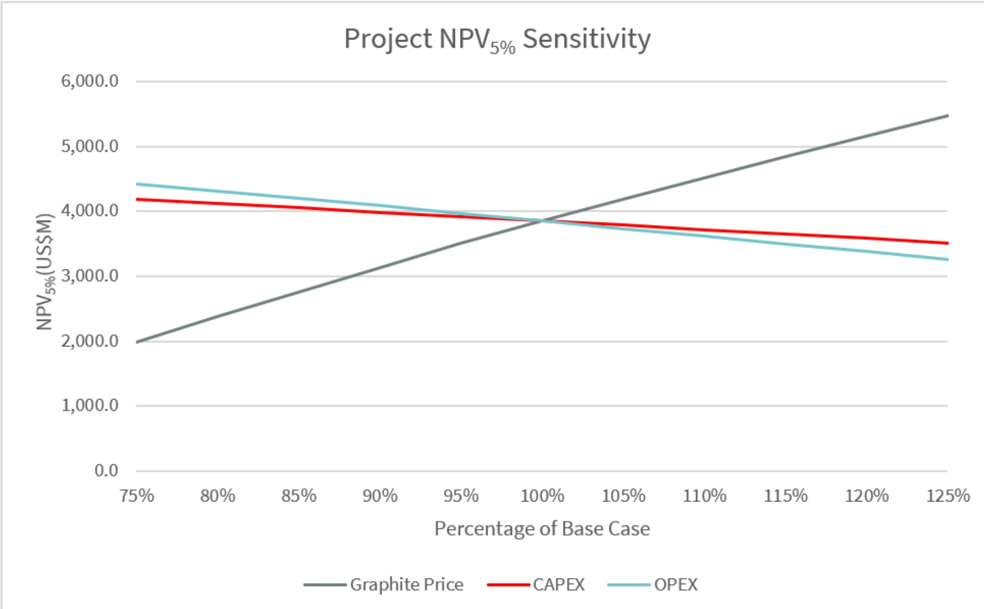
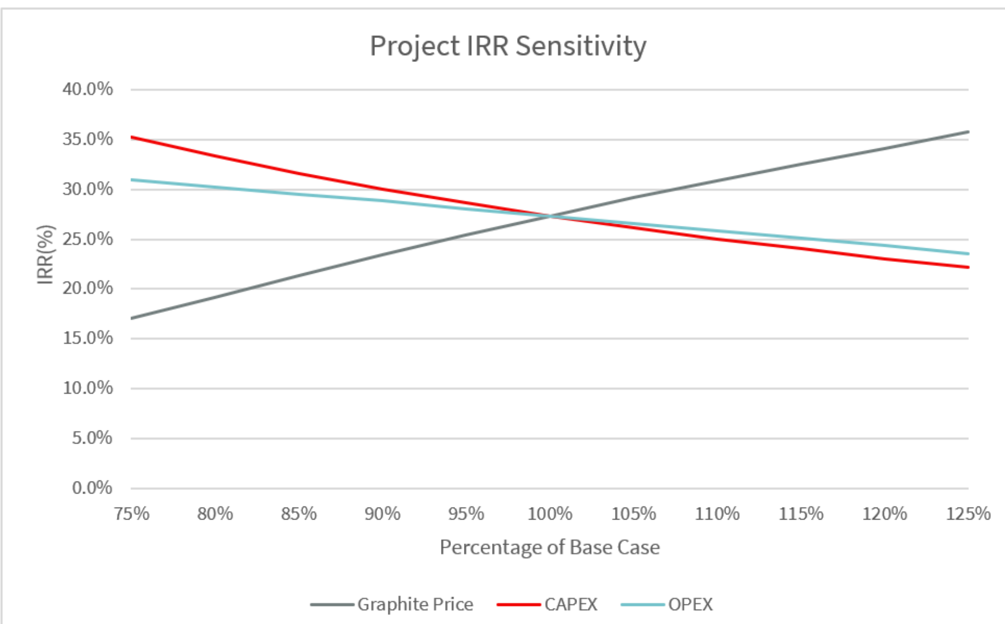


Figure 1.7: Post-Tax IRR Sensitivity



At a 5% discount rate, the pre-tax NPV ranges from approximately US$2.018 billion at 75% of the base case product-price assumption to approximately US$6.340 billion at 125% of the base case assumption. Over the same price range, the pre-tax IRR varies from approximately 17.0% to 37.4%. Post-tax NPV ranges from approximately US$1.981 billion to US$5.484 billion, while post-tax IRR ranges from approximately 17.0% to 35.8%. The project is less sensitive to equivalent percentage changes in capital and operating costs.

The economic analysis is based on forward-looking assumptions that are subject to material uncertainty. Project outcomes may be affected by changes in the MRE, mine and construction schedules, metallurgical recoveries, product specifications, graphite selling prices, market acceptance, capital and operating costs, taxation, royalties, exchange rates, permitting timelines, availability of labour and equipment, infrastructure requirements, and environmental or community-related obligations. The results should therefore be considered in the context of the conceptual engineering and cost-estimate accuracy applicable to the PEA.

16 Interpretation and Conclusions

16.1 Overview

The Micon 2026 PEA evaluates Albany's integrated production pathway, encompassing resource extraction, through flotation processing and FBR purification to produce ultra-high-purity graphite products for nuclear, defence, and other strategic critical mineral supply chains increasingly seeking secure, traceable, North American sources of graphite. In Micon QPs opinion, the PEA demonstrates that positive economic results can be obtained for the Project as detailed in Section 22 and summarized here.

16.2 Geology and Mineral Resources

The Albany deposit is a hydrothermal graphite deposit hosted in two separate breccia pipes (the East Pipe and West Pipe) within the AAC. The West Pipe consists of a single mineralized zone, which encompasses graphitic breccia and some lower grade graphitic overprint in some marginal areas. The East Pipe consists of two mineralized zones: graphitic breccia and a low-grade halo.

Completed petrography indicates that the graphite-hosting breccias range in composition from diorite to granite and are generally described as “syenite”. Graphite occurs both in the matrix, as disseminated crystals, clotted to radiating crystal aggregates and veins and along crystal boundaries, and as small veins within the breccia fragments.

In addition to graphite, the matrix consists primarily of quartz, alkali feldspar, and plagioclase feldspar with minor phlogopite and amphibole and trace amounts of pyrite-pyrrhotite and magnetite.

Drill hole data shows variations in grade distribution both on a local scale and globally. There is also a general decrease in grade with increasing depth from surface. This is detailed in Section 14 of this Report.

16.3 Metallurgy and Recovery Methods

The process flowsheet selected for the PEA is based on bench scale batch testing and pilot scale metallurgical testwork completed at SGS. The mineral processing flowsheet comprises conventional crushing and grinding, rougher flotation and multi stages of flotation cleaning and intermediate regrinding concentrate to produce a graphite concentrate containing over 85% total carbon. The purification process consists of ultra-high temperature thermal treatment to produce speciality graphite products with purities up to 5N (99.999% C).

Testwork has been completed using composite samples representing both the East and West deposits. It is the QP’s opinion that the samples used were a good representation of the mineralization occurring within the two deposits. The QP also notes that there appears to be no material deleterious elements or compounds measured in the samples.

East Pipe samples tended to be higher-grade than the West Pipe samples and flotation testwork indicated better carbon recoveries for this higher grade mineralization. The flotation test results showed a significant negative concentrate grade / recovery relationship, although recoveries for all types of mineralization tended to be over 80% with graphite concentrate grades of up to 90% C(t) or higher.

For the purposes of the PEA an average metallurgical graphite recovery of 86% has been selected with a final flotation concentrate grading 87% C(t).

The thermal purification process represents a key technical risk due to uncertainties associated with scale-up from batch testwork to commercial operation, including achievement of the required product purity and throughput, equipment performance, and energy requirements. This risk should be mitigated during the next phase through additional testwork, as required, and early engagement with a qualified furnace/reactor manufacturer or technology supplier to confirm the commercial-scale process and equipment design and associated capital and operating costs.

16.4 Infrastructure

The Project infrastructure has been developed to a PEA level and is considered adequate to support the proposed mining and concentrator operations at the current level of study. The proposed infrastructure includes site access and internal roads, electrical power supply and distribution, mine and concentrator support facilities, water and tailings management, communications, and other ancillary facilities. The principal infrastructure uncertainties relate to site ground conditions, water management, TSF design, and the routing and design of the access road and electrical transmission line. Further geotechnical, hydrological, and hydrogeological investigations, together with additional engineering and route studies, will be required during the next phase of Project development to address these uncertainties and improve confidence in the infrastructure design and associated capital and operating cost estimates.

16.5 Environmental

Environmental and social risks associated with the Albany Project are considered typical of similar mining operations at this stage of development. The natural characteristics of the area mean that a high level of diligence will need to be given to water and waste management. This is due to the fact that the proposed Project site is constrained by the Pitopiko and Nagagami Rivers, resulting in a limited surface area for infrastructure development and therefore higher potential for impacts on shallow groundwater and surface watercourses. Potential caribou migration routes will also need to be considered. These risks can likely be managed to an acceptable level, provided that appropriate mitigation features are incorporated into the Project design, and robust monitoring and management systems are implemented.

17 Recommendations

Micon's QPs recommend that Zentek advance the Project to the pre-feasibility stage and undertake the work programs outlined in this section. A summary of the recommended work programs and associated Project budget is presented in Table 1.4, with further details provided in the following subsections.

Table 1.4: Summary Of The Albany Project Budget For The PFS Phase

Item	Detail	US$
Geological Studies	Petrographic/petrological and mineralogical	400,000
Geotechnical & Hydrogeological studies	Mine design and surface infrastructure	1,250,000
Metallurgical Testwork	Albany site beneficiation plant only	500,000
PFS Engineering	Open pit, TSF, concentrator and infrastructure	2,000,000
Environmental Baseline Study	Albany mine site and access corridor only	2,200,000
Carbon Purification Plant Design	Thermal purification plant	1,000,000
Purification Plant Site	Site engineering	1,000,000
Contingency	25%	2,087,500
Total	preliminary	10,437,500

Micon's QPs have reviewed the proposed annual Project budget and agree with the nature of the proposed expenditures. The budget is subject to Zentek's ability to secure the required funding, obtain the necessary approvals and agreements to advance the Project, and receive approval from Zentek's Board of Directors.

17.1 Geology and MRE

Whist the geology of the Albany deposit is well understood, further detailed petrographic/petrological and mineralogical studies are recommended to determine currently unforeseen by-products and at the same time assist in metallurgical optimizations.

As demonstrated in the PEA, the Measured and Indicated resources are adequate to kick start a possible open-pit mining operation. However, the expansion and upgrading of the Inferred Resource should still be considered particularly in view of the fact that the bigger the resource size, the greater the opportunity for capital injection into the Project. Accordingly, infill and deeper drilling are recommended for resource upgrading and growth.

17.2 Metallurgy and Recovery Methods

Additional flotation testing is recommended to optimize the circuit and quantify the impact of feed grade and spatial variability of both deposits on flotation performance. Separate recovery models for each deposit should be developed that can be used for future more advanced Project development studies.

The QP also recommends additional liquid-solid separation testing for both concentrate and tailings process streams, and standard characterization studies using representative samples of process tailings.

Further purification optimization testwork is recommended to validate and to confirm process efficiencies and robustness of the overall process design and product qualities.

17.3 Infrastructure

The QP recommends advancing the Project infrastructure during the next phase through geotechnical, hydrological, and hydrogeological investigations to better characterize ground and water conditions and refine the site water management strategy. Studies should also be completed to identify the preferred access-road and transmission-line routes, and waste rock and overburden should be characterized to assess their suitability for use as construction materials. The TSF design and other major infrastructure should be further developed as additional site investigation and engineering information becomes available.

17.4 Environmental

- Ensure all previous exploration drill holes are sealed and disturbed areas are remediated. This will be particularly important for potential development of waste storage infrastructure, to ensure there are no pathways for groundwater connectivity.
- Undertake additional environmental baseline studies for water quality and biodiversity. In particular it will be important to understand seasonal variations over multiple years and establish migration routes for birdlife and caribou. Baseline conditions should also be established for other aspects such as climate data, air quality, and noise levels.
- Undertake additional hydrology studies and initiate hydrogeology studies to facilitate a better understanding of baseline conditions and enable more accurate assessment of water management needs for the Project. A site-specific Flood risk study is also advised.
- Undertake a ground-based archaeological survey in the proposed Project footprint area and ensure a Chance Finds procedure is in place for future drilling activity and ongoing site visits.
- Undertake additional geochemical testwork as the Project design evolves, to better understand ARDML risks in waste rock and tailings material.
- Undertake a trade-off study to evaluate different options for the Project’s water supply, including provision for water storage, treatment and discharge.
- Undertake a trade-off study to evaluate alternative options for tailings storage/disposal, including the potential for a dry stack tailings facility.
- Undertake a trade-off study to evaluate alternative options for mine fleet fuel and power supply, taking sustainability and newer technologies into account.
- Ensure local stakeholders, in particular Constance Lake First Nation, remain actively engaged in all Project developments and are specifically consulted on options for the proposed access route. All formal and informal consultation should be documented to support the future permitting process.
- Confirm project-specific permitting requirements and timelines with the Government of Ontario.

2 INTRODUCTION

2.1 ISSUER

The Albany Graphite Project (Project or Property) is 100% owned by Albany Graphite Corp, a wholly-owned subsidiary of Zentek Ltd. (Zentek or the Company). Zentek is a Canadian intellectual property development and commercialization company advancing a portfolio of graphene-enabled and advanced material technologies across clean air, next-generation materials, and critical minerals. Albany is the company's principal critical minerals asset.

2.2 TERMS OF REFERENCE

Micon International Limited (Micon) has been retained by Albany Graphite Corp., to prepare an updated 2025 Mineral Resource Estimate (MRE) and a Preliminary Economic Assessment (PEA) for the Albany Graphite Project, located in northern Ontario, Canada. Zentek has also requested that Micon compile and disclose the results of the updated 2026 MRE and PEA in a Canadian National Instrument (NI) 43-101 Technical Report.

This Report discloses technical information, the presentation of which requires the Qualified Persons (QPs) to derive sub-totals, totals and weighted averages that 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.

The conclusions and recommendations in this Report reflect the QPs' best independent judgment in light of the information available to them at the time of writing. Micon and the QPs reserve the right, but will not be obliged, to revise this Report and conclusions if additional information becomes known to them subsequent to the date of this Report. Use of this Report acknowledges acceptance of the foregoing conditions.

This Report is intended to be used by Zentek subject to the terms and conditions of its agreement with Micon. That agreement permits Zentek to file this Report as a Technical Report on SEDAR (www.sedarplus.com) pursuant to Canadian securities legislation, or with the Securities and Exchange Commission (SEC) in the United States.

Neither Micon nor the individual QPs have, nor have they previously had, any material interest in Zentek or related entities. The relationship with Zentek is solely a professional association between the client and the independent consultants. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this Report.

Micon and the QPs are pleased to acknowledge the helpful cooperation of Zentek management, and technical personnel, all of whom made any and all data requested available and responded openly and helpfully to all questions, queries and requests for material.

This Report supersedes and replaces all prior Technical Reports written for the Project.

2.3 PRINCIPAL SOURCES OF INFORMATION

The descriptions of geology, mineralization and exploration used in this Report are taken from reports prepared by various organizations and companies or their contracted consultants, as well as from various government and academic publications. The conclusions of this Report use, in part, data available in published and unpublished reports supplied by the companies which have conducted exploration on the property, and information supplied by Zentek. The information provided to Zentek was supplied by reputable companies and the QPs have no reason to doubt its validity. Micon's QPs have used the information where it has been verified through its own review and discussions.

In summary, the principal sources of information for this Report are:

- Data and transcripts supplied by Zentek.
- AETC, Overview of Value-Added Markets and Business Opportunity for Natural Flake Graphite for Zentek Ltd., June 2026.
- AETC, Preliminary Engineering Scoping Study of Zentek Ltd. Natural Crystalline Flake Graphite Processing Facility, June 2026.
- Observations made during the site visit by Micon's QPs.
- Previous NI 43-101 technical reports on the Project:
    - Technical Report on Albany Graphite Deposit, Northern Ontario, Canada, dated January 16, 2014, issued by Roscoe Postle Associates Inc. (RPA).
    - Technical Report on the Preliminary Economic Assessment of the Albany Graphite Deposit, Northern Ontario, Canada, dated July 9, 2015, issued by RPA.
    - Technical Report on Albany Graphite Project, Ontario, Canada. Report for NI 43-101, dated July 31, 2023, issued by SLR Consulting (Canada) Ltd. (SLR).

2.4 QUALIFIED PERSON SITE VISIT AND PERSONAL INSPECTION

On March 15, 2018, a Micon QP visited Zentek's (formerly Zenyatta Ventures Ltd.) office and drill core storage facility in Thunder Bay, Ontario. During the visit, company personnel provided a presentation on the Albany Graphite Project, and the Micon QP inspected selected drill core from the Project in detail. The Albany Project site itself was not visited at that time due to winter conditions and extensive snow cover.

The Micon QPs that visited the Project site on June 15, 2026, are Mohsin Hashmi P.Eng., and Charley Murahwi P.Geo., accompanied by Adil Aissautov Ph.D. The site visit included a review of the Project drill core, an aerial overview of the Project site, and verification of the 2019 bulk sample drill hole locations. Further details on the site visit are available in Section 12.2 of this Report. Other Micon QPs did not visit the Albany Project site, as a physical site inspection was not considered necessary to support their respective areas of technical responsibility.

2.5 QUALIFIED PERSONS

The QPs responsible for the preparation of this Report and their areas of responsibility are summarized in Table 2.1.

Table 2.1: PEA Report Qualified Persons, Areas of Responsibility

Qualified Person	Title	Company	Area of Responsibility
Charley Murahwi, P.Geo.	Senior Economic Geologist	Micon International Ltd	Sections 2 to 12, 14, 23, 24 and their related summaries in Sections 1, 25 and 26
Oktay Erten, PhD, P.Eng., MAusIMM(CP), SEG Member	Senior Resource Geologist & Geostatistician	Micon International Ltd	Sections 14, 25.2.2 and 26.1
Richard M. Gowans, P.Eng.	Principal Metallurgist	Micon International Ltd	Sections 1.9, 13 and 17.

Qualified Person	Title	Company	Area of Responsibility
Garth Liukko, P.Eng.	Principal Mining Engineer	Micon International Ltd	Sections 19, 21 and 22.
Mohsin Hashmi, P.Eng. PMP	Senior Open Pit Engineer	Micon International Ltd	Sections 1.11.1, 16.1, 16.2, 25.3 and 25.3.1.
Becky Humphrey CEnv, MIMMM	Associate Environmental Consultant	Micon International Ltd	Sections 1.13, 20, 25.8 and 26.6.
Sepehr Aryan, MSc., P. Eng.	Manager CSA Team	Halyard Inc.	Section 18 except 18.10 to 18.13
Morwenna C. Rogers, MSc., MIMMM	Project Engineer	Halyard Inc.	Section 18.10 to 18.13

2.6 UNITS OF MEASURE

All units of measurement used in this Report are metric unless otherwise stated. Tonnages are reported as metric tonnes (t), precious metal values (gold and silver) in grams per tonne (g/t) or parts per million (ppm) and base metal values (tin, copper, lead, and zinc) are reported in weight percent (%) or ppm. Other references to geochemical analysis are in ppm or parts per billion (ppb) as reported by the originating laboratories. Unless otherwise stated, all currency amounts and commodity prices are stated in U.S. dollars (US$) for Canadian dollars CD$. A summary of the units of measure is provided in Table 2.2.

Table 2.2: Unit of Measure

Unit	Abbreviation	Unit	Abbreviation
Ampere	A	Litre	l
Annum (year)	a	Litre per second	l/s
Centimetre	cm	Metre	m
Cubic centimetre	cm^3	Metres above sea level	masl
Total Carbon	C(t)	Metric ton (tonne)	t
Cubic metre	m^3	Microns	µm
Day	d	Milligram	mg
Days per year (annum)	d/a	Milligrams per litre	mg/l
Degree	°	Millilitre	mL
Degrees Celsius	°C	Millimetre	mm
Diameter	Ø	Million	M
Dollar (American)	US$	Mega pascals	MPa
Dollar (Canadian)	CD$	Megawatt	MW
Dry Metric Tonnes	dmt	Million tonnes	Mt
Foot	ft	Minute (time)	min
Gram	g	Ounce	oz
Grams per litre	g/L	Parts per billion	ppb
Grams per tonne	g/t	Parts per million	ppm
Greater than	>	Percent	%
Hour	h	Second (time)	sec
Hours per day	h/d	Specific gravity	SG
Hours per year	h/a	Square kilometre	km^2
Kilo (thousand)	k	Thousand tonnes	kt
Kilogram	kg	Three dimensional	3D
Kilograms per cubic metre	kg/m^3	Tonne (1,000 kg)	t
Kilograms per hour	kg/h	Tonnes per day	t/d
Kilograms per square metre	kg/m^2	Tonnes per hour	t/h
Kilometre	km	Tonnes per year (annum)	t/a
Kilometres per hour	km/h	Wet Metric Tonnes	wmt
Kilotonne	kt	Weight percent	wt%
Less than	<		

Source: Micon, 2026.

2.7 ABBREVIATIONS AND ACRONYMS

Table 2.3: Abbreviations and Acronyms

Unit	Abbreviation / Acronym
Albany Graphite Corp.	AGC
airborne electromagnetic	AEM
American Energy Technologies Company	AETC
AppEco Inc.	AppEco
Acid Rock Drainage	ARD
Acid Rock Drainage and Metal Leaching	ARDML
Azimuth Pointing System	APS
Bond ball mill work index	BWI
Canadian Dollar	CD$
Graphitic Carbon	Cg
Chibougamau Diamond Drilling Ltd.	Chibougamau
Canadian Institute of Mining, Metallurgy, and Petroleum	CIM
Cliffs Natural Resources Inc.	Cliffs
Cliffs Natural Resources Exploration Canada Inc.	CNRECI
Constance Lake First Nation	CLFN
Copper-Nickel-Platinum Group Metal	Cu-Ni-PGM
Critical Minerals Innovation Fund (Ontario Government)	CMIF
Certified Reference Material	CRM
Civil Structural and Architectural	CSA
Coated Spherical Purified Graphite	CSPG
Bond crushing work index	CWi
Digital Terrain Model	DTM
Environmental Assessment	EA
Equivalent Boron Content	EBC
Eveleigh Geological Consulting Inc.	EGC
Environmental Social and Governance	ESG
electrical resistivity	ERI
Feasibility Study	FS
Billions years ago	Ga
Geotech Ltd.	Geotech
Global Positioning System	GPS
Integrated Authorization and Permitting Plan	IAPP
Integrated Consultation Plan	ICP
Interim Consultation Report	ICR
induced polarization	IP
Infra-Red	IR
High-Density Polyethylene	HDPE
Hydraulic Grade Line	HGL
Mining Lands Administrative System (Ontario Government)	MLAS
Ministry of Natural Resources (Ontario Government)	MNR
Memorandum of Understanding	MOU
Ministry of Transportation (Ontario Government)	MTO
National Instrument 43-101	NI 43-101
Net Present Value	NPV
Nagagami River Alkalic Rock Complex	NRARC
Niobium	Nb
One Project, One Process	1P1P
Potentially Acid Generating	PAG
Preliminary Economic Assessment	PEA
Particle Size Distribution	PSD
Qualified Person	QP
Quality Assurance	QA
Quality Control	QC
Quality Assurance / Quality Control	QA/QC
Reverse Circulation Drilling	RCD
Rare Earth Element	REE
Revenue Factor	RF
Run of Mine	RoM
Reasonable Prospects for Eventual Economic Extraction	RPEEE
Rock Quality Designation	RQD
Revised Statutes of Ontario	R.S.O.
Bond rod mill work index	RWI
Semi-Autogenous Grinding	SAG
SAG Mill Comminution	SMC
Species at Risk Act (Canada)	SARA
Species At Risk in Ontario	SARO
Statutes of Canada	S.C.
SGS Mineral Services/SGS Mineral Services	SGS
Selective Mining Unit	SMU
Statutes of Ontario	S.O.
Statutory Orders and Regulations	SOR
To Be Determined	TBD
Total Dynamic Head	TDH
time-domain electromagnetic	TDEM
Total Inorganic Carbon	TIC
Total Organic Carbon	TOC

Unit	Abbreviation / Acronym	Unit	Abbreviation / Acronym
Locked Cycle Tests	LCT	Tailings Storage Facility	TSF
Lerchs-Grossmann	LG	United States Dollar	US$
Life of Mine	LoM	Universal Transverse Mercator	UTM
Lakehead University Mineralogy and Experimental Laboratory	LUMINX	versatile time domain electromagnetic	VTEM
Millions of years ago	Ma	Water Survey of Canada	WSC
Metres Above Sea Level	masl	Wildlife Management Unit	WMU
Micon International Limited	Micon	Waste Rock Management Facility	WRMF
Mine Authorization and Permitting Delivery Team (Ontario Government)	MAPDT	whole rock analysis	WRA
Mineral Resource Estimate	MRE	Water Survey of Canada	WSC
Ministry of Citizenship and Multiculturalism (Ontario Government)	MCM	Zentek Ltd.	Zentek
Ministry of the Environment, Conservation and Parks (Ontario Government)	MECP	50 King Capital Canada Inc.	50 King
Ministry of Energy and Mines (Ontario Government)	MEM		

Source: Micon, 2026.

3 RELIANCE ON OTHER EXPERTS

3.1 INTRODUCTION

The QPs have relied on information provided by Zentek, including expert reports, in preparing their findings and conclusions regarding the following: mineral rights, surface rights, property agreements, royalties, environmental studies, permitting, social impact, closure, taxation, and marketing.

3.2 PROPERTY AGREEMENTS, MINERAL TENURE, SURFACE RIGHTS AND ROYALTIES

The QPs have not independently reviewed ownership of the Project area and any underlying property agreements, mineral tenure, surface rights, or royalties. The QPs have fully relied upon information derived from Zentek and legal experts retained by Zentek for this information. The documents containing this information are on the Zentek official website.

This information is used in Sections 1, 4 and 20 of the Report. The information is also used in support of the MRE in Section 14, and the Economic Analysis in Section 22.

3.3 METALLURGICAL TESTING AND RECOVERY METHODS

Micon's QPs have relied on technical information provided by American Energy Technologies Co. (AETC) relating to the purification of graphite concentrate. AETC conducted scoping-level purification testwork in 2025 and 2026 on flotation concentrate samples generated by SGS Mineral Services (SGS) during pilot plant testing. The testwork included process development and production of high-quality graphite products using thermal purification at approximately 2,800°C without the use of halogen gases, acids, or other chemicals. AETC also provided process flow diagrams, a mechanical equipment list, and capital and operating cost information for the proposed purification facility. Micon's QP relied on AETC's testwork results, process design information, equipment information, and cost estimates in developing the purification process design and economic basis presented in this Technical Report.

3.4 SITE WATER MANAGEMENT

Joe Skuse, MSc., FGS, Micon's Lead Hydrogeologist, has contributed to Section 18.9 with regards to the site-wide water management system.

3.5 ENVIRONMENTAL, PERMITTING, CLOSURE, SOCIAL AND COMMUNITY IMPACTS

The QPs have relied upon information supplied by Zentek and experts retained by Zentek for information related to environmental and social and community impacts. For the Regulatory and Permitting aspects, the Albany Project is subject to the laws and regulations of the Federal Government of Canada and the provincial Government of Ontario.

This information is used in Section 20 of the Report. The information is also used in support of the MRE in Section 14, Capital and Operating Costs in Section 21 and the Economic Analysis in Section 22.

3.6 TAXATION

The QPs have not independently reviewed the Project taxation position. The QPs have fully relied upon taxation information based on the laws and regulations of the Federal Government of Canada and the provincial Government of Ontario.

This information is used in Section 22 of the Report.

3.7 MARKETS AND CONTRACTS

The QPs have not independently reviewed the market studies or contract information. The QPs have fully relied upon information derived from Zentek and experts retained by Zentek for this information through the following documents:

- Market research and economic analysis of the Albany Graphite Project - Final report. July 10, 2026. By AppEco Inc. (AppEco) an economics consulting firm.
- Pricing analysis prepared by American Energy Technologies Co. (AETC), a United States-based advanced graphite materials company dated June 19,

Metals price forecasting is a specialized profession requiring commodity-specific knowledge of supply and demand, economic activity and other factors that are commercially sensitive and require access to proprietary data that are outside of the purview of a QP. The QPs consider it reasonable to mainly rely upon the documents provided to Zentek by AppEco.

This information is used in Section 19 of the Report. The information is also partially used in support of the MRE in Section 14, and Economic Analysis in Section 22.

3.8 REMARKS

Other than as specified in this section no other expert opinions have been considered in this Technical Report.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 LOCATION AND AREA

The Project is located north of Lake Superior and southwest of James Bay, Canada, within the Porcupine Mining District of northern Ontario, Canada (Figure 4.1). It is centred on 682,400 mE and 5,544,514 mN, UTM Zone 16, NAD 83. The Project consists of 521 claim units for a total area of 9,760 ha.

Figure 4.1: Project Location Map

Source: Micon 2026.

4.2 LAND TENURE

The Albany Graphite Project is one of several claim blocks originally assembled by Zentek Ltd. (Zentek), now Albany Graphite Corp. (AGC), within a large area encompassing approximately twenty townships in the Porcupine Mining District of northern Ontario. The claims were originally staked under an agreement between Cliffs Natural Resources Exploration Canada Inc. (CNRECI), an affiliate of Cliffs Natural Resources Inc. (Cliffs), and Eveleigh Geological Consulting Inc. (EGC) to explore for copper-nickel-platinum group metal (Cu-Ni-PGM) mineralization.

At the time of Zentek's initial public offering in December 2010, ownership of the Albany Project claims was held 75% by CNRECI and 25% by Zentek under the 2010 Amended Albany Option and Joint Venture Agreement. Most of the claims were staked during the summer and fall of 2009, with additional staking completed in the winter and spring of 2010.

This Technical Report covers the Albany Graphite Project, which hosts the Albany graphite deposit and is currently 100%-owned by AGC. The Project was previously referred to as Block 4F and is the only remaining claim block from the original Albany Project land package. The Property comprises 521 mining claim units covering approximately 9,760 ha.

In April 2023, Zentek executed a property purchase agreement with its wholly owned subsidiary, AGC, transferring ownership of the Albany Graphite Project to AGC (Zentek, 2023).

The Project consists of 521 mining claims, including 461 Single Cell Mining Claims and 60 Boundary Cell Mining Claims, as summarized in Figure 4.2. The Albany claims were staked between March and June 2010. All claims are currently in good standing through to 2027, and excess assessment work credits are sufficient to maintain the claims for over 30 additional years. The land tenure is shown in Figure 4.2. Additional details on expiry dates are displayed in Figure 4.3.

4.3 ROYALTIES, OWNERSHIP HISTORY, AND AGREEMENT WITH CLIFFS

In November 2012, Zentek reached an agreement with CNRECI to acquire 100% ownership of the Albany Graphite Project claims.

Prior to this transaction, Zentek had exercised its right under the applicable agreements to earn an 80% interest in the Property by incurring approximately CD$10 million in exploration expenditures across the broader Albany Project claim package. The acquisition of Cliffs' remaining 20% interest increased Zentek's ownership to 100%.

Under the terms of the transaction, Zentek agreed to:

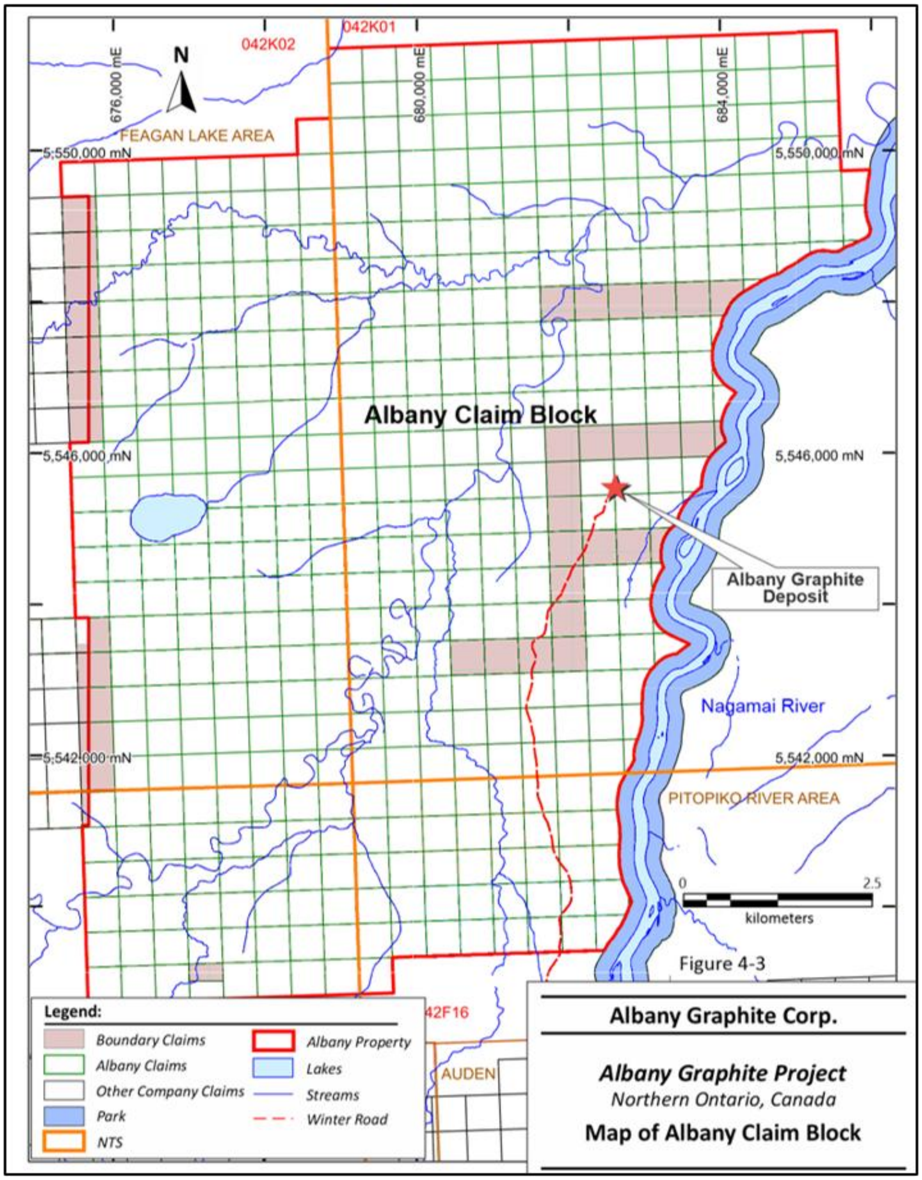
- Issue CNRECI (or its designated affiliate) a total of 1,250,000 common shares, consisting of:
  - 500,000 shares upon execution of the agreement (completed).
  - 250,000 shares upon completion of a Pre-Feasibility Study (PFS).
  - 500,000 shares upon completion of a feasibility study.

Grant Cliffs a 0.75% net smelter return (NSR) royalty on the Project, of which 0.5% may be repurchased at any time for CD$500,000.

CNREC subsequently became 50 King Capital Canada Inc. (50 King) effective November 24, 2015, and the Albany royalty remained with that corporate entity. Accordingly, the 0.75% NSR royalty is currently held by 50 King. AGC retains the right to repurchase 0.50% of the royalty for CD$500,000, thereby reducing the royalty from 0.75% to 0.25%.

The Property is also subject to an underlying 2.0% NSR royalty in favour of EGC. AGC may repurchase 1.0% of this royalty at any time for CD$1,000,000. This royalty originates from the 2009 Project Agreement between CNRECI and EGC and was subsequently incorporated into the 2010 Amended Albany Option and Joint Venture Agreement among Zentek, Cliffs, CNRECI, and EGC, and the 2012 Albany North and South Second Amended and Restated Option Agreement.

Figure 4.2: Map Showing the Albany Project Claims



Source: Zentek 2026.

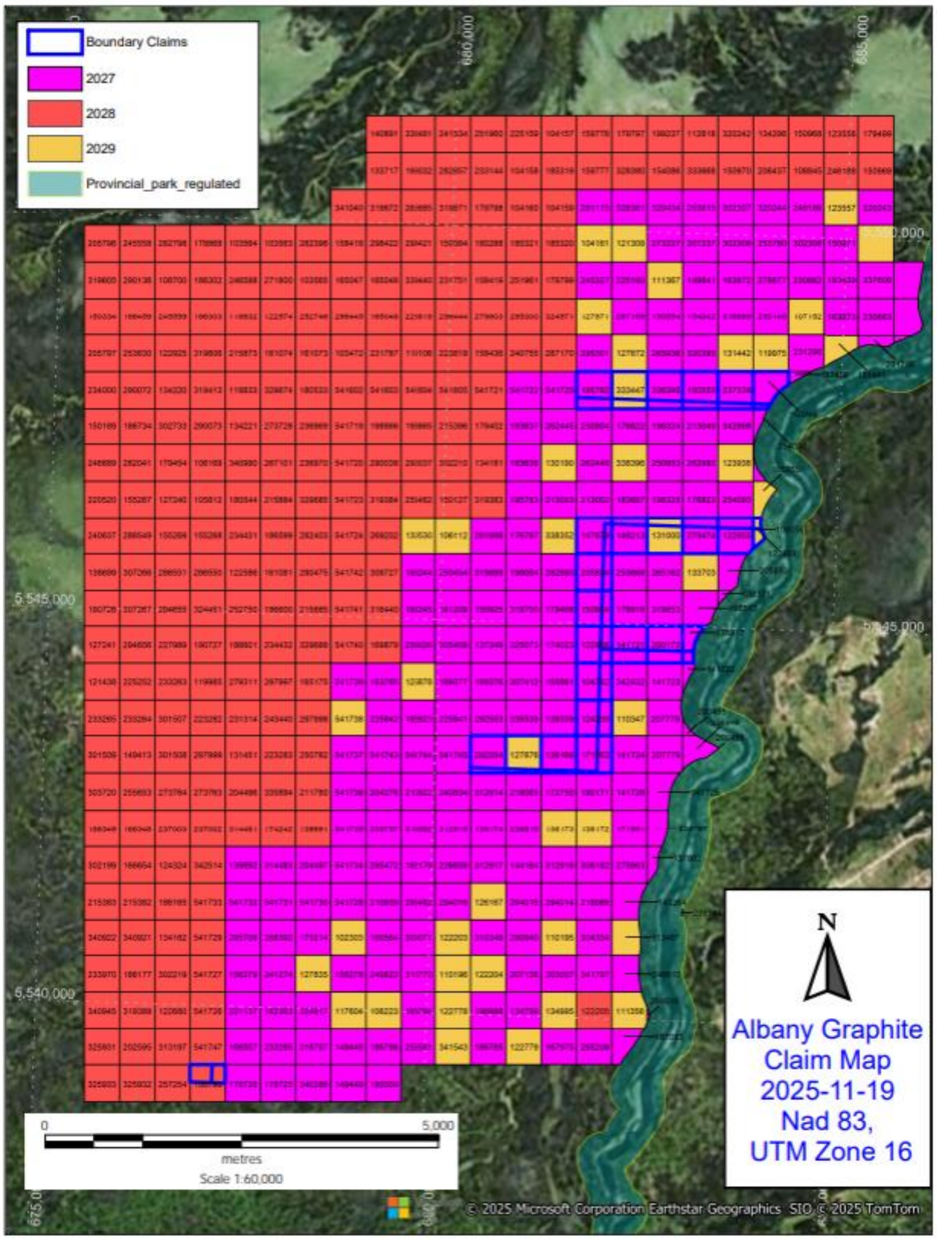
The agreements further provide that, upon the sale, assignment, or farm-out of all or part of the Albany Graphite Project to a third party, AGC shall make a one-time payment of CD$50,000 to EGC. Only one such payment is payable regardless of the number of subsequent transfers or farm-out transactions. The agreement specifically excludes the November 2012 acquisition by Zentek of CNREC's remaining 20% interest in the Albany Graphite Project from triggering this payment obligation.

Accordingly, the Albany Graphite Project is currently subject to aggregate NSR royalties totalling 2.75%, consisting of:

- 2.00% NSR held by EGC, of which 1.00% may be purchased at any time for CD$1,000,000.
- 0.75% NSR held by 50 King, of which 0.50% may be purchased at any time for CD$500,000.

If all available royalty buyback rights are exercised, the aggregate royalty burden on the Property would be reduced to 1.25% NSR.

Figure 4.3: Albany Project Claims Plan Showing Expiry Dates



Source: Zentek, 2026

4.4 AGREEMENTS WITH CONSTANCE LAKE FIRST NATION

The Albany Graphite Project is located within the traditional territory of Constance Lake First Nation (CLFN).

On July 18, 2012, Zentek and CLFN entered into an Exploration Agreement establishing a cooperative and mutually beneficial relationship related to exploration and pre-feasibility activities at the Project.

In September 2018, the parties signed a Memorandum of Understanding (MOU) to establish a framework for a project partnership supporting the future development of the Albany Graphite Project. The MOU recognized the transition of the Project from exploration toward development. The original Exploration Agreement remained in effect pending negotiation of a more comprehensive project partnership arrangement.

The parties committed to developing a project partnership structure that would provide for:

- Shared governance and decision-making related to the Project.
- Joint support for community engagement activities.
- Alignment on Project objectives and expectations.
- Shared economic opportunities and benefits arising from Project development.

Pursuant to the Exploration Agreement, the July 2018 MOU, and a subsequent amendment executed in September 2018, AGC and CLFN entered into an Implementation Agreement (IA) in March 2021. The IA establishes the governance framework, roles, responsibilities, and activities required to develop a Project Partnership Structure (PPS) and advance the Albany Graphite Project.

The IA provides for the creation of a joint working committee comprising representatives of AGC and CLFN. The committee is intended to facilitate collaboration on matters related to Project development, including environmental assessment, engagement with provincial and federal governments, community benefits, traditional knowledge, free, prior, and informed consent considerations, economic development opportunities, employment and training, and other matters associated with the Project's potential impacts and benefits.

AGC and CLFN continue to work toward a formal agreement that will define the long-term Project Partnership Structure and support advancement of the Albany Graphite Project.

4.5 OTHER SIGNIFICANT FACTORS/RISKS

The Micon QP is not aware of any significant factors and risks that may affect continued access, title, or the right or ability to perform further work on the Property.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The following section has been adapted from Carey (2012).

5.1 ACCESSIBILITY

The Property is located approximately 30 km north of the Trans-Canada Highway (Highway 11). At present, most areas of the Property are most efficiently accessed by helicopter during the summer months and by forestry roads and winter roads during the winter season. Helicopter access minimizes disturbance to vegetation and forest cover.

Water access is also available via boat or canoe along the Nagagami River, which traverses bounds the eastern portion of the Property. Historic forestry roads extend to the southeastern boundary of the Property, where several ATV trails provide access through previously harvested forest areas east of the Nagagami River. Winter access is provided by a seasonal trail that connects the forestry road network to the drill site and can be reached by travelling north along the all-season Pitopiko Road from Highway 11.

5.2 CLIMATE

The region experiences a continental climate characterized by warm to hot summers and cold winters. Summer daytime temperatures commonly reach the low to mid-20s °C, with periodic hotter conditions reaching 30°C or higher. Winter temperatures from December through March commonly range from about -10°C to -30°C, with occasional extreme lows approaching -40°C to -45°C. Annual precipitation is generally estimated to range from approximately 600 mm and 900 mm.

Lakes, rivers, and wetlands are typically frozen during the winter months, and winter diamond drilling is generally feasible from January through to late March, or locally into early April, depending on annual freeze-up and thaw conditions. Mineral exploration can generally be conducted year-round, subject to seasonal interruptions during spring breakup and during the transition to winter freeze-up conditions. Future mining operations could also be conducted on a year-round basis, provided appropriate all-season access and site infrastructure are developed.

5.3 LOCAL RESOURCES

The Town of Hearst, located approximately 68 km southeast of the Project and with a population of approximately 5,000, provides a full range of services to support mineral exploration activities. Available facilities include hotels, restaurants, a hospital, hardware and building supply stores, fuel services, mining supply outlets, and an airport. Aviation facilities in Hearst include fixed-wing, helicopter, and floatplane-capable infrastructure.

Additional mining-related personnel, equipment, and specialized supplies can be obtained from Timmins, Ontario, a major mining and exploration centre located approximately 260 km by road southeast of Hearst.

5.4 INFRASTRUCTURE

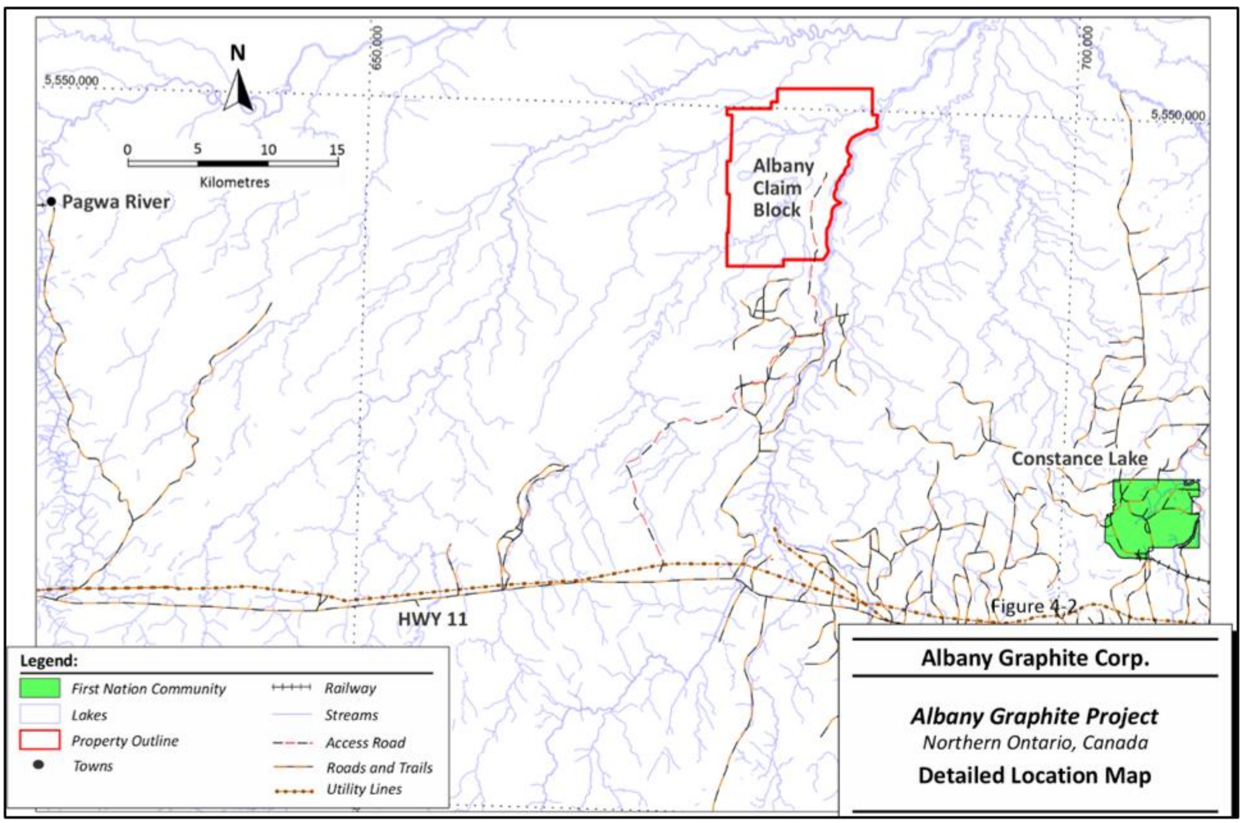
There is currently no permanent infrastructure located on the Property. A network of existing logging roads extends to within approximately 9 km of the graphite deposit, with final access provided by a winter road.

The Project is situated near the communities of Hearst and CLFN. The nearest airport is in Hearst, approximately one hour from the Project by vehicle, while the Timmins Airport, which provides scheduled commercial flight services, is approximately four hours away by road.

Regional infrastructure includes a power transmission corridor and natural gas pipeline located along Highway 11, approximately 30 km south of the Project. Rail transportation infrastructure is located approximately 70 km from the Property, subject to confirmation of the specific access point. The Project infrastructure is summarized in Figure 5.1.

The Project is at an advanced exploration stage and occupies sufficient land to potentially support future mining development. However, additional surface rights would need to be secured from the provincial government. Potential sources of water, grid power, skilled labour, tailings storage areas, waste rock disposal sites, and processing plant locations are available on or near the Property, subject to further engineering, environmental, permitting, and surface-rights assessment.

Figure 5.1: Map Showing Existing Infrastructure Surrounding the Albany Project



Source: Zentek 2026.

A power transmission line and a natural gas pipeline run along the Trans-Canada Highway, 30 km south of the Project. A rail line is located 70 km away.

The Project is in the advanced-exploration stages of the exploration and development cycle. It is considered to have sufficient area for a potential future mining operation; however, appropriate surface rights will need to be secured from the government. Sources of water, grid power, mining personnel, potential tailings storage areas, potential waste disposal areas, and potential processing plant sites are all available on or near the Property.

5.5 PHYSIOGRAPHY

The Project is located near the southern boundary of the James Bay Lowlands, a physiographic region, characterized by flat, low-relief terrain, extensive wetlands, and widespread muskeg. Overburden is generally thick throughout the area, averaging approximately 44 m in depth based on drilling, resulting in an absence of bedrock exposure across most of the Property. Paleozoic limestone strata form the only known bedrock exposures within the Property area and are exposed locally along the banks and within the channels of the Nagagami and Pitopiko Rivers.

The Nagagami River is a large regional river, approximately 200 m wide, that flows northward along the eastern boundary of the Project area, while the Pitopiko River is a smaller but locally important tributary, approximately 25 m to 40 m wide, that traverses the property and discharges directly into the Nagagami River. The Nagagami River lies within Nagagamisis Provincial Park, where the park boundary is defined by a 200 m buffer on either side of the river along its length, creating a protected river corridor that extends through the region. Vegetation within the river corridors is dominated by wetland communities, interspersed with stands of spruce, alder, and cedar swamp. Spruce and alder are particularly abundant along the banks of the Nagagami River and associated tributaries.

6 HISTORY

6.1 PRIOR OWNERSHIP

The Albany Graphite Project comprises Claim Block 4F of the larger Albany Project, which originally consisted of 28 claim blocks distributed across a large area of northern Ontario. The property package was assembled to evaluate multiple exploration targets identified from regional geophysical and geological datasets. Most of the claims were staked under an exploration agreement between Cliffs Natural Resources Exploration Canada Inc. (CNRECI), an affiliate of Cliffs Natural Resources Inc., and Eveleigh Geological Consulting Inc. (EGC). Initial staking was completed in late 2009, with additional claims staked during the winter and spring of 2010.

The claims encompassed areas that had been explored to varying degrees by several companies, including the Nagagami River Prospecting Syndicate, Algoma Ore Properties Ltd., Satellite Metal Mines Limited, Keevil Mining, Cedam Limited, Shell Canada Explorations Limited, East-West Resource Corporation, and Gowest Amalgamated Resources Limited.

The original exploration target was copper-nickel-platinum group element (Cu-Ni-PGE) mineralization. Target selection by EGC was based on:

- Ontario Geological Survey (OGS) airborne magnetic survey data.
- Geological interpretations of regional magnetic anomalies (Stott, 2008).
- Compilation and review of historical geological and geophysical data available through the Ontario Ministry of Northern Development and Mines (MNDM).

Exploration within the James Bay Lowlands had historically been limited due to extensive overburden cover, scarce bedrock exposure, and difficult access conditions. Previous work in the region consisted primarily of airborne and ground geophysical surveys, supplemented by localized diamond drilling programs.

At the time of Zentek Ltd.'s initial public offering in December 2010, ownership of the Albany Project was held 25% by Zentek and 75% by CNRECI under the terms of the 2010 Amended Albany Option and Joint Venture Agreement.

In November 2012, Zentek acquired a 100% interest in the Albany Graphite Project claim block, commonly referred to as Claim Block 4F, comprising 521 mining claims. Subsequently, on April 24, 2023, Zentek announced the transfer of the Albany Graphite Project to its wholly owned subsidiary, Albany Graphite Corp.

The following sections summarize the historical ownership, exploration, development, and production history of Claim Block 4F, based principally on information compiled by Geotech Ltd. (Geotech) (2010) and Carey (2012).

6.2 EXPLORATION AND DEVELOPMENT HISTORY

Historical exploration within the Property area was relatively limited prior to the discovery of the Albany graphite deposit. Exploration was constrained by the presence of thick glacial overburden and Paleozoic limestone cover rocks, which obscure the underlying Archean basement geology. Bedrock exposure is virtually absent across the Property, and exploration targets can generally only be evaluated through drilling.

6.2.1 Summary of Historical Exploration

6.2.1.1 Nagagami River Prospecting Syndicate (1959)

Koulomzine and Brossard Ltd. conducted ground magnetic and electromagnetic (EM) surveys in the Feagan Lake–Pitopiko River Township area. The survey program was terminated prematurely due to spring breakup conditions.

Key results included:

- Identification of three significant magnetic anomalies interpreted as basement geological contacts.
- Recognition of several lenticular EM conductors.
- Interpretation that some conductors, occurring adjacent to a diabase dyke, could represent sulphide-bearing lenses containing base metals.
- Identification of a coincident magnetic and EM anomaly potentially associated with disseminated mineralization.

Four drill holes were recommended; however, no records of follow-up drilling have been located.

6.2.1.2 Algoma Ore Properties Ltd. (1961)

An aeromagnetic survey covering the Nagagami River and Pitopiko Township area identified a distinctive horseshoe-shaped magnetic anomaly. Ground investigations confirmed the anomaly and led to additional exploration programs in subsequent years.

6.2.1.3 Algoma Ore Properties Ltd. (1963)

An airborne magnetometer survey completed by Hunting Survey Corporation outlined two large circular magnetic-low features beneath Paleozoic limestone cover.

Interpretations suggested:

- The anomalies were related to a syenitic-to-gabbroic intrusive complex.
- One anomaly, located near the northern portion of the present-day Property, was interpreted to represent an alkaline intrusive or potential carbonatite system.
- The intrusive complex held potential for niobium (Nb_2O_5) and rare earth element (REE) mineralization.

The company recommended follow-up ground magnetic surveys and diamond drilling.

6.2.1.4 Algoma Ore Properties Ltd. (1964–1967)

Subsequent exploration included:

- Ground magnetometer surveys.
- Additional claim staking.
- Nine diamond drill holes within the broader Nagagami River area, including two holes completed within Claim Block 4F.

Core logging, petrographic studies, scintillometer testing, and limited geochemical sampling were undertaken.

Notable results included:

- Niobium values ranging from 0.02% to 0.04% Nb_2O_5.
- Intersections of coarse-grained syenite containing approximately 3% to 5% magnetite.

Although no economic mineralization was encountered, Algoma concluded that drilling had confirmed the geophysical anomalies and suggested that other portions of the intrusive complex could remain prospective.

6.2.1.5 Shell Canada Explorations Ltd. (1978)

Shell initiated diamond drilling based on previously identified airborne geophysical anomalies.

A single drill hole (7609-78-1) was completed within the current Project area. The drill log records an intersection described as "graphitic syenite breccia" and based on the claim map that was submitted with the drill log it is believed that the hole was drilled on the West Pipe. The drill logs remain available through provincial records; however, no accompanying technical report was submitted.

6.2.1.6 Ontario Geological Survey (1999)

The Ontario Geological Survey released regional aeromagnetic data covering the Hudson Bay and James Bay Lowlands under Geophysical Data Set 1036.

These data provided improved regional geophysical coverage for the Property area.

6.2.1.7 Ontario Geological Survey (2008)

The OGS published Precambrian Geology Map P.3599: Hudson Bay and James Bay Lowlands Region Interpreted from Aeromagnetic Data (Stott, 2008).

The publication provided updated geological interpretations of the regional magnetic data and contributed significantly to subsequent targeting efforts that ultimately led to the discovery of the Albany graphite deposit.

6.3 HISTORICAL DRILLING

The principal historical drill holes completed within the Property area are summarized in Tabel 6.1.

Table 6.1: Albany Project Historical Drilling

Year	Company	Drill Hole ID	NTS2	Datum	UTM-East (m)	UTM-North (m)
1964	Algoma Ore Properties Ltd.	DDH-8-64	42K01	NAD 83	685,792	5,551,132
1964	Algoma Ore Properties Ltd.	DDH-9-64	42K01	NAD 83	685,237	5,550,906
1978	Shell Canada Explorations Ltd.	7609-78-1	42K01	NAD 83	682,954	5,545,616

Notes:

1. Coordinates represent approximate drill collar locations based on assessment reports and claim maps.
2. NTS = National Topographic System.

6.4 HISTORICAL RESOURCE ESTIMATES

No historical MREs have been prepared by previous owners.

6.5 PAST PRODUCTION

No historic mining production has occurred on the Property as of the effective date of this Report.

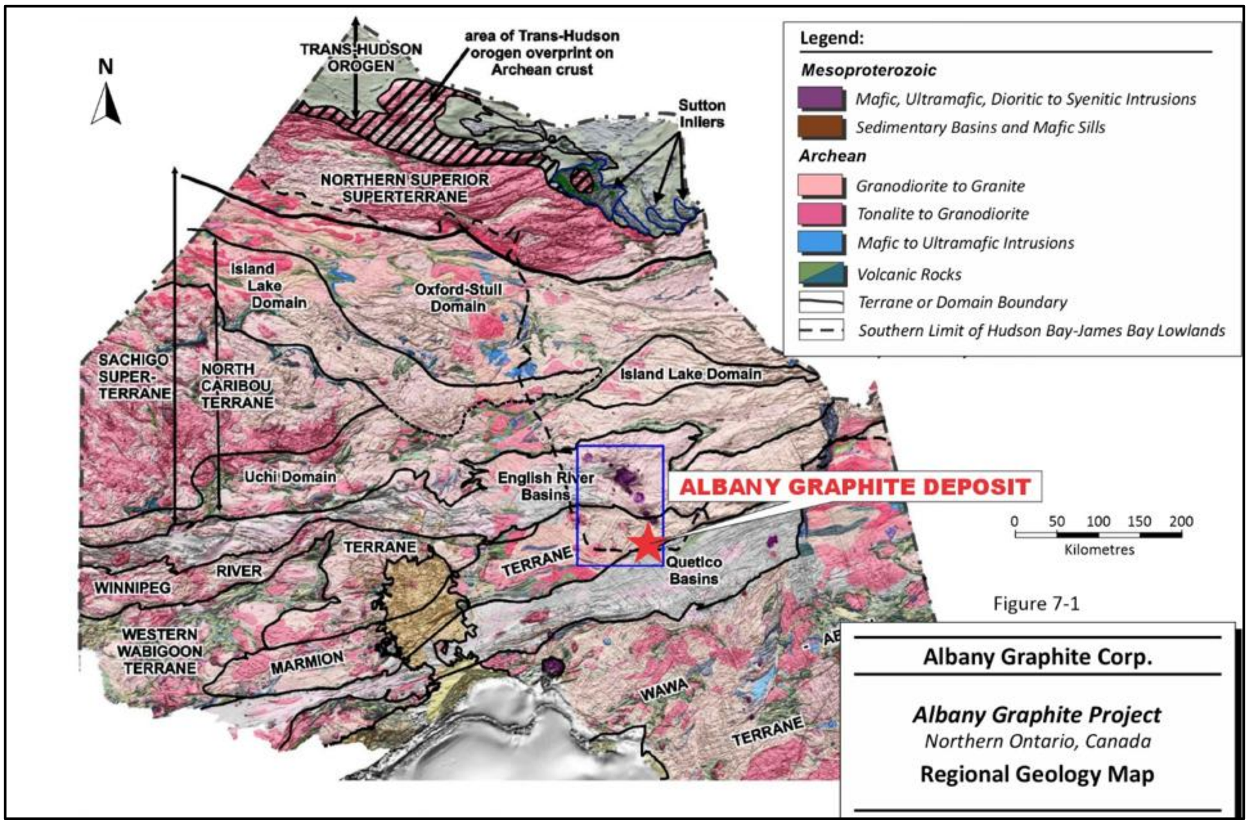
7 GEOLOGICAL SETTING AND MINERALIZATION

The following descriptions have been excerpted from the July 9, 2015, RPA technical report number 2248 entitled "Technical Report on the Preliminary Economic Assessment of the Albany Graphite Project, Northern Ontario, Canada") with minor edits.

7.1 REGIONAL GEOLOGY

The claims were staked based on geological information acquired from OGS Map P3599, Precambrian Geology of the Hudson Bay and James Bay Lowlands Region. Stott et al. (2007) interpreted the regional tectonic subdivisions and mapped the claim blocks as part of the English River Basins, the Marmion Terrane, and the Quetico Basins of the Superior Province of the Canadian Shield (Figure 7.1). Based on the interpretation of Sage (1988), it appears that the Nagagami Alkalic Rock Complex underlies most of the Property.

Figure 7.1: Regional Geology Map - Albany Graphite Project



Source: SLR 2023 after Scott et al., 2007 OGS.

A summary of the major rock units and their distribution within the various subdivisions of the geological provinces as cited in Geotech (2010) are detailed in this section.

The relatively flat-lying Hudson Bay and James Bay Lowlands consist mostly of carbonate rocks of Paleozoic to Mesozoic age. These sedimentary rocks cover a significant portion of the Precambrian rocks of northern Ontario and, therefore, have impeded the understanding of the Precambrian geology and the tectonic framework across this region of Ontario. The region's Precambrian geology is based mainly on available re-processed aeromagnetic data and limited drill hole information. The results provide a general framework of interpreted supracrustal belts, plutonic subdivisions, major faults, and Proterozoic mafic dykes (Figure 7.1).

7.1.1 The Quetico Sub-Province

The Quetico Sub-Province is an east-northeast trending, 10 km to 100 km wide by 1,200 km long belt of variably metamorphosed and deformed clastic metasedimentary rocks and granitoids located in the west-central part of the Superior Province. The metamorphic grade varies from greenschist to amphibolite to local granulite facies. The metasedimentary rocks were deposited before 2,696 Ma. The Quetico intrusions near Atikokan are typically small (<1 km^2) and form sills, plugs, and small stocks composed of a variety of lithologies, mainly wehrlites, clinopyroxenites, hornblendites, monzodiorites, syenites, foidites, and silicocarbonatites. They are locally enriched in Ni-Cu and PGEs (Vaillancourt et al., 2003).

7.1.2 The English River Sub-Province

The English River Sub-Province is an east-trending 30 km to 100 km wide by 650 km long belt of metasedimentary and granitoid rocks located in the west-central Superior Province. The metasedimentary rocks contain detrital zircons as young as 2698 Ma and the granitoid rocks range between 2.65 Ga and 2.70 Ga (Vaillancourt et al., 2003).

7.1.3 Marmion Terrane/Sub-Province

This terrane consists predominately of metamorphosed felsic intrusive rocks. The 3.0 Ga to 2.7 Ga rocks are interpreted as an assemblage of continental fragments. These rocks were once also interpreted as part of the Western Wabigoon and Winnipeg River terranes.

7.1.4 Nagagami Alkalic Rock Complex

Limited data and observations obtained from drill logs and drill core, together with aeromagnetic data, suggest that the Nagagami River Alkalic Rock Complex (NRARC) is composed of two ring-shaped subcomplexes with more mafic rims and more leucocratic cores. Aeromagnetic data interpretation may indicate that the northern subcomplex is cut by the southern subcomplex, indicating the southern subcomplex is younger. The middle-to-late Precambrian diabase dykes, which are characterized by linear northwest-trending aeromagnetic patterns, do not crosscut the aeromagnetic signature of the NRARC. This indicates that the complex is younger than the regional diabase dyke swarm. Sage (1988) concluded that this observation, together with the fresh and unmetamorphosed nature of the rock point to a Late Precambrian age, is equivalent to the dominant period of alkali magmatism in Ontario. Regional structural controls on the emplacement of the subcomplexes have not been unambiguously identified, but the NRARC lies on trend with the extension of the northeast-striking Gravel River Fault.

The dominant rock type is an amphibole-pyroxene syenite which varies from fine to coarse-grained and locally displays a trachytoidal texture. A coarse-grained nepheline-bearing phase appears restricted to the southern subcomplex. A very coarse-grained pegmatitic phase and a minor granite phase have also been identified. Petrographic analysis indicates that the NRARC has strong similarities to the pyroxene-bearing syenites of the Port Coldwell Alkalic Rock Complex.

Based on the fact that the intrusion underwent unsuccessful testing for iron and niobium in 1964 by the Algoma Ore Properties Division of Algoma Steel Corporation, it was previously recommended that future exploration of the complex should be directed towards the type of mineralization found in equivalent syenitic rocks of the Port Coldwell Alkalic Rock Complex.

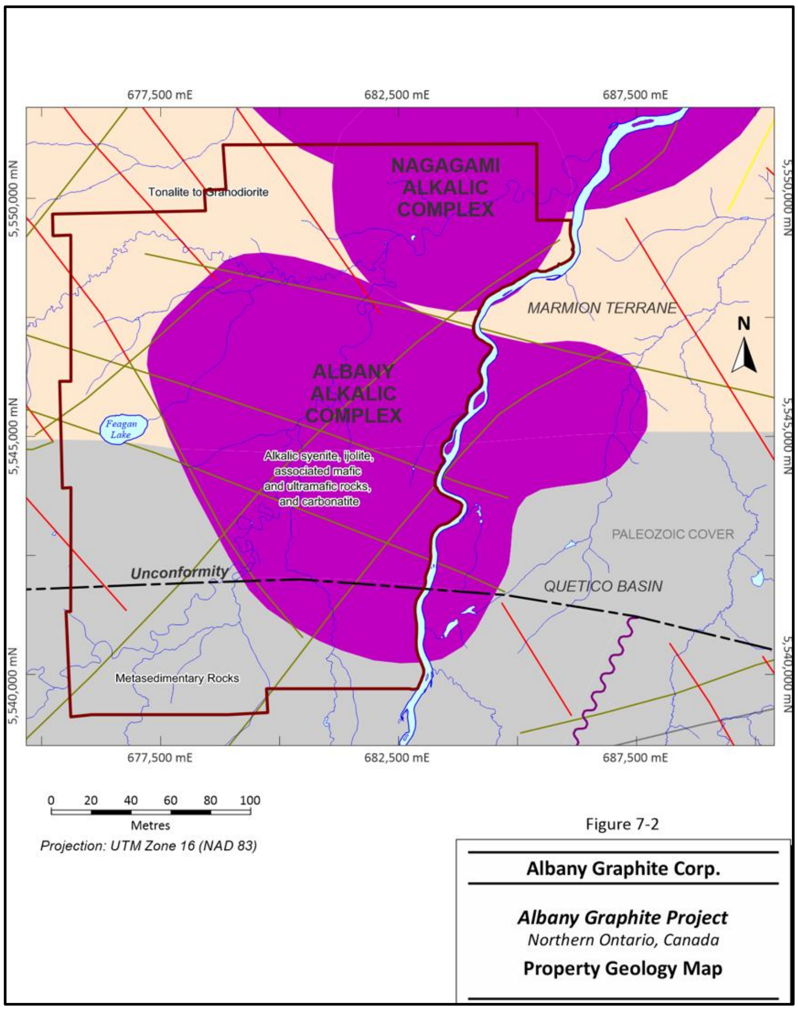
7.1.5 Albany Alkalic Rock Complex

The Albany Alkalic Complex (AAC) (Conly, 2014), which hosts the graphitic breccia pipes, occurs to the south of the two Nagagami Alkalic sub-complexes. This intrusion appears to be cross-cut by the northwest-trending middle-to-late Precambrian diabase dykes suggesting that it predates the dyke swarm. Initial work by Dr. Conly indicates that the AAC "syenite" corresponds to a range of quartz-poor to moderate quartz-bearing felsic rocks that are albite dominant. All drilling by Zentek has focused on the immediate area which hosts the graphite deposit. The limits of the intrusion are based on geophysical interpretation.

7.2 PROPERTY GEOLOGY

The Albany graphite deposit is centred on Claim Block 4F (Figure 7.2). The area is covered by a layer of overburden (ranging from 28 m to 55 m, averaging 44 m) and there are no surface exposures of bedrock. Consequently, no surface geological mapping projects are reported for the area.

Figure 7.2: Property Geology Map



Source: RPA 2015 (after Zenyatta 2013)

7.2.1 Lithology Distribution

Precambrian rocks in the southern section of Claim Block 4F primarily comprise paragneissitic and migmatitic metasedimentary rocks, and mafic rocks together with related intrusive rocks of the Quetico Sub-Province (Stott, 2007). The northern section of Claim Block 4F is underlain by metamorphosed tonalite to granodiorite, foliated to gneissic with minor supracrustal inclusions of the Marmion Terrane/Sub-Province. Both sub-provinces have been intruded with a younger alkalic intrusive suite made up of alkalic syenite, ijolite, and associated mafic and ultramafic rocks and carbonatite (Stott, 2007).

Precambrian basement rocks are unconformably overlain by Paleozoic limestone, and drilling on the property by Zenytek suggests that thicknesses can range from zero metres to greater than fifteen metres. The Albany graphite deposit is hosted within gneissic to unfoliated syenite, granite, diorite, and monzonite (AAC) that are cross-cut by younger dykes, ranging from felsic to mafic in composition. The basement rocks are overprinted by graphite near the margins of the graphite breccia pipes.

A multi-year NSERC-funded research program under the direction of Dr. Andrew Conly investigated the geology and origin of the Albany Graphite Deposit. The research focused on determining the age of mineralization, the source and chemical nature of the graphite-forming fluids, and the mineralogical and geochemical characteristics of the deposit. Zentek provided additional support for the research, which is summarized in Conly (2014a), Conly (2014b, Conly and Moore (2015a) and Conly and Moore (2015b).

7.2.2 Overburden

The Project is on the edge of glacial Lake Barlow-Ojibway, a prehistoric lake formed during the retreat of the last glaciation 8,500 years ago. The former lakebed features varved sediments that present challenges to mining, as encountered at Agrium Inc.’s Kapuskasing Phosphate Mine.

Zentek did not observe any clay while drilling through the overburden.

The Ontario Geological Survey (OGS) carried out field campaigns in the area. Dr. Andy F. Bajc, Ph.D., P.Geo., Senior Science Leader, Quaternary Geology, reports:

“The stratigraphic sequence generally observed along river cuts consists of variable thicknesses (0-11 m) of what are likely marine sands, silts and clays overlying dense, silty to sandy till to river level. Varved sediments as occur in glacial Lake Barlow-Ojibway to the east and south were not observed at any of the sections visited as part of the 2012 or 2014 field campaigns. The underlying till is typically blocky and over consolidated and not prone to landsliding. Paleozoic bedrock was commonly exposed below the till along the Otasawian River to the northwest as well as at a site (2014AFB051) along the Nagagami River and another along the Kabinakagami River near site MR053. Older stratigraphic units of stratified silt, sand, and gravel were occasionally observed beneath the surface till. Given the limited data, I would suggest that field verification of critical sites be undertaken.”

7.3 MINERALIZATION

Preliminary petrography indicates that the graphite-hosting breccias range in composition from diorite to granite and are generally described as "syenite". Graphite occurs both in the matrix, as disseminated crystals, clotted to radiating crystal aggregates and veins and along crystal boundaries, and as small veins within the breccia fragments. In addition to graphite, the matrix consists primarily of quartz, alkali feldspar, and plagioclase feldspar with minor phlogopite and amphibole and trace amounts of pyrite-pyrrhotite and magnetite. Alteration is minor and is most pronounced as a paleo-weathering profile in the upper 20 m of the breccia pipes where bleaching and late, carbonate-filled fractures are common. The stockwork graphitic veins can be several centimetres wide while the veinlets and hairline fractures are millimetre and submillimetre scale. Breccia fragments are dominantly massive to weakly foliated AAC syenite (>95%) with minor to trace chlorite-biotite-rich schist fragments, and mafic to intermediate dyke fragments. Occasional solid graphite fragments and rare altered fragments of unknown origin were also observed. Breccia fragments are angular to subangular to subrounded and range in size from sub-centimetre to approximately one metre, most being between three centimetres and 30 cm. Dyke and graphite fragments range from one centimetre to five centimetres.

8 DEPOSIT TYPES

8.1 DEPOSIT TYPE

As described in the SLR 2013 technical report there are three different processes leading to the formation of economic graphite deposits (Harben and Kuzvart, 1996), which are simplified and summarized as follows:

1. Contact metamorphism of coal deposits. Graphite formed under these conditions is characterized by incomplete structural ordering and crystallization, resulting in low value “amorphous” graphite with its main market in foundry applications.
2. Syngenetic flake graphite deposits. The formation of these deposits involves the alteration of carbonaceous organic matter to graphite during regional metamorphism.
3. Epigenetic graphite deposits. The formation of these deposits is associated with migrating supercritical carbon-bearing (C-O-H) fluids or fluid-rich magmas. The formation of the carbon-bearing fluids is most often a consequence of high temperature (granulite facies) metamorphism, but magmatic degassing can also produce graphite.

The Albany graphite deposit is a globally unique example of an epigenetic graphite deposit in which a large volume of highly crystalline, fluid-deposited graphite occurs within an igneous host. The deposit is interpreted as a vent pipe breccia that formed from CO_2-rich fluids that evolved due to pressure-related degassing of syenites of the AAC and is described in the following subsections (Conly, 2014a; Conly, 2014b; Conly and Moore, 2015a; Conly and Moore, 2015b).

8.2 ORIGIN/GENETIC MODEL

The Albany graphite deposit model is shown in Figure 8.1. A description of the various stages during the formation of the deposit is provided in this section.

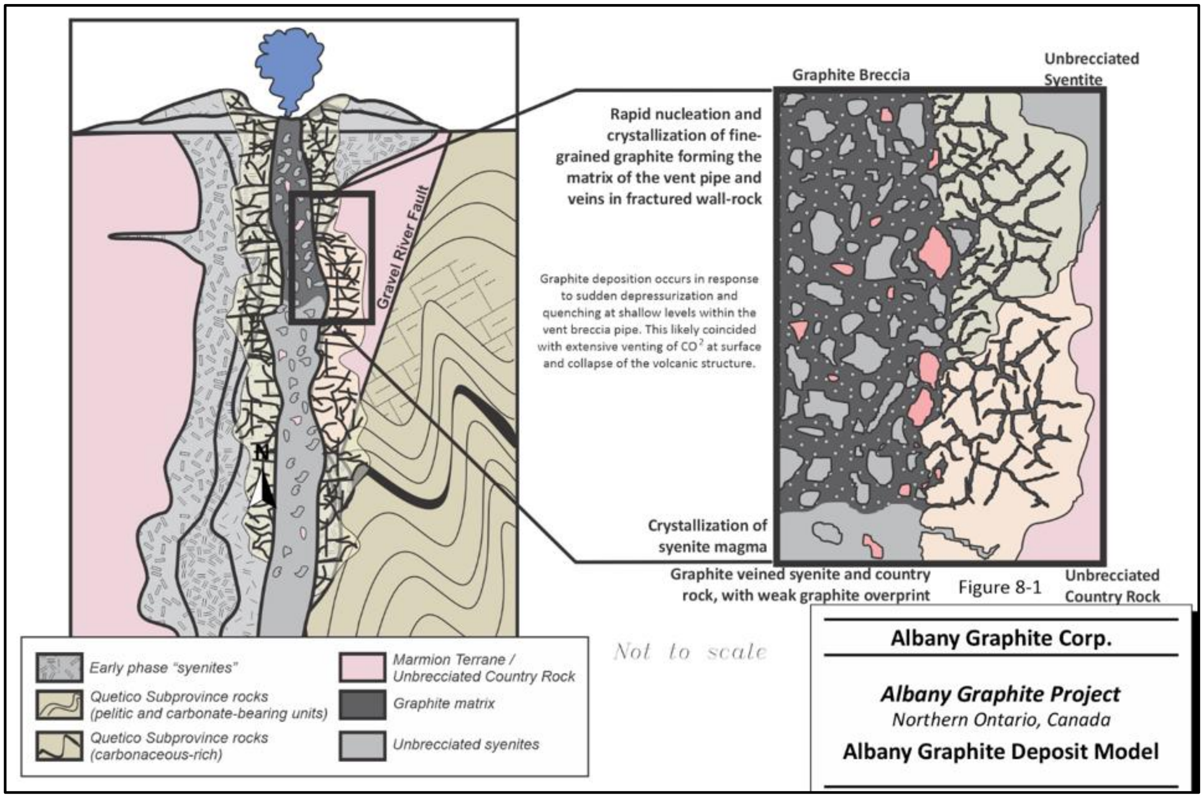
8.2.1 Stage 1 – Emplacement of Host Syenites Forming the Albany Alkalic Complex

Emplacement of the Albany breccia pipes is estimated to be Mesoproterozoic to Neoproterozoic, based on crosscutting relationship with the Paleoproterozoic Matachewan and Hearst quartz diabase dyke swarms and Mesoproterozoic Sudbury olivine tholeiite dyke swarm. Magma emplacement may also be structurally controlled by the Gravel River Fault, which in part defines the southern margin AAC and separates the Marmion Terrane (to the north) and the Quetico Sub-Province (to the south).

8.2.2 Stage 2 – Fluid Generation and Breccia Pipe Development

The two breccia pipes formed as a result of a degassing magma, resulting in segregation of a CO_2-bearing fluid, occurred in response to depressurization of the magma at mid to shallow crustal levels, and accumulation of CO_2 at the top of the ascending dyke. Possible sources for the carbon include: i) generation of primary CO_2-rich syenite; and ii) assimilation of carbonaceous Quetico metasedimentary rock by syenitic magmas. The co-existence of angular to rounded breccia fragments is evidence of mixing of juvenile fragments with earlier entrained material, which has been subject to a greater extent of mechanical erosion due to rapid and turbulent up flow of the CO_2-fluid.

Figure 8.1: Albany Graphite Deposit Model



Source: SLR, 2023 (after Conly, 2012a).

8.2.3 Stage 3 – Graphite Deposition

Graphite deposition likely occurred rapidly due to the sudden depressurization and quenching (from supercritical fluid to gas) of the CO_2-fluid which, in turn, is due to the dyke head breaking the surface and venting CO_2 gas. Surface venting is evidenced from the extent of the graphite breccias to the unconformity with the overlying Palaeozoic rock. Such rapid depressurization would have also imploded the walls of the vent complex; it is consistent with the higher proportion of angular syenite fragments relative to rounded syenite fragments and fragments of Archean country rock, and with localized production of xenoliths with minimal transport. Rapid deposition of graphite inferred from its fine-crystal size (laths typically 100 µm to 300 µm long) and high abundances of discrete crystals and fine crystal aggregates. Coinciding with the changes in pressure, a rapid decrease in temperature would have inhibited growth of coarser crystalline graphite and led to the crystallizing of the degassing syenite magma at depth.

8.2.4 Stage 4 – Post-Mineralization Magmatic and Erosional Events

Post-mineralization magmatic and erosional events include the following (listed in temporal succession):

- Emplacement of late-stage barren olivine-aegirine syenite sills.
- Intrusion of aplite and other felsic dykes.
- Erosion of upper levels of the AAC and supergene alteration.
- Deposition of Palaeozoic carbonate rocks and Quaternary glacial sediments.

8.3 EXPLORATION CONCEPT

Graphite deposits are characteristically conductive and are easily detectable using electrical geophysical techniques. The electrical techniques commonly in use are electrical resistivity (ERI) and induced polarization (IP). Resistivity surveys measure the sub-surface's ability to conduct electrical current, helping to identify conductive graphite layers, while IP can detect charge accumulation associated with mineralization. These methods are particularly effective for high-resolution, localized investigations, though their spatial coverage is limited and they may require detailed ground surveys for accurate interpretation.

Electromagnetic (EM) surveys, including airborne electromagnetic (AEM), are highly effective for regional graphite exploration. EM methods measure the subsurface response to induced electromagnetic fields, allowing detection of conductive graphite over large areas.

9 EXPLORATION

9.1 INTRODUCTION/OVERVIEW

Zentek (now AGC) commenced exploration on the Albany Project claim blocks in 2010. All prior exploration conducted by other companies and government agencies is summarized in Section 6. Zentek was targeting nickel, copper, and PGM on the claim blocks, prior to the discovery of extensive graphite mineralization on Claim Block 4F.

9.2 2010 CAMPAIGN

As part of a staged approach, preliminary exploration began in March 2010 with a helicopter borne versatile time domain electromagnetic (VTEM) and aeromagnetic (cesium magnetometer) geophysical survey flown by Geotech Ltd. (Geotech) of Aurora, Ontario, over the 28 claim blocks. Ancillary equipment included a Global Positioning System (GPS) navigation system and a radar altimeter.

The survey operations were based out of the Town of Hearst. In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase. Preliminary and final data processing, including generation of final digital data and map products, was undertaken from the office of Geotech in Aurora, Ontario.

The VTEM system has the highest signal to noise ratio of any AEM system resulting in the deepest possible depth of investigation. This technology enabled a more effective means to explore the Albany claim blocks, where thick glacial overburden and iron-deficient shallow marine carbonate/clastic sediments cover prospective geological and structural settings within the underlying Archean basement terrane. Furthermore, processing of the VTEM data allowed for the derivation of multiple products used collectively in identifying priority targets for follow-up work.

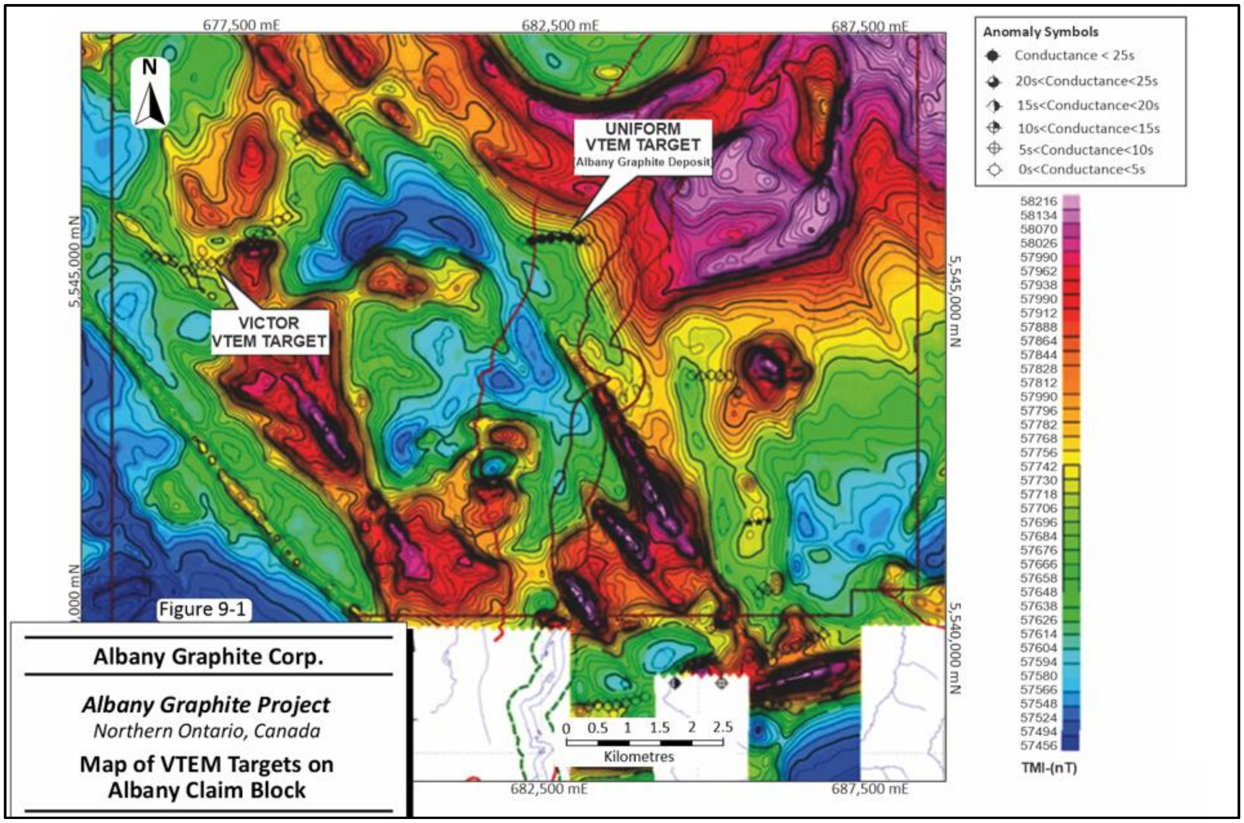
The field portion of the survey commenced on March 17, 2010, and ended on May 19, 2010, with lines flown in a north-south direction using 150 m line spacing. The survey covered an area of 2,485 km^2 and totalled approximately 9,450 line-km over 28 claim blocks. A final survey report was prepared by Geotech (Geotech, 2010) describing the procedures for data acquisition, processing, final image presentation, and the specifications for the digital data set. EM time-constant (Tau) and magnetic derivative analyses were performed and Geotech provided Zentek with a list of EM anomalies.

Results of this survey were used to identify several high-priority geophysical EM targets for follow-up drilling, commencing in 2011. A total of 22 EM and magnetic targets were identified for follow-up modelling and drill testing on the Albany Project, two of which (Victor and Uniform) were situated on the Project (Figure 9.1). Drilling at the Uniform target led to the discovery of the Albany graphite deposit. Inversion modelling analyses, both 2D and 3D, and magnetic derivative analysis were recommended prior to ground follow-up and drill testing.

9.3 2011 – 2022 CAMPAIGN

Excluding drilling, which is described in Section 10, no exploration work was conducted on the Property in 2011 to 2012.

Figure 9.1: Map of VTEM Targets on Albany Claim Block



Source: SLR 2023 (after Geotech Ltd., 2010)

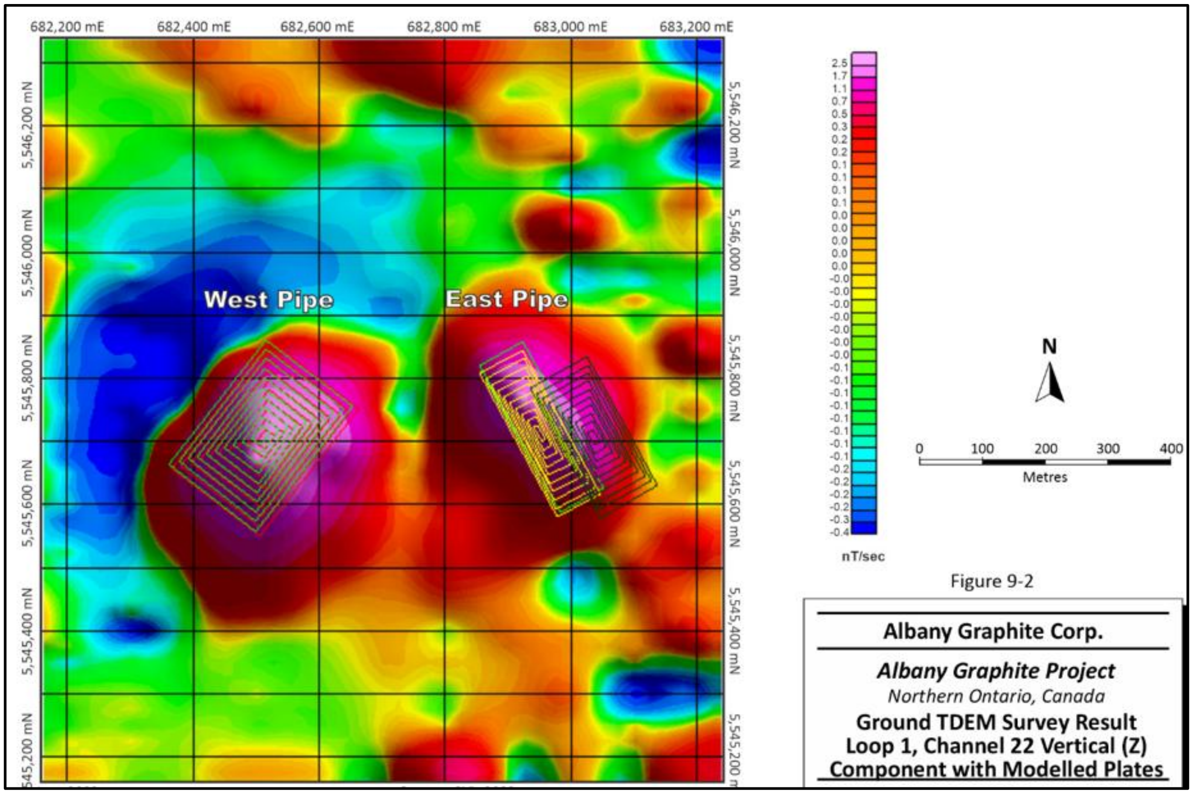
9.4 2013 CAMPAIGN

Crone Geophysics & Exploration Ltd. (Crone) was contracted by Zentek to perform surface time-domain electromagnetic (TDEM) surveys on the Project during February and March 2013. Crone targeted the drill-confirmed East and West graphitic breccia pipes that were initially identified in Geotech's 2010 airborne VTEM survey. Crone anticipated that surface TDEM surveys could be influenced by the top, presumably flat edge of the pipe as well as any of the vertical faces if the pipe had a significant depth extent. The survey design incorporated both an in-loop mode (Loop 1) to couple with the top, flat edge of the body and an out-of-loop mode (Loop 2) to couple with the steeply dipping edges (Crone, 2013).

The processed data from Loop 1 showed two separate isolated response patterns, apparently the result of two separate breccia pipes (Figure 9.2). The response pattern of the in-loop surveys is dominated by the top edge of these conductive sources and in the modelling results, excellent fits were obtained with the assumption of these being due to thin units. Bodies of varying thicknesses were utilized as well, but gave little appreciable difference in the modelling studies, suggesting the response patterns were indeed dominated by the relatively flat-lying tops of these bodies.

Overall, the modelled plates from Loop 1 and Loop 2 provided a robust model for targeting purposes. After drilling the first few holes, it was concluded that the channel 22 contoured plan map of the TDEM data provided a close correspondence to the actual outline of the breccia pipes for drill planning purposes (Legault et al., 2015).

Figure 9.2: Map of Ground TDEM Survey Results



Source: SLR 2023 (after Crone Geophysics & Exploration Ltd., 2013).

Subsequent to Loop 1, Loop 2 was positioned with the loop located just north of the conductive features/breccia pipe identified from TDEM results. This loop was positioned to provide optimal coupling with any near vertical or steeply dipping edges. As with Loop 1, the Loop 2 results suggest the presence of two isolated bodies.

Crone completed numerical modelling on Loop 1 and 2 datasets. The results provided excellent fits with the observed data.

The TDEM ground survey appears to have outlined the lateral extent of two graphite breccia pipes (inferred from previous drilling results), although the boundary of the model is considered roughly approximate. The Western anomalous zone (West Pipe) is characterized by a rough circular response pattern with a slight elongation in the northeast-southwest direction and the Eastern anomalous zone (East Pipe) is characterized by an ovoid shaped source with its long axis oriented in a NNW–SSE direction.

10 DRILLING

10.1 OVERVIEW

The drilling completed on the Property is divided into exploration and delineation drilling, and bulk sampling/metallurgical drilling. All exploration and delineation drilling at the Property was completed via diamond drilling from 2011 to 2013. The bulk sampling/metallurgical drilling was performed by diamond drilling in 2013 and reverse circulation drilling in 2019.

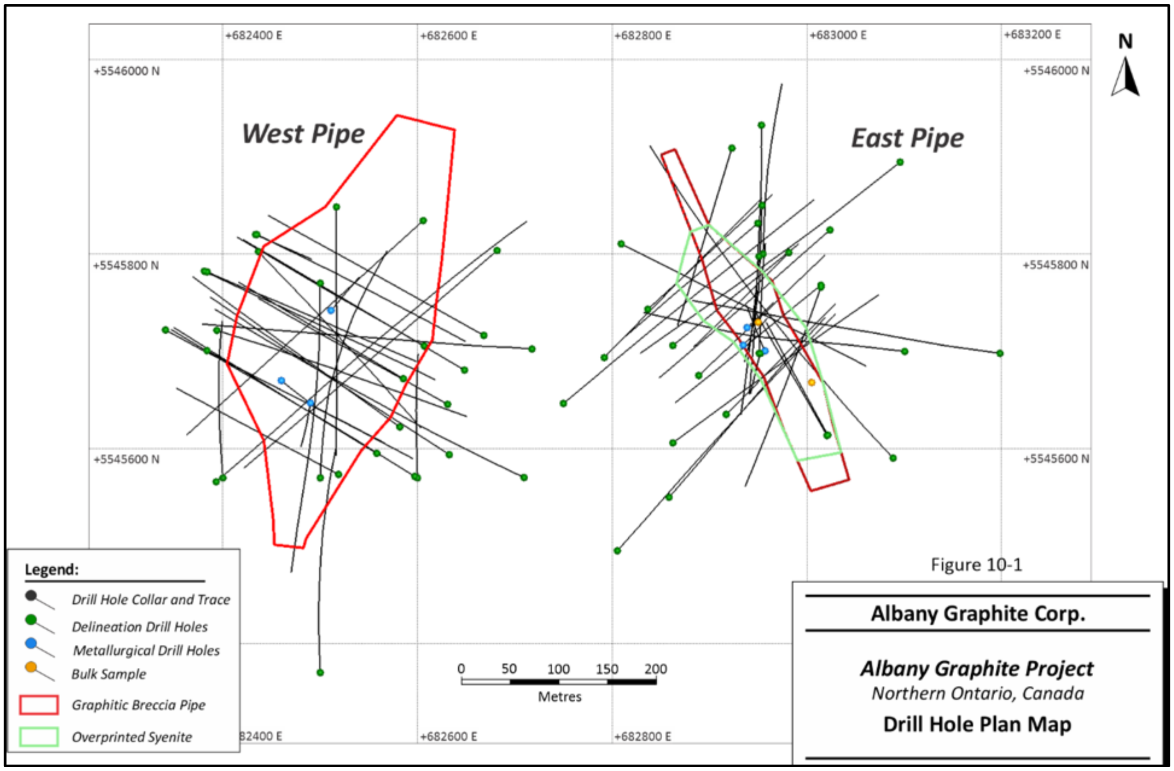
10.2 EXPLORATION/DELINEATION DRILLING (2011 – 2013)

The exploration and delineation drilling completed on the Albany deposit to date is summarized in Table 10.1. The drill hole collar locations and hole traces are shown in Figure 10.1. Drilling was contracted to Chibougamau Diamond Drilling Ltd. (Chibougamau) of Chibougamau, Quebec, Canada.

Table 10.1: Summary of Drill Core Drilling on the Albany Deposit to 2026

Pipe	Year	No. of Holes	Total Length (m)	No. of Assay Samples
East	2011	0	0	0
	2012	4	1,295	584
	2013	27	10,968	9132
	Total	**31**	**12,263**	**9,716**
West	2011	1	543	380
	2012	4	1,690	804
	2013	27	11,495	9,402
	Total	**32**	**13,728**	**10,586**

Figure 10.1: Albany Drill Hole Plan Map



Source: SLR 2023.

10.2.1 Procedures

Diamond drill holes were collared using NQ (47.6 mm core diameter) equipment for the 57 resource drill holes and HQ (63.5 mm core diameter) for the other six drill holes which served a dual purpose for the resource and metallurgical test samples. Most collar locations were surveyed using a Reflex North Finder Azimuth Pointing System (APS) and reported in the coordinate system UTM Zone 16 NAD 83. The orientation of the drill collar was measured using the APS and downhole orientations were monitored using a Reflex multi-shot instrument with most readings taken at three metre intervals.

The Zentek project geologist was at the drill to end each hole. Once the hole was completed, all casings were left in place, capped, and the collar was identified with labelled pickets. Drill core was delivered via helicopter to the core shack twice daily at crew change.

At the West Pipe, most holes we drilled to either the northwest or southeast, with dips ranging from -50° to -75°. Drill sections were spaced at 40 m to 50 m along strike, with intercepts on each section averaging 70 m apart down dip. At the East Pipe, most holes were drilled to either the northeast or southwest, with dips ranging from -48° to -78°. Drill sections were spaced at 40 m to 50 m along strike, with intercepts on each section averaging 60 m apart down dip. Holes drilled for metallurgical purposes, on both the East and West pipes, were angled at -85°. Drill hole recoveries are mostly greater than 99%. This was confirmed by Micon's QP during the site visit drill core inspections.

10.2.2 Drill Hole Targeting Results and Interpretation

All holes drilled in the deposit area intersected graphitic carbon (Cg) mineralization. A list of select drill hole intercepts are listed in Table 10.2. The relationship between core intersection length and true thickness is discernible only via 3D resource modelling method due to the subvertical nature of the deposit. A detailed description of the grade, thickness, depth, and general geometry of the pipes is provided in Section 14 under Geological Interpretation.

In summary, the drill holes delineated two discrete bodies associated with the EM anomalies: the West Pipe and the East Pipe. The latter drilling in 2013 helped in refining and constraining both pipes.

Since 2013, there has not been further drilling related to exploration/delineation.

Table 10.2: Albany Graphite Project Select Drill Hole Intersections

Pipe	Hole ID	From (m)	To (m)	Length (m)	Grade Cg%)
West	Z13-4F39	63.22	294.00	230.78	3.63
	Z13-4F41	64.05	304.90	240.85	3.15
	Z13-4F50	80.36	239.71	159.35	3.59
	Z13-4F55	67.87	264.15	196.28	2.81
	Z13-4F46	72.01	296.00	223.99	2.35
	Z13-4F32	115.00	302.97	187.97	2.76
	Z13-4F57	106.80	345.00	238.20	2.11
	Z13-4F30	62.77	198.85	136.08	3.33
	Z13-4F40	82.00	234.00	152.00	2.97
	Z13-4F49	64.00	203.64	139.64	3.11
	Z13-4F26	100.57	226.07	125.50	3.32
	Z13-4F54	64.82	281.00	216.18	1.80
	Z13-4F34	166.00	306.15	140.15	2.54
	Z13-4F29	59.90	186.85	126.95	2.69
	Z13-4F33	155.62	320.23	164.61	1.93
	Z11-4F1	329.90	542.92	213.02	1.47
	Z13-4FM04	46.78	465.00	418.22	4.05
	Z13-4FM05	49.19	448.50	399.31	2.02
	Z13-4FM06	50.23	489.32	439.10	2.28
East	Z13-4F45	55.48	330.25	274.77	5.85
	Z13-4F10	48.34	341.56	293.22	5.37
	Z13-4FM03	46.78	307.00	260.22	5.36
	Z13-4FM01	45.59	304.33	258.74	5.40
	Z13-4FM02	48.97	301.64	252.67	5.27
	Z13-4F43	62.06	231.00	168.94	6.98
	Z12-4F5	47.82	214.30	166.48	6.44
	Z13-4F13	147.53	315.00	167.47	5.57
	Z13-4F14	185.85	374.75	188.90	4.64
	Z12-4F9	168.60	326.49	157.89	5.14
	Z13-4F28	94.59	209.80	115.21	6.93
	Z13-4F12	123.89	240.20	116.31	6.39
	Z13-4F22	90.10	187.30	97.20	6.49
	Z13-4F11	395.09	596.04	200.95	3.00
	Z13-4F25	61.76	164.36	102.60	5.48
	Z13-4F15	172.00	256.74	84.74	6.48
	Z13-4FM01	45.59	512.22	466.63	4.45
	Z13-4FM02	512.22	525.34	13.12	0.04
	Z19-4FM07	44.81	157.89	113.08	6.42
	Z19-4FM08	44.81	134.11	89.31	5.92

10.3 BULK SAMPLING-METALLURGICAL DRILLING (2019)

Zentek completed a bulk sample drill program on the Project in 2019 to provide additional information to support the grade and continuity of the East Pipe and metallurgical and product development testwork. Zentek contracted the drill program to Les Forages LBM Inc., and the program provided a 111-t bulk sample from two 24-inch percussive reverse circulation drill (RCD) holes.

A total of six bulk sample holes, each 300 m in length, were planned for the 2019 program with five on the East Pipe and one on the West Pipe; however, the drill encountered a water-filled fracture system which drastically slowed the progress of the drill and only two holes were partially completed (Z19-4FM07 and Z19-4FM08). A total of 123 samples were submitted for assay (graphitic carbon, Cg%) of which six were field duplicate samples, eight were blanks, and 13 were Zentek's Certified Reference Material (CRM or standards). A summary of the drill hole intercepts used in the metallurgical tests are listed in Table 10.3.

Table 10.3: Albany Graphite Project Select Bulk Sample Drill Hole Intersections

Pipe	Hole ID	From (m)	To (m)	Length (m)	Grade (Cg%)
East	Z19-4FM07	44.81	157.89	113.08	6.42
East	Z19-4FM08	44.81	134.11	89.31	5.92

Since 2019, there has not been further drilling related to metallurgical testwork.

10.4 QP OPINION ON THE DRILLING CAMPAIGNS AND RESULTS

Micon's QP has reviewed all drilling campaigns and analysed all the drilling results, and has established that there are no drilling, sampling or recovery factors that could materially impact the accuracy and reliability of the analytical results and, hence, the resource database. Core recoveries of >95% were confirmed during the site visit.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 SAMPLE PREPARATION/QUALITY CONTROL MEASURES

11.1.1 Sample Preparation

All of the samples collected from the Albany deposit are from diamond drill core. The drill core is cut/split longitudinally into symmetrical halves prior to sampling using a diamond saw; one half is taken as the sample for laboratory analysis, and the other half is retained for future reference. The drill core samples are typically collected at 1 m intervals; however, where warranted, sample lengths are varied based on visible mineralization, lithological, alteration and mineralogical changes.

Once the sampling was completed, both the sampled and unsampled core was stored sequentially in core racks at AGC's core handling facility.

11.1.2 Quality Control Measures

Quality Assurance (QA) consists of evidence to demonstrate that the assay data has precision and accuracy within generally accepted limits for the sampling and analytical method(s) used to have confidence in future resource estimations. Quality Control (QC) consists of procedures used to ensure that an adequate level of quality is maintained in the process of sampling, preparing, and assaying the exploration drilling samples. In general, QA/QC programs are designed to prevent or detect contamination and allow assaying (analytical) precision (repeatability) and accuracy to be quantified. In addition, a QA/QC program can disclose the overall sampling – assaying variability of the sampling method itself. The QA/QC samples comprise Certified Reference Materials (CRMs) representing low, medium, and high-grade mineralization; duplicates and repeats.

The quality control measures employed by Zentek are as follow:

- Insertion of 1 CRM in 18 samples.
- Insertion of 1 certified blank in 18 samples.
- Insertion of 1 pulp check sample in 35 samples.
- Submission of duplicate samples: quarter drill core (94), coarse rejects (1,041) and pulp (1,245).

The QA/QC results are discussed in Section 11.5.

11.2 SAMPLE PACKAGING AND SECURITY

All activities pertaining to sampling and insertion of control samples, were conducted under the supervision of the Zentek project geologist. There was no other action taken at site; thus, no aspect of the sample preparation for analysis was conducted by an employee, officer, director or associate of the issuer.

On site, samples (including QA/QC samples) were individually sealed in polymerization bags and consolidated into sample batches in rice sacks which were sealed and uniquely numbered with security tags to control sample tampering. The sample batches were then transported to the ALS facility in Thunder Bay, Ontario, by Zentek company employees. Upon receipt, laboratory personnel checked to ensure that no seal had been tampered with and then acknowledge receipt of samples in good order via telephone/email. No samples were reported tampered with from 2011 through to 2023.

11.3 DETAILS OF LABORATORIES USED

The primary laboratory used for sample preparation and assaying for samples collected is ALS Group of Laboratories and is independent of Zentek.

The management system of the ALS Group of laboratories is ISO 9001:2015 accredited by the Standards Council of Canada for certain testing procedures, including the methods used to assay samples submitted from the Albany Project. ALS participates in international proficiency tests such as those managed by CANMET and Geostats Pty. Ltd.

Zentek used ISO/IEC 17025 accredited SGS in Lakefield, Ontario, as the secondary laboratory.

11.4 LABORATORY SAMPLE PREPARATION AND ANALYSES

11.4.1 Sample Preparation

ALS received the samples, verified them against the shipping documents, and logged them into their tracking system.

Preparation was carried out under ALS protocol PREP-31B. Each bagged core sample was dried, crushed to better than 70% passing 2 mm, and a 1,000 g split of the crushed material was pulverized to better than 85% passing 75 µm for assaying. Samples from the high-grade graphite breccia were noted on the sample submittal sheet and ALS cleaned the crushers and pulverizers with barren material after every sample to avoid contamination. Prior to June 3, 2013, ALS shipped the sample pulps to their laboratory in Brisbane, Australia, for assay. After June 3, 2013, the sample pulps were shipped to the ALS laboratory in North Vancouver, British Columbia, for assay.

11.4.2 Sample Analysis

Samples were analyzed for graphitic carbon (Cg) using ALS protocol C-IR18. A 0.1 g sample was leached with dilute hydrochloric acid to remove inorganic carbon (carbonate). After filtering, washing, and drying, the remaining sample residue was roasted at 425°C to remove any organic carbon. The roasted residue was finally analyzed for graphitic carbon using a high temperature LECO furnace with infra-red (IR) detection. Sulphur dioxide released from the sample was also measured by IR detection and the total sulphur (S) result was provided following ALS protocol S-IR 08.

The drill core samples taken in 2011 and 2012 from holes Z11-4F1, Z12-4F2, and Z12-4F3 were shipped to Activation Laboratories Ltd. (Actlabs), an independent laboratory in Thunder Bay, for preparation and analysis for total carbon by combustion and IR analysis (Actlabs protocol 4F-C). In 2013, the sample pulps, some reject material, and split core were re-assayed by ALS for graphitic carbon and sulphur, and the database was updated accordingly.

11.5 QUALITY ASSURANCE AND QUALITY CONTROL PROTOCOLS AND RESULTS OF PROGRAMS

11.5.1 Overview of Protocols

11.5.1.1 CRMs

Zentek prepared custom in-house standards using graphite mineralized material from the 2012 drill program. Four different custom CRMs were prepared by CDN Resource Laboratories Ltd. in Langley, British Columbia and certified for both graphitic carbon and sulphur: ZEN-1, ZEN-2, ZEN-3, and ZEN-4. The CRMs details are shown in Table 11.1.

Table 11.1: Albany Graphite Project CRMs Details

CRM ID	Cg (%)		S (%)	
	Mean	SD	Mean	SD
ZEN-1	0.91	0.045	0.316	0.025
ZEN-2	3.13	0.125	0.374	0.018
ZEN-3	7.42	0.415	0.305	0.017
ZEN-4	14.12	0.99	0.306	0.016

A QC failure for a CRM was defined as an assay that fell outside three standard deviations (±3SD) or ±10% of the expected value. The CRM assay results are illustrated in Figure 11.1 and data are summarized in Table 11.2.

11.5.1.2 Blanks

Contamination and sample numbering errors are assessed through blank samples, on which the presence of the elements undergoing analysis has been confirmed to be below the corresponding detection limit. A significant level of contamination is identified when the blank sample yields values exceeding 0.2% Cg, which is ten times detection limit of 0.02% Cg. The matrix of the blank sample should be similar to the matrix of the material being routinely analyzed.

A blank consisting of coarse-grained granite was purchased from Analytical Solutions Ltd., Toronto, Ontario.

11.5.2 Results of QA/QC Programs

11.5.2.1 CRMs

A total of 1,177 CRMs were inserted with the regular 20,728 regular drill core samples. Overall, the average results are generally within ±10% or ±3SD and the QPs consider the CRM results acceptable. The CRM assay results are presented in Figure 11.1.

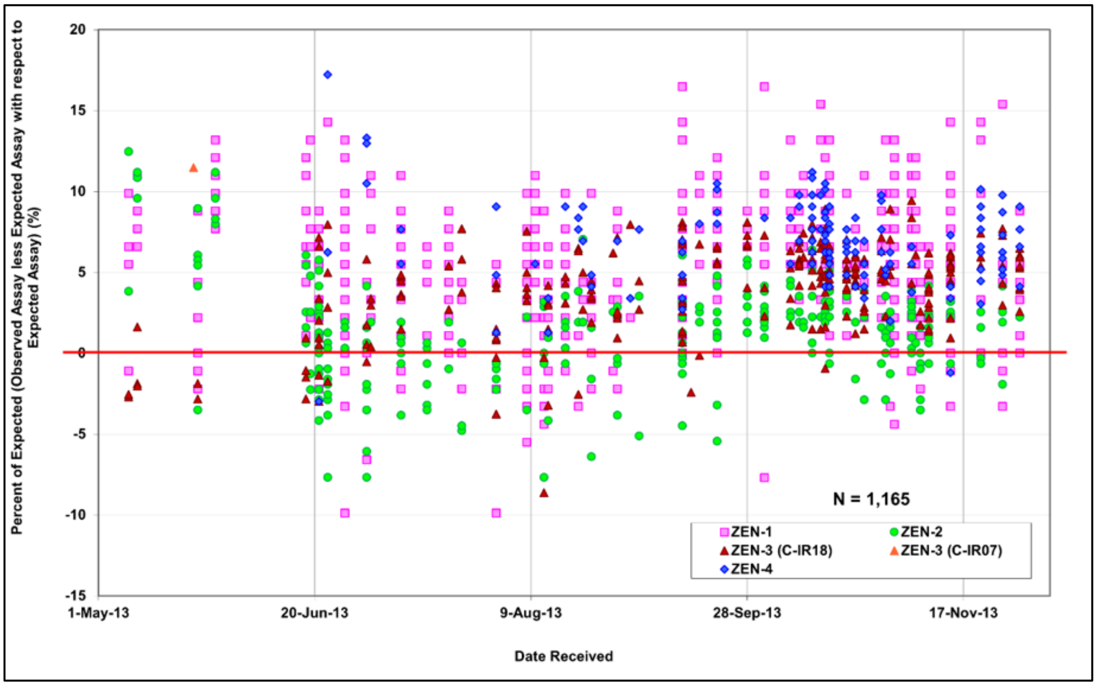
11.5.2.2 Blanks

A total of 1,147 blanks were submitted with the 20,728 regular drill core assay samples for an insertion rate of about 5.5%. Blank assay results are plotted in Figure 11.2. Based on these results, there is no evidence of systematic sample contamination.

11.5.2.3 Duplicate Samples

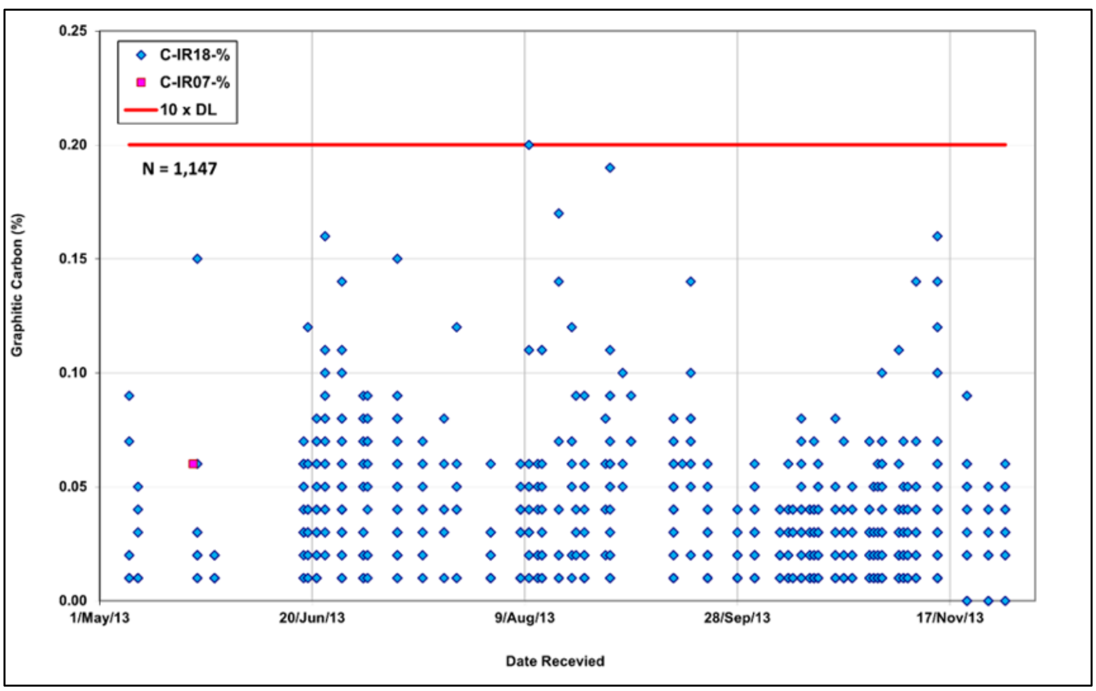
Laboratory reproducibility of assays on the same pulp and at the same laboratory fall within the expected ranges. Overall, the precision for the field, reject, and pulp duplicates is satisfactory. Most duplicates are well within ±10% to ±20%. The best match is attained on pulp duplicates as shown in Figure 11.3.

Figure 11.1: CRM Results for the Albany Drill Hole Programs



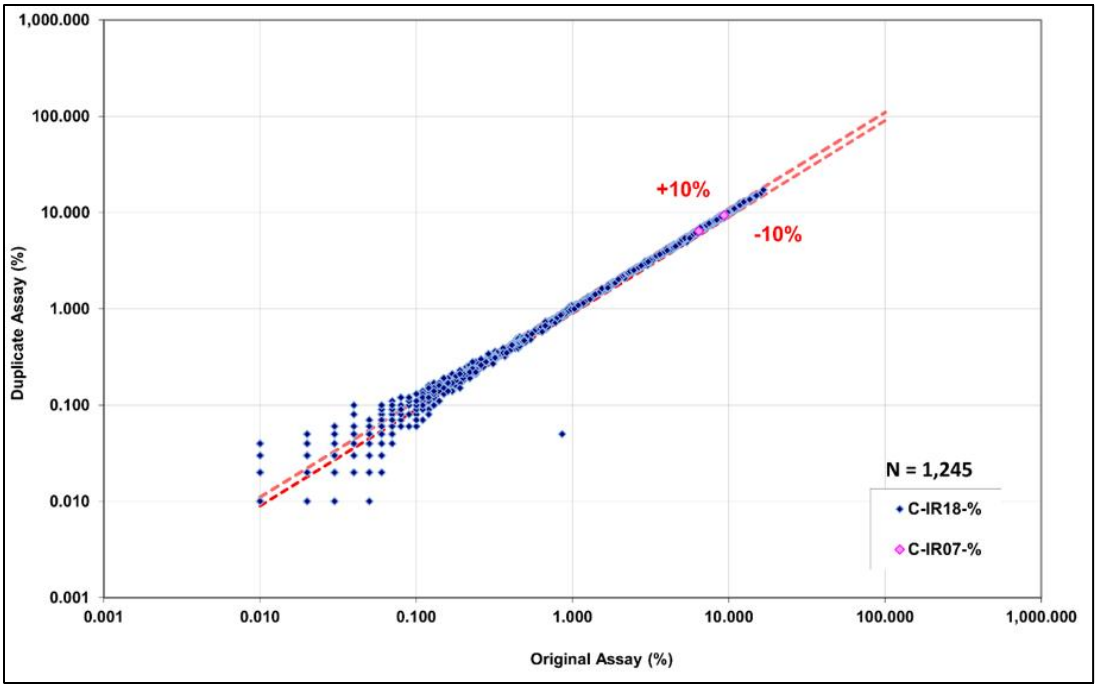
Source: Micon, 2026

Figure 11.2: Albany Project Blank Control Sample Results



Source: Micon, 2026

Figure 11.3: Scatter Plot of Graphitic Carbon Pulp Duplicates



Source: Micon, 2026

11.5.2.4 Assay Check Samples

The check assays result generally indicate a satisfactory match between the original and the check assays within an acceptable range of 10% to 20% difference. The best match is attained when pulp assay splits are used as demonstrated in the scatter plot in Figure 11.3.

11.6 MICON QP OPINION AND COMMENTS

Micon QP considers the sample preparation, security, and analytical procedures to be adequate to ensure the credibility of the analytical results used for mineral resource estimation. The QA/QC protocols are comprehensive and in line with the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM) 2019 Best Practice Guidelines; they include the use of CRMs, duplicates, and repeat analyses at an umpire laboratory. All of these protocols are complimentary in ensuring the accuracy and integrity of data used in the MRE. The monitoring of the laboratory's performance on a real time basis ensures that corrective measures, if needed, are taken at the relevant time and gives confidence in the validity of the final certified assay data.

Following a thorough review of the QA/QC results plus the accompanying Quality Control Reports from Issuers, the Micon QP concludes that the data provided by the Issuer and laboratories is adequately reliable for the purposes of mineral resource estimation.

12 DATA VERIFICATION

12.1 INTRODUCTION

In addition to holding discussions/interviews with the Company personnel responsible for the exploration/drilling on the Property, the steps/procedures taken by the Micon QPs to verify the data/information in this Technical Report included:

- Site visit.
- Review of QA/QC protocols and results.
- Review/validation of the MRE database.

12.2 SITE VISIT

The Micon QPs conducted a site visit on June 15, 2026. The site visit included an aerial inspection/tour of the Project site, and a detailed review of drill core in addition to the verification of the 2019 bulk sample drill hole locations.

12.2.1 Aerial Inspection

Ordinarily, a ground truthing exercise would have been conducted during the site visit. However, at the time of the visit, the extremely wet conditions encountered at the time created an environment that was that was effectively impassable, even the most experienced field consultants. The deposit area is situated within a large, treed fen and swamp complex (Figure 12.1), which was still extensively covered by surface water. As a result, any attempt to traverse the Property on foot would have been both arduous and potentially hazardous, effectively leaving the alternative of using the helicopter as the only practical means of inspecting the exploration site.

A helicopter chartered by the Company enabled the QPs to verify several drill collar positions, bulk sample sites, and the general infrastructural setting i.e., the Project area designated for mining and the associated infrastructure.

Figure 12.1: Site Visit Photograph Illustrating Site Conditions (Aerial View from Helicopter)

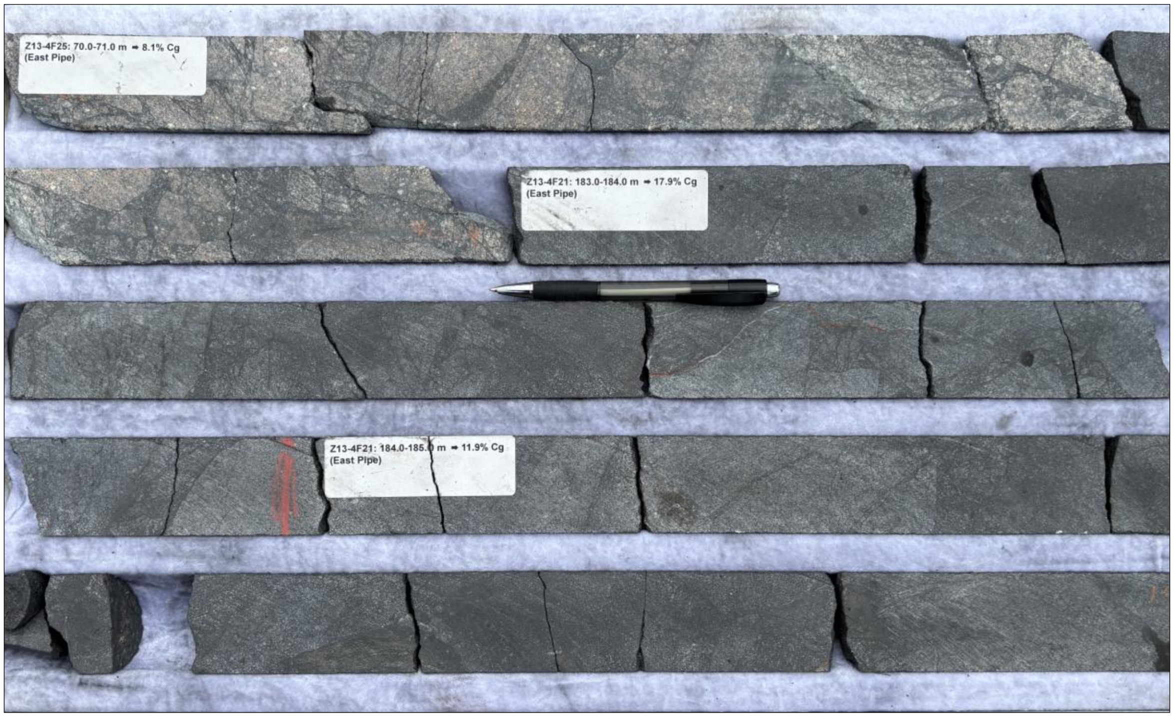
Source: Micon, 2026.

12.2.2 Drill Core Review

On March 15, 2018, a Micon QP visited Zentek's (formerly Zenyatta Ventures Ltd.) office and drill core storage facility in Thunder Bay, Ontario. During the visit, company personnel provided a presentation on the Albany Graphite Project, and the Micon QP inspected selected drill core from the Project in detail. The Albany Project site itself was not visited at that time due to winter conditions and extensive snow cover.

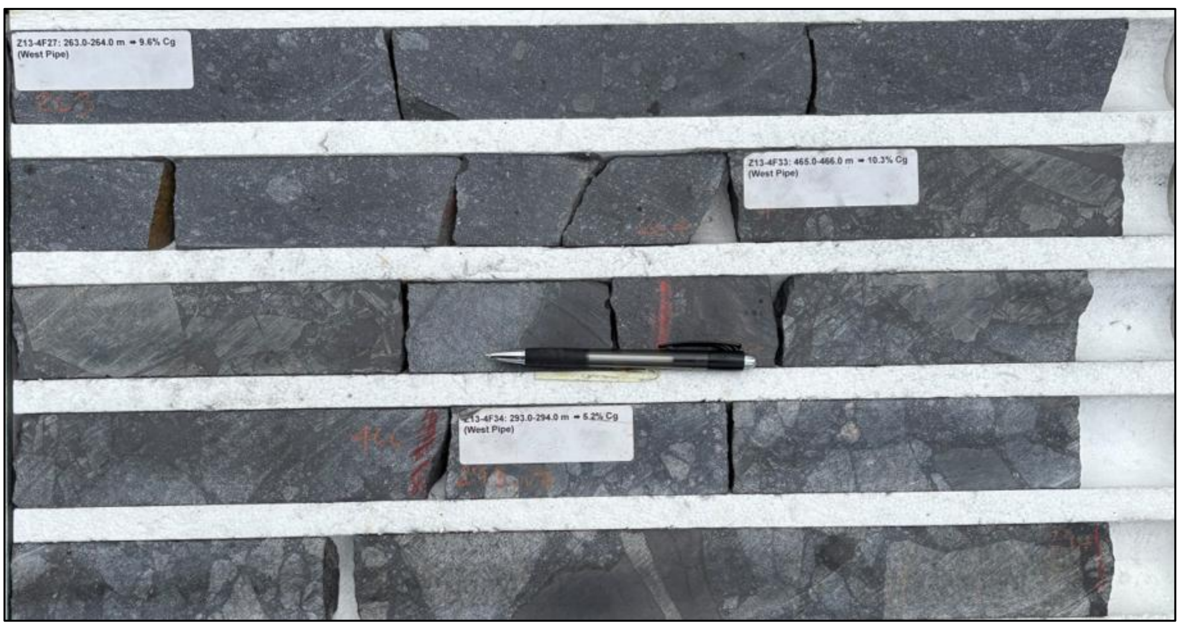
Micon's QP reviewed drill cores (Figure 12.2 and 12.3), drill hole core logs and sampled intervals, and compared assay results with mineralized intercepts to ensure that there was a close correlation with the intensity of mineralization. Comparison of drill hole intercepts with analytical results showed a good correlation as demonstrated in Figures 12.2 and 12.3.

Figure 12.2: East Pipe Drill Core



Source: Micon, 2026.

Figure 12.3: West Pipe Drill Core



Source: Micon, 2026.

12.3 REVIEW OF QA/QC PROTOCOLS AND RESULTS

The QA/QC protocols/procedures and the results/performance of control samples (i.e., standards and blanks) was found to be satisfactory as already noted by Micon's` QP in Section 11 of this Report.

During the site visit, Micon's MRE QP inspected records of the QA/QC protocols (including documentation on control samples insertion rates and sample packing records) and found them to be in order. Records of drill holes drilled and sampled are well kept (Figure 12.4).

Figure 12.4: Section of the Drill Core Boxes in the Core Storage Area

Source: Micon, 2026.

12.4 RESOURCE DATABASE VALIDATION

The Micon QPs performed a thorough review of the data to ensure its adequacy and integrity. The review of the data was performed at site and in Micon's Toronto offices, and involved the following steps:

- Conducting a 3D interactive review of the drill holes covering the deposit.
- Comparing the database assays and intervals against the original assay certificates and drill logs.
- Verifying assay quality by reviewing the (i) laboratory credentials/analytical procedures, and (ii) performance of control samples (standards/CRMs and blanks) as per Section 11 of this Report.
- Checking for any non-conforming assay information such as duplicate samples and missing sample numbers.
- Verifying the collar elevations to ensure a satisfactory match with the DTM/topographic map.

- Inspecting down hole survey results for anomalous kinks and excessive bends in the drill hole traces.
- Ensuring that the lithology table of the MRE database matches the drill core logs.

No material discrepancies were encountered.

12.5 QP OPINION ON THE ADEQUACY OF THE DATA

Based on the verification procedures described above, Micon's QP considers the database of the Albany deposit to have been generated in a credible manner and to be sufficiently error-free to support the MRE. The drilling density is adequate to yield a representative model of the deposit.

Aerial inspection confirmed that the permit area currently designated for mining operations is sufficient to accommodate the envisaged mining and ancillary operations.

The testimonies from Company personnel during discussions and interviews are supported by the evidence seen on the ground, in the field and in the drill hole cores.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 INTRODUCTION

The flowsheet selected for this PEA comprises traditional processing technologies to recover a graphite flotation concentrate followed by high temperature pyrometallurgical treatment to produce high-purity graphite products. The concentration process, which includes crushing, grinding and flotation, was developed from a number of bench and pilot scale testwork programs undertaken by SGS, Lakefield, ON, Canada. The pyrometallurgy purification process adopted for the PEA is based on testwork completed by AETC, Wheeling IL, USA.

The key testing programs conducted by SGS include:

- **2013 - 2014:** Bench scale development and pilot plant testing using drill core from both the East and West Pipe deposits.
- **2015 - 2016:** Bench scale optimization and variability flotation and grindability testwork using a variety of assay reject and drill core composite samples from both the East and West Pipe deposits.
- **2017:** Pilot plant campaign using coarse assay rejects and drill core composite samples from both the West and East Pipe deposits.
- **2025 - 2026:** Pilot plant campaign using a composite sample of East Pipe mineralization to produce concentrate for purification testing.

Preliminary mineralogical characterization of the East and West Pipe head samples and flotation concentrate samples has been undertaken by SGS and Lakehead University Mineralogy and Experimental Laboratory (LUMINX).

A number of scoping level purification batch tests were undertaken by AETC in 2025 and 2026. This work included both development testing as well as production of various high-quality products for marketing.

A series of graphite upgrading and purification tests were completed by SGS in 2017 and 2018 using hydrometallurgy. This technology is not being considered for the PEA and therefore the results are not discussed in this Report

13.2 METALLURGICAL TESTWORK - SGS 2013 - 2014

A series of development and optimization tests were undertaken using two metallurgical composites, one representative of the East Pipe deposit and one representing the West Pipe. Testwork included multi-element analyses, standard comminution tests and flotation tests, both bench scale and pilot plant. This phase of work also included an IsaMill signature plot on a rougher flotation concentrate, assessment of “flash flotation”, and mineralogical analyses of flash flotation concentrate and final pilot plant concentrate.

The results from these tests were detailed in two SGS reports, one dated June 2014 and another dated December 2014.

13.2.1 Metallurgical Samples

In 2013, Zentek selected, prepared and shipped composite samples to SGS for metallurgical testing from the East and West Pipes. The weights of these samples were approximately 5.5 t for the East Pipe (EP) and 4.6 t for the West Pipe (WP). The EP Composite was comprised of material from drill holes Z13-4FM01 to Z13-4FM03, and the WP composite sample was prepared from drill holes Z13-4FM04 to Z13-4FM06.

The EP and WP composite samples were used for comminution testing and bench scale development flotation testwork, including locked cycle tests (LCT). Both composites were used as feed for separate pilot plant campaigns.

A summary of the head analyses of the two metallurgical composite samples is provided in Table 13.1.

Table 13.1: 2013 Metallurgical Composite Sample Head Analyses

Analyte	Composite EP (%)	Composite WP (%)
C(t)	4.64	2.79
C(g)	3.68	2.61
TOC	0.76	0.21
CO_3	1.92	0.92
S	0.24	0.23
Al	6.89	7.21
Ca	1.2	1.44
Fe	1.45	1.86
K	3.4	3.48
Mg	0.41	0.55
Na	2.87	3.18
Ti	0.1	0.16

Source: Data from SGS Report, June 2014.

13.2.2 Comminution Tests

Table 13.2 shows the results from JKTech semi-autogenous grinding (SAG) mill comminution testing (SMC), Bond crushing work index (CWi), Bond rod mill work index (RWi), Bond ball mill work index (BWi), and Bond abrasion index (Ai) tests.

Table 13.2: 2013/2014 Comminution Testwork Results

Sample	SG	A x b	Hardness Percentile	ta	BWi (kWh/m³)	CWi (kWh/t)	RWi	BWi	Ai (g)
EP Comp	2.63	35.6	71	0.35	7.42	11.4	15.4	18	0.682
WP Comp	2.65	40.4	61	0.39	6.56	11.3	15.4	17	0.606

Source: Data from SGS Report, June 2014

The EP Composite was characterized as hard with respect to resistance to impact breakage (A x b) and the WP Composite was deemed to be moderately hard.

Regarding the Bond rod and ball mill indices, both composites were categorized by SGS as moderately hard and hard, respectively. Both composite samples were found to be highly abrasive.

IsaMill testwork comprised a signature plot for the rougher concentrate, there was insufficient sample available for the secondary regrind stage. The testwork results suggested a grinding energy requirement for the 1st regrind phase of 41.1 kWh/t. This was considered relatively high by SGS compared to the it's in-house IsaMill database at similar grind sizes.

13.2.3 Flotation Tests

13.2.3.1 Bench Scale Testwork

The program of flotation tests included batch, locked cycle and pilot plant testwork. The objective of the batch tests was to maximize final flotation concentrate carbon grade while achieving reasonable graphite recovery. The LCT were used to confirm the batch test results and establish preliminary operating parameters for the pilot plant tests.

To confirm parameters pilot plant testing, eight development bench scale flotation tests were completed using the EP Composite and two using the WP Composite. The parameters considered included primary grind size, regrind grind size, and the number of cleaner flotation and regrinding steps, flotation stage kinetics, and reagent addition.

A summary of the test results for three of the EP tests and the two WP tests, which used the protocol developed with the EP tests, is presented in Table 13.3. The test protocol used in these five tests was used as a basis for the pilot plant testwork.

Table 13.3: Summary of Selected Bench Scale Flotation Test Results

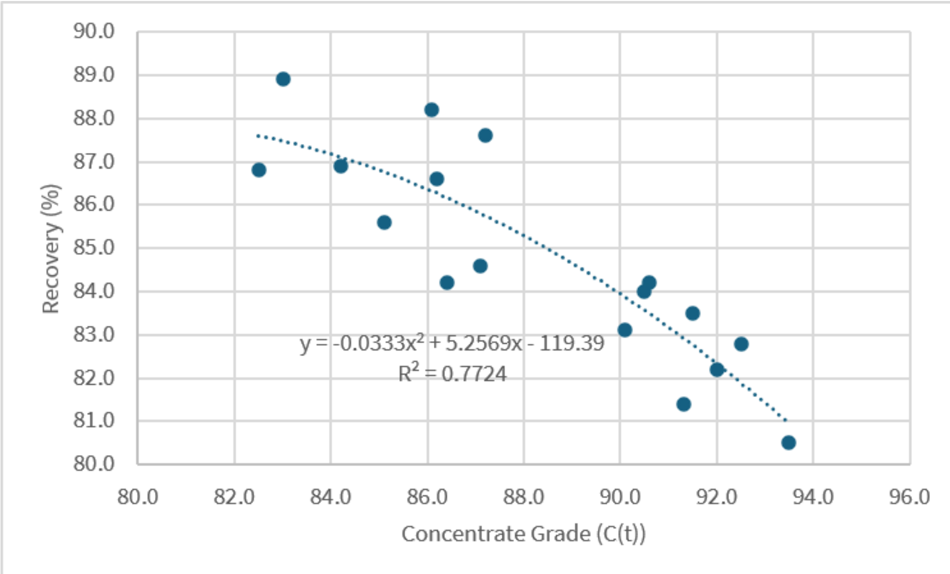
Test No	Composite	Flotation Rougher Carbon (Ct)			Final Cleaner Carbon (Ct)		
		Mass (%)	Grade (%)	Recovery (%)	Mass (%)	Grade (%)	Recovery (%)
F6	EP	27.3	19.1	91	5.76	86.2	86.6
F7	EP	32.6	14.1	96.1	4.82	87.2	87.6
F8	EP	26.2	17	92.2	4.32	92	82.2
F9	WP	22.9	11.7	91.3	2.61	91.3	81.4
F10	WP	22.1	12.7	92.6	2.61	93.5	80.5

Source: Data from SGS Report, June 2014

The results from these batch tests showed that carbon grades of greater than 90% are achievable at recoveries greater than 80% after multiple cleaning and regrinding steps. Comparing the results for EP and WP, the EP composite tests tended to result in higher recoveries for comparable concentrate grades.

The data from these five batch flotation tests are presented in Figure 13.1 where there is a clear concentrate -grade recovery relationship.

Figure 13.1: 2013 - 2014 Test Program Batch Flotation Test Results and Concentrate Grade – Recovery Curve



Source: Data from SGS Report, June 2014.

Locked cycle flotation tests were completed on both composites using the flowsheet developed during the batch flotation testing program described above. The carbon recoveries achieved by both locked cycle tests were over 90%, higher than the batch flotation tests. However, the carbon grades in the final concentrates were well below those of the optimized batch tests, 77% C(t) for EP and 70% C(t) for WP.

13.2.3.2 Pilot Plant Testwork

The objectives of the pilot plant campaign were primarily to produce concentrate for downstream purification testing, but also to evaluate the flotation response of the proposed Albany flotation flowsheet under continuous operating conditions.

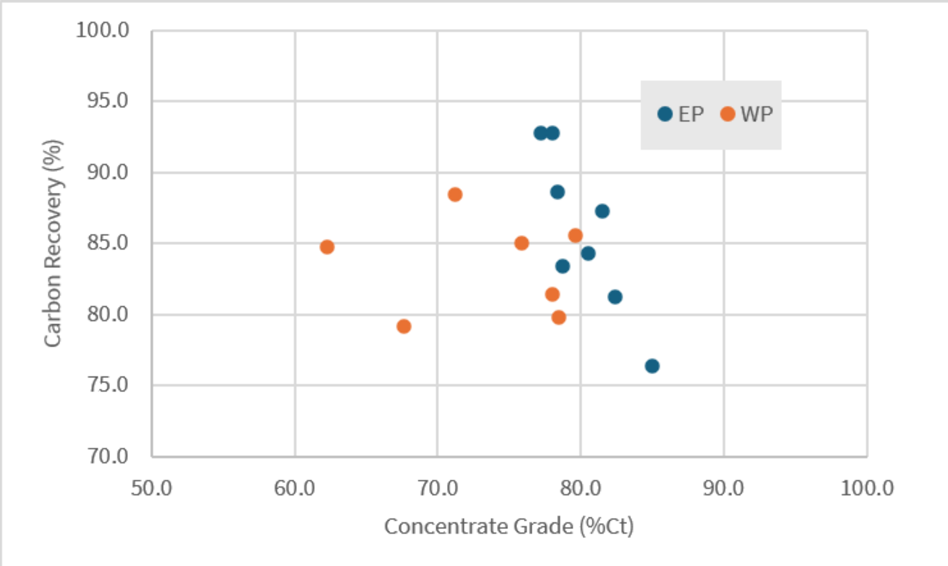
The final flowsheet selected for the pilot plant comprised a relatively coarse primary grind of around 80% passing (P_{80}) 175 to 200 µm, rougher flotation, three stages of regrinding and a total of nine cleaning stages.

The pilot plant targeting a throughput of 60 kg/h was constructed following the flowsheet that was optimized through the batch and locked cycle flotation testwork.

Overall, the pilot plant initially processed about 5.0 t of EP composite producing 259 kg of concentrate followed by 4.9 t of WP sample producing an additional 150 kg of flotation concentrate. For both the EP and WP runs, the pilot plant was operated daily for a few hours for 3 to 4 days then continuously for 72 hours. Detailed sampling campaigns were conducted every 12 hours. The pilot plant operated between 20 January 2014 and 12 February 2014. The concentrate produced was used by SGS to develop a hydrometallurgical graphite purification flowsheet.

The results from each sampling campaign were used to estimate the mass and carbon balance. The calculated carbon concentrate grade and recoveries for both the EP and WP runs are presented in Figure 13.2.

Figure 13.2: Pilot Plant Results for EP and WP Composites (2014)



Source: Data from SGS Report, June 2014

The results generated from the EP Composite pilot plant campaigns were generally positive. For long periods of time, the final concentrate was well over 80% in carbon grade while maintaining at least an 80% carbon recovery. The results indicated that there was a strong inverse carbon grade / recovery relationship for the EP composite but not for the WP composite.

The WP pilot plant final concentrate sample was subjected to whole rock analysis (WRA), see Table 13.4.

Table 13.4: Pilot Plant WP Concentrate Sample Whole Rock Analysis

Description	WP PP Con (%)
LOI	76.8
Non-LOI	23.2
Al_2O_3	15.6
CaO	2.13
Cr_2O_3	0.02
Fe_2O_3	5.45
K_2O	6.04
MgO	1.99
MnO	0.08
Na_2O	3.12
P_2O_5	0.16
SiO_2	64
TiO_2	0.47
V_2O_5	0.01
Non-LOI Sum	99.1

A sample of pilot plant concentrate was used for preliminary mineralogical characterization by SGS. The SGS report stated that the sample contained mainly graphite, with minor silicate minerals (quartz, plagioclase feldspar, and potassium feldspar), and traces of sulphides and Fe-Ti oxides. Graphite occurred as <5 µm to 100 µm sized particles. Liberation of graphite was estimated at 79%, with the remainder as intergrown with non-sulphide gangue minerals. Some graphite occurred as platy particles. The contained silicate minerals were very fine grained at <10 µm to 80 µm in size and generally occurred as liberated and middlings with graphite. Sulphides and oxides are generally fine at <30 µm and occurred primarily as liberated grains suggesting that they can be rejected with further cleaning.

13.3 METALLURGICAL TESTWORK - SGS 2015/2016

A second phase of flowsheet development testwork was undertaken by SGS in 2015 and 2016. Samples from the East Pipe and West Pipe deposits were used for flowsheet optimization as well as variability testing of several different composites. The objective of the bench scale testwork program was to evaluate metallurgical performance variability through laboratory comminution and flotation testing.

13.3.1 Metallurgical Samples

In 2015, a total of 5.1 t of coarse assay reject material and 469 kg of drill core samples were submitted to SGS for flowsheet optimization and variability testing.

The assay reject samples were prepared into six flotation composites while the drill core was used to create six grindability composites. The grindability and flotation composites included three samples each from EP and WP. Graphitic carbon ranged from 2.00% to 7.69% C(g) for the flotation composites and from 0.42% to 6.26% C(g) for the grindability composites. The graphitic carbon represented between 81.5% to 98.1% of the total carbon in the samples. A summary of the head analyses of the various samples is presented in Table 13.5.

Table 13.5: Metallurgical Variability Samples Head Carbon Species Analyses

Sample	Deposit	Carbon Species				Distribution
		Ct (%)	Cg (%)	TOC (%)	CO_3 (%)	Cg (%)
Float C-5	WP	2.34	2.01	<0.05	0.45	85.9
Float C-7	WP	2.12	2	0.15	0.41	94.3
Float C-8	WP	4.72	4.63	0.16	0.22	98.1
Float C-13	EP	6.06	5.89	0.05	<0.05	97.2
Float C-14	EP	7.97	7.69	<0.05	0.13	96.5
Float C-15	EP	7.14	6.99	0.08	<0.05	97.9
GR-C2	WP	3.43	3.12	<0.05	0.33	91
GR-C3	EP	7.45	6.07	0.4	0.19	81.5
GR-C4	WP	3.71	3.24	0.12	0.39	87.3
GR-C10	WP	3.14	2.67	0.31	1.89	85
GR-C11	EP	7.04	6.26	0.28	1.7	88.9
GR-C12	EP	0.47	0.42	<0.05	0.06	89.4
Average		**4.63**	**4.25**	**0.19**	**0.58**	**91.1**
EP-Average		**6.02**	**5.55**	**0.2**	**0.52**	**91.9**
WP-Average		**3.24**	**2.95**	**0.19**	**0.62**	**90.3**

Source: Data from SGS Report, September 2016.
Notes: Carbon Species: Ct (total carbon), Cg (graphitic carbon), TOC (total organic carbon), CO_3 (carbon in carbonate)

13.3.2 Grindability Testwork

The various grindability composite samples were subjected to the SMC test, which is an abbreviated version of the standard JK drop-weight test, standard Bond rod and ball mill grindability tests, and Bond abrasion test. The results for the variability composite samples and the WP/EP composites used in the 2013 - 2014 test program, are summarized in Table 13.6.

Table 13.6: Summary of Variability Sample Grindability Testwork Results

Sample Name	Relative Density	JK Parameters				WI (kWh/t)		AI (g)	RWI/BWI
		A x b	DWI	SCSE	ta1	RWI	BWI		
WP Comp	2.65	40.4	6.6	-	0.39	15.4	17	0.606	0.900
GR-C2	2.63	43.6	6.1	9.4	0.43	16.3	18.4	0.859	0.900
GR-C4	2.66	41.8	6.3	9.6	0.41	18	18.4	0.878	1.000
GR-C10	2.46	57.9	4.2	8.3	0.61	9.3	11.6	0.262	0.800
EP Comp	2.63	35.6	7.4	-	0.35	15.4	18	0.682	0.900
GR-C3	2.59	45.1	5.8	9.2	0.45	15.6	17.7	0.814	0.900
GR-C11	2.4	95.3	2.5	7	1.02	9.5	14.5	0.178	0.700
GR-C12	2.58	51.6	5	8.7	0.52	15.3	17.1	0.629	1.000
Average	**2.58**	**51.4**	**5.5**	**8.7**	**0.52**	**14.3**	**16.6**	**0.614**	**0.900**
Std.Dev.	0.09	19	1.5	1	0.22	3.2	2.4	0.264	0.100
Rel.Std.Dev.	4	37	28	11	41	22	14	43	11
Minimum	2.66	95.3	2.5	7	1.02	9.3	11.6	0.178	0.700
10'%ile	2.65	69.1	3.7	7.7	0.73	9.4	13.6	0.237	0.800
25'%ile	2.64	53.2	4.8	8.4	0.54	13.8	16.4	0.52	0.800
Median	2.61	44.3	5.9	9	0.44	15.4	17.4	0.655	0.900
75'%ile	**2.55**	**41.5**	**6.4**	**9.3**	**0.41**	**15.8**	**18.1**	**0.825**	**0.900**
90'%ile	2.44	39	6.8	9.5	0.38	16.8	18.4	0.865	0.900
Maximum	**2.4**	**35.6**	**7.4**	**9.6**	**0.35**	**18**	**18.4**	**0.878**	**1.000**

Source: Data from SGS Report, September 2016.

The SMC test results, found the six grindability composites to range from soft to medium hardness, with A x b ranging from 95.3 to 41.8.

Bond rod mill index (RWI) grindability test results ranged from 9.3 kWh/t to 18.0 kWh/t, two composites were considered relatively soft while the other four composites fell in the medium to hard range of hardness.

Bond ball mill index (BWI) grindability test results ranged from 11.6 kWh/t to 18.4 kWh/t. The composites generally considered moderately hard to hard, although one sample which was relatively soft in terms of hardness.

Abrasion indices (AI) ranged from 0.178 g to 0.878 g, ranging from weakly abrasive to highly abrasive.

13.3.3 Flotation Testwork

The goal of the bench scale flotation variability testwork program was to obtain >85% C(t) concentrate grades at maximum recovery, while also investigating the possibility of reducing the cleaning circuit to six stages and two regrind stages. A summary the batch flotation test results is provided in Table 13.7.

Table 13.7: Bench Scale Flotation Test Results (2015 Test Program)

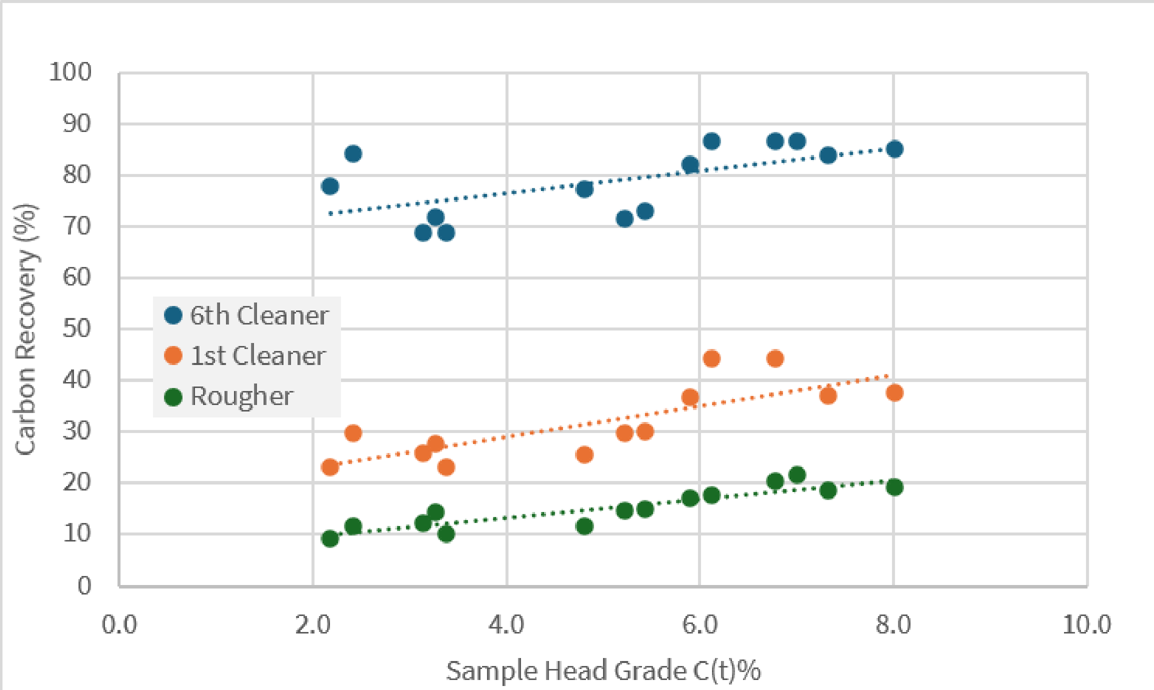
Test	Composite	Deposit	Head C(t)	Rougher			6th Cleaner			
				Ct	wt%	Rec (%)	Ct	wt%	Rec (%)	c/f
F4	Float C-5	WP	2.41	11.7	18.9	91.9	84.2	2.5	88.7	34.9
F5	Float C-7	WP	2.18	9.34	21.3	91.3	77.9	2.4	85.7	35.7
F6	Float C-8	WP	4.8	11.7	38.6	94.4	77.1	5.4	87	16.1
F11	GR-C4	WP	3.38	10.2	28.8	86.7	68.8	3.8	76.4	20.4
F12	GR-C10	WP	3.26	14.5	12.4	54.9	71.8	2	43.3	22
F18	GR-C2	WP	3.14	12.3	19.7	77.5	68.8	2	42.8	21.9
F15	80% C-13/20% C-8	EP/Wp	5.89	1700.00%	31.7	91.4	82.1	6.3	87.2	13.9
F16	50% C-13/50% C-8	EP/Wp	5.44	1490.00%	34.1	93.6	73.1	5.8	78.5	13.4
F17	30% C-13/70% C-8	EP/Wp	5.23	14.7	32.2	90.8	71.4	4.8	65.9	13.7
F1	Float C-13	EP	6.13	17.7	31.9	92.5	86.5	6.3	88.9	14.1
F2	Float C-14	EP	8.02	19.1	38.1	90.8	85	8.2	86.5	10.6
F3	Float C-15	EP	7.33	18.5	38.1	95.9	84	7.4	84.4	11.5
F7	GR-C3	EP	6.78	20.3	28.6	85.7	86.6	6.5	83.6	12.8
F8	GR-C11	EP	7	21.7	28.3	88	86.7	6.6	81.9	12.4
F9	GR-C12	EP	0.45	5.53	6.4	79.2	65.9	0.5	74.4	146.4
All Data Average			**5.07**	**15.26**	**28.76**	**87.53**	**78.9**	**5.0**	**77.2**	**18.1**
EP Average			**7.05**	**19.46**	**33**	**90.58**	**85.8**	**7.0**	**85.1**	**12.3**
WP Average			**3.2**	**11.62**	**23.28**	**82.78**	**74.8**	**3.0**	**70.7**	**25.2**

Source: Data from SGS Report, September 2016.

The observations and conclusions from the bench scale variability flotation testwork included the following:

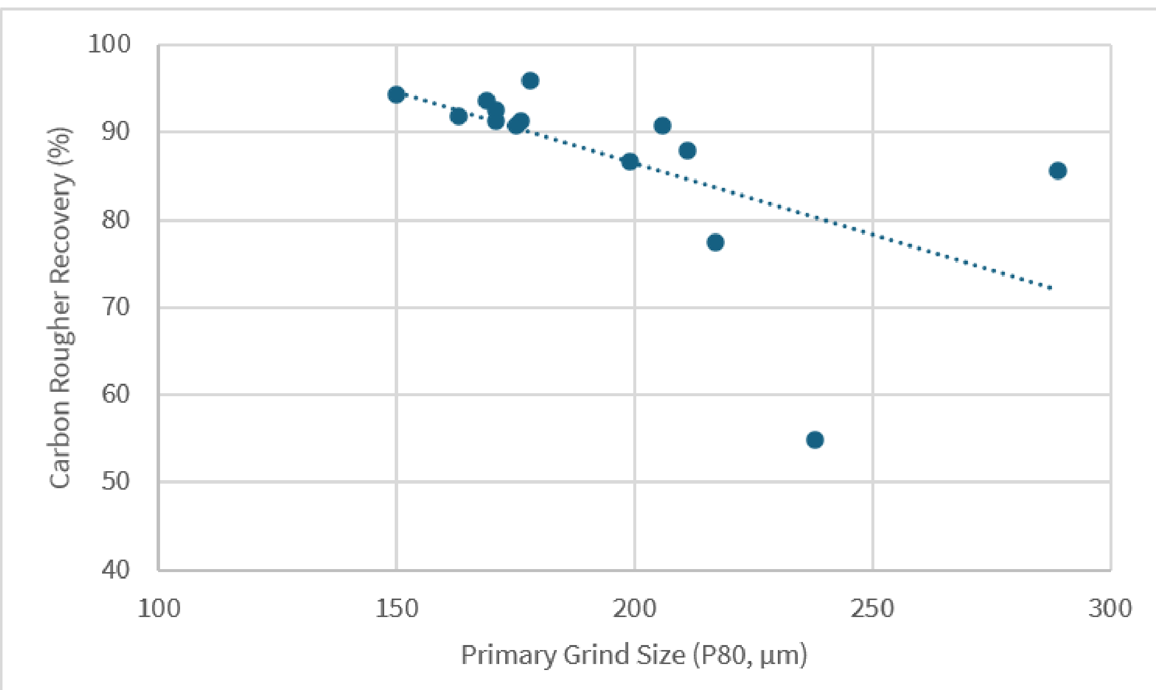
- Concentrate grades above 85.0% were achieved for composites Float C-13 (F1), Float C-14 (F2), GR-C3 (F7), and GR-C11 (F8).
- SGS reported a good correlation between head grade and concentrate grade for the rougher, 1st cleaner, and final concentrates. The results suggested that the desired final concentrate grades could be achieved by increasing the number of cleaning stages or possibly by decreasing the retention time in the cleaning stages.
- Test results indicate that the majority of EP deposit composites can reach target C(t) grades of +85% through reducing the cleaning flotation circuit from 9 to 6 cells and from 3 to 2 regrind stages. However, WP deposit composite tests tended to struggle to reach target C(t) grade of +85% through reducing the cleaning flotation circuit from 9 to 6 cells and from 3 to 2 regrind stages, possibly due to the fineness of the interaction between the graphite and gangue material.
- There was a positive head grade vs recovery relationship, as illustrated in Figure 13.3.
- The rougher carbon recovery tended to improve with finer primary grind size (Figure 13.4).

Figure 13.3: Bench Scale Flotation, Head Grade vs Carbon Rougher, Cleaner 1 and Final Cleaner Recovery



Source: Data from SGS Report, September 2016.

Figure 13.4: Bench Scale Flotation, Primary Grind Size vs Carbon Rougher Recovery



Source: Data from SGS Report, September 2016.

13.4 METALLURGICAL TESTWORK - SGS 2017

In January 2017, SGS operated a 60 kg/h pilot plant using composite samples from both the East West pipes. Overall, approximately 3.8 t of East mineralization and 2.0 t of West material were fed to the pilot plant producing around 204 kg of flotation concentrate.

The primary objectives of this work were to produce feed for hydrometallurgical purification testwork and to test the selected flowsheet under continuous operating conditions.

13.4.1 Metallurgical Samples

Approximately 4.8 t of drill core containing both East Pipe (EP-1) and West Pipe (WP-1) material for pilot plant testing was transported to SGS in 2015. A further 275 kg of coarse rejects from previous grindability testwork was used for the EP-2 pilot plant run, and a further 573 kg of West Pipe (WP-2) material was shipped to SGS in January 2017. A summary of the composite sample weights and total carbon head grades is included in Table 13.8.

Table 13.8: 2017 Pilot Plant Sample Weights and Head Grades

Description	Unit	EP-1	WP-1	EP-2	WP-2
Weight	kg	3,319	1,462	275	573
C(t)	%	5.24	3.75	5.31	2.73

Source: SGS Report, April 2017.

13.4.2 2017 Pilot Plant Testwork

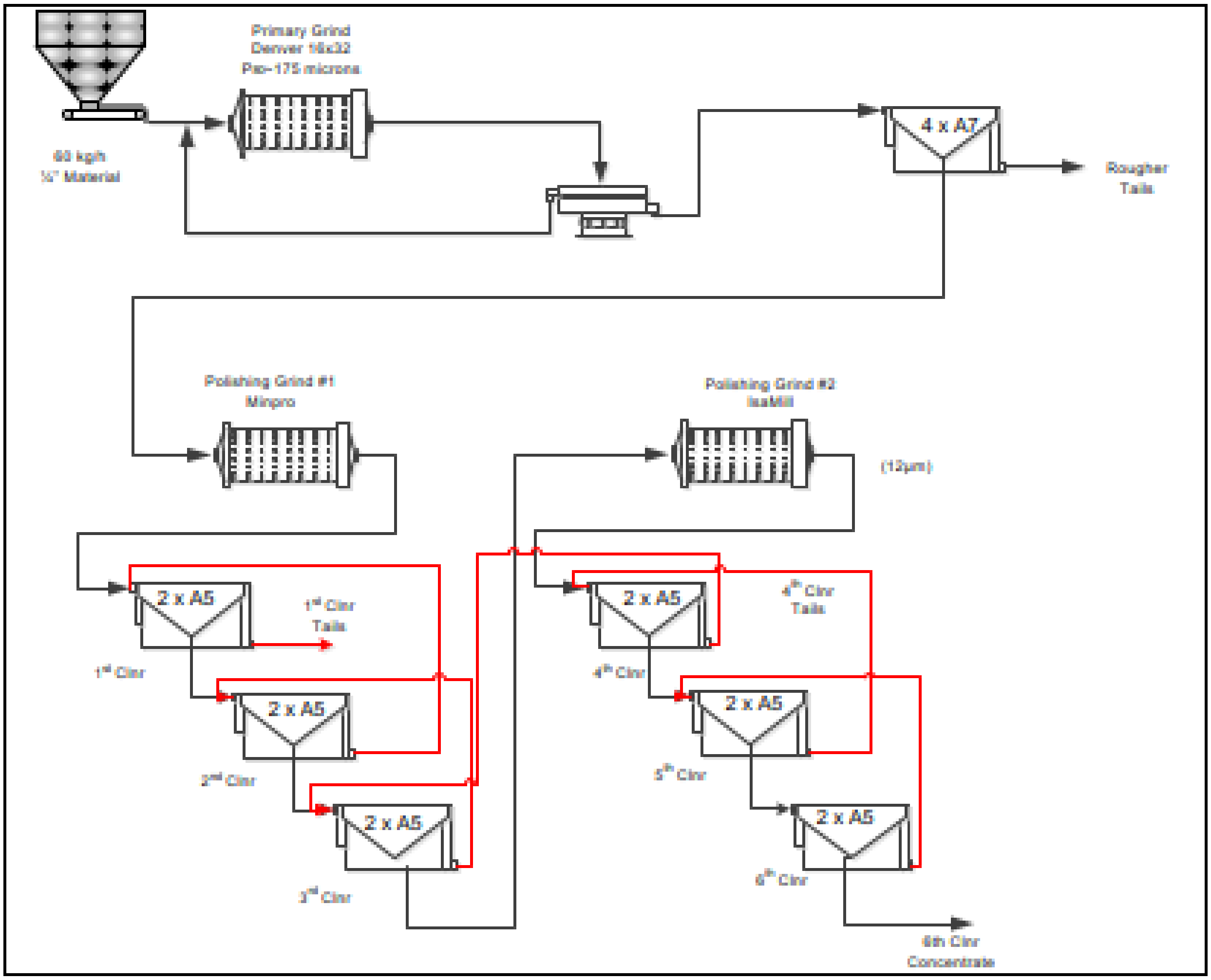
A pilot plant targeting a throughput of 60 kg/h was assembled at SGS in early 2017, initially feeding East Pipe (EP-1) material through a grinding and flotation circuit that contained one regrind stage followed by a series of up to six cleaning stages. Upon exhaustion of the EP-1 composite, an additional regrind (IsaMill) and another 3 cleaners were added to the circuit for the WP-1 composite campaign. Due to the excellent results obtained by the WP-1 composite when compared to historical West Pipe material, a shift was scheduled to run a second East Pipe (EP-2) composite through the two-stage regrind flowsheet. Finally, a second West Pipe (WP-2) composite campaign was run. The circuit that provided the best metallurgical results is illustrated in Figure 13.5.

Detailed sample campaigns were conducted each operating day. The first nine operating days (PP-01 to PP-09) fed composite EP-1 using the single re-grind flowsheet. Run PP-10 upgraded combined concentrate produced by PP-01, PP-02, PP-03, PP-04, PP-08, and PP-09 using an additional re-grind/polishing stage and additional cleaning. The concentrate from PP-10 was upgraded again in run PP-14.

Operating runs PP-11 to PP-13 fed composite WP-01 using the flowsheet presented in Figure 13.5. The results were much improved and an additional run using East mineralization (EP-2) was undertaken (PP-15) producing good results with a final concentrate grade of 86.3% C(t) at an overall graphite recovery of 87.0%. These improved results were achieved using a finer primary grind and pulling the rougher circuit harder than previous pilot plant runs.

The final pilot plant run (PP-16) used the WP-2 composite produced good results using the same test protocol as PP-15, achieving a final concentrate grade of 81.6% C(t) at an overall graphite recovery of 93.8%.

Figure 13.5: 2017 SGS Pilot Plant Configuration



Source: SGS, April 2017.

A summary of the 2017 pilot plant tests results is provided in Table 13.9.

Table 13.9: 2017 Pilot Plant Average Results per Composite Sample

Composite	Feed (kg)	Rate (kg/t)	Pr.Grind (P_{80} µm)	Re.Grind.1 (P_{80} µm)	Re.Grind.2 (P_{80} µm)	Fuel Oil (g/t)	MIBC (g/t)	Con. (kg)	Grade C(t) (%)	Recovery (%)
EP-1	3482	53.6	172	22	N/A	115	191	124	76.8	53.8
WP-1	1460	56.1	163	25.3	23.3	124	196	47	85.4	82.8
EP-2	448	47.7	136	25	31	128	220	15	86.3	87
WP-2	574	62.4	136	18	24	125	180	18	81.6	93.8

Source: SGS Report, April 2017.

13.5 METALLURGICAL TESTWORK - SGS 2025

A bulk flotation concentrate production program was conducted by SGS Lakefield using a composite sample of East Pipe mineralization. The objective of the pilot plant operation was to produce a final concentrate grading ≥85% C(t) that would be used for downstream purification tests.

13.5.1 Metallurgical Samples

The bulk sample provided by Albany Graphite was collected from the East Pipe deposit during winter to early spring 2019 using large-diameter reverse circulation drilling. Two vertical holes were drilled into the top of the East Pipe, intersecting a thin paleo-weathered cap overlying unweathered graphite-mineralized material. The sample was extracted by drilling into the upper part of the deposit, it was considered a good representation of the upper portion of East pipe mineralization although not necessarily a good sample of the whole deposit.

Three shipments totalling approximately 98 tonnes in 96 supersacks were received at the SGS Lakefield site in July 2025. After the bulk sample was crushed to 100% passing 3.35 mm and blended, approximately 100 kg was collected for validation flotation testing and head analyses. A summary of the head analyses is provided in Table 13.10.

Table 13.10: 2025 - 2026 SGS Pilot Plant Bulk Sample Head Analysis

Analyte	Unit	Value
C(t)	%	6.26
C(g)	%	5.61
TOC	%	0.28
TIC	%	0.38
S(t)	%	0.13
S (sulphide)	%	0.11
SiO_2	%	67.3
Al_2O_3	%	12.5
Fe_2O_3	%	1.03
MgO	%	0.89
CaO	%	1.62
Na_2O	%	2.38
K_2O	%	5.68
TiO_2	%	0.11
P_2O_3	%	0.03
Ba	g/t	589
LOI	%	8.33
Total	**%**	**99.8**

Source: SGS Pilot Plant Report, August 2026.
Notes: C(t)=total carbon; C(g)=graphitic carbon, TOC = total organic carbon; TIC=total inorganic carbon.

13.5.2 Bench Scale Validation Testing

A Bond ball mill grindability test was conducted on the pilot plant feed using feed material crushed to pass 6 mesh (3.36 mm) and a product screen of 100 mesh (150 µm). The result of 18.2 kWh/t was comparable to previous testwork and was used to help support pilot plant grind circuit equipment design and media selection.

Open-circuit bench scale cleaner flotation testing produced results of 84.4% C(t) grade at 86.3% C(t) recovery utilizing eight-stages of cleaner flotation. Addition of sodium silicate in the cleaner stages improved metallurgical performance when compared to the base case of flotation with fuel oil and MIBC alone.

A locked cycle test reached stability over the final five cycles. The steady-state result produced an 8th cleaner concentrate grading 79.0% C(t) at 79.8% C(t) recovery. Loss of graphite recovery as compared to historical tests and the open-circuit tests was attributed to instability in the 7th cleaner.

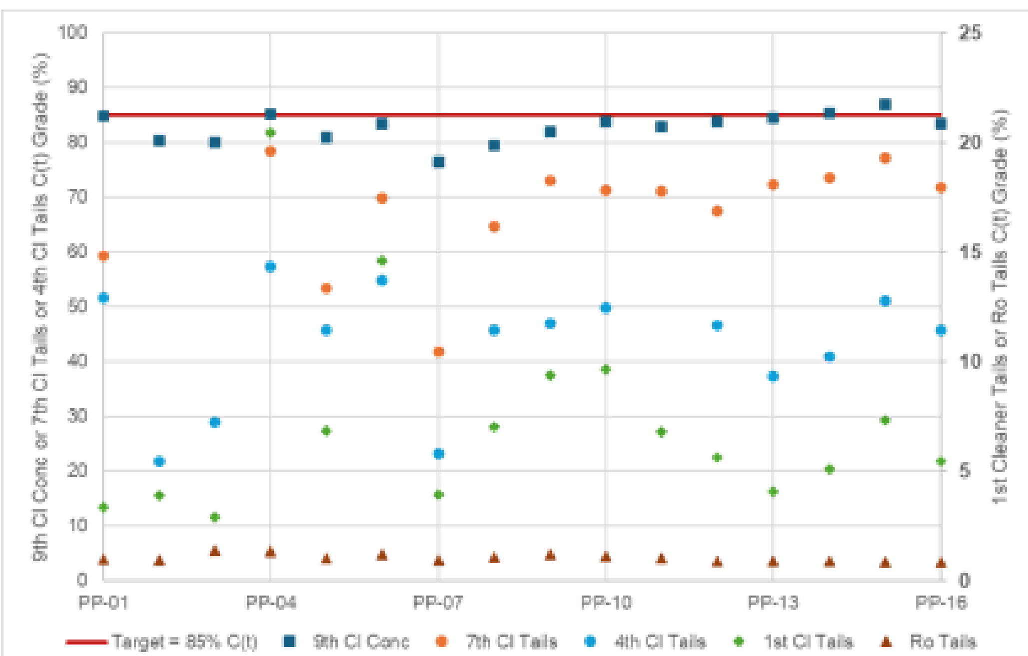
13.5.3 Bulk Pilot Pant Testwork

Approximately 77 tonnes of Albany Graphite feed were processed through a pilot plant comprising rougher flotation followed by nine cleaning stages with polishing grinds prior to the 1st, 4th, and 7th cleaning stages. Pilot scale operations were initiated on November 25, 2025, and completed on December 18, 2025.

The bulk of the 9th cleaner concentrate produced a final concentrate product meeting the ≥85% C(t) target grade. Any portion of the 9th cleaner concentrate grading below 82% C(t) was collected and upgraded to achieve the target grade (Phase 2). Phase 2 flowsheet comprised an additional regrinding step followed by three cleaning stages.

The average primary grind and regrind product P_{80} sizes over the 18 operating days were 125 µm, 63 µm for regrind 1, 38 µm for regrind 2 and 29 µm for regrind 3. The average flotation reagent usage was fuel oil - 106 g/t, MIBC – 46 g/t and sodium silicate - 348 g/t. The grab sample analyses for the 9th cleaner concentrate to rougher tailings (including the streams 1st, 4th, and 7th cleaner tailings) are presented in Figure 13.6.

Figure 13.6: Grab Sample Analyses During the Pilot Plant Operation



Source: SGS Pilot Plant Report, August 2026

The combined graphite flotation concentrate produced from Phases 1 and 2 totalled approximately 2.8 t at a grade of 85% C(t).

13.6 THERMAL PURIFICATION TESTWORK

In 2025 and 2026 AETC of Wheeling, IL, USA, conducted purification tests using flotation concentrate samples generated by SGS during the pilot plant runs. AETC is an independent laboratory and technology centre focused on functional coatings, novel materials, and portable energy systems.

The laboratory bench scale tests used ultra-high temperature purification (around 2,800 °C) to thermally drive out impurities without the use of halogen gases, acids or other chemicals.

13.6.1 AETC Purification Testwork - 2025

A sample of dried flotation concentrate was forwarded to AETC by Zentek in 2025 for scoping level purification tests. The sample was produced during the 2017 pilot plant testwork program undertaken by SGS using a homogenized WP-EP feed (see Section 13.4). The testwork program included bench scale high-temperature purification tests, initially to confirm the amenability of the technology, but secondly to assess potential product quality regarding the recovery of high value graphite products.

Preliminary tests at the beginning of 2025 produced a 99.9991% C product from a dried flotation concentrate containing 85.6% total carbon. A summary of the results is provided in Table 13.11.

Table 13.11: Preliminary High Temperature Purification Test Results

Description	Unit	Feed	Aggregate Strength	
			Post Heat Treatment Product	De-Aggregation Product
LOI	wt%C	85.6	99.9991	99.9991
Ash	wt%	14.4	0.0009	0.0009
Tap density	g/cc	0.36	0.75	0.24
Scott Volume	g/cc	0.2	0.72	0.15
Surface area	m_2/g	12.2	-	9.44
D10	µm	4.42	-	4.46
D50	µm	10.7	-	9.82
D90	µm	31.7	-	30.7
MV	µm	17.2	-	14.6
Yield	wt%	-	-	78.2

Notes: LOI= loss on ignition, D10=10% passing size, MV = mean volume diameter.

Later in 2025, AETC processed a second batch of flotation concentrate using its thermal refining unit and achieved 99.9992 wt% C, which suggests that material can be produced which could meet nuclear purity specifications. The equivalent boron content (EBC) factor, which is calculated by totalling the EBC for each element in the product (EBC is estimated by applying specific factors to each analyte), was less than 3 ppm and within specification. Other parameters measured included particle size analysis, resiliency, resistivity and coefficient of friction.

Following the thermal purification process a portion of the sample was subjected to milling, spheroidization, classification and carbon coating to assess the possible suitability of the material for specialized electrochemical applications.

13.6.2 AETC Purification Testwork - 2026

A second sample of dried flotation concentrate was sent to AETC for additional purification flowsheet development testwork in 2026 to support the PEA. The sample originated from the 2025 SGS pilot plant test program (see Section 13.5). The flotation concentrate was produced in December 2025 using East Pipe (100%) mineralization.

The testwork undertaken by AETC in 2026 included ultra-high temperature purification and multiple steps of milling, spheroidization, fine screening and coating with high purity pitch. The products produced and tested by AETC include the following:

- >99.999 %C (5N) thermally purified natural graphite (Product A), intended to be nuclear grade matrix graphite powder.
- >99.995 %C (4N) thermally purified natural graphite (Product B), suitable for synthetic diamond production.
- >99.99 %C (4N) thermally purified spheroidized surface coated natural graphite (Product C), suitable for specialized battery markets.
- >99.99 %C (4N) thermally purified non-spheroidized surface coated natural graphite Product D), suitable for specialized paint and coating applications, and conductive additive for specialized cathode applications.

A summary of the testwork results, which were presented in Certificate of Analysis by AETC is shown in Table 13.12.

Table 13.12: Summary of Product Analyses from 2026 AETC Thermal Purification Testwork

Parameter	Unit	ID:GN260518001 Product A	ID:GN260430001 Product B	ID:GN260521001 Product C	ID:GN260618002 Product D
Carbon Specification		**5N**	**4N+**	**4N**	**4N**
LOI	wt%C	>99.9992	>99.995	>99.99	99.99
Ash	wt%	<0.0008	<0.005	<0.01	0.01
Tap Density	g/cm3	0.28	0.32	1.05	0.36
Scott Volume	g/cm3	0.21	0.2	0.54	0.18
Surface Area	m2/g	8.61	8.25	2.7	9.34
D10	µm	4.6	4.4	5.2	3.6
D50	µm	13.5	14.6	12.2	10.6
D90	µm	37.3	74.1	24.4	26.7
MV	µm	18.2	30.6	14.1	13.4

Notes: LOI= loss on ignition, D10=10% passing size, MV = mean volume diameter, "N" stands for the number of nines purity produced as final product, for example 5N = 99.999%.

The results from the 2026 thermal purification testwork were used by AETC to develop the purification process flowsheet and estimate of product production outlined in Section 17 of this Report.

13.7 CONCLUSIONS AND RECOMMENDATIONS

The process flowsheet selected for the PEA is based on bench-scale batch testing and pilot scale metallurgical testwork completed at SGS. The mineral processing flowsheet comprises conventional crushing and grinding, rougher flotation and multi stages of flotation cleaning and intermediate regrinding concentrate to produce a graphite concentrate containing over 85% total carbon. The purification process consists of ultra-high temperature thermal treatment to produce speciality graphite products with purities up to 5N (99.999% C).

Testwork has been completed using composite samples representing both the East and West deposits. It is the QP's opinion that the samples used were a good representation of the mineralization occurring within the two deposits. The QP also notes that there appears to be no material deleterious elements or compounds measured in the samples.

East Pipe samples tended to be higher grade than the West Pipe samples and flotation testwork indicated better carbon recoveries for this higher-grade mineralization. The flotation test results showed a significant negative concentrate grade / recovery relationship, although recoveries for all types of mineralization tended to be over 80% with graphite concentrate grades of up to 90% C(t) or higher.

For the purposes of the PEA an average metallurgical graphite recovery of 86% has been selected with a final flotation concentrate grading 87% C(t).

The PEA flowsheet includes two stages of concentrate regrinding and a total of six stages of flotation cleaning. Bench scale testing has shown this circuit to be adequate to achieve the target concentrate grade of >85% carbon with reasonable recoveries, especially when treating higher grade East pipe mineralization; however, the most recent pilot plant operation utilized three regrind and nine cleaning stages. Additional flotation testing is recommended to optimize the circuit and quantify the impact of feed grade and spatial variability of both deposits on flotation performance. Separate recovery models for each deposit should be developed that can be used for future more advanced project development studies.

The QP also recommends additional liquid-solid separation testing for both concentrate and tailings process streams, and standard characterization studies using representative samples of process tailings.

Further purification optimization testwork is recommended to validate and to confirm process efficiencies and robustness of the overall process design and product qualities.

14 MINERAL RESOURCE ESTIMATES

14.1 INTRODUCTION

Micon's QPs have used the Report entitled "Technical Report on Albany Graphite Project, Ontario, Canada. Report for NI 43-101, dated July 31, 2023", issued by SLR and the existing drillhole data and wireframes as the basis for the updating the MRE.

14.2 MINERAL RESOURCE ESTIMATION METHODOLOGY

The CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2019) and the CIM Definitions Standards for Mineral Resources and Mineral Reserves (2014) were employed in the estimation and reporting, respectively.

The strategy adopted by the Micon QPs in the preparation of the updated resource model for the Project is as follows:

- Data Review.
- Geological Interpretation.
- Deposit modelling/wireframing.
- Data analysis/treatment.
- Block model definition and grade interpolation.
- Mineral Resource definition.

14.3 DATA REVIEW

The Albany Project database comprises 65 drill holes, totalling 26,284 m of drilling and 20,389 individual samples. It contains drill hole collar coordinates, downhole survey data, lithological information, and assay results. Assay data from all the 2013 metallurgical drill holes Z13-4FM01 to Z13-4FM06, as well as 2019 bulk-sample drill holes Z19-4FM07 and Z19-4FM08, were incorporated into the current updated MRE. A summary of the available database is provided in Table 14.1.

Table 14.1: Albany Project Database

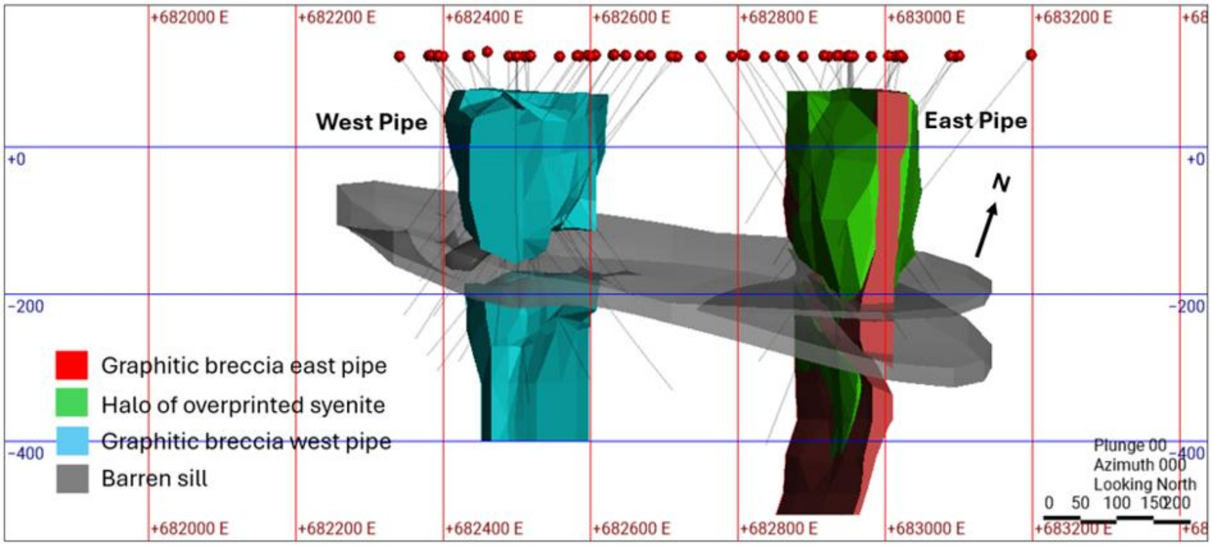
Item	Count/Value
Number of Drill Holes	65
Total Meterage	26,284
Surveys	5,062
Assays	20,389
Lithology	1,953
Density Measurements	1,100

The quality and accuracy of the database was assessed as described in Sections 11 and 12, respectively.

14.4 GEOLOGICAL INTERPRETATION

The Albany Graphite deposit is comprised of two distinct brecciated bodies (i.e. breccia pipes), referred to as the West and East Pipes (Figure 14.1). The West Pipe consists of a single mineralized domain consisting primarily of graphitic breccia, with localized zones of lower-grade graphitic alteration along its margins. The East Pipe consists of two mineralized domains: a graphitic breccia core and a surrounding lower-grade halo.

Figure 14.1: 3D Perspective of the East and West Pipes along with the Barren Sill and Drill Holes



Source: Micon, 2026 (Generated from the resource block model).

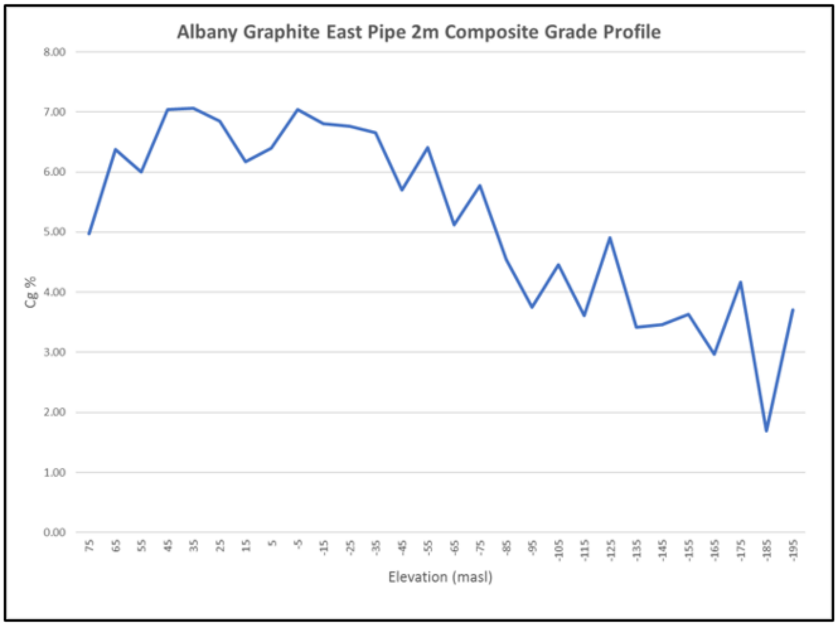
As shown in Figure 14.1, the West Pipe is cut by a sub-horizontal barren sill at a depth of approximately 250 m that dips 10° to 15° to the east. Its thickness ranges from less than 40 m to greater than 60 m. There is a minor amount of graphitic mineralization within the sill, and where sufficient continuity was demonstrated, a small wedge of mineralization (Figure 14.1) was modelled. Two fairly substantial blocks of barren intrusive rock (predominantly syenite) have been modelled in the West Pipe. At the top of the pipe, a 40 m by 100 m unmineralized zone of syenite has been delineated and just above the barren sill is an irregular-shaped block of internal waste that measures 100 m by 90 m.

The East Pipe is cut by two barren sills (Figure 14.1). The upper sill, intersected at a depth of approximately 310 m, ranges from 10 m to 12 m in thickness and is nearly horizontal. A second, wider sill 35 m thick is intersected 40 m below the upper unit and has a shallow dip to the east. The sills that cut both pipes are likely to be part of the same body. Three-dimensional wireframes were constructed to represent barren sills that cut the graphite breccia pipes. In addition, a large block of barren material was wireframed in the West Pipe and designated as waste material.

Micon QPs have observed a general decrease in grade with increasing depth from surface for both the East Pipe and the West Pipe. The decrease is more pronounced for the East Pipe than for the West Pipe. A plot of the variation in the East Pipe is shown in Figure 14.2.

The resource remains open down dip.

Figure 14.2: Albany Graphite East Pipe 2 m Composite Grade Profile



Source: Micon, 2026.

14.5 DEPOSIT MODELLING

The distinct geological features associated with the graphite mineralization facilitated the modelling/wireframing of the deposit. The modelled domains are summarized in the following sections.

14.5.1 East Pipe

The East Pipe graphitic breccia pipe (coded Domain 10) has been defined on the basis of geology from 31 drill holes. It is subvertical with a width of approximately 50 m at surface but narrows to approximately 10 m at depth. It is modelled to approximately 625 m below the surface corresponding to an elevation of -500 masl.

A low-grade graphitic overprint halo (Domain 14) represents a halo of graphite mineralized syenite surrounding the East Pipe and is defined using a minimum threshold of 0.4% Cg. Grades within the halo exceed 16% Cg locally, although the domain has an overall average grade of 0.7% Cg.

Upper Barren Sill: Barren and based purely on geology and confirmed by assays.

Lower Barren Sill: Barren and based purely on geology and confirmed by assays.

14.5.2 West Pipe

West Pipe graphitic breccia pipe (Domain 20) with minor graphitic overprint along margins is geologically distinct based on 29 drill hole intersections. It occurs as a steep-sided cone that narrows with depth and is elongated north-northeast. Width varies from approximately 175 m to less than 68 m. Length is up to 350 m. It was modelled to a depth of approximately 525 m, corresponding to an elevation of -400 masl.

Graphitic breccia "wedge" within barren sill (Domain 21) is based on geology. It is a small, mineralized wedge located within the barren sill of the West Pipe. The wedge measures approximately 25 m by 50 m and occurs in the western portion of the pipe at a depth of approximately 215 m. Individual samples from this zone returned grades exceeding 5% Cg, while the average grade of the domain is 1.7% Cg.

Barren Sill: Based purely on geology and confirmed by assays.

Internal Barren Waste: Based purely on geology and confirmed by assays.

Barren Syenite in the Top of the Pipe: Based purely on geology and confirmed by assays.

14.5.3 Other (Domain 55)

Overburden/glacial till based on drill hole collar elevation and depth of intersection to pipe:

Palaeozoic Limestone unit: Based purely on geology.

Archaean Country Rock: Based purely on geology.

Wireframes for the base of the overburden and the Paleozoic sedimentary unit were generated utilizing Leapfrog software. The topographic surface was constructed using drill collar elevation data. The West and East Pipe mineralized wireframes were constrained by the base of the sedimentary unit.

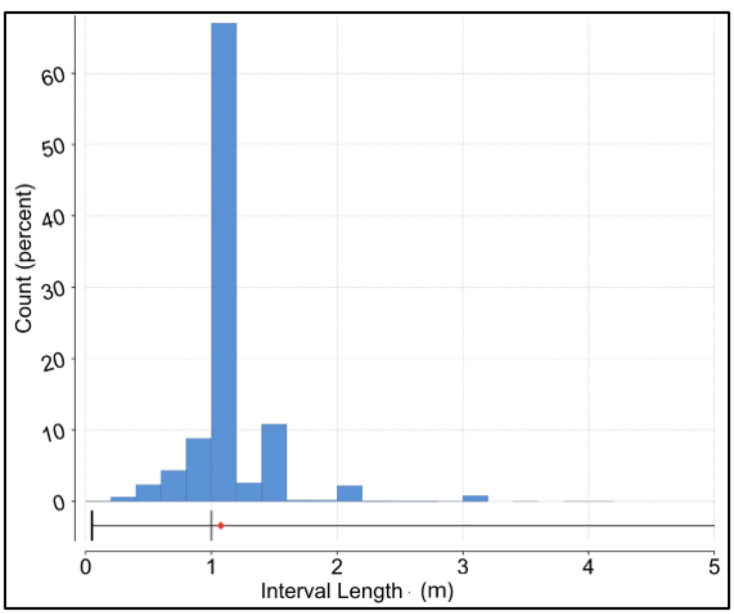
Off-shoots and or islands of mineralization are excluded due to lack of coherence to form potentially mineable shapes.

14.6 DATA ANALYSIS/TREATMENT

14.6.1 Compositing

Sample lengths within the wireframes range from 5 cm to 4 m. More than 70% of samples were taken at one metre intervals (Figure 14.3). Approximately 1.35% have sample lengths greater than 2 m. Given these distributions and considering the width of mineralization, resource assays were composited to 2 m lengths. Compositing starting at the first mineralized wireframe boundary from the collar and resetting at each new wireframe boundary. Composites less than 0.5 m were distributed equally along the intercept.

Figure 14.3: Histogram of Sample Lengths



Source: Micon, 2026.

14.6.2 Composites Statistics

The composite statistics are presented in Table 14.2. The coefficient of variation (CoV) averages less than 1.

Table 14.2: General Statistics of the Wireframe Domains

Domain	Count	Mean	CoV	Minimum	Median	Maximum
10	2,484	5.2	0.6	0.02	5.44	14.99
14	891	0.69	1.16	0.02	0.46	9.08
20	3,152	2.57	0.8	0	2.29	10.77
21	36	1.71	0.64	0.27	1.7	3.98

Note: Domain 10 = East Pipe; Domain 14 = East Pipe mineralized halo; Domain 20 = West Pipe; Domain 21 = West Pipe Mineralized wedge; Domain 55 = All barren intrusive rock.

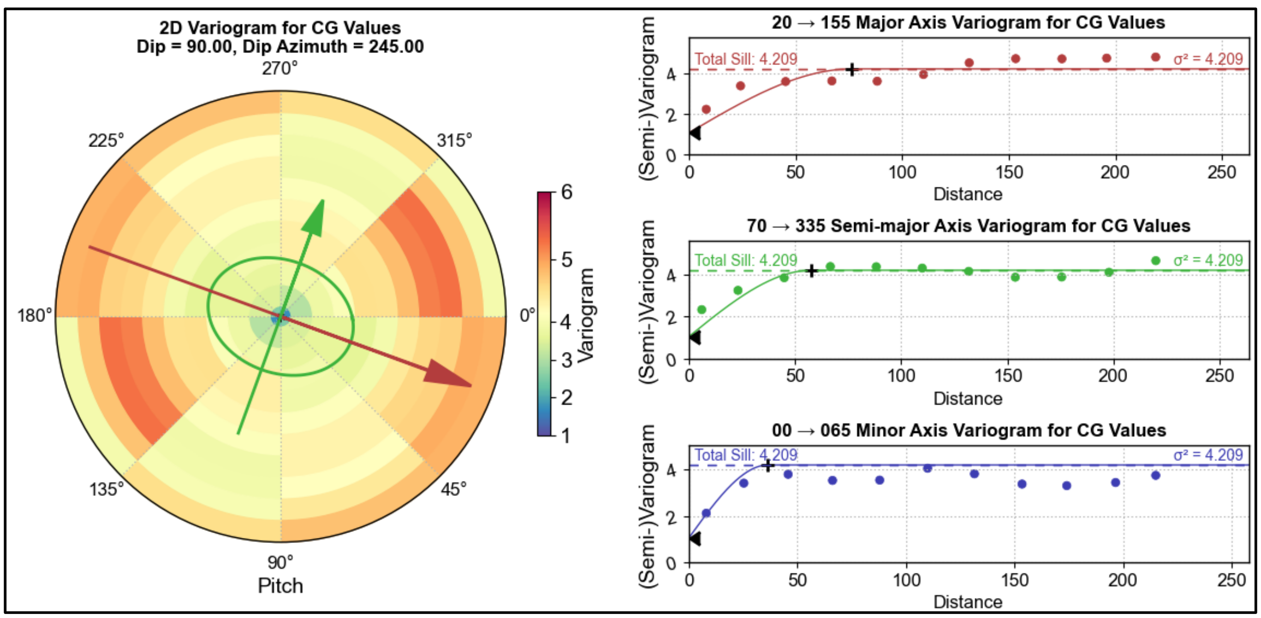
14.6.3 Grade Capping

The Micon QPs deemed grade capping unnecessary as the CoV of the assays within the major domains (Table 14.2) are much less than 1.

14.6.4 Variography/Spatial Analysis

Variography/spatial analysis was conducted using composites within the wireframes to assist in establishing estimation parameters. The variograms for the East Pipe are unstable which is likely due to some marked trend in grade distribution as shown in Figure 14.2. The variograms for the West Pipe display ranges of between 50 m and 100 m and are shown in Figure 14.4.

Figure 14.4: Variograms for the West Pipe



Source: Micon 2026.

14.7 RESOURCE BLOCK MODEL DEFINITION AND GRADE INTERPOLATION

14.7.1 Resource Block Model Definition

The block model parameters are presented in Table 14.3. The upper limit representing surface topography is based on the digital terrain model (DTM) generated from the drill hole collar elevations. The parent block size is based on the envisaged Selective Mining Unit (SMU) and drill hole spacing.

Table 14.3: Albany Deposit Block Model Parameters

Parameter	X	Y	Z
Block Size	6	6	7
Base Point	681,700	5,544,750	150
Boundary Size	2,100	1,860	805

Parameter	Value
Azimuth	0.00°
Dip	0.00°
Pitch	0.00°
Size in Blocks	350 × 310 × 115 = 12,477,500
Model Name	6 x 6 x 7

14.7.2 Block Grade Interpolation

The search ellipse configuration and dimensions for grade interpolation were defined using a combination of the variography results, drill hole spacing, and the geometry/orientation of the deposit. The parameters adopted are presented in Table 14.4.

A two-pass estimation procedure was adopted for all the domains. Ordinary kriging was used for the West Pipe which displayed good variograms whilst ID^2 was employed for the East Pipe.

14.7.3 Block Grade Validation

14.7.3.1 Visual Comparison

Estimated block grades were compared with the composites in the proximity. Transversal and longitudinal sections, showing similar colour-coded composites and blocks, were visually inspected to confirm the correspondence between original and the estimated values, as well as the trends shown by the estimated grades in the block model. Figure 14.5 shows a typical vertical section, passing approximately through the central part of the resource shell.

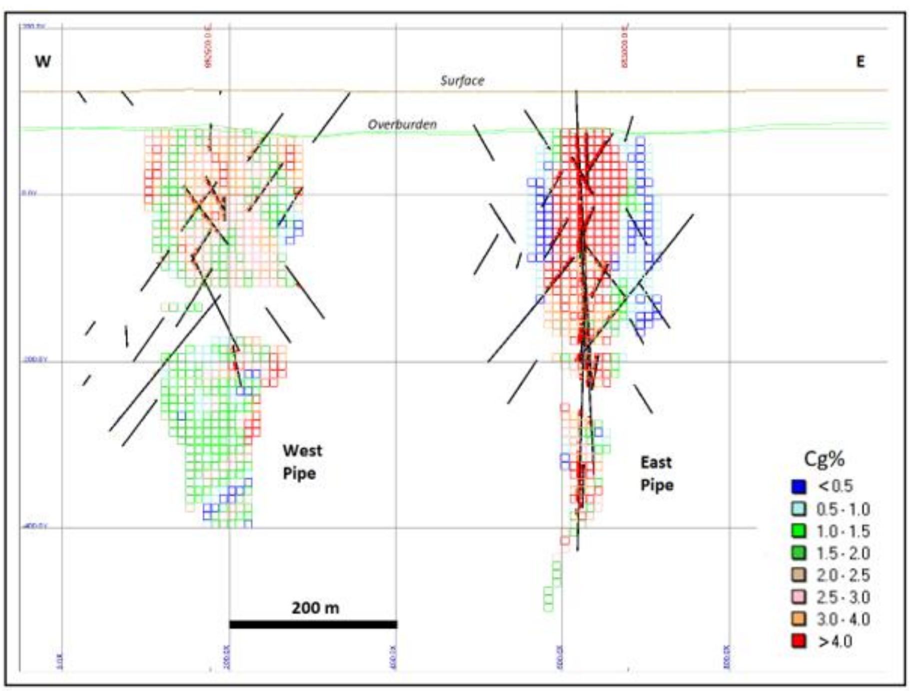
14.7.3.2 Swath Plots

Swath plots were used to assess the similarity between the composites and the estimated block grades, considering the general location along Northing. Average grade of the composites and estimated grade, for several estimation methods, in slices 100 m wide, were plotted along with the volume of the estimated blocks, as shown in Figure 14.6 and Figure 14.7.

Table 14.4: Block Grade Estimation Parameters

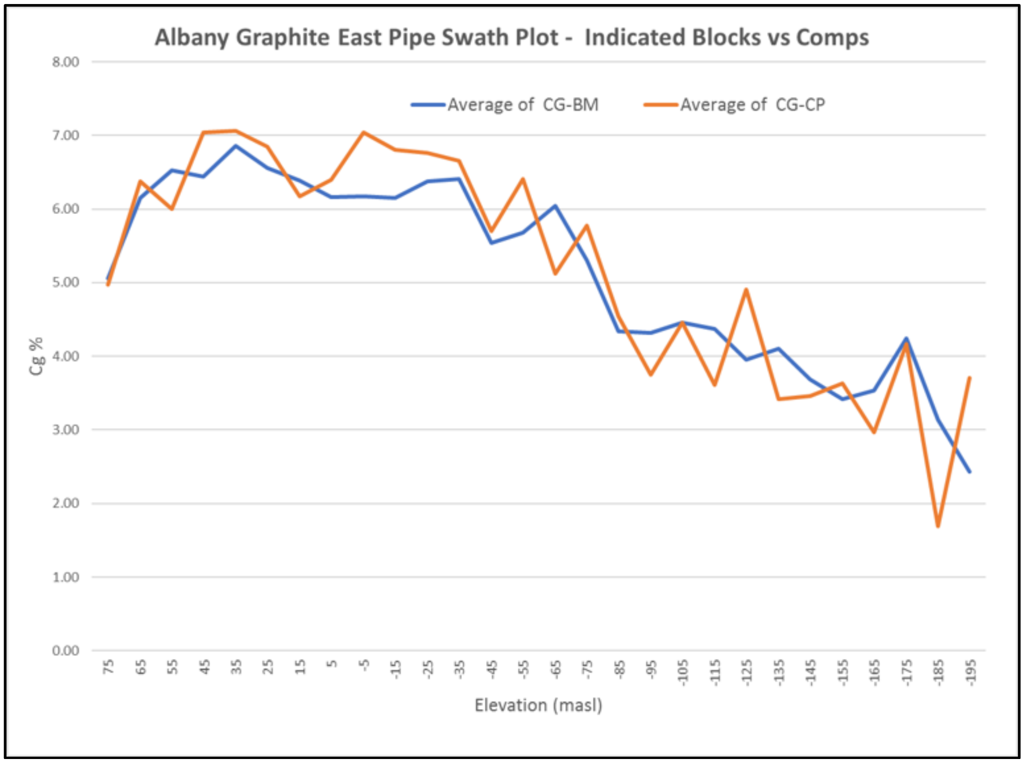
Parameters			West Pipe		East Pipe	
	Domain		20	21	10	14
	Method		OK	IDW	IDW	IDW
	Boundary Type		Hard	Hard	Hard	Hard
	Minimum No. Composites	Pass 1	4	4	4	4
		Pass 2	2	2	2	2
Search Anisotropy	Maximum No. Composites	Pass 1	12	12	12	12
		Pass 2	24	24	24	24
	Maximum Comps. per Drill Hole	Pass 1	3	3	3	3
		Pass 2	3	NA	NA	NA
	Principal Azimuth		245	245	290	290
	Principal Dip		-90	-90	-90	-90
	Int. Azimuth		20	20	20	20
	Range X (m)	Pass 1	76	76	100	100
		Pass 2	152	152	200	200
Search Ellipse	Range Y (m)	Pass 1	58	58	100	100
		Pass 2	116	116	200	200
	Range Z (m)	Pass 1	36	36	35	35
		Pass 2	72	72	70	70
Variogram Model	Nugget (C0)		1.05	NA	NA	NA
	Relative Nugget		25%	NA	NA	NA
	C1		3.16	NA	NA	NA
Structure	Range X (m)		76.4	NA	NA	NA
	Range Y (m)		57.8	NA	NA	NA
	Range Z (m)		36.4	NA	NA	NA
Total Sill			**4.21**	**NA**	**NA**	**NA**

Figure 14.5: Visual Comparison Drill Intercepts vs Block Grades



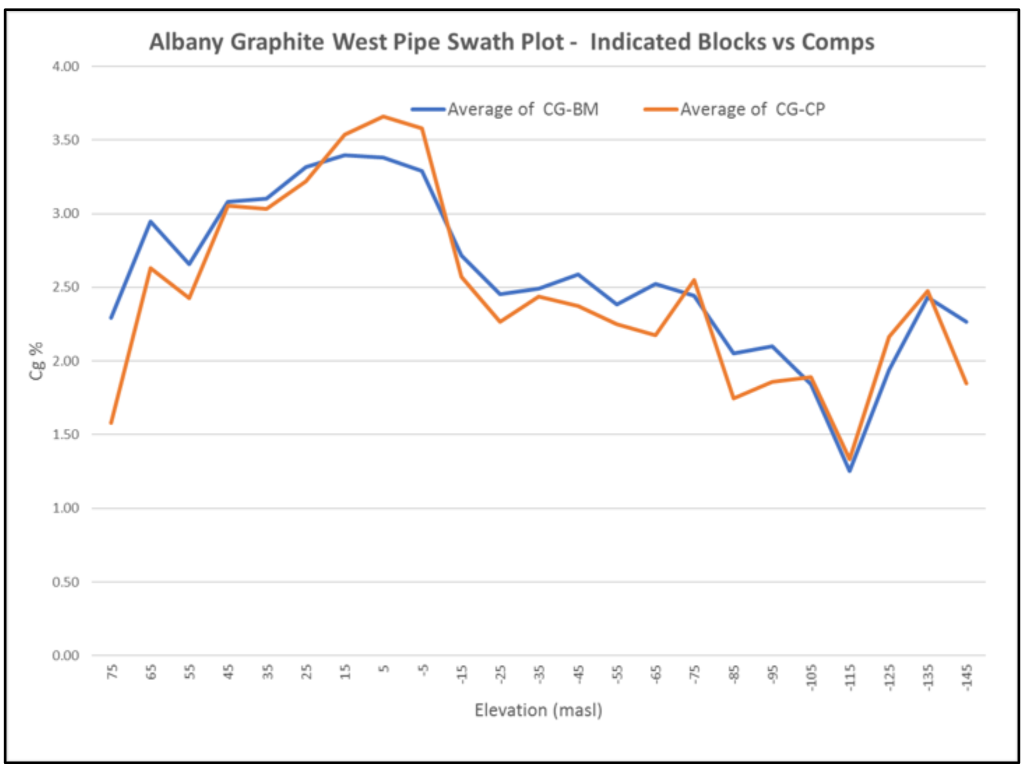
Source: Micon, 2026.

Figure 14.6: Swath Plot for the Albany Deposit East Pipe



Source: Micon, 2026.

Figure 14.7: Swath Plot for the Albany Deposit West Pipe



Source: Micon, 2026.

14.8 MINERAL RESOURCE DEFINITION

The factors employed in defining the Albany Graphite Project mineral resources are summarized in the following sub-sections.

14.8.1 Bulk Density

As stated in 2023 SLR technical report, the density values for all mineralized wireframes are based on Zentek's specific gravity testing results carried out by ALS on pre-selected assay samples in 2013. To convert volumes to tonnes, the QPs elected to derive an assigned density for each domain based on the median of the samples. For the mineralized resource domains, a density value of 2.59 t/m^3 was assigned to the East Pipe graphitic breccia (10), 2.63 t/m^3 to the low-grade graphitic overprint (14), 2.62 t/m^3 to the West Pipe graphitic breccia (20), and 2.61 t/m^3 to the mineralized wedge (21). For internal waste and barren sills (55), a density of 2.68 t/m^3 was assigned and a value of 2.63 t/m^3 was used for the Archean country rock host (99). Specific gravity testing was not carried out on the overlying limestone unit (66) and overburden (33): density values of 2.5 t/m^3 and 1.8 t/m^3, respectively, were assigned, which the QPs consider typical and reasonable values for these lithologies.

14.8.2 Technical/Mining Parameters and Assumptions

The parameters and assumptions used to estimate mineral blocks which offer RPEEE via open pit and underground exploitation are summarized in Table 14.5.

Table 14.5: Assumptions/Parameters for Constraining Mineral Blocks

Parameters	Units	2023 MRE Values	2026 June Scoping Study
Graphite Price	US$/t	8,000	23,485
Open Pit Cut-off Grade*	% Cg	1.22	1.48
UG Cut-off Grade	% Cg	1.76	1.77
Recovery	%	90.6	86
Concentrate Grade	%	83.4	87
Payable Graphite	% Cg	100	100
Transportation & Offsite Cost	US$/t	1,478	Variable – U$S265 avg.
Open Pit Mining Cost	US$/t	–	3.8 (Rock), 4.3 (Overburden)
UG Mining Cost	US$/t	–	60 (Rock)
Processing Cost	US$/t	14.3	16.4
G&A Cost	US$/t	6.43	10
Processing Throughput	kt/d	–	2.35 (850 kt)
Royalties	%	1.25	1.25
Overall Slope Angle (Rock)	°	43.5	50
Overall Slope Angle (Overburden)	°	18.5	18.5
Open Pit Minimum Mining Width	m	10	15
Discount Rate	%	5	5

Datamine mining software was utilized in the subsequent pit optimization and underground mining stope determinations.

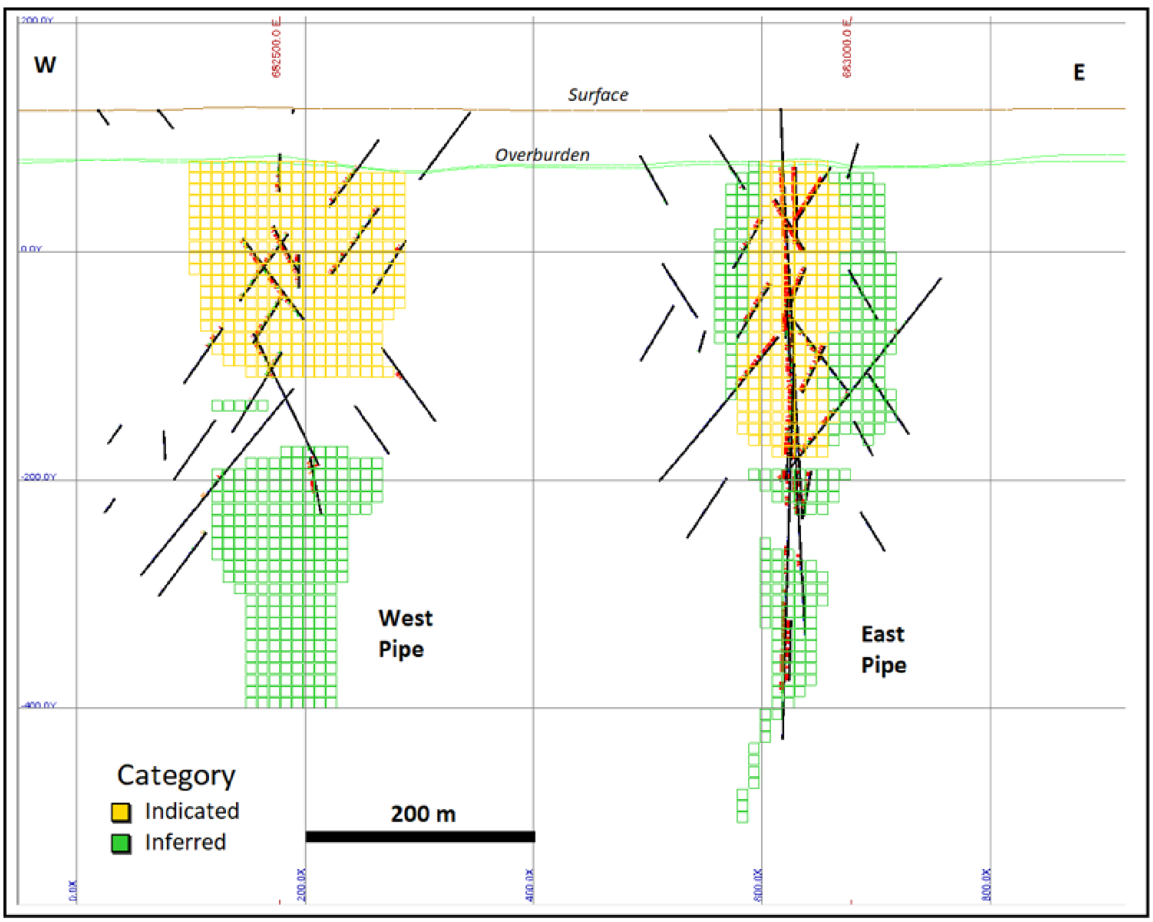
To fulfil the NI 43-101 requirement of RPEEE, Micon QPs prepared an optimized pit shell to constrain the block model for open pit resource reporting purposes followed by using the MSO function of the Datamine mining software to establish the underground resource reporting shapes.

14.8.3 Resource Classification

The Micon QPs classified the resources based on drilling density and variography. In general, drill holes are closely spaced near the centre of each pipe, and more widely spaced at their margins.

The Indicated Resources are in areas with a drill hole spacing of less than 50 m apart (Figure 14.8) and are comprised of mineral blocks within two thirds of the variogram range. The Inferred Resources are in areas where the drilling density is less, the drill hole spacing >50 m and beyond two thirds of the variogram range.

Figure 14.8: Albany Block Model Vertical Section Showing Resource Classification



Source: Micon, 2026.

14.8.4 Mineral Resources Statement

The Project updated MREs as of June 30, 2026, are presented in Tables 14.6 and 14.7.

Table 14.6: Global Resource Summary for the Project Effective Date June 30, 2026

Mining Method	Resource Category	Cut-Off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
Open Pit	Indicated	1.48	23.1	4.14	957,075
	Inferred	1.48	9.35	2.73	254,747
Underground	Indicated	-	-	-	-
	Inferred	1.77	3.94	3.23	127,383
Total Indicated		**1.48**	**23.1**	**4.14**	**957,075**
Total Inferred		**Variable**	**13.3**	**2.88**	**382,130**

Table 14.7: Mineral Resource Estimate by Domain for the Project Effective Date June 30, 2026

Mining Method	Resource Category	Cut-Off Grade (% Cg)	Domain	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
Open Pit	Indicated	1.48	East Pipe	9.44	5.69	537,031
			West Pipe	13.7	3.07	420,044
Open Pit	Inferred	1.48	East Pipe	1.62	3.39	54,786
			West Pipe	7.73	2.59	199,961
Underground	Indicated	-	East Pipe	-	-	-
			West Pipe	-	-	-
Underground	Inferred	1.77	East Pipe	3.18	3.32	105,631
			West Pipe	0.76	2.87	21,752
Total Indicated		**1.48**	**East and West Pipes**	**23.1**	**4.14**	**957,075**
Total Inferred		**Variable**	**East and West Pipes**	**13.3**	**2.88**	**382,130**

Notes:

1. The Effective Date of the MRE is June 30, 2026.
2. The Micon QPs with responsibility for the MRE are Oktay Erten, P.Eng. and Charley Murahwi, P.Geo.
3. CIM Best Practice Guidelines (2019) and Definitions Standards (2014) were employed in the estimation and reporting.
4. Mineral resources are estimated using a long-term weighted average price of US$23,485/t Cg, and an exchange rate of US$1.00 = CD$1.33.
5. Bulk density is 2.62 t/m^3 and 2.61 t/m^3 for West Pipe domains 20 and 21, respectively, and 2.59 t/m^3 and 2.63 t/m^3 for East Pipe domains 10 and 14, respectively.
6. Open pit MREs are constrained by a pit-shell generated in Datamine NPVS software above a cut-off grade of 1.48% Cg.
7. Underground MREs are constrained within underground reporting shapes to demonstrate Reasonable Prospects for Eventual Economic Extraction (RPEEE) and reported above a cut-off grade of 1.77% Cg.
8. The Pit Optimization parameters used are: pit slope = 50°, metallurgical overall recovery = 86%.
9. While no such issues have been specifically identified, the MREs may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
10. Numbers may not add due to rounding.

14.8.5 Risks/Opportunities

While no such issues have been specifically identified, the MREs may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. A more detailed discussion is given in Section 25.

15 MINERAL RESERVE ESTIMATES

There are no Mineral Reserves to report as of the date of this Report.

16 MINING METHODS

16.1 OPEN PIT

16.1.1 Introduction

This section outlines the parameters and procedures used by Micon's QP to complete the PEA-level open pit mining work for the Project at a target mill feed production rate of 950,000 t/a (2.65 kt/d).

This PEA utilizes the Mineral Resources described in Section 14, with an effective date of June 30, 2026. Open pit mining was considered a viable option given that the two mineralized graphite pipes (East Pipe and West Pipe) outcrop near the surface.

Open pit mining will comprise conventional drilling and blasting with hydraulic excavators and front-end loader units loading broken material into haul trucks. The trucks will haul material from the bench to the primary crusher, Run of Mine (RoM) stockpile, or the Waste Rock Management Facility (WRMF) depending on material type. Ancillary equipment includes dozers, graders, and various maintenance, support, service, and utility vehicles. This Technical Report considers an owner managed contractor operated mining scenario.

16.1.2 Summary

The Project mining scenario studied for the PEA involves:

- Conventional open pit mining of two mineralized breccia pipes, comprising the East and West pits, at an average total material movement rate of 6.2 Mt/a during the LoM, using 7 m operating benches.
- The pit shell forms the basis of the mine plan and contains approximately 25.9 Mt of mineralized material at grade of 3.99% Cg, with an overall strip ratio of approximately 6.6:1 at an elevated selected cut-off grade of 1.48% Cg.
- The East and West pits are divided into three mining phases to prioritize higher-grade mill feed, maintain practical pushback widths, sustainable management of overburden stripping requirements and support consistent mill feed blending.
- The LoM plan includes a 36-month pre-production period, incorporating 24 months of pre-stripping, followed by 28 years of open pit mining and two subsequent years of low-grade stockpile processing.
- Approximately 25.9 Mt at 3.87% Cg is processed over the LoM, containing approximately 1,002 kt of graphite and producing approximately 862 kt of recovered graphite. Processing averages approximately 863 kt/a over the 30-year processing period and is subject to a steady-state market limit of 34.5 kt/a of concentrate grading 87% Cg, equivalent to approximately 30 kt/a of recovered graphite in concentrate.

16.1.3 Geotechnical Considerations

The geotechnical parameters supporting the open pit design were derived from the preliminary open pit geotechnical evaluation completed by BGC Engineering Inc. in support of the previous PEA (RPA, 2015). BGC reviewed the 2014 resource pit shell constraint, which extends to a maximum depth of approximately 350 m. The scope of work was completed in four phases: background review, a site visit, compilation of available data, rock mechanics analysis, and report preparation. No dedicated geotechnical drilling was completed for the PEA, the assessment relied on existing exploration data.

16.1.3.1 Geological and Overburden Setting

The southern portion of the Property is underlain by Precambrian paragneissic and migmatitic metasedimentary rock, while the northern portion contains metamorphosed tonalite and granodiorite. Both sub-provinces are intruded by an alkalic intrusive suite the AAC consisting of alkali syenite and ijolite, mafic and ultramafic rocks, and carbonatite, which hosts the graphitic breccia pipes. Overburden across the site is expected to consist largely of glacial till and glaciolacustrine deposits, and the site is anticipated to be swampy with a near-surface water table.

16.1.3.2 Data Sources

The geotechnical characterization was based on rock core observations, acoustic televiewer and downhole seismic logs, drill hole data collected by the Zentek, Leeb hardness tester data, point-load testing data, laboratory testing results, and historical reports. The proposed open pits were interpreted as being contained within a single geological structural domain.

16.1.3.3 Structural Domains and Discontinuities

Four design discontinuity sets were identified: two dominant sub-horizontal sets (I1 and I2) and two orthogonal sub-vertical sets striking NW–SE (H1) and NE–SW (G1). There is significant variability in the structures, and the discontinuity set orientations are not strongly defined.

16.1.3.4 Rock Mass Characterization

A preliminary geotechnical model comprising three geotechnical units was developed: the Unmineralized Zone (UMZ), the Low-Grade Zone (LGZ), and the High-Grade Zone (HGZ). The intact rock strength ranges from strong (50 MPa to 100 MPa) to very strong (100 MPa to 250 MPa);“R4” to “R5” by ISRM (1978) methods. Rock Quality Designation (RQD) values range between 75% and 90%, joint condition ratings range from 12 to 18, and the RMR76 is estimated to range from 55 to 70. A summary of the rock mass parameters is provided in Table 16.1.

Table 16.1: Summary of the Preliminary Rock Mass Parameters (after BGC Engineering; RPA, 2015)

Parameter	Value / Range	Basis / Method
Intact Rock Strength	Strong to very strong (50 MPa – 250 MPa; R4–R5)	ISRM methods; point-load testing [1]
RQD	75% – 90%	Core logging, acoustic televiewer
Joint Condition Rating	12 – 18	Discontinuity characterization
Rock Mass Rating (RMR76)	55 – 70	Bieniawski classification [2]
Geotechnical Units	UMZ, LGZ, HGZ	Unmineralized / Low-Grade / High-Grade zones
Structural Domains	Single domain; 4 discontinuity sets (I1, I2 sub-horizontal; H1, G1 sub-vertical)	Acoustic televiewer, oriented core

Source: Micon, after BGC Engineering Inc. (2014) and RPA (2015).

[1] 1978
[2] 1976

16.1.3.5 Slope Design Recommendations

Bench scale, multi-bench, and overall slope analyses were completed to derive preliminary open pit slope design recommendations for single bench heights of 5 m to 7 m, based on guidance received from RPA. Given the quality of the rock, the pit could be mined in triple benches, if desired. BGC recommended a design maximum inter-ramp height of 150 m, with inter-ramp angles between 37° and 50° (5 m to 15 m benches) and between 43° and 50° (7 m to 21 m benches), and maximum bench face angles between 72° and 77° (5 m to 15 m benches) and between 67° and 77° (7 m to 21 m benches). These recommendations are summarized in Table 16.2.

For pit optimization, Micon's QP retained a 50° inter-ramp slope angle in rock (double benching of 7 m benches). In the absence of geotechnical data within the overburden, an overall 20°inter-ramp slope was adopted for overburden in pit optimizations based on site observations and nearby operating mines. WRSA with integrated overburden and waste materials, were designed with overall 2H:1V slopes based on benchmarks from adjacent mines. Similar parameters were also used for the mine design.

Table 16.2: Preliminary Open Pit Slope Design Recommendations (after BGC Engineering; RPA, 2015)

Domain / Bench Configuration	Bench Height (m)	Bench Face Angle (°)	Catch Bench Width (m)	Max Inter-Ramp Height (m)	Inter-Ramp Angle (°)
Rock – Single Bench	5	77	5.5	150	37
Rock – Double Bench	10	75	6.5	150	47
Rock – Triple Bench	15	72	7.5	150	50
Rock – Single Bench	7	77	5.9	150	43
Rock – Double Bench	14	72	7.3	150	50
Rock – Triple Bench	21	67	8.7	150	50

16.1.3.6 Hydrogeology and Seismicity

Hydrogeological and hydrological conditions may influence pit slope design and dewatering requirements and will be assessed as the Project advances. A dewatering well network and in-pit sump pumping are assumed given proximity to the Pitopiko and Nagagami River.

16.1.4 Pit Limit Evaluations

The open pit optimization was performed using the Lerchs-Grossmann (LG) algorithm in Datamine NPVS software. The pit optimizer delineates an economic pit shell that maximizes the value of the extractable resources by incorporating mining cost, processing cost, selling cost, graphite recovery, and an overall pit slope delineated by material type (see Section 16.1.3).

The pit optimization generates a series of nested pit shells across a range of revenue factors. Revenue factors are defined as reducing the commodity price while holding costs constant. The nested shells are evaluated to identify a shell that is relatively insensitive to economic fluctuation and provides a robust value over alternative underground mining methods and prioritizes extraction of the most economically viable material.

16.1.5 Open Pit Optimization Parameters

The pit analysis was completed using slope parameters assigned by material type as summarized in Section 16.1.3. Key pit optimization inputs including economic assumptions, processing parameters, graphite recovery, and design criteria were applied to generate the economic pit shells. These parameters are summarized in Table 16.3.

Table 16.3 Pit Optimization Factors

Pit Optimization Parameters	Unit	Price
Graphite Price[1]	US$/t	23,485
Open Pit Mining Cost - Overburden	US$/t	3.75
Open Pit Mining Cost - Fresh	US$/t	3.25
Incremental Bench Mining Cost	US$/t/bench	0.02 per 7 m (Reference Elevation 122 m)
Processing Cost	US$/t	16.4
Concentrate Grade	%	87
General & Administrative Cost	US$/t	10
Transportation and Offsite Cost	US$/t mill feed	$330.5 Average
Percent Payable	%	99.95%
Open Pit Royalty	%	1.25%
Dilution[2]	SMU	5 x 5 x 6 m Regularized BM
Total Cost OP - Fresh	US$/t	2.75
Slope Angle Overburden[3]	°	17
Slope Angle Fresh[3]	°	48.5
Open Pit Minimum Mining Width	m	15
Discount Rate	%	5
Target Processing throughput	kt/a	950
Annual Concentrate Production Market Cap	kt	34.5

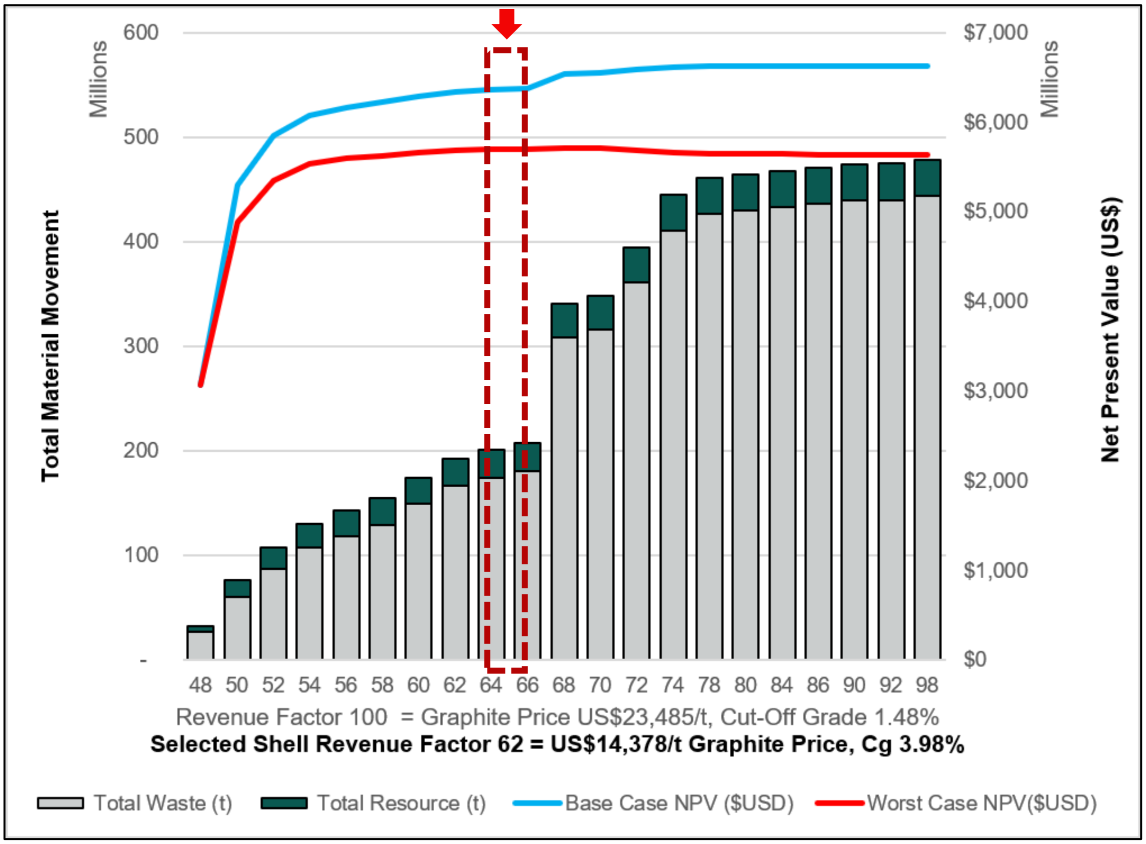
Notes:
1. Blended Price of 4N US$20,541/t, US$19,300/t 4N+, and 5N+ US$50,000/t.
2. The mine schedule and cashflow model includes an additional 3% dilution and 97% mining recovery factor.
3. Includes ramp allowance.

The pit optimization parameters summarized in Table 16.3 were applied to calculate the marginal cut-off grade for the deposit estimated to be 0.3% Cg, to define the economic pit limits. Given the insensitivity of the deposit to a cut-off grade and a nominal market concentrate capacity of 34.5 kt/a, an elevated cut-off grade was selected at 1.48% Cg giving a minor loss of graphite content and a potentially higher mill feed within the optimal pit limits.

The sub-celled block model was regularized in Deswik.CAD to a practical mining block size of 6 m x 6 m based on a 7 m operating bench height and a minimum mining width of 15 m suitable for an 8 m^3 class mining shovel.

Figure 16.1 present the pit optimization result for the Albany graphite deposit, including resource tonnes, waste tonnes and Discounted Net Present Value (NPV) for each Revenue Factor (RF) shell. Please note that the NPV output for Datamine NPVS software excludes capital cost and is purely used for pit shell selection generated by the optimizer.

Figure 16.1: East and West Pit LG Shells by Revenue Factors



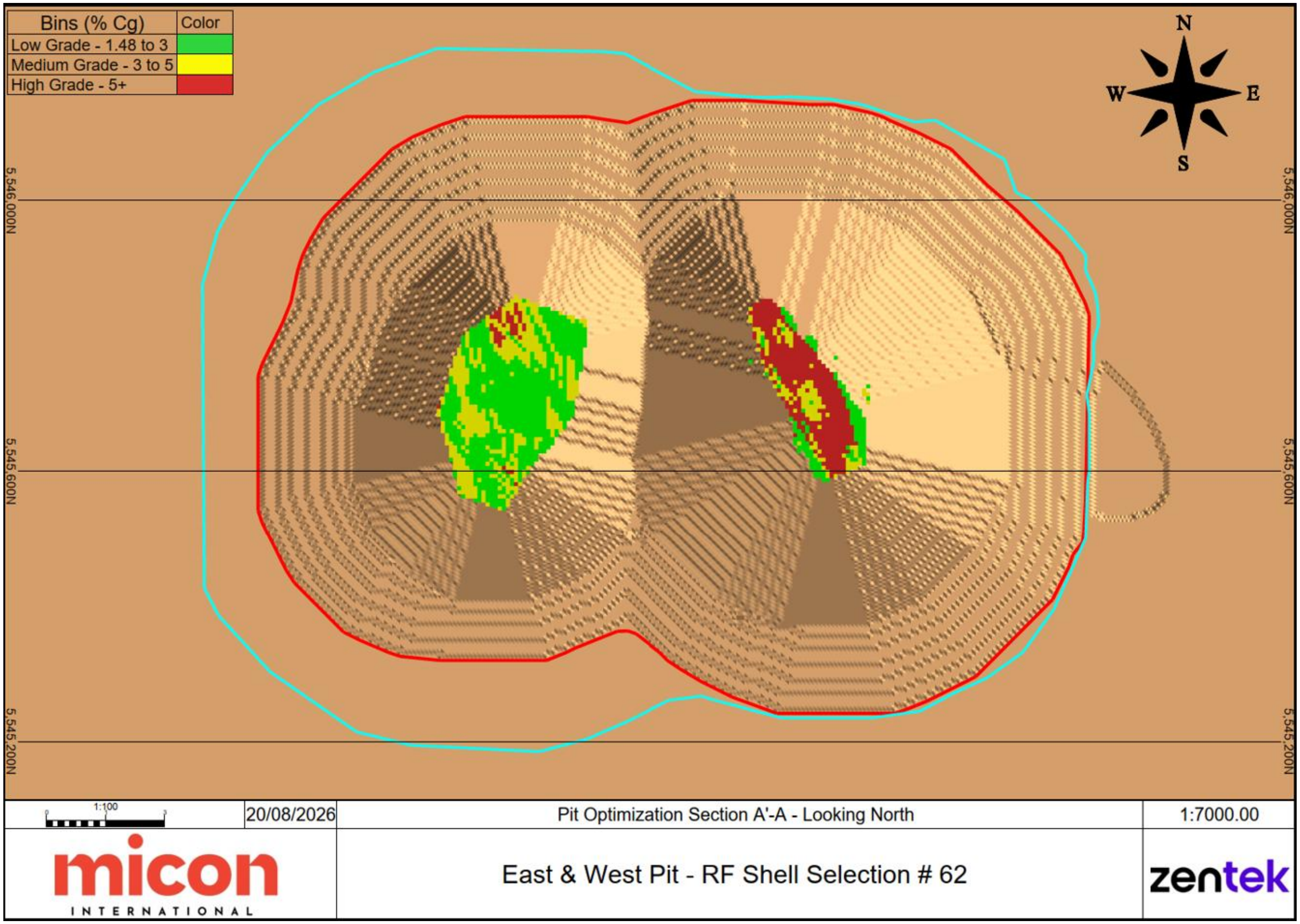
Source: Micon, 2026.

Optimized Pit Shells were generated from RF 48(US$ 11,273/t) to RF 100 (US$23,485/t). The selected Pit shell corresponds to RF 62 (US$14,378/t) to a cut-off grade of 1.48% Cg with 26.5 Mt of resource, 166.5 Mt of waste, and an overall strip ratio of 6.3:1 (waste: resource). A comparison of the selected RF 62 pit shell compared to the MRE Resource shell are highlighted in Figures 16.2 to 16.3.

The ultimate pit shell selection was driven by the following factors:

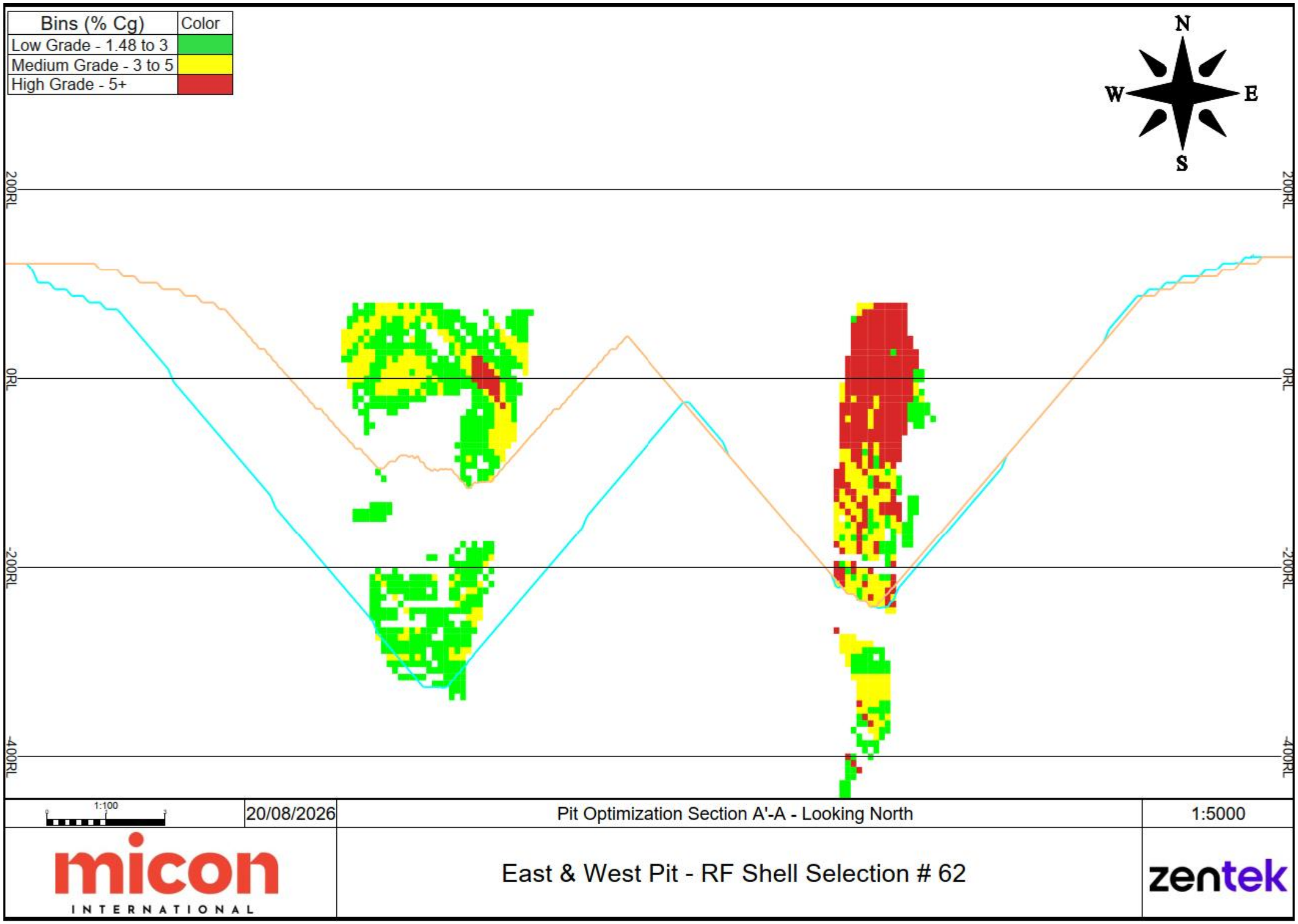
- Conservative graphite pricing pit shell that captures more than 95% of the potential Base Case NPV at US$ 6,345 M (RF 100, US$6,633 million) while maintaining robust economics to withstand pricing downturn.
- Sustainable waste to mineralized material ratio at 6.3:1.
- Constraint of mine to 30 years as additional years of mining have minimal impact on discounted cash flow and the overall Base Case NPV profile as shown above in Figure 16.1.

Figure 16.2: Plan View showing MRE Resource Shell in Cyan and the Selected RF 62 Pit Shell in Red Outline



Source: Micon, 2026.

Figure 16.3: Section showing MRE Resource Shell in Cyan and the Selected RF 62 Pit Shell in Orange Outline (View looking North)



Source: Micon, 2026.

16.1.6 Economic Evaluation and Differences from the Financial Model

The economic evaluation parameters applied during pit optimization may differ from those used in the financial model presented in the subsequent section. All reported graphite grade and tonnages in the optimization are diluted based on a regularized block model of 6 m x 6 m x 7 m to reflect mining dilution and assume 100% mining recovery.

For mine scheduling and financial modelling, an additional 3% dilution factor is applied to all schedule mill feed material by reducing the grades by 3%, while resource tonnages remain unchanged accounting for 97% mining recovery.

The pit limits generated from the pit optimization were retained for production scheduling. In the Qualified Person's opinion, the mine plan including the selected economic pit limits, the applied cut-off grade, and the resulting production schedule remains robust within the scale of these input variations.

16.1.7 Pit Designs

The pit shells generated from the pit optimization, together with the block model, form the basis of the preliminary Life-of-Mine (LoM) plan, which incorporates trade-off consideration with underground mining method.

The pit phasing and optimization were completed in Datamine NPVS, with emphasis on maintaining adequate mining widths within operating benches and establishing feasible pushback configurations. The East and West Pits are designed to be mined in three phases.

The three-phased mining approach prioritizes the following:

- Phase 1(Starter Pit) focuses on high value material mining early in the life of mine to maximize early cashflow while using excess haulage capacity to advance stripping of the West Pit. The initial phase also focuses on essential pre-stripping while strategically deferring major overburden and waste stripping movement to later phases of mine life to minimize total material movement.
- Phase 2 focuses on mining both pits to blend a consistent mill feed while maintaining sustainable waste to mineralize material mining ratio.
- Phase 3 is the final push back towards tail end of mine life that transitions from mining to lower grade material.

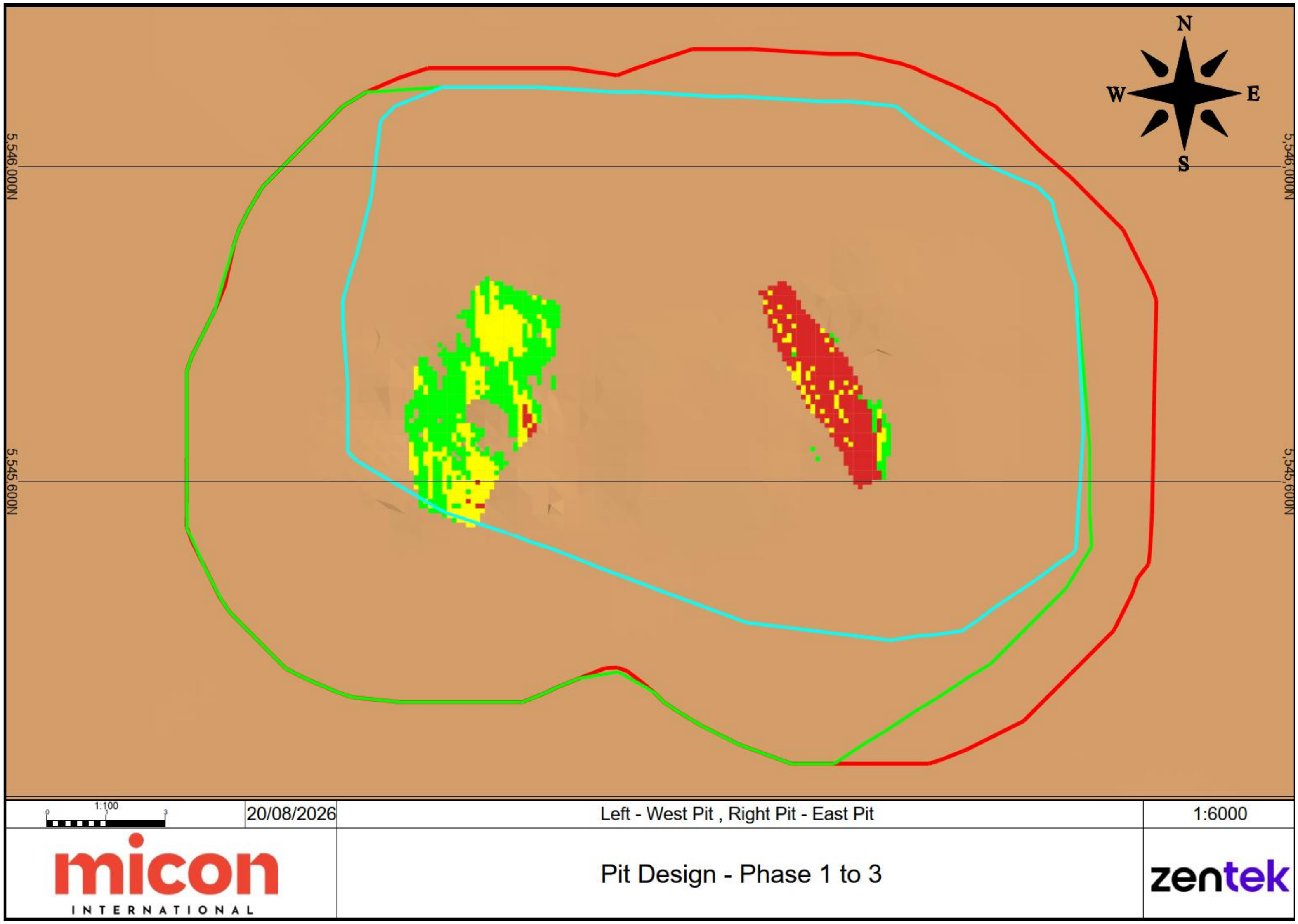
Please see Table 16.4 highlighting the results of Phase 1 to 3 including material movement and mineralized material breakdown by pipe.

Table 16.4: East and West Pit Phase 1 to 3 Result Breakdown

Shell Selection	Total Resource (t)	Total Waste (t)	Total OVB (t)	Strip Ratio	Cg (%)	Cg (t)	East Pipe (t)	East Cg (%)	West Pipe (t)	West Cg (%)
Phase 1	6,074,410	69,673,057	36,737,064	11.5	4.73	287,623	182,976	6.46	104,647	3.23
Phase 2	17,884,193	68,107,932	12,317,962	3.8	3.76	671,846	316,906	5.34	354,940	2.97
Phase 3	1,979,556	28,659,051	4,873,025	14.5	3.76	74,438	68,645	3.92	5,793	2.52
Total	**25,938,158**	**166,440,040**	**53,928,051**	**6.4**	**3.99**	**1,033,907**	**568,527**	**5.4**	**465,380**	**3.02**

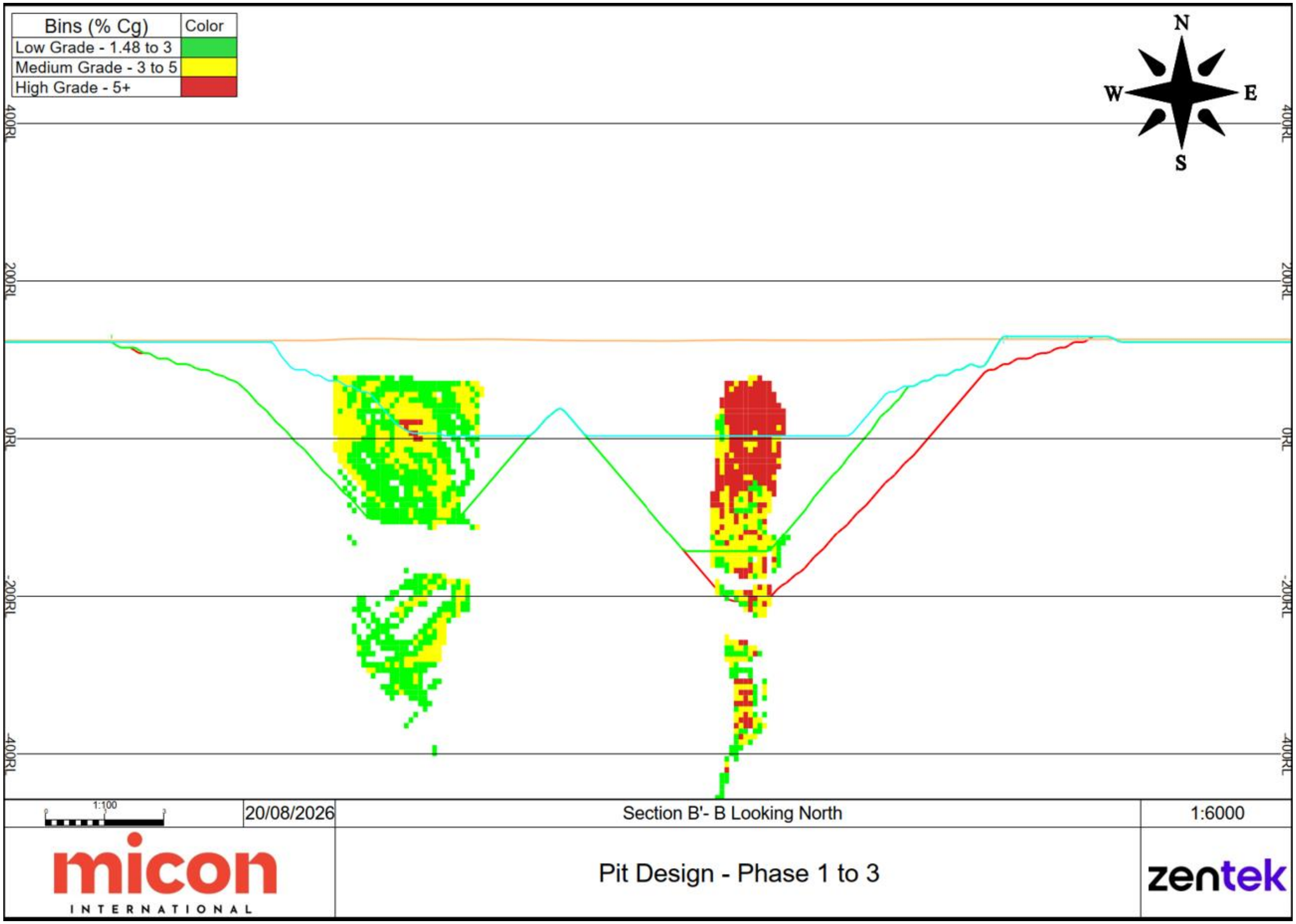
Figures 16.4 and 16.5 show the outline and cross-section results of Phase 1 to 3 pit profiles.

Figure 16.4: Plan View of Pit Outlines from Phase 1 to 3 with Phase 1 in Cyan, Phase 2 in Green and Phase 3 in Red



Source: Micon, 2026.

Figure 16.5: Section View B' - B looking North with Phase 1 in Cyan, Phase 2 in Green, and Phase 3 in Red



Source: Micon, 2026.

16.1.8 LoM Production Schedule

The LoM production schedule was developed using the Deswik Planning module. Spreadsheet-based tools incorporating AI-assisted functionality were used to aggregate, structure, optimize, and summarize the schedule output data in Microsoft Excel. All AI-assisted outputs were reviewed, validated, and verified by a Mining QP as part of the QA/QC process. Please note that the AI-assisted tools were not relied upon for engineering judgment, mine design decisions, or the determination of schedule parameters.

Annualized LoM production results, including the mining and processing breakdown, are summarized in Figure 16.6. The production schedule is based on a contractor-operated mining fleet under owner-managed site supervision, operating two 12-hour shifts per day, seven days per week. The key methodology, schedule constraints, and LoM highlights are summarized as follows:

- A 36-month pre-production period is planned, incorporating development of access roads and 24 months of pre-stripping prior to the commencement of mine operations. This ensures sufficient material is available for site infrastructure development and provides access to mill feed.
- Mining during pre-production is limited to essential pre-stripping, with additional material deferred to later in the LoM. The schedule includes four years of contracted pre-stripping comprising the two-year pre-production period plus an additional two years following start-up after which operations transition to an owner-managed, contractor-operated fleet carrying out pre-stripping and ongoing production mining for the remainder of the LoM. Figure 16.6 presents the LoM breakdown by material type.
- Process plant output is constrained by market demand. Graphite concentrate production is limited to 17.2 kt in Year 1 during processing ramp-up and to 34.5 kt/a thereafter, equivalent to approximately 30 kt/a of recovered Cg.
- Crushing is constrained to a target rate of 950 kt/a, with up to 30% surge capacity utilized during intermittent periods such as pushback development and reclaim of low-grade stockpile material toward the end of the LoM.
- The blending strategy prioritizes direct feed from the mine to the mill, minimizing rehandling of mill feed. Figure 16.7 presents the mill feed breakdown between direct feed and rehandled (reclaimed) material.
- Grade segregation is managed using three grade bins High Grade (>5.0% Cg), Medium Grade (3.0% Cg to 4.99% Cg), and Low Grade (1.48% Cg to 2.99% Cg) —to maintain a consistent mill feed grade while selectively stockpiling low-grade (LG) material. The LG stockpile reaches a maximum inventory of approximately 2.6 Mt grading 2.3% Cg in Year 25, with reclaim commencing in Year 26 as mining activity tapers in the East Pit. The mining operations conclude by Year 28 with two additional years of LG stockpile depletion. Figure 16.8 illustrates stockpile inventory levels over the LoM by grade bin.
- Mining progression is constrained to a maximum vertical sink rate of eight benches per year, per phase.

Mine progression surfaces presenting the end of period pit profile at selected years are highlighted from Figure 16.9 to 16.15.

Figure 16.6: Total Material Movement by Type and Strip Ratio

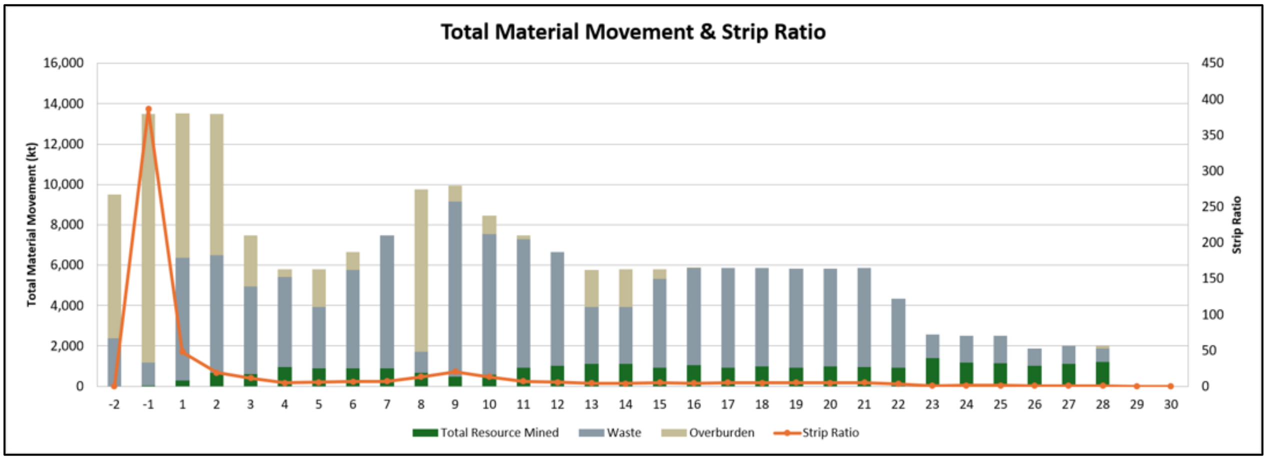


Figure 16.7: Mill Feed Breakdown Between Direct and Stockpile Reclaim Feed Over LoM

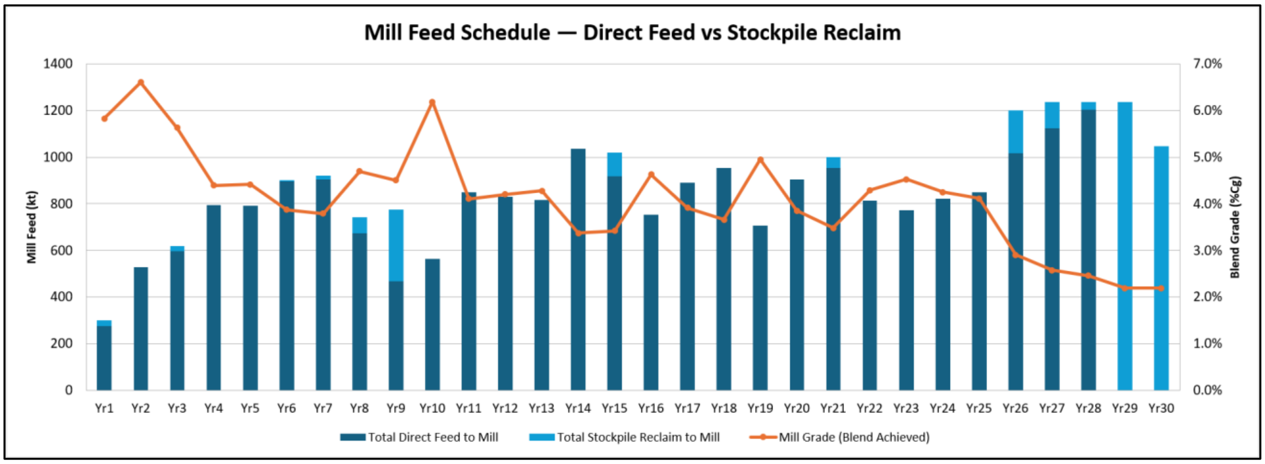


Figure 16.8: Stockpile Balance by Grade Bins and Mill Feed Over LoM

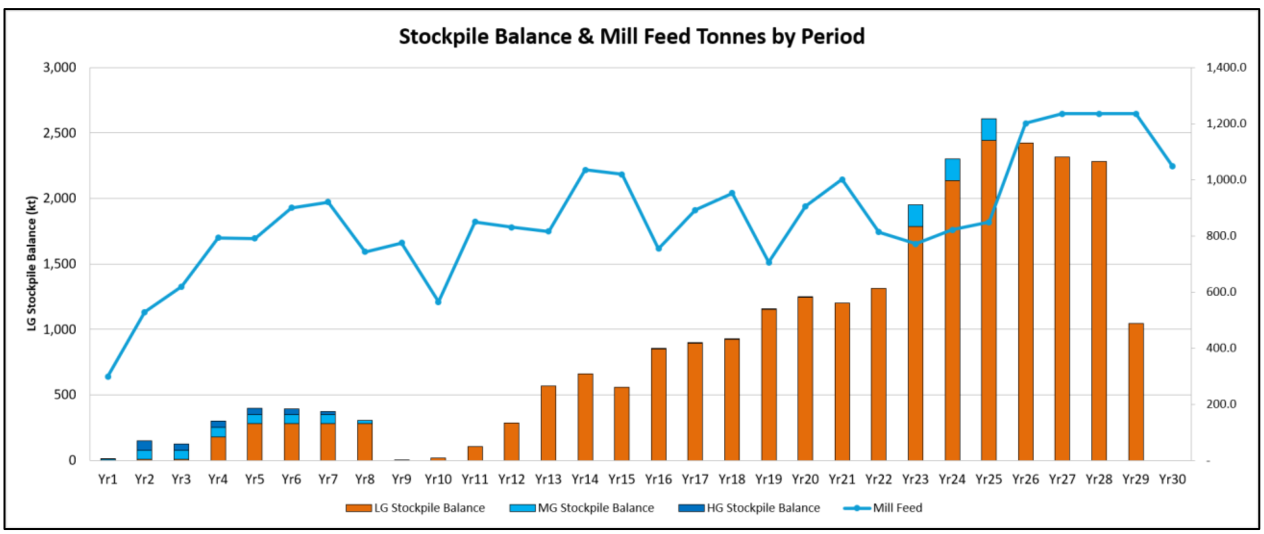
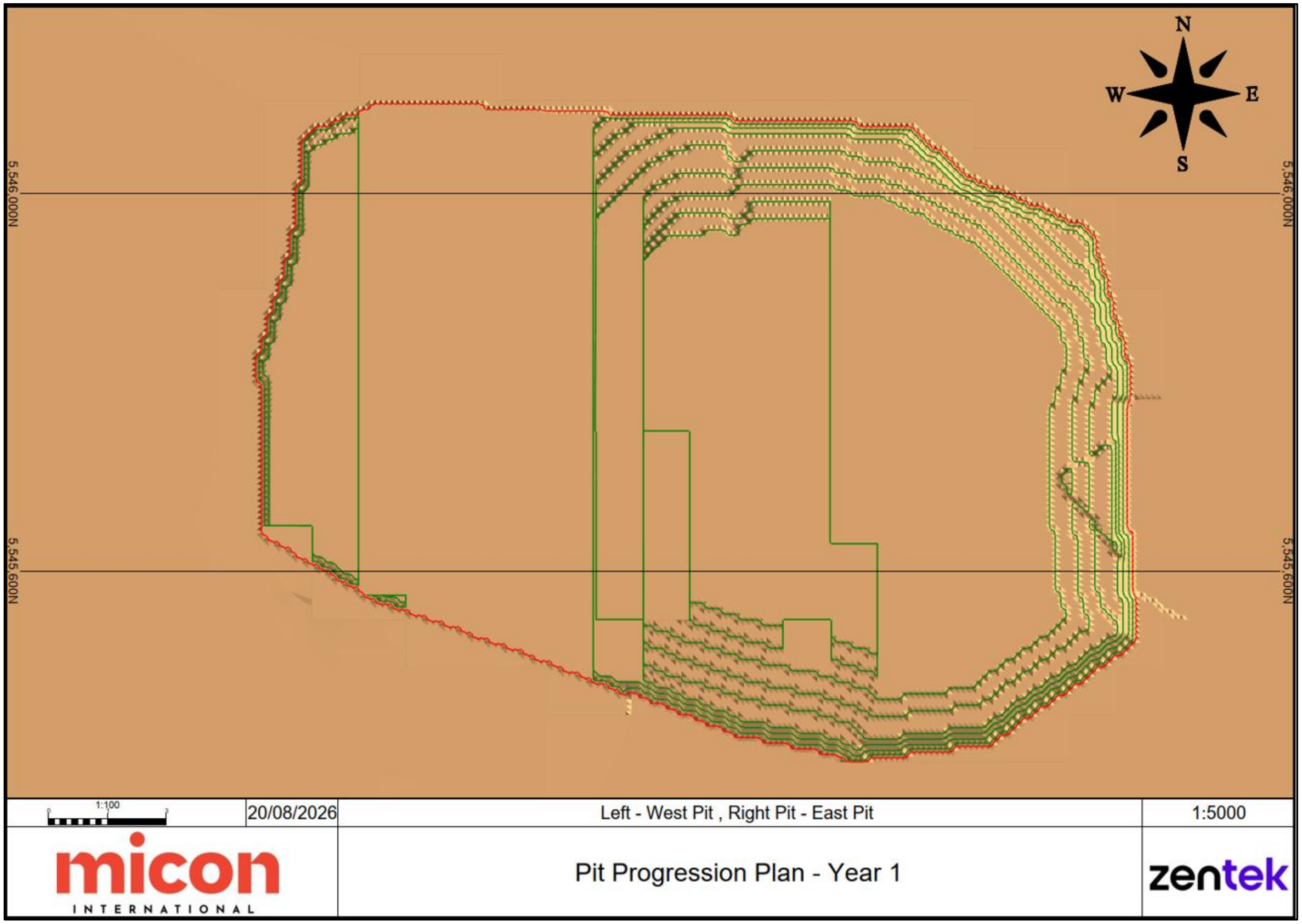


Table 16.5: LoM Production Schedule

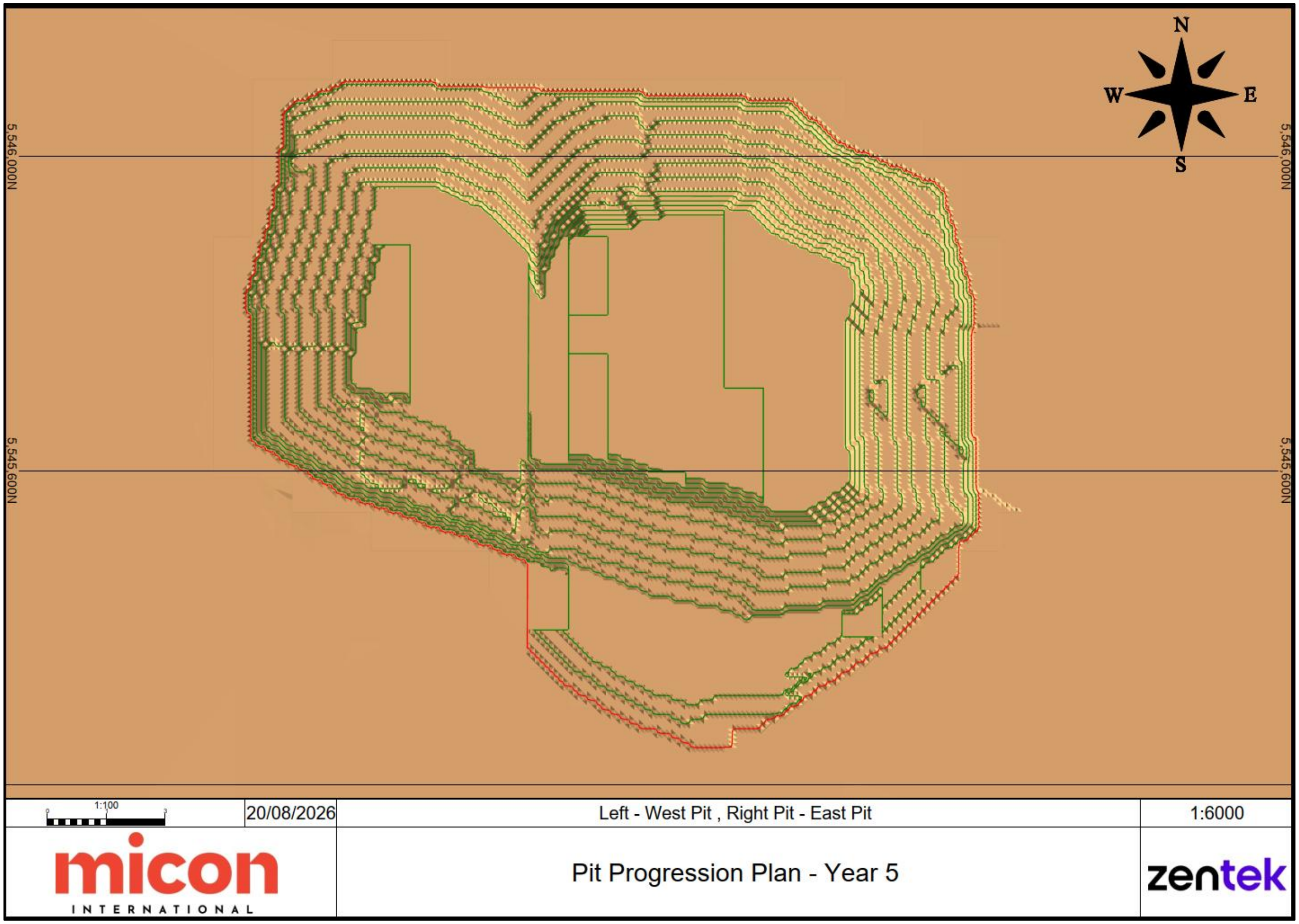
	Mining											Processing			
Year	East Pipe Mined (kt)	East Pipe Grade (% Cg)	West Pipe Mined (kt)	West Pipe Grade (% Cg)	Processed Mined (kt)	Processed Mined Grade (% Cg)	Contained Graphite (kt)	Waste (kt)	Overburden (kt)	Total Mined (kt)	Strip Ratio	Processed Feed Milled (kt)	Feed Grade (% Cg)	Contained Graphite (kt)	Recovered Graphite (kt)
-2	-	-	-	-	-	-	-	2,366	7,134	9,500	-	-	-	-	-
-1	35	5.67	-	-	35	5.67	2	1,130	12,335	13,500	386.3	-	-	-	-
1	276	5.8	-	-	276	5.8	16	6,100	7,134	13,510	48	299	5.8	17.4	15
2	665	6.32	-	-	665	6.32	42	5,844	6,991	13,500	19.3	528	6.6	34.9	30
3	450	6.52	148	2.77	598	5.59	33.4	4,353	2,532	7,482	11.5	620	5.6	34.9	30
4	292	6.38	674	2.98	966	4.01	38.7	4,451	377	5,794	5	793	4.4	34.9	30
5	276	6.46	614	3.17	889	4.19	37.3	3,050	1,870	5,809	5.5	791	4.4	34.9	30
6	183	6.4	713	3.21	897	3.86	34.6	4,859	893	6,649	6.4	900	3.9	34.9	30
7	182	5.63	721	3.26	903	3.74	33.8	6,580	-	7,482	7.3	920	3.8	34.9	30
8	323	6.34	350	3.09	674	4.65	31.3	1,040	8,045	9,758	13.5	743	4.7	34.9	30
9	450	5.94	18	3.04	468	5.83	27.3	8,691	788	9,947	20.2	775	4.5	34.9	30
10	576	6.09	8	2.65	584	6.04	35.3	6,967	918	8,469	13.5	564	6.2	34.9	30
11	294	6.15	642	2.93	936	3.94	36.9	6,354	192	7,482	7	850	4.1	34.9	30
12	327	5.84	683	2.9	1,010	3.85	38.9	5,633	-	6,643	5.1	831	4.2	34.9	30
13	228	6.36	870	3.08	1,098	3.76	41.3	2,819	1,845	5,762	4.2	816	4.3	34.9	30
14	3	5.41	1,124	3.28	1,127	3.29	37	2,803	1,862	5,793	4.1	1,035	3.4	34.9	30
15	90	4.41	827	3.46	917	3.55	32.6	4,416	476	5,810	5.3	1,019	3.4	34.9	30
16	299	5.74	750	3.27	1,050	3.97	41.7	4,802	105	5,852	4.7	754	4.6	34.9	30
17	244	6.12	689	3.03	933	3.84	35.8	4,933	-	5,866	5.3	892	3.9	34.9	30
18	361	4.79	623	2.93	985	3.61	35.5	4,869	-	5,854	4.9	952	3.7	34.9	30
19	536	5.36	396	2.79	932	4.27	39.8	4,885	-	5,817	5.2	705	4.9	34.9	30
20	438	5.14	562	2.55	1,000	3.68	36.8	4,822	-	5,822	4.8	905	3.9	34.9	30
21	402	4.65	551	2.74	953	3.55	33.8	4,894	-	5,847	5.1	1,001	3.5	34.9	30
22	741	4.45	183	2.27	924	4.02	37.1	3,417	-	4,341	3.7	813	4.3	34.9	30
23	925	4.22	489	2.57	1,414	3.65	51.6	1,141	-	2,554	0.8	772	4.5	34.9	30
24	941	3.88	230	2.73	1,171	3.65	42.8	1,343	-	2,514	1.1	821	4.1	34.9	30
25	939	3.82	216	2.58	1,155	3.59	41.4	1,350	-	2,505	1.2	849	4.1	34.9	30
26	33	4.31	982	2.7	1,016	2.75	27.9	866	-	1,881	0.9	1,200	2.9	34.9	30
27	-	-	1,125	2.62	1,125	2.62	29.5	877	-	2,002	0.8	1,235	2.6	31.8	27
28	-	-	1,203	2.47	1,203	2.47	29.7	678	-	1,986	0.6	1,235	2.5	30.4	26
29	-	-	-	-	-	-	-	-	-	-	-	1,235	2.2	27.1	23
30	-	-	-	-	-	-	-	-	-	-	-	1,048	2.2	23	20
Total	**10,510**	**5.24**	**15,392**	**2.93**	**25,902**	**3.87**	**1,002**	**116,333**	**53,497**	**195,731**	**6.6**	**25,901**	**3.9**	**1,002**	**862**

Figure 16.9: Production Schedule Year-1



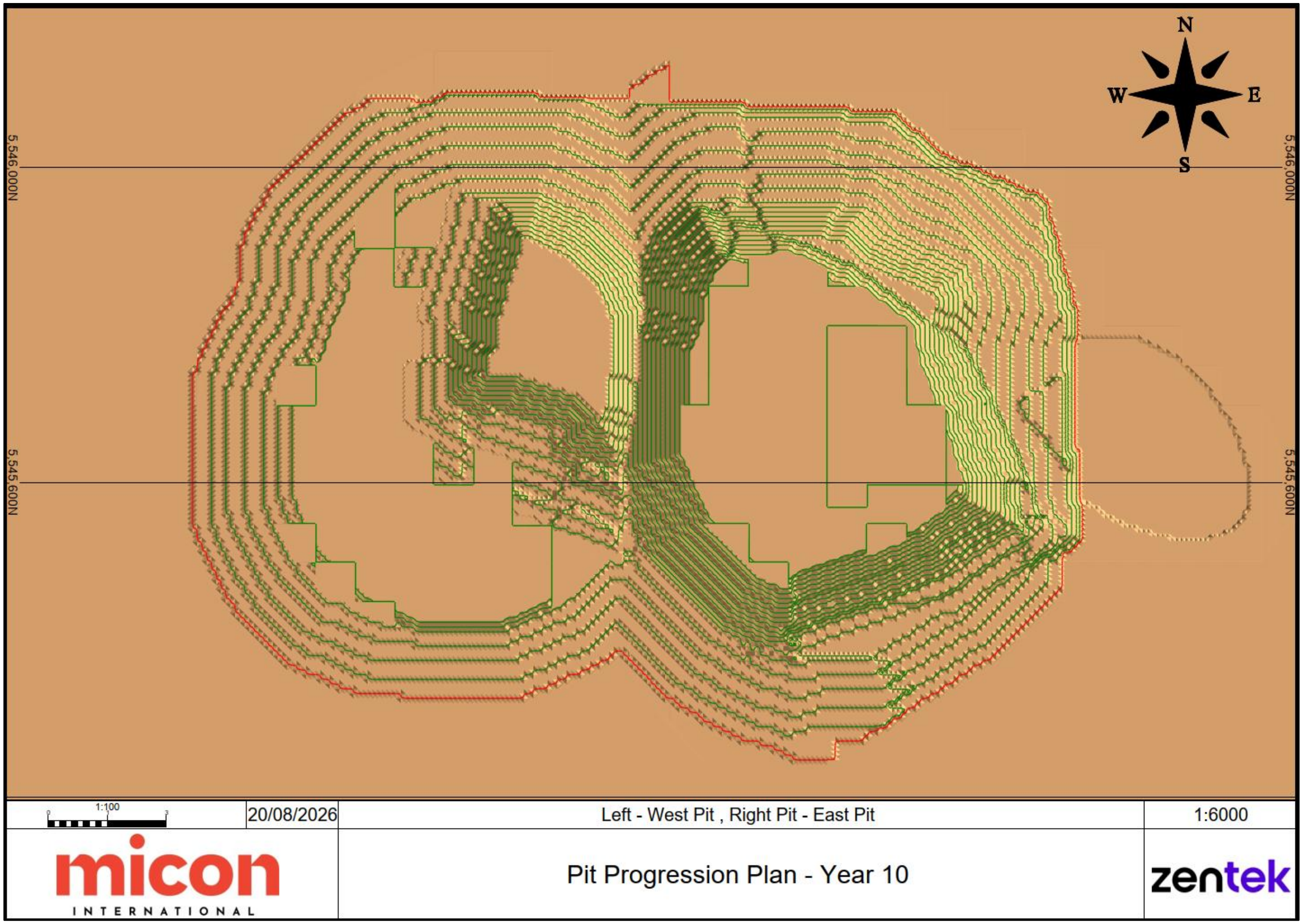
Source: Micon, 2026.

Figure 16.10: Production Schedule Year-5



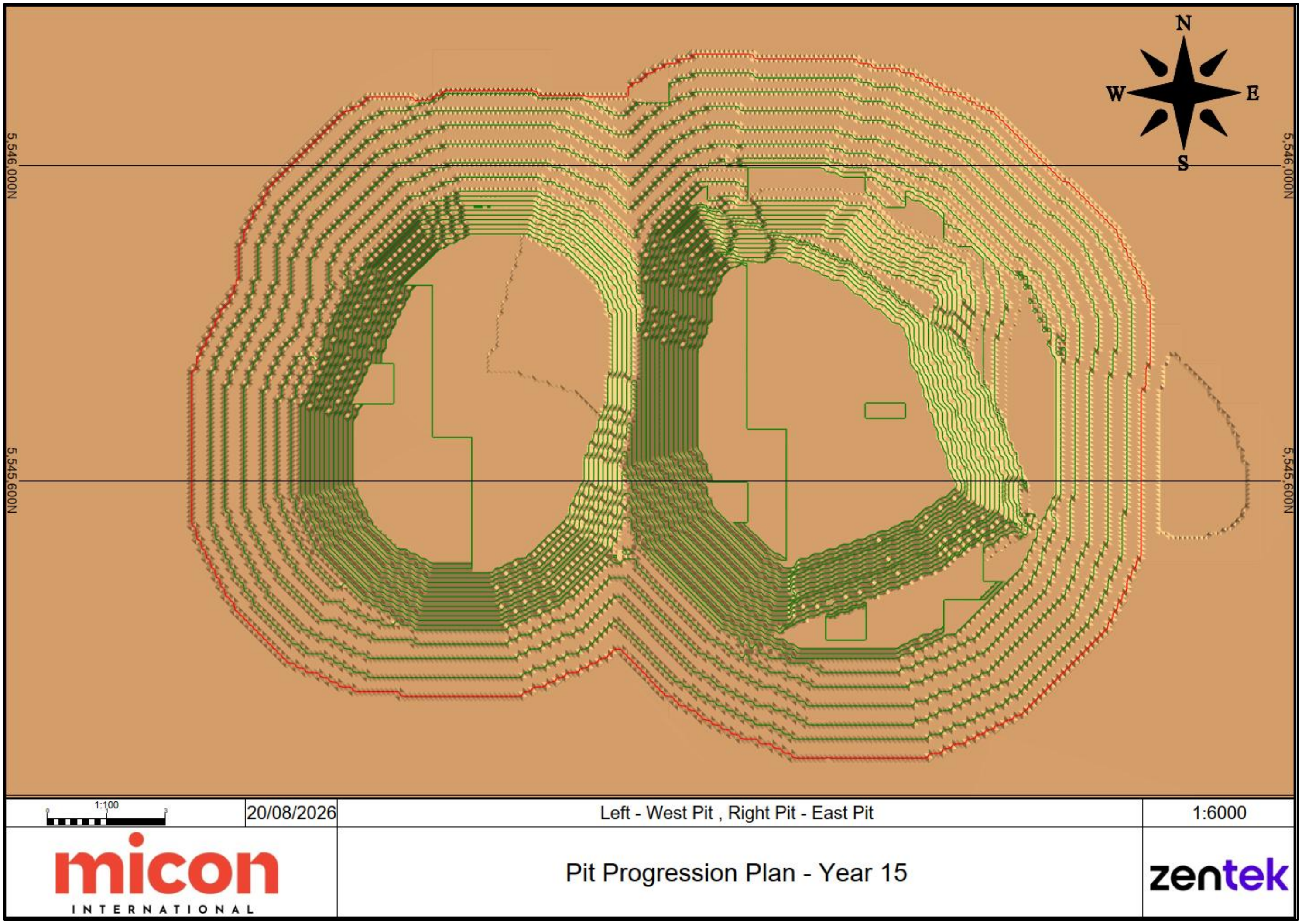
Source: Micon, 2026.

Figure 16.11: Production Schedule Year-10



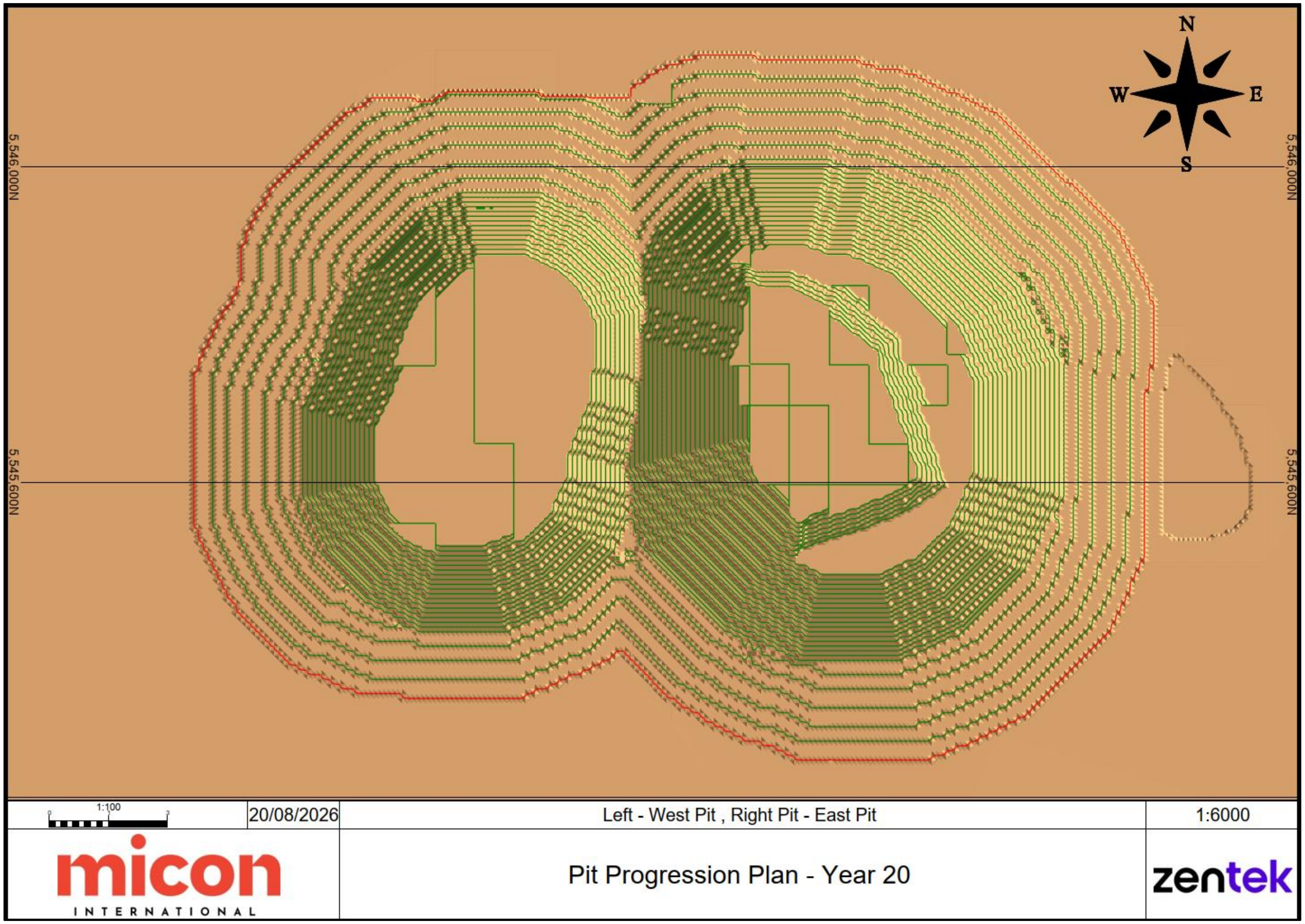
Source: Micon, 2026.

Figure 16.12: Production Schedule Year-15



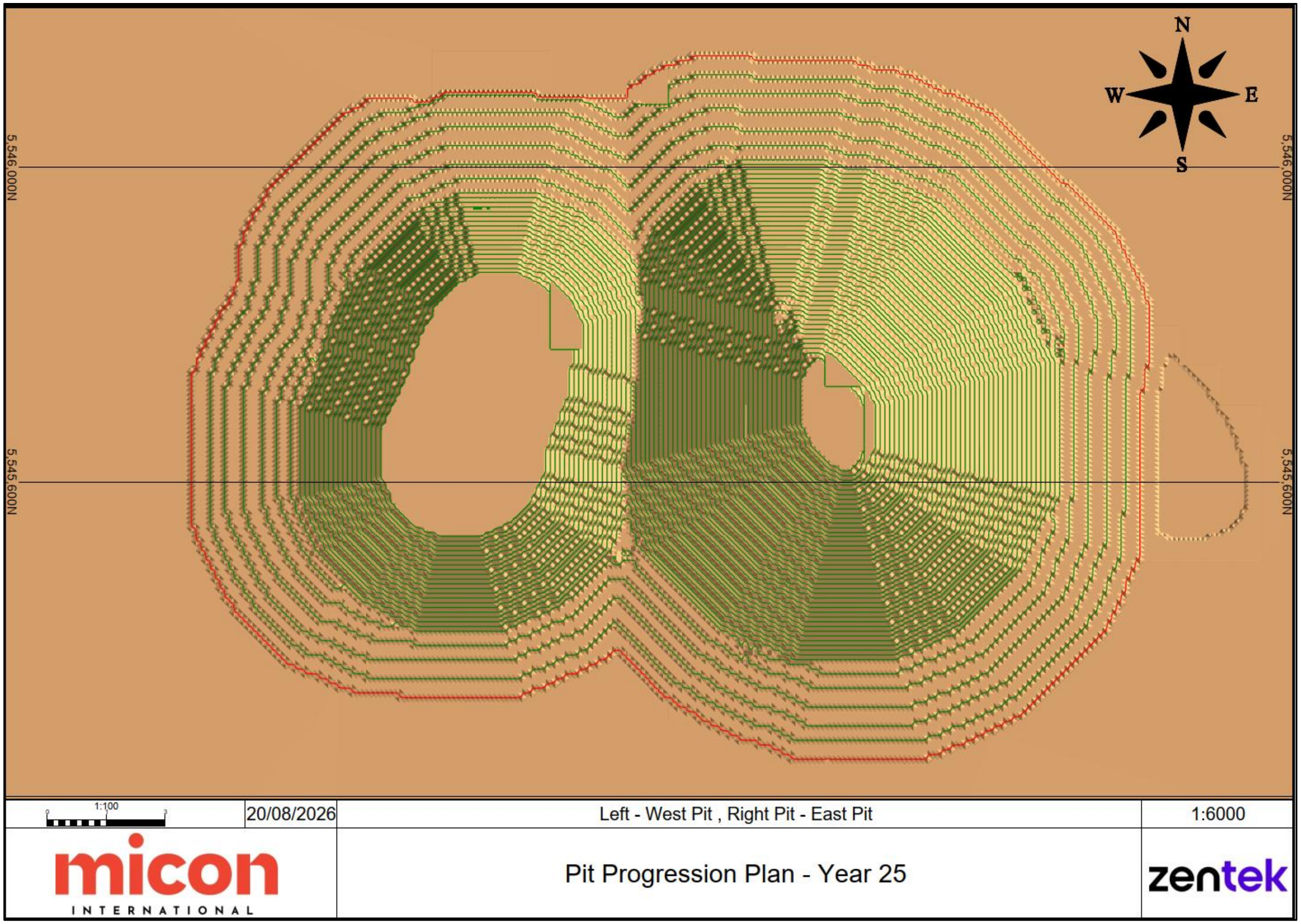
Source: Micon, 2026.

Figure 16.13: Production Schedule Year-20



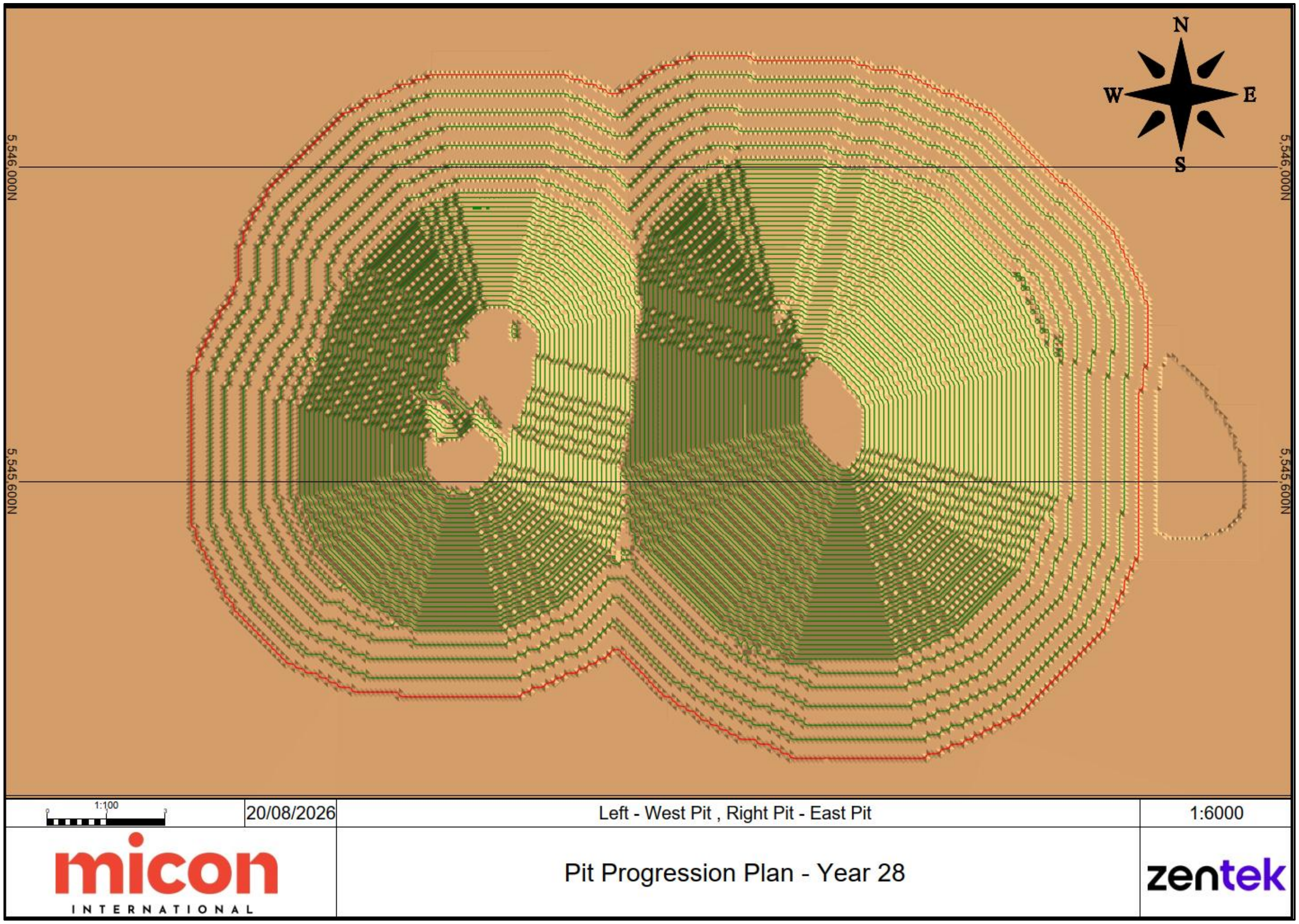
Source: Micon, 2026.

Figure 16.14: Production Schedule Year-25



Source: Micon, 2026.

Figure 16.15: Production Schedule Year-28



Source: Micon, 2026.

16.1.9 Open Pit Mining Operations

The open pit is envisioned to be operated using conventional open pit mine method with production hydraulic excavator, front end loaders and mining trucks in a bulk approach on 7 m operating benches. The open pit operations have been benchmarked using first-principles assumptions and reference data from nearby operations for drilling, blasting, loading, hauling, and support equipment. The benchmarking and equipment selection are intended to support PEA-level cost estimates and do not represent an optimized fleet. Final equipment selection for any fleet will depend on the capabilities and offering of the chosen operating mining contractor selected for this Project.

Table 16.6 summarizes the time-usage model assumptions applied to derive effective operating hours for the benchmark mining fleet and corresponding productivity estimates.

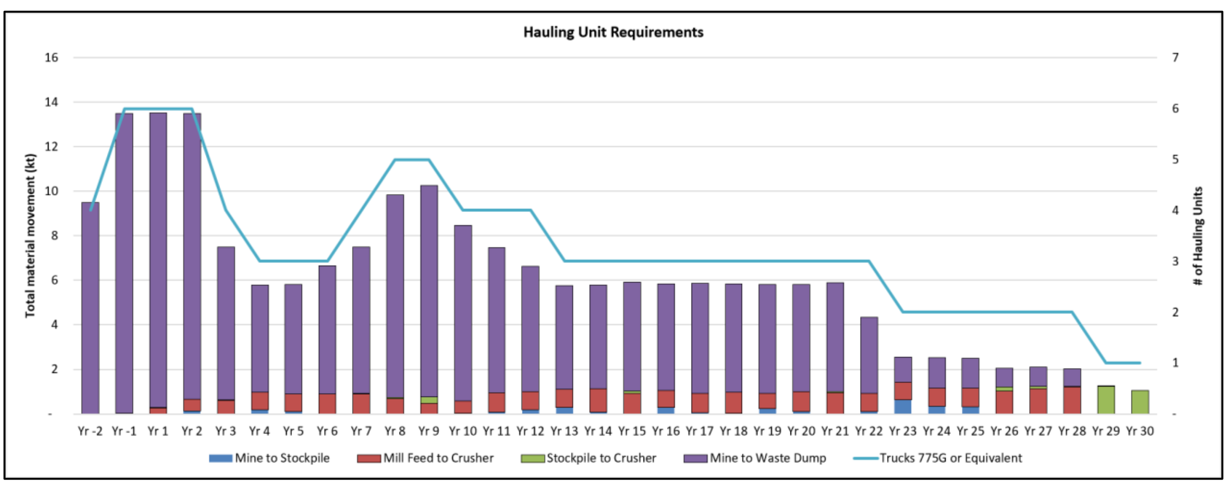
Table 16.6: Time Usage Assumption for Major Mobile Fleet Estimate

Equipment	Mechanical Availability (%)	Usage of Availability (%)	Operation Efficiency Factor (OE) (%)	Effective Operating Hours 360 Calendar Days (h)
Drills	89	90	95	4,627
Production Mining Shovel	85	90	95	6,140
Front End Loader	82	95	95	5,923
Haul Truck	85	85	92	5,743
Track Dozer	80	70	90	4,355
Motor Grader	80	70	90	4,355
Ancillary Equipment	90	70	90	4,899

A selection of the major equipment fleet class and sizing with the complementary support fleet proposed for the open pit mining fleet are summarized in Table 16.7.

The mine operations are envisioned to pair 8 m^3 class Production Excavator and 6 m^3 class Production Front end loader with a 65 t class Haulage fleet. Please note the peak equipment quantities include the pre-stripping contracting fleet utilized during pre-production and the first 2 years of the LoM. Figure 16.16 shows the haulage fleet requirement inclusive of pre-stripping overburden contracting fleet over the LoM.

Figure 16.16: Peak Haulage Fleet Requirement over LoM inclusive of Overburden Pre-Stripping Fleet



Source: Micon, 2026.

Table 16.7: Mining and Support Equipment Class and Sizing with Peak LoM Requirements Estimate

Fleet	Size / Capacity	Peak No. Units
Haul Truck	65 t	6
Production Mining Shovel	8 m^3	2
Production Front End Loader	6 m^3	1
Primary Drill Rig	6.5 inch / 165 mm	1
Auxiliary Drill Rig	5.5 inch / 140 mm	1
Track Dozer	D9 or Equivalent	2
Motor Grader	14M Grader or Similar	2
Water Truck	775 or Similar	1
Ancillary Excavator	336 or Similar	1
Wheel Dozer	834 or Similar	1
Pit Bus	Crew Transport	2
Fuel and Lube Truck	12,000 L or Similar	1
Mechanical Maintenance Truck	-	1
Light Towers	-	6
Mine Communication Network	LTE or Starlink	1
Mine Dispatch System	FMS system	1

16.1.10 Drilling and Blasting

Production drilling and blasting is anticipated on 7 m operating benches, with pre-split blasting performed on a double-bench 14 m configuration. Given the anticipated wet ground conditions on site attributable to the proximity of two nearby rivers, an emulsion-based explosive product has been assumed to achieve optimal fragmentation and water resistance.

Detonators and explosives will be stored in a dedicated explosive magazine located southeast of the open pit, as shown in Figure 16.6, positioned away from site infrastructure and active operating areas to ensure safe handling and storage. The explosive supplier will be responsible for the supply and delivery of explosives to site, including delivery to the active operating bench.

The owner's onsite mine engineering team will be responsible for designing the blast pattern configuration and issuing the necessary drilling instructions to the drilling equipment.

16.1.11 Labour Requirements

Open pit personnel requirements have been benchmarked using the estimation methodology described above. For the purposes of this study and considering the established northern Ontario mining jurisdiction, it is anticipated that a temporary site camp will only be required for construction efforts. A summary of the estimated operating labour requirements including mine operations, technical services, maintenance, general administration, and supervision is provided in Table 16.9.

16.1.12 Waste Rock and Overburden Storage Areas

Overburden and waste rock will be stored in an integrated WRMF located immediately north of and adjacent to the open pit, as shown in Figure 16.7. As the site is constrained by the Pitopiko and Nagagami Rivers, available land for infrastructure is limited, and the storage facility must account for drainage, seepage, and potential acid rock drainage (ARD) management. The quantity of material reporting to the WRMF is summarized in Table 16.8 while the remaining non-mineralized waste material will be utilized for site infrastructure construction.

It should be noted that marginal material grading between 0.30% and 1.48% Cg currently reporting to the WRMF could potentially be processed following the completion of mine life to marginally enhance project economics. For the purposes of this PEA LoM plan, this material had negligible impact on the Project's discounted cash flow and was therefore excluded from the mine schedule and the subsequent financial model.

Table 16.8: Material Quantities Reporting to the WRMF

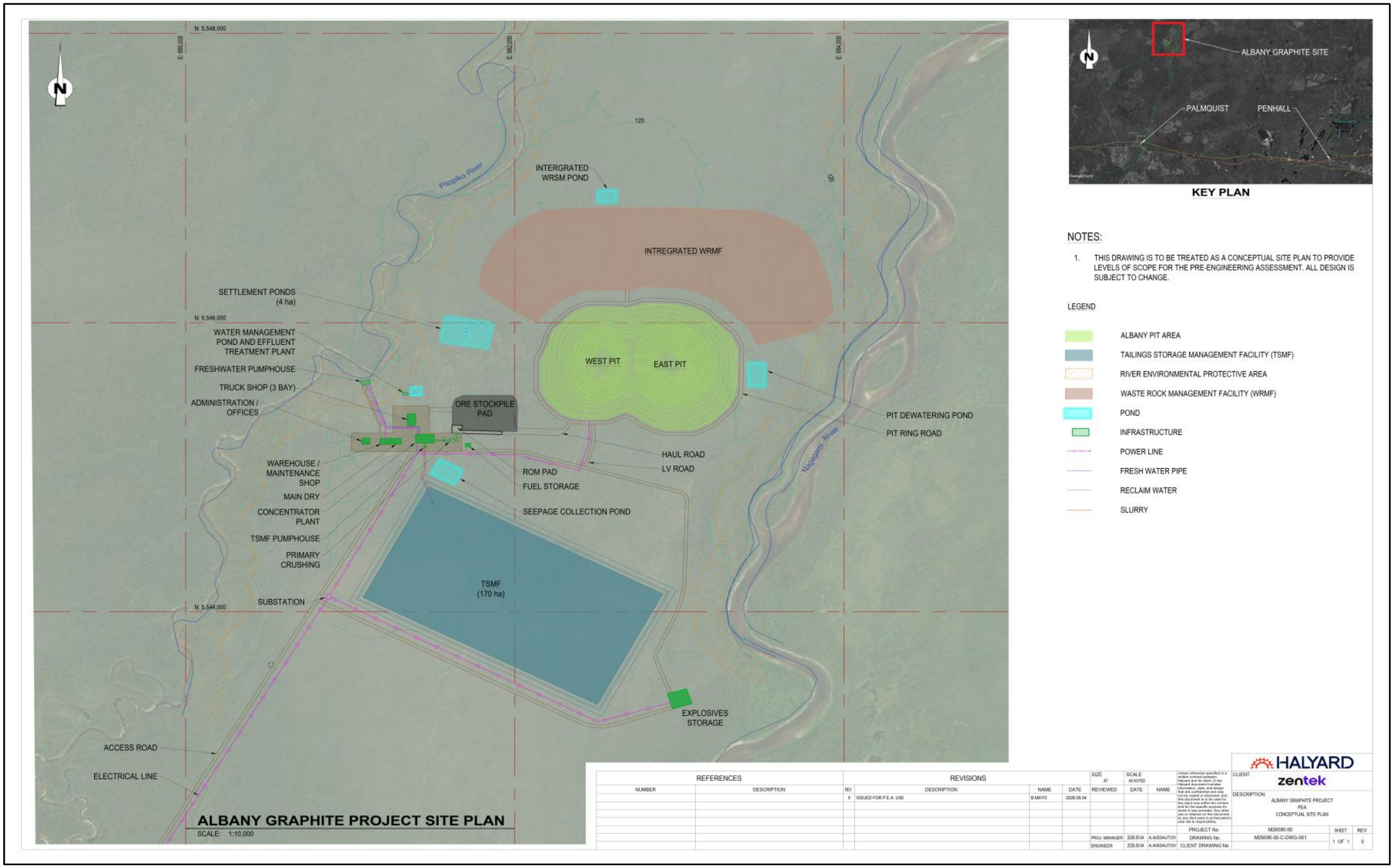
Material	In-Situ Volume (m^3)	In-Situ Density (t/m^3)	Swell Factor (%)	Compaction Allowance (%)	Estimated Compacted Storage Volume (m^3)
Waste Rock[1]	36,463,224	2.68	35%	10%	44,302,817
Overburden	28,235,255	1.85	20%	10%	30,494,075
Total	**64,698,479**	**–**	**–**	**–**	**74,796,893**

Note: 1. Waste Rock includes marginal graphite bearing mineralized rock between 0.3% Cg to 1.48% Cg.

Table 16.9: Number of Mine Personnel Breakdown by Department / Position Over LoM

Mine Personnel Schedule	Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Yr 11	Yr 12	Yr 13	Yr 14	Yr 15	Yr 16	Yr 17	Yr 18	Yr 19	Yr 20	Yr 21	Yr 22	Yr 23	Yr 24	Yr 25	Yr 26	Yr 27	Yr 28	Yr 29	Yr 30
Technical Services																															
Mine Manager	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Technical Services Manager	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Administrative Assistant	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Water Plant Technician	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Senior Mine Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mine Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Surveyor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Surveyor Assistant	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Geology Superintendent	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ore Control Geologist	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Ore Grade Technicians	0	4	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
Technical Services Sub-Total	**7**	**14**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**	**19**
Mine																															
Mine Manager	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Administrative Assistant	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Mine Superintendent	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Shift Supervisor	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Drilling	9	9	9	9	9	9	9	9	9	9	9	9	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Loading	9	13	13	13	9	5	5	5	9	9	9	9	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Hauling	17	26	26	26	17	13	13	13	17	21	21	17	17	17	13	13	13	13	13	13	13	13	13	13	9	9	9	9	9	9	5
Ancillary Fleet	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Support Fleet	0	0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Blaster	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Blaster Helper	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Construction Superintendent	2	2	2	2																											
Construction Engineer Supervisor	2	2	2	2																											
Mine Sub-Total	**49**	**62**	**72**	**72**	**55**	**47**	**47**	**47**	**55**	**59**	**59**	**55**	**51**	**47**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**43**	**39**	**39**	**39**	**39**	**39**	**39**	**35**
Mine Maintenance																															
Maintenance Manager	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Administrative Assistant	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Reliability Engineer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maintenance Planner	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maintenance Labourer	1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Maintenance Shift Supervisor	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Maintenance Specialist A	10	12	16	16	14	12	12	12	14	14	14	14	13	12	12	12	12	12	12	12	12	12	12	12	11	11	11	11	11	11	10
Mine Maintenance Sub-Total	**15**	**25**	**29**	**29**	**27**	**25**	**25**	**25**	**27**	**27**	**27**	**27**	**26**	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**24**	**24**	**24**	**24**	**24**	**24**	**23**
Total Personnel	**71**	**101**	**120**	**120**	**101**	**91**	**91**	**91**	**101**	**105**	**105**	**101**	**96**	**91**	**87**	**87**	**87**	**87**	**87**	**87**	**87**	**87**	**87**	**87**	**82**	**82**	**82**	**82**	**82**	**82**	**77**

Figure 16.17: Project Site Plan Highlighting the Ultimate Pit, Integrated WRFM, Mine Site Infrastructure Including Mobile Crusher and Explosive Storage Facility



Source: Micon/Halyard, 2026.

17 RECOVERY METHODS

The Albany Graphite Project PEA process design is based on the information and metallurgical test results summarized in Section 13 of this Report. The process plant design throughput is 2,500 t/d comprising single primary and fine crushing circuits, two parallel comminution and flotation circuits with single concentrate dewatering and tailings pumping systems. The dried flotation concentrate will be transported to a separate purification facility comprising four parallel thermal purification modules with a total high purity graphite production capacity of 30,000 t/a.

17.1 PROCESS DESIGN BASIS

The graphite beneficiation facility will receive mineralization from the open pit mine haul trucks. The mined material will be crushed and conveyed to storage bins where it will be reclaimed and transported to the main mill building where it will feed two parallel mill and flotation circuits.

The mineralization will be sufficiently reduced in size in the grinding circuit to liberate the graphite and flotation circuits shall be used to selectively recover the liberated graphite. Tailings from the flotation circuit will be pumped to the Tailings Storage Facility (TSF) while graphite concentrate will be dewatered and loaded into bulk bags for transportation t the thermal purification facility where it will be processed into high-quality specialized graphite products.

A selection of the key process design parameters and assumptions are presented in Table 17.1. The facility has been designed to treat 2,500 t/d on average, nominally operating 24 hours per day and 7 days per week. The table also provides an overview of the graphite concentrate recovery and product qualities/specifications. The operating utilization and design factors shown in the table have been used to develop the mass balance and size the unit operations included in the processing facility.

Table 17.1: Process Design Basis

Description	Unit	Value	Comments
Process Plant General			
Operating Days per Year	d/a	365	-
Annual Processing Rate (nominal)	t/a	894,454	Based on pure product output
Selected Ore Processing Rate (nominal)	t/d	2,451	-
Selected Ore Processing Rate (design/name plate)	t/d	2,500	Allow for grade / recovery variations
Annual Design Rate	t/a	912,500	-
Design Operating Life	Years	22	-
Crushing Circuits			
Primary Crusher Operating Utilization	%	65.00	24 h per day and 65% utilization
Average Operating Hours per Operating Day	h	15.6	7-days per week
Number of Circuits		1	-
Average Throughput Rate per Circuit	t/h	157	-
Fine Crusher Operating Utilization	%	75.00	24 h per day and 75% utilization
Average Operating Hours Per Operating Day	h	18	7-days per week
Number of Circuits		1	-

Description	Unit	Value	Comments
Average Throughput Rate per Circuit	t/h	136	-
Crusher Circuit Product Size (P_{80})	mm	15	-
Number of Crushing Stages		3	includes primary crushing
Grinding and Flotation Circuit			
Grinding Circuit		Rod mill and ball mill	
Total Operating Utilization	%	92.00	Includes thickeners
Average Operating Hours per Operating Day	h	22.1	-
Number of Circuits		2	Two parallel circuits
Average Throughput Rate, Total	t/h	111	-
Average Throughput Rate per Circuit	t/h	55.5	-
Primary Ball Mill Grind Size (80% passing -P_{80})	µm	140	Based on testwork
Number of Regrind/Polishing Stages		2	-
RG Circuit 1, Product Size - passing (P_{80})	µm	30	To be confirmed
RG Circuit 2, Product Size - passing (P_{80})	µm	15	To be confirmed
Number of Flotation Cleaner Stages		6	-
Tailings Management		Conventional system, no dewatering	
Concentrate Thickening / Filtration			
Total Operating Utilization	%	85.00	Pressure filtration
Average Operating Hours per Operating Day	h	20.4	-
Number of Circuits		1	-
Average Throughput Rate (dry t)	t/h	4.6	-
Beneficiation Plant Process Recoveries and Concentrate Grades			
Average Graphite Flotation Recovery		86.00%	Based on bench scale testwork, same used for East and West Zones
Graphite Concentrate Grade	%C(g)	87.00%	-
Graphite Concentrate Solids (SG)		2	-
Concentrate Filter Cake Moisture Content	wt%	20%	Based on pilot plant testing
Concentrate Dryer Moisture Content	wt%	2.00%	Purification plant requires ≤2%
Graphite Concentrate Production			
Graphite Concentrate Production (nominal)	dry t/d	94	Calculated
Graphite Concentrate Production (nominal)	t/a	34,483	Based on purification plant design
Average Concentration Ratio (CR nominal)		25.9	Calculated
Graphite Purification Plant Operating Criteria			
Technology Adopted for the Study		Thermal Purification using Fluidized Bed Reactor (FBR)	
Feed Graphite Content (Cg)	wt%	87.00%	-
Net Graphite Purification Process Yield	%	100.00%	Based on losses and pitch additions
Purification Plant Feed, Full Scale Operation	dmt/a	34,483	-

Description	Unit	Value	Comments
Purification Plant feed, full scale operation	wmt/a	35,186	-
Total pure graphite production	t/a	30,000	Nominal design
Final Products		**Proportion**	**AETC June 2026**
Nuclear Grade Matrix Graphite Powder (5N)		12.80%	>5N %C, EBC <3ppm
Synthetic diamond & Iso-Molded Graphite Products		8.60%	>4N %C
Coated Spherical Purified Graphite (CSPG)		36.50%	>4N %C
Paints and Conductive Coatings		21.10%	Non spherical,>4N %C
Conductive Additives for Cathode Applications		21.10%	Non spherical,>4N %C, d90 4-6 µm
Process Unit Operation Design Operating Factors		**Value**	**Criteria**
Primary crushing	%	30	Throughput
Conveyors and feeders	%	30	Throughput
Grinding equipment	%	10	Motor sizing
Flotation equipment	%	15	Volume calculations
Process pumps	%	20	Flows and motor sizing
Concentrate dewatering	%	30	Cater for high grade zone
Tailings dewatering	%	15	Equipment sizing
Dryers	%	20	Moisture in feed
Thermal reactor	%	20	Throughput

17.2 PROCESS DESIGN CRITERIA

Table 17.2 provides a summary of key process design parameters used for the Albany Graphite Project PEA These criteria are mainly based on the metallurgical testwork described in Section 13, typical industry design factors and Micon's in-house database of similar projects and unit operations.

Table 17.2: Summary of PEA Process Design Criteria

Criterion	Unit	Value	Comments
Mined Material Characteristics			
Total LoM Tonnage	kt	25,902	Economic model (Rev01)
Average LoM Mined Grade	Cg(%)	3.87	Economic model (Rev01)
Total Mined Graphite Inventory	Cg (kt)	1,002	Economic model (Rev01)
Primary Crushing			
Crusher type		Jaw	C100 or equivalent
Nominal throughput	t/d	2,451	-
Nominal throughput	t/h	157	-
Crusher feed stockpile retention time required	d	1	Covered
Crusher stockpile total live capacity	t	2,500	Use design rate
Final product size - passing (P_{80})	mm	125	-
Fine Crushing Circuit			2-stage crushing/screen package
Crusher circuit average feed rate	dry t/d	2,451	-

Criterion	Unit	Value	Comments
Crusher Circuit Average Feed Rate	dry t/h	136	-
Final Product Size - passing (P_{80})	mm	15	-
Fine Crushed Ore Storage			2 Parallel Circuits
Fine Crushed Ore Bin	h	2	-
Number of Storage Bins		2	-
Live Capacity-Total	t	-	-
Live Capacity-Bin	t	130	One feed bin per grinding circuit
Grinding circuit			2 Parallel Circuits
Average operating hours per operating day	h	22.1	-
Feed size - passing (P_{80})	mm	15	-
Final product size - passing (P_{80})	µm	140	From preliminary testwork
Average throughput rate-per circuit	t/d	1,225	-
Average throughput rate-per circuit	t/h	55.5	-
Rod Mill Product size - passing (P_{80})	µm	850	-
Bond rod mill work index (RWI)	kWh/t	15.8	Testwork
Rod mill estimated power consumption	kWh/t	5.03	RWI and efficiency factors
Ball Mill product size - passing (P_{80})	µm	140	-
Proportion circulating load	%	300%	-
Bond ball mill work index (BWI)	kWh/t	18.1	Testwork
Ball Mill specific energy	kWh/t	9.32	BWI and efficiency factors
Flotation Circuit			
Solids feed rate to each flotation circuit	t/d	1,225	Two parallel circuits
Solids feed rate to each flotation circuit	t/h	55.5	-
Rougher Feed slurry density	wt % solids	32.80%	-
Rougher volume feed rate (per circuit)	m^3/h	135	-
Design final concentrate grade	C (t)%	87.00%	Design basis
Flotation concentrate solids SG		2.5	Design basis
Flotation conditioning time	mins	2	-
Rougher circuit C(t) grade	%C	12.50%	Calculated
Rougher circuit new feed wt recovery	wt%	30.00%	Testwork results
Rougher circuit carbon recovery	%	96.00%	Testwork results
Scavenger new feed wt recovery	wt%	0.00%	Testwork results
1st cleaner new feed wt recovery	wt%	15.00%	Testwork results
1st cleaner scavenger new feed wt recovery	wt%	0.00%	Testwork results
2nd cleaner new feed wt recovery	wt%	9.00%	Testwork results
3rd cleaner new feed wt recovery	wt%	7.00%	Testwork results
4th cleaner new feed wt recovery	wt%	5.50%	Testwork results
5th cleaner new feed wt recovery	wt%	4.50%	Testwork results
6th cleaner new feed wt recovery	wt%	3.86%	Calculated
Rougher flotation time	mins	20	Testwork results x factor

Criterion	Unit	Value	Comments
Rougher volume	m3	45	-
Cleaner 1 feed flowrate	m^3/h	70.8	Per circuit
Cleaner 1 flotation time	mins	10	Testwork results x factor
Cleaner 1 volume	m^3	11.8	-
Cleaner 2 feed flowrate	m^3/h	38.5	Per circuit
Cleaner 2 flotation time	mins	10	Testwork results x factor
Cleaner 2 volume	m^3	6.4	-
Cleaner 3 feed flowrate	m^3/h	23.9	Per circuit
Cleaner 3 flotation time	mins	10	Testwork results x factor
Cleaner 3 volume	m^3	4	-
Cleaner 4 feed flowrate	m^3/h	17.8	Per circuit
Cleaner 4 flotation time	mins	10	Testwork results x factor
Cleaner 4 volume	m3	3	-
Cleaner 5 feed flowrate	m^3/h	13.1	Per circuit
Cleaner 5 flotation time	mins	10	Testwork results x factor
Cleaner 5 volume	m^3	2.2	-
Cleaner 6 feed flowrate	m^3/h	8.7	Per circuit
Cleaner 6 flotation time	mins	10	Testwork results x factor
Cleaner 6 volume	m3	1.5	-
Final concentrate ratio		25.9	-
Total graphite flotation recovery	%	86.00%	Design basis, based on testwork results
Final conc grade	%C(g)	87.00%	Design basis
Regrind Mill 1 type (rougher con)			Stirred media, ISA or vertical unit
Design feed rate (per circuit)	t/h	21.6	Includes design factors
Feed size - passing (F_{80})	µm	140	-
Product size - passing (P_{80})	µm	30	Design Basis
Estimated unit power consumption	kWh/t	21	Typical, place holder, to be confirmed
Regrind Mill 2 (3rd Cleaner con)			Stirred media, ISA or vertical unit
Design feed rate	t/h	10.1	Includes design factors
Feed size - passing (F_{80})	µm	30	-
Product size - passing (P_{80})	µm	15	Design Basis
Estimated unit power consumption	kWh/t	31.5	Typical, place holder, to be confirmed
Flotation reagent addition (fuel oil)	g/t float feed	120	From 2017 pilot plant
Flotation reagent addition (MIBC)	g/t float feed	190	From 2017 pilot plant
Concentrate Dewatering			1 Circuit
Thickener Design feed rate	t/d	123	Includes design factors
Design feed rate	t/h	5.6	-
Thickener sizing criteria	$t/m^2/h$	0.25	Place holder -to be verified by testwork
Thickener u/f density	%w/w	50%	Typical - to be verified by testwork

Criterion	Unit	Value	Comments
Filter Design feed rate	t/h	6	-
Specific filtration rate	kg/m$_2$/h	300	Placeholder - to be verified by testwork
Filter product moisture	wt %	20.00%	Based on pilot plant results
Concentrate dryer design feed moisture		24%	Includes design factors
Dryer specified product moisture	wt%	≤2.0%	Spec from AETC

Source: Micon, 2026.

17.3 PROCESS DESCRIPTION – BENEFICIATION PLANT

The conceptual process design is based on conventional processing technologies and a flowsheet that has been developed from numerous bench and pilot scale testwork programs, as discussed in Section 13 of this Report. A simplified process flowsheet is presented in Figure 17.1.

Fresh material will be crushed to about 80% passing (P_{80}) 15 mm and fed to storage bins from which it will be conveyed at a controlled rate to two identical parallel grinding circuits.

The grinding circuits design consists of a rod and ball mill. The discharge slurry from both mills will be pumped to a cyclone cluster with the overflow feeding the flotation circuit and cyclone underflow discharging into the ball mill. The target flotation feed cyclone overflow P_{80} size is 140 µm.

The conceptual design of the graphite flotation circuit comprises a rougher flotation stage with regrinding of the rougher concentrate, six stages of cleaning with regrinding/polishing of the third cleaner concentrate.

The final flotation concentrate will be dewatered using a thickener, pressure filter and dryer, then stored before loading into 1 tonne capacity bags and transportation to the purification pant.

Tailings from the flotation circuit will be pumped to the Tailings Storage Facility (TSF).

17.3.1 Crushing

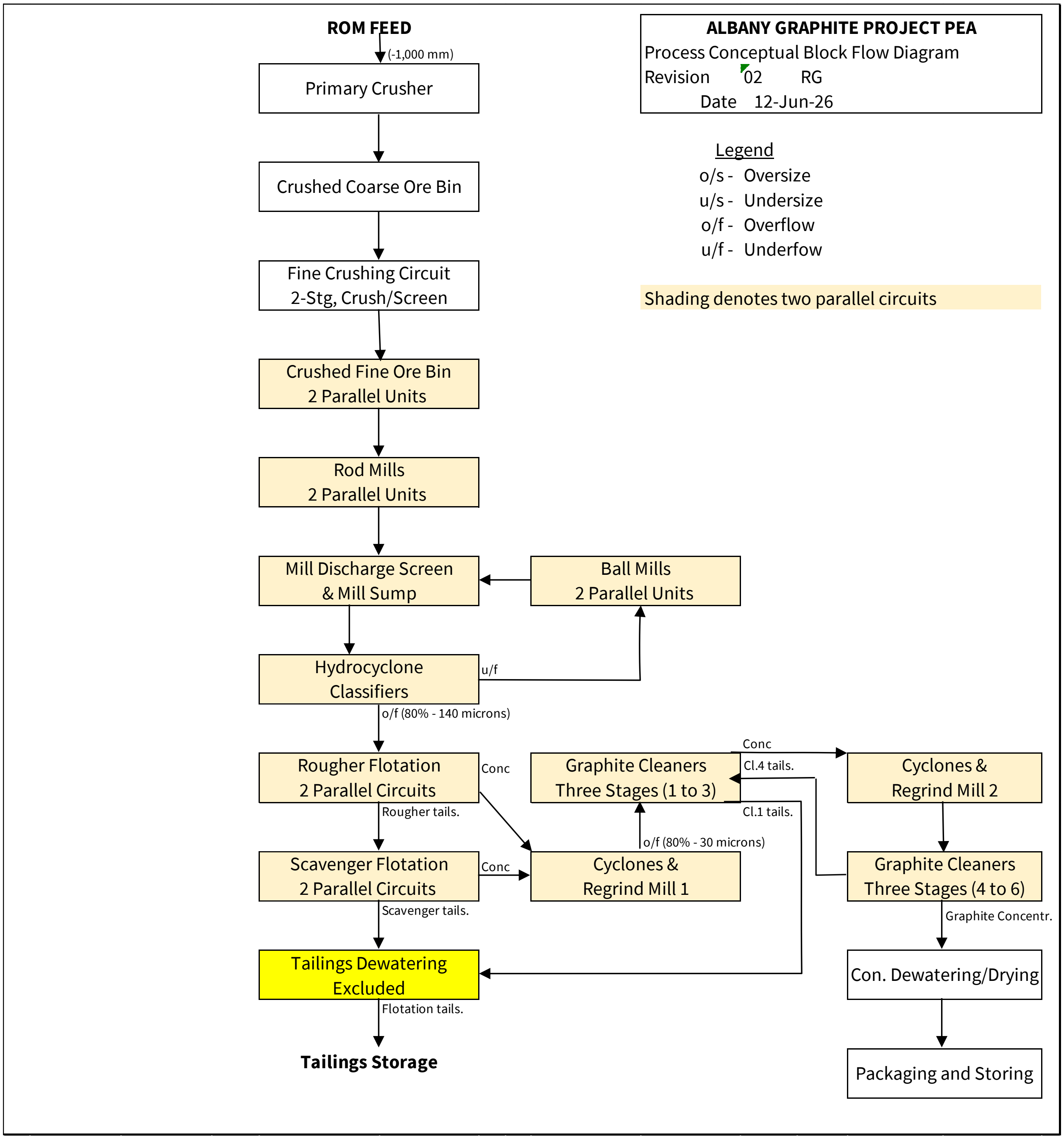
The primary gyratory crusher circuit is designed for 2,500 t/d and a nominal 157 t/h with a 65% utilization.

The run of mine feed will be fed over a static grizzly to prevent oversize material being fed to the crushing circuit. Rejected oversize will be broken using a hydraulic rock breaker. A vibrating grizzly feeder will feed the material from the feed bin to the primary crusher, which will allow finer material to bypass the crusher.

The jaw crusher discharge will combine with the undersize material from the grizzly feeder onto the sacrificial conveyor. The sacrificial conveyor will transport the reduced material to a second conveyor which will feed the 1,260 t capacity coarse crushed ore bin. Coarse crushed mineralization (approximately P_{80} = 125 mm) will be fed at a controlled rate to the fine crushing (secondary and tertiary) and screening circuit where the rock will be reduced to around P_{80} of 15 mm then conveyed to one of two crushed ore bins.

The total live capacity of the crushed ore bins will be 2,500 t. A dust collection system will be utilized to minimize dust emissions.

Figure 17.1: Conceptual Process Block Flow Diagram



Source: Micon, 2026.

17.3.2 Grinding Circuit

There will be two identical parallel grinding and flotation circuits, each rated at a design tonnage of 1,250 t/d. The purpose of the two circuits is to defer construction and capital spend of one line to correlate with the envisaged product sales ramp-up schedule. The descriptions of the grinding and flotation systems below are for one circuit.

Mineralized material will be withdrawn at a controlled rate of nominally 56 t/h from a crushed ore bin using two of three variable speed belt feeders, onto the rod mill feed conveyor. The rod mill feed conveyor system will include a magnet, metal detector, and weigh scale.

The conveyor will discharge the mineralization into the rod mill and process water will be added to the rod mill feed to achieve the desired pulp density. The preliminary size of the selected rod mill is 2.7 m diameter by 4.1 m long (9' diameter by 13.5' long) with a 336 kW (450 HP) motor.

The rod mill trommel undersize will discharge into a common mill sump, which also receives the ball mill product. The mill sump material will be pumped to a cluster of cyclones with the cyclone underflow reporting to a ball mill and the overflow gravitating to the flotation feed conditioners.

The preliminary ball mill selection for this circuit comprises a 2.7 m diameter by 4.9 m long (9 ft diameter by 16 ft long) equipped with a 600 kW (800 HP) motor. The target 80% passing product size (P_{80}) of the cyclone overflow is 140 µm.

17.3.3 Flotation Circuit

The cyclone overflow from the grinding circuit will feed the flotation rougher conditioners, where flotation reagents will be added. The mixed slurry will flow by gravity to the graphite rougher flotation bank at a nominal density of around 33% solids by weight.

The PEA design includes conventional forced air tank cells as rougher flotation cells although alternative technologies shall be investigated during the next phase of Project development. The rougher tailings will be pumped to the tailings sump while the concentrate collected from the roughers shall feed the primary regrind circuit.

The copper regrind circuit will consist of a hydro-cyclone cluster and a stirred mill operating in open circuit. Slurry from the surge tank will be pumped to the cyclone to densify the feed and target an 80% passing size of 30 µm in the overflow that will feed the graphite cleaner flotation circuit. The cyclone underflow will feed the regrind mill while overflow will gravitate to the first stage of cleaning.

The cleaner circuit consist of three sequential stages of cleaner flotation followed by a secondary regrind stage, which feeds a second series three cleaner flotation stages (six cleaning stages in total). The secondary stirred mill will have a target P_{80} product size of 15 µm. The flotation concentrates flow from the first stage downstream until it reaches the six stage cleaner, the concentrate from which will be pumped to the graphite concentrate thickener. The tailings from the cleaner cells flow counter-currently to the concentrate movement. The tailings from the first stage of cleaning will be directed to the tailings collection tank.

17.3.4 Flotation Concentrate Dewatering and Handling

The concentrate handling circuit consists of a thickener, pressure filter, dryer and product handling equipment.

The final concentrate from flotation circuit will be fed to a dedicated thickener, where flocculant will be dosed to facilitate the settling of solids in the slurry and to reach an underflow density of approximately 50% solids by weight. The thickener overflows will be recycled to the process water system to be re-used within the process plant. The thickener underflow will be pumped to an agitated filter feed tank which will be able to hold 4 hours equivalent of slurry.

The thickened graphite concentrate held within the filter feed tank will be pumped to a dedicated concentrate filter press. The filters will be fed according to the required cycle time and will produce a filter cake containing about 20% moisture by weight (based on preliminary testwork but would likely be much lower). The filter cake will discharge into a bi-directional dryer feed conveyor, which will also have the facility to discharge filter cake into a designated emergency stockpile area.

The concentrate dryer will reduce the moisture content of the product to 2% by weight of less. The nominal concentrate production will be 94 dry t/d of about 4.6 dry t/h.

To prepare the concentrate for shipment, the dried material will be loaded into 1-t capacity bags which will be loaded onto transport trucks to transfer the material off site to the purification plant. Dust collection systems will be installed to manage dust levels within the concentrate handling area.

17.3.5 Tailings Handling

Tailings from the flotation circuits will report to tailing collection tank from which it will be pumped to the TSF.

Any water run-off from the tailings storage area will be collected and pumped back to the processing plant to be used as process water.

17.3.6 Reagents and Consumables, Handling and Storage

Reagent preparation and storage systems will be located within dedicated containment areas. Storage tanks will be equipped with level indicators, instrumentation, and alarms to reduce the risk of spills during normal operation. Appropriate ventilation, fire and safety protection, safety shower stations and Safety Data Sheet stations will be located throughout the facility.

Reagents consumed within the process plant will be prepared on site and distributed via various reagent handling and makeup systems. The preliminary list of reagents includes:

- Fuel Oil / Diesel, used as graphite flotation collector.
- MIBC, a flotation frother.
- Flocculants, used for dewatering of concentrate.

The reagents will be mixed, stored, and then pumped at a controlled rate to the flotation circuit and dewatering areas. Dosages will be controlled by flow meters and control valves. The capacity of the storage tanks is sized to handle one day of production.

The major consumables for the comminution circuit will be the grinding media (steel rods and balls) and liners.

17.3.7 Plant Services

Compressed air will supply the necessary air for the operation of filter presses, actuation of instruments and maintenance tools. Low pressure blowers will be used to supply air to the flotation cells.

Process water will be recycled from the collection of thickener overflows and de-watering filtrates. Process water make-up will be primarily sourced from mine water and collected tailings storage area run-off.

Fresh water will be used to feed the potable water system, gland water service, fire-water system and reagent (flocculant) preparation.

17.4 PURIFICATION FACILITY

The preliminary design of the purification circuit was undertaken by AETC of Wheeling, IL, USA, who also completed testwork using samples of Albany Graphite flotation concentrate. The engineering package delivered by AETC included block flow diagrams and material balances, process flow diagrams (PFDs), mechanical equipment list, conceptual layouts and building sizes, and preliminary capital and operating cost estimates.

The purification plant will comprise a number of parallel identical independent modules, each with a production capacity of 7,500 t/a of graphite. The construction of these modules will be staged to correlate with the high purity product marketing strategy.

17.4.1 Purification Process Description

The purification plant is designed to produce 30,000 t/a of high purity specialized graphite products. The process developed by AETC has been designed to produce a up to 7 distinct graphite products including 99.999% C nuclear grade powder, synthetic diamond material (99.99% C), high grade (>99.99% C) Coated Spherical Purified Graphite (CSPG) products and high-grade graphite for conductive coatings and paints.

The technology is based on high temperature thermal purification using a FBR in an inert atmosphere. This thermal purification resistively heats the material to 2,800^{0}C under a nitrogen atmosphere and at this temperature, almost all the impurities will boil off, resulting in carbon purity values upwards of 99.9995 wt% C.

A simplified modified flowsheet developed by AETC is presented in Figure 17.2.

17.4.1.1 Flotation Concentrate Receiving and Initial Heat Treatment

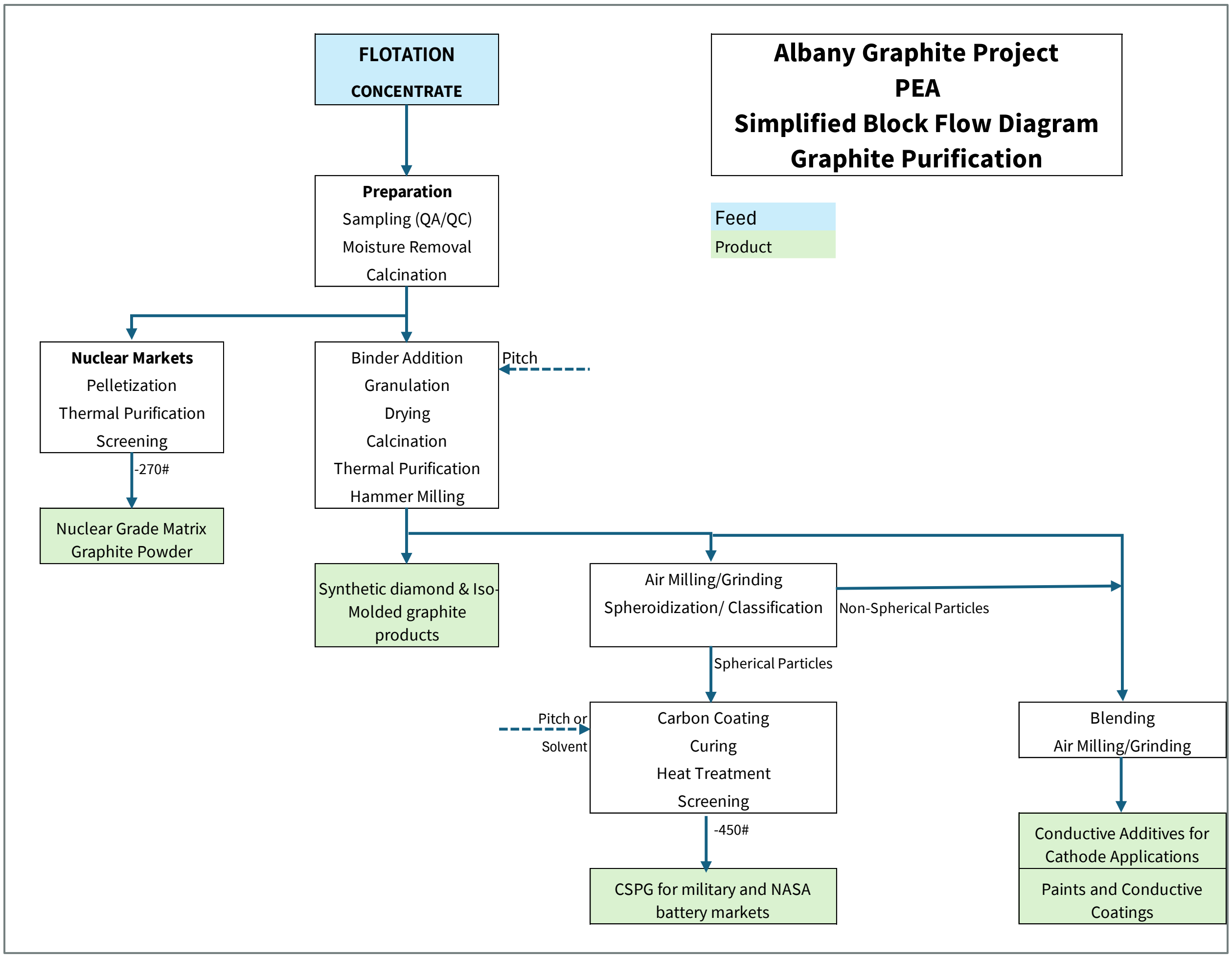
Each batch of flotation concentrate received from the mine site will be sampled and detailed analyses will be undertaken to measure certain key variables, such as moisture, volatile content, carbon purity, bulk density, tap density, particle size distribution and specific surface area. These characteristics will be used to determine detailed processing conditions and controls and estimate expected yields for each unit operation.

The material will be fed at a controlled rate to dryer to remove all remaining moisture (<0.1 wt %) then to a calciner to remove volatile impurities.

17.4.1.2 Nuclear Grade Processing

The processing route developed to produce ultra-high grade graphite powder suitable for the nuclear industry comprises pelletization without the use of binders or additives, thermal purification to remove all remaining impurities, screening to remove oversize particles and finally packaging for shipping.

Figure 17.2: Purification Process Conceptual Block Flow Diagram



Source: Micon based on detailed flowsheets provided by AETC, 2026.

17.4.1.3 Non-Nuclear Grade Processing

Material not designated for the nuclear market will be blended with pitch, granulated with binder (pitch) to increase particle size, dried, calcined to sublimate any volatile impurities introduced by the pitch and then thermally purified at 2,800°C. Following thermal purification, the graphite will be ground in a hammer mill and air classified into various size ranges. The product from this circuit will be suitable for use in Synthetic Diamond and Iso-Molded Graphite Products although most of this product stream will feed additional downstream treatment processes to produce higher value products.

The majority of the material from the hammer mill classification circuit will feed the spheroidization process and undergo an additional air-milling step followed by spheroidization milling and classification. It is estimated that roughly 55% of material from this process will be classed as "spherical particles" that can be treated to produce high grade CSPG products, while the remaining 45% of non-spherical particles will be blended with other streams, finely milled then packaged for sale as Non-Spherical Graphite for Paints and Conductive Coatings and Conductive Additives for Cathode Applications.

17.4.1.4 Reagents and Consumables

The main consumables used in the purification process are different forms and specifications of pitch, used for dry particle coating and granulation, and organic solvents used for coating of spherical particles to produce specific CSPG products.

Each type of pitch will be milled into a powder before it can be effectively used to dry coat particles or dissolved in solvent before being applied to the graphite (wet coating).

18 PROJECT INFRASTRUCTURE

18.1 INTRODUCTION

The Project is located approximately 30 km north of the Trans-Canada Highway, near the communities of CLFN and Hearst. An existing logging road extends to within approximately 4 km to 5 km of the deposit, with current access to the Project site provided by a winter trail.

The Project infrastructure is planned to support two open pits and the concentrator, which has a nominal processing capacity of 894,454 t/a. The concentrator is planned to operate continuously, 24 h/d and seven days per week. The preliminary infrastructure layout considers the available information on site topography, terrain, ground conditions and operational requirements.

This section describes the PEA-level infrastructure requirements for the Project, including site roads, buildings, utilities, power distribution, fuel storage, communications, water management, and other supporting facilities. The layouts and facility descriptions are conceptual and will require further definition during the next phase of Project development.

The Project area is generally characterized by relatively flat terrain, wet ground conditions, and substantial overburden. A site geotechnical investigation will therefore be required during the next phase to confirm ground conditions and establish appropriate design parameters for buildings, road embankments, drainage systems, utility corridors, and other infrastructure. The investigation is expected to include drilling, test pits, bore holes, sampling, and laboratory testing to characterize the overburden and bedrock conditions. The resulting information will support subsequent assessment of foundation conditions, bearing capacity, settlement, drainage, excavation requirements, seismicity and the potential use of locally available materials for construction.

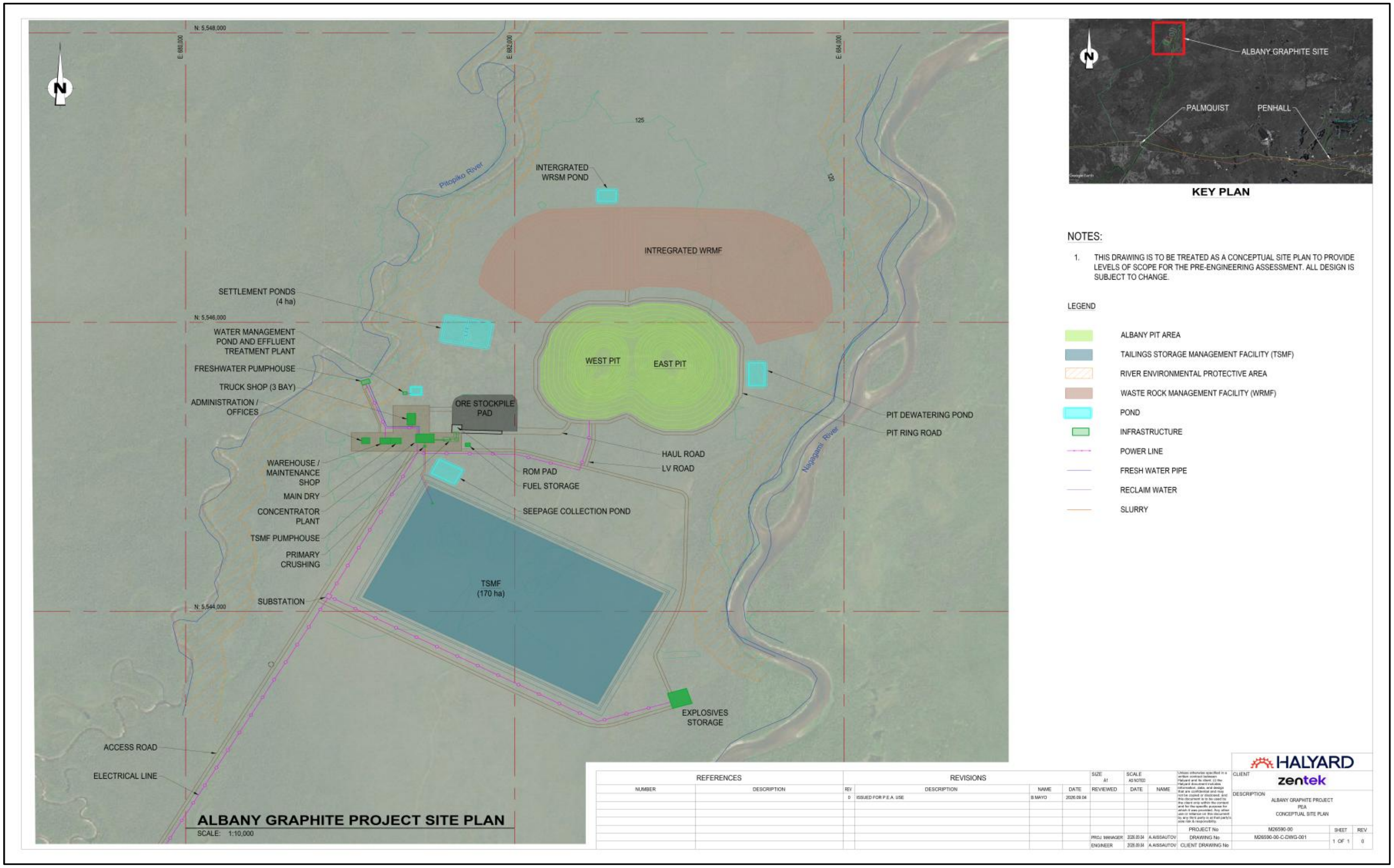
18.2 SITE LAYOUT

Figure 18.1 shows the preliminary Project site layout and associated on-site infrastructure. The layout has been developed to provide a compact operating arrangement, maintain practical separation between facilities, provide safe access, and reduce unnecessary disturbance and infrastructure requirements.

18.2.1 Site Roads and Drainage

The Project will require an internal road network suitable for year-round operation and for both heavy equipment and light-vehicle traffic. Heavy-vehicle roads will provide access between the open pits and the key mining and infrastructure areas, including the truck shop, fuel and wash facilities, primary crusher, waste rock management facility, and tailings management facilities. Other site facilities will generally be connected by service roads suitable for light vehicles and routine maintenance traffic.

Figure 18.1: Project Site Plan and Associated Onsite Infrastructure



Source: Micon/Halyard, 2026.

The main on-site roads are expected to include:

- Haul roads.
- Light-vehicle roads.
- Pit ring roads.
- Explosives storage access road.
- Water pumphouse access roads.

The current site layout includes approximately 8 km of internal service roads. The final road lengths and alignments will be refined as the site layout advances. Where suitable, crushed rock generated during site development or mining may be used as construction aggregate or road-building material, subject to confirmation of its geotechnical and geochemical suitability.

Drainage channels, ditches, and culverts will be provided as required to manage surface run-off and direct water away from buildings, roads, the concentrator area, open pits, and other critical infrastructure. Site pads will be graded to promote drainage away from buildings and toward the site water collection system. Run-off from areas with a potential for hydrocarbon contamination, including truck maintenance and fuelling areas, will be collected and directed through appropriate oil-water separation facilities before entering the site water management system.

18.3 SITE INFRASTRUCTURE

The principal infrastructure buildings are assumed to comprise pre-engineered or modular structures, with steel framing and insulated cladding where appropriate. Building configurations and construction methods will be refined during subsequent engineering. Fire detection and protection systems will be provided in accordance with the intended building use and applicable Canadian requirements. Fire protection for the main site facilities is expected to include a dedicated fire-water distribution system and hydrants, supplemented by building-specific detection and suppression equipment where required.

A controlled site entrance will be established near the main access road. The entrance area is expected to include a gatehouse and security facilities for personnel and vehicle access control.

18.3.1 Building and Ancillary Items

The principal surface buildings and ancillary facilities anticipated for the Project include:

- Truck shop.
- Main Administration Building.
- Maintenance facility and warehouse.
- Concentrator.
- TSF pumphouse.
- Freshwater pumphouse.
- Effluent treatment facility.
- Explosives storage facilities.

- Main Dry.
- Assay laboratory.

A permanent accommodation camp is not included in the PEA base case. The workforce is assumed to commute to the Project site from Hearst and surrounding communities.

18.3.2 Mine Infrastructure

The mine infrastructure has been integrated with the concentrator infrastructure, where practical, to reduce the overall site footprint and provide a compact and efficient layout. Common facilities, including the warehouse, Main Dry, Administration Building, and other supporting infrastructure, are intended to serve both the mining and concentrator operations.

An integrated WRMF is located adjacent to the open pits and will accommodate waste rock and overburden generated over the life of the Project. The WRMF is described further in Section 14 of this Report.

18.3.3 Truck Shop

The Truck Shop is planned as a single-level facility located adjacent to the main operating area. The facility is intended primarily for maintenance and servicing of the mining fleet. The current concept provides two heavy-equipment service bays capable of accommodating the nominal 65 t haul trucks, together with one bay for light-duty vehicles. A lubrication and grease distribution area is also included, with bulk fluids stored centrally and distributed to the service bays as required.

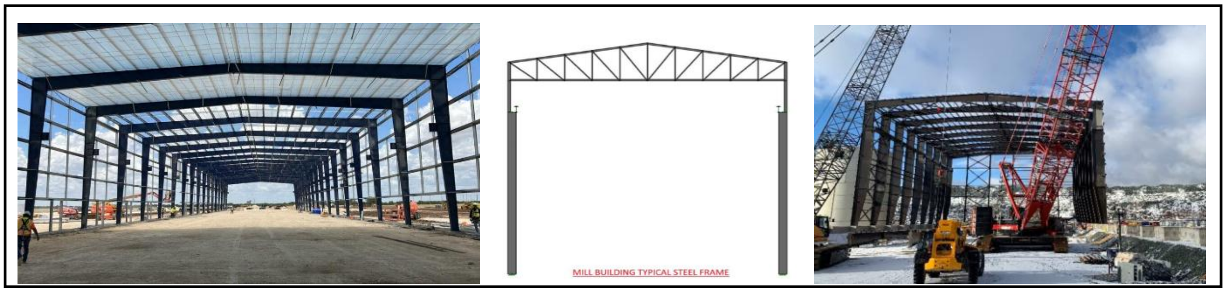
The facility is expected to include:

- Bulk-fluid storage.
- Lubricant and oil storage.
- Tire service and repair area.
- Office space.
- Tool and parts storage.
- Washroom and personnel support areas.
- Electrical room.

The Truck Shop is assumed to comprise a pre-engineered steel-frame building with insulated wall and roof panels. An overhead crane will be provided to support major maintenance activities. A representative pre-engineered building arrangement is shown in Figure 18.2.

Floor drainage will be collected through the shop drainage system and directed through an oil-water separator prior to discharge to the site contact-water management system.

Figure 18.2: Pre-Engineered Building (Reference Photos)



Source: Publicly available

18.3.4 Maintenance Facility and Warehouse Area

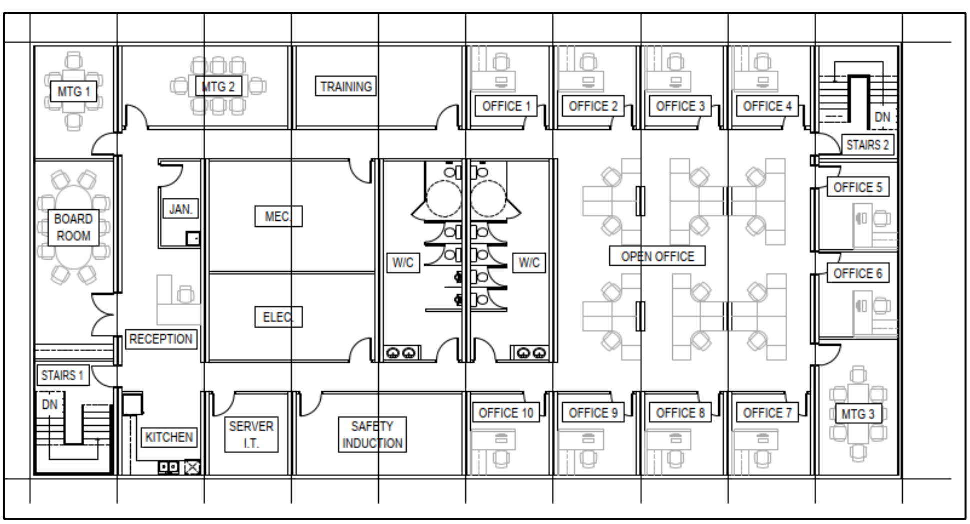
The maintenance and warehouse area will provide storage and maintenance support for the mine and concentrator. The maintenance facility is expected to include an overhead crane and equipment required for routine maintenance activities. The warehouse will provide centralized storage for spare parts, maintenance materials, and general site consumables, reducing the need for separate mine and concentrator warehouse facilities.

18.3.5 Main Administration Building

The Main Administration Building will form part of the common infrastructure serving both the mine and the concentrator. The building is planned as a single-storey facility with an area of approximately 1,000 m^2.

The building will accommodate site management, mine and concentrator management, technical and administrative personnel, meeting rooms, general services, dispatch functions, and a medical room. Ambulance access and parking will be provided adjacent to the medical area. For the purposes of the PEA, the building is assumed to comprise a steel-frame structure supported on a concrete slab, with insulated wall and roof panels. A conceptual office arrangement is shown in Figure 18.3.

Figure 18.3: Office Plan

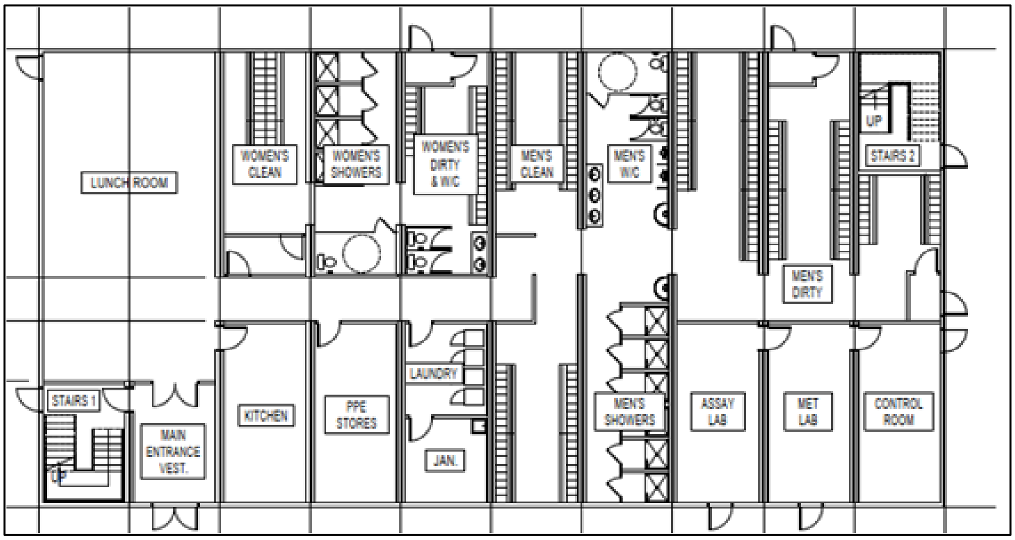


Source: Micon/Halyard, 2026.

18.3.6 Main Dry

The Main Dry will provide centralized changeroom, locker, shower, and washroom facilities for both mining and concentrator personnel. The facility will be located adjacent to the maintenance building and will form part of the common site infrastructure. A conceptual Main Dry arrangement is shown in Figure 18.7. Separate personnel change areas will be provided as appropriate for the workforce.

Figure 18.4: Main Dry Plan



Source: Micon/Halyard, 2026.

The ventilation and heating systems will be sized to maintain suitable indoor conditions and provide adequate air movement and moisture removal from work clothing and change-room areas. Final mechanical requirements will be established during subsequent engineering.

18.3.7 Explosive Storage

A dedicated explosives storage area will be established for the explosives and detonators required for mining operations. Based on the current site layout, the facility is located approximately 2.3 km from the nearest permanent site infrastructure and is separated from the main operating areas.

The explosives storage area will be fenced and access controlled. Explosives and detonators will be stored in dedicated magazines, with the final configuration and separation distances established in accordance with applicable regulatory requirements and explosives supplier recommendations.

An emulsion-based explosive product has been assumed for production blasting because of the anticipated wet ground conditions. Explosives will be supplied by a specialist contractor and delivered to the Project site as required, including delivery to the active mining benches.

18.3.8 Concentrator

The concentrator building will accommodate the principal mineral processing equipment together with associated operating and support facilities. The principal areas within the concentrator are expected to include the control room, grinding and flotation circuits, dewatering and drying facilities, concentrate bagging and storage areas, and reagent preparation facilities. Where practical, supporting facilities are shared with the mine rather than duplicated within the concentrator area.

18.3.9 Administrative Offices

Dedicated administrative offices are not planned within the concentrator building. Mine and concentrator administrative and technical personnel will be accommodated in the Main Administration Building described in Section 18.5.3.

18.3.10 Assay Laboratory

Routine assaying will be undertaken in an on-site laboratory incorporated into the Main Dry Building. The laboratory will support both the mine and concentrator operations and is assumed to be operated by a specialist contractor. The laboratory will include areas for sample reception, sample preparation, wet chemistry, and drying. The current design basis assumes a capacity of up to 30 samples per day. Storage will also be provided for laboratory consumables and supporting equipment.

Laboratory areas will be ventilated in accordance with the activities undertaken. Local extraction will be provided where required for dust-generating equipment, chemical handling, and heated equipment. Wet-chemistry areas are expected to include suitable fume extraction, with final ventilation and safety requirements to be confirmed during subsequent engineering.

18.3.11 Reagent Storage

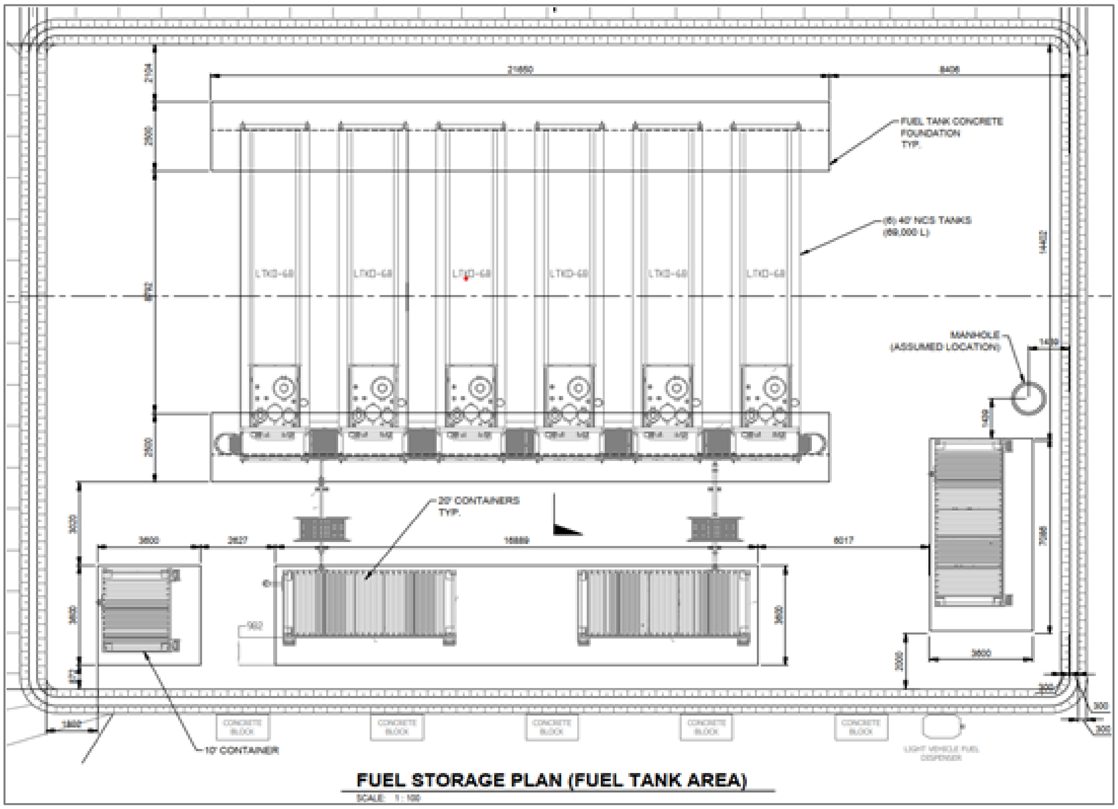
Reagents required for operation of the concentrator will be stored in a dedicated area associated with the concentrator building. Approximately 200 m^2 of reagent storage space has been allowed for in the PEA layout. The reagent storage area will include appropriate containment for liquid reagents and spills. Final storage requirements, segregation, ventilation, and containment provisions will be established once reagent consumption and delivery requirements are further defined.

18.3.12 Fuel Storage and Distribution

A central fuel storage and distribution facility will provide diesel and gasoline for the mining fleet and other mobile equipment operating at the Project site. The current PEA design basis provides approximately 125,000 L of diesel storage for heavy equipment and approximately 1,000 L of gasoline storage for light vehicles. These capacities will be reviewed during subsequent engineering against fleet consumption, delivery frequency, and required operating inventory.

Fuel storage tanks are assumed to be double-walled, above-ground units installed within suitable secondary containment. Leak detection and spill-management provisions will be incorporated as required. Storage tanks will be located within diked containment areas sized to retain potential spills. The preliminary fuel storage arrangement is shown in Figure 18.9.

Figure 18.5: Fuel Storage Facility



Source: Micon/Halyard, 2026.

18.4 NON-MINING WASTE MANAGEMENT

Non-mining waste generated by the Project will be managed through appropriate collection, segregation, storage, treatment, recycling, and off-site disposal practices. The principal non-mining waste streams are expected to comprise solid waste and sanitary wastewater and are described in this section.

18.4.1 Solid Waste

Non-mining solid wastes generated during Project operations are expected to include domestic waste, recyclable materials, non-hazardous industrial waste, and hazardous or regulated wastes associated with maintenance, laboratory, and other site activities. Waste will be segregated by type and collected and stored in designated areas. Where practical, recyclable materials will be separated from the general waste stream and transported off site to appropriate recycling or disposal facilities.

Hazardous and regulated wastes, including waste oils, lubricants, batteries, chemical containers, and other potentially hazardous materials, will be stored separately in designated areas with appropriate containment prior to removal from site by authorized contractors. Waste handling, storage, transportation, recycling, and disposal practices will be developed in accordance with applicable regulatory requirements.

18.4.2 Sanitary Waste

During the site preparation and construction phase, sanitary wastewater, including sewage and grey water, will be collected using portable sanitary facilities and transported off site for disposal at an existing provincially approved sewage disposal facility.

During the operational phase, sanitary wastewater generated by the Project will be collected and treated on site at a dedicated sewage treatment facility. Treated effluent will be managed in accordance with applicable regulatory requirements. The treatment process and final configuration of the sewage treatment facility will be established during subsequent engineering phase.

18.5 POWER SUPPLY AND DISTRIBUTION

At the Project site, power will be distributed from a central substation to the concentrator, mine facilities, freshwater pumphouse, tailings management facilities, in-pit pumping systems, and other supporting infrastructure. At full production, the concentrator, mining operations, and associated site infrastructure are estimated to require an average electrical load of approximately 9 MW.

The preliminary site distribution system is based on 13.8 kV, 60 Hz distribution. The system will include substations, transformers, switchgear, motor control centres, overhead lines, and cable distribution as required. Large process motors are expected to operate at 4.16 kV, while most industrial motors and process equipment will be supplied at 600 V. Building services, lighting, receptacles, and other small loads will generally be supplied at 208/120 V or other appropriate utilization voltages.

18.6 COMMUNICATIONS

The Project will require reliable external and internal communications for mine, concentrator, maintenance, security, and administrative functions. The PEA assumes that external communications will be provided through a combination of fibre-optic and/or microwave services.

Within the Project site, the principal facilities will be connected through a fibre-optic data network, supplemented by wireless or mobile communications coverage for field personnel and mobile equipment. The final communications architecture and service-provider arrangements will be established during subsequent engineering.

18.7 OFF-SITE INFRASTRUCTURE

The Project requires three principal off-site infrastructure components: an approximately 35 km access road connecting the Project site to the existing road network, a new 115 kV transmission line and an off-site carbon purification facility for treatment of graphite concentrate produced by the Albany concentrator. A preliminary route for the access road has been identified. Micon's QP developed a PEA-level allowance for upgrading and constructing the access road for inclusion in the Project capital cost estimate.

The PEA assumes that grid power will be supplied to the Project by a new 115 kV transmission line extending from a connection near the Trans-Canada Highway to the Project site. The preliminary transmission line length is approximately 40 km, with the alignment generally following the proposed site access corridor.

For the purposes of the PEA, the carbon purification facility is assumed to be located at a brownfield industrial site in Ontario with existing infrastructure. The facility is intended to process graphite concentrate produced at Albany and produce approximately 30,000 t/a of purified graphite product.

The process flowsheet, equipment list, facility description, and capital cost information for the purification facility were provided by the Client. Micon's QP relied upon this information for incorporation into the PEA. The purification facility is assumed to operate as a self-contained facility incorporating concentrate receiving and handling, purification, product handling, bagging and storage, utilities, and supporting infrastructure.

The potential use of natural gas at the Albany site was also considered. Natural gas could provide energy for concentrate drying, building heating, and other ancillary services. If selected in a next phase, natural gas could potentially be supplied through an approximately 37 km connection to the existing TransCanada Pipeline, with the route generally following the proposed access-road corridor.

For the PEA base case, electrical power is assumed to be sufficient to meet the Project energy requirements and a natural gas connection has therefore not been included in the capital estimate. The technical and economic merits of natural gas connection will be assessed during the next phase of Project development.

18.8 SITE WATER MANAGEMENT

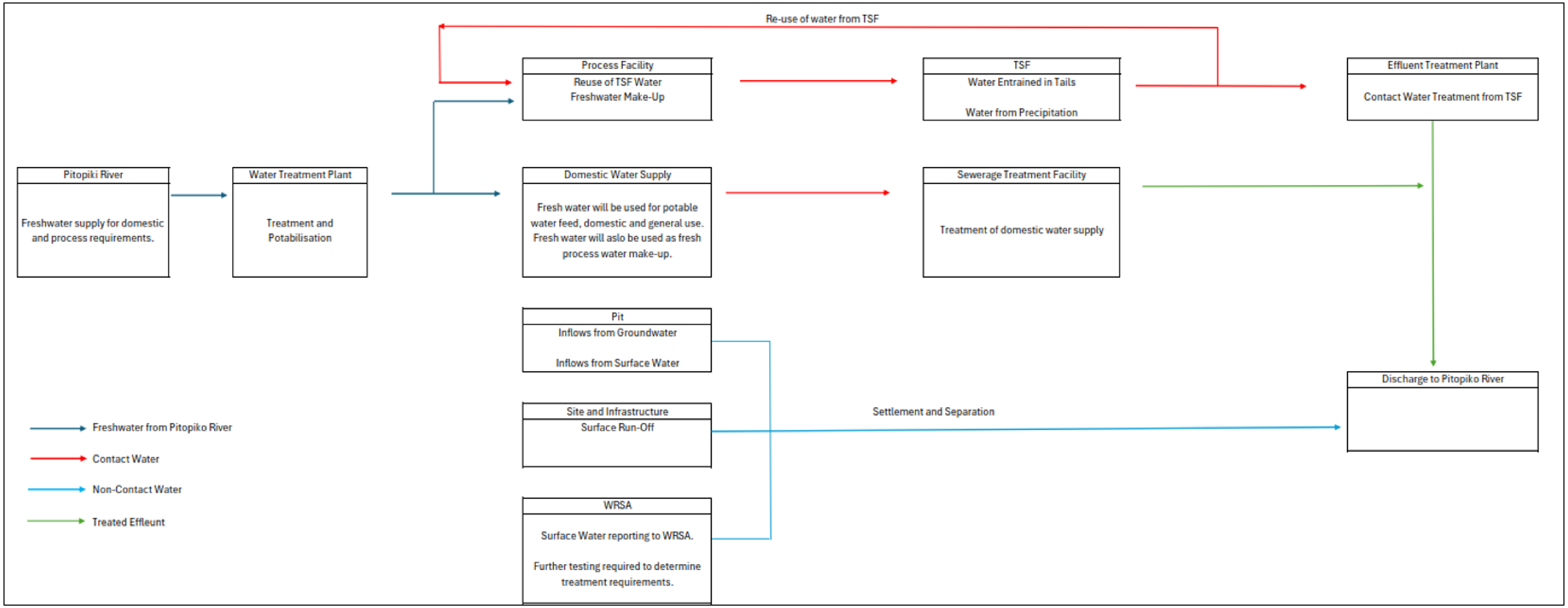
The site-wide water management system is intended to manage surface run-off and groundwater inflows within the Project footprint, reduce the risk of flooding, and direct collected water to designated channels, collection ponds, treatment facilities, or discharge points, as appropriate. The drainage network will comprise ditches, channels, culverts, sumps, and other water collection and conveyance infrastructure required to manage site run-off and maintain suitable operating conditions.

18.8.1 Water Accounting Circuit

A preliminary site water balance has been undertaken, based on early-stage data, annual climatic averages, hydrological and hydrogeological assumptions and analytical calculations and preliminary flow sheet design.

It is noted that the Project is expected to have a net-positive water balance, meaning the Project area will generate more water than it receives/requires. A high-level water accounting circuit for the Project is provided in Figure 18.1. The schematic also illustrates the proposed site water management strategy, including the collection, distribution, reuse, and discharge of water across the Project site.

Figure 18.6: High-Level Water Accounting Circuit for Project Area



Source: Micon, 2026.

18.8.2 Water Supply

Water supply to feed the Project is proposed via three main sources:

- Pitopiko River - Freshwater supply for domestic, potable, freshwater process make-up and general use.
- Recycled water from TSF – Process make-up water.
- Non-contact water – from mine site infrastructure, pit inflows and WRSA - Low-level applications, including; fire water and dust suppression.

18.8.2.1 Pitopiko River

This PEA assumes that freshwater for domestic, potable and process make-up requirements will be pumped from the Pitopiko River, located approximately 500 m west of the Project infrastructure, provided all relevant permits are duly made and granted. Early-stage estimates indicate a likely flow rate requirement of approximately 168 m^3/d. This includes 111 $m^{3/}d$ for process freshwater make-up and 57 m^3/d for domestic and freshwater purposes. These numbers are based on 300 l/person/day, assuming 189 total site personnel. It is noted these numbers are preliminary and should be refined and confirmed at a later stage of the study.

A potable water system will be utilised on-site and designed to local drinking water standards.

Previous hydrological studies undertaken at the Project area, at a high-level screening stage have suggested the Pitopiko has the capacity to supply sufficient volumes of freshwater to the Project. This review included the assumption that no water would be recycled. It is noted in this PEA that the majority of water required for the process facility will be recycled from the TSF, as detailed in Section 18.10.

Further studies will be required as part of an environmental baseline program to confirm the validity of the Pitopiko River and to support an assessment of likely alternatives (e.g. surface and groundwater inflows) at a later stage in Project development.

18.8.2.2 Recycled Water from TSF (Contact Water)

Contact water, in this instance, refers to water originating from the TSF or process facility and thus has the potential to contain elevated concentrations of contaminants.

Process flow sheet calculations indicate a total volume of 4,934 m^3/d of water entrained in tails reporting to the TSF. Based on average annual precipitation[3] over the TSF catchment, average TSF inflows are estimated at approximately 8,300 m^3/d, ranging from 6,500 m^3/d in January to 10,000 m^3/d in September. Table 18.1 provides monthly breakdown.

Water captured from the TSF will be recycled for use within the processing facility. This process make-up requirement is estimated at 4,958 m^3/d. Based on inflow numbers quoted in this section and presented in Table 18.1, it is estimated that water recovered from the TSF will be sufficient to meet the full process water make-up requirement year-round, while also generating a net surplus of contact-water.

[3] Environment and Climate Change Canada.

Surplus contact-water will require effluent treatment prior to discharge. Yearly average surplus contact water for treatment has been estimated at 3,300 m^3/d, with highs estimated in September (5,000 m^3/d) and lows estimated in January (1,600 m^3/d). Provisional effluent treatment facility design should be based on these numbers.

These values are estimates based on average climatic data and constant process throughput, suitable for PEA level review. These values do not account for wet or dry year conditions or storm events, nor downtime in process operations. Calculations also do not account for startup requirements, which will need to be considered at later stage following more detailed hydrological and engineering review.

Table 18.1: Yearly Average TSF Inflows From Precipitation and Process Facility and Surplus Contact-Water

Monthly Averages	Inflow				Make Up (Process Water)	Effluent Treatment Requirement
	Precipitation Inflow (m^3)	Water Entrained in Tailings (m^3)	Total Inflows (m^3)	Average Daily Water to TSF (m^3/d)	Process Make-Up Requirement (m^3)	Surplus Contact-Water (m^3/d)
Jan	49,300	152,954	202,254	6,524	4,958	1,566
Feb	47,600	138,152	185,752	6,634	4,958	1,676
Mar	52,700	152,954	205,654	6,634	4,958	1,676
Apr	98,600	148,020	246,620	8,221	4,958	3,263
May	130,900	152,954	283,854	9,157	4,958	4,199
Jun	147,900	148,020	295,920	9,864	4,958	4,906
Jul	142,800	152,954	295,754	9,540	4,958	4,582
Aug	122,400	152,954	275,354	8,882	4,958	3,924
Sep	153,000	148,020	301,020	10,034	4,958	5,076
Oct	129,200	152,954	282,154	9,102	4,958	4,144
Nov	83,300	148,020	231,320	7,711	4,958	2,753
Dec	68,000	152,954	220,954	7,128	4,958	2,170
Annum (m^3/a)	**1,225,700**	**1,800,910**	**3,026,610**	**8,286**	**-**	**3,328**

18.8.2.3 Non-Contact Waters

Non-contact water, in this instance, refers to water that is deemed free from/or have low levels of contamination and therefore requires reduced levels of treatment, e.g. settlement and separation prior to discharge.

18.8.3 Pit Inflows

18.8.3.1 Surface Water Inflows

Surface water inflows into the pit shell have been estimated at stages during the LoM, based on changes to pit shell dimensions and average annual climatic data[1]. Results are presented Table 18.2.

Note, open water evaporation losses (550 mm) from a hypothetical pit sump (50 m x 50 m) have been applied for six months of the year (May to Oct). These values are indicative subject to pit sump design at a later Project stage.

18.8.3.2 Groundwater Inflows

Groundwater inflows to the pit have been estimated at stages during the LoM, based on changes to pit shell dimensions. Results are presented in Table 18.2.

It is noted that the hydrogeology of the area is poorly constrained, with little/no information available pertaining to water bearing units (aquifers) on site, hydrogeological properties (e.g. hydraulic conductivity, specific yield, hydraulic gradient), groundwater elevations, fracture connectivity or surface/groundwater interactions.

For the sake of this PEA, and provisional site water balance, the following water bearing units have been included:

- Overburden.
- Bulk basement.
- High permeability fracture systems – As noted during exploration drilling in 2019.

Inferred hydraulic properties based on literature values and inferred hydrogeological conditions were utilised within the analytical inflow assessment for inflows reporting to the pit from the overburden and bulk basement units.

A high level, base case flow rate from the high permeability fracture system was assigned for the LoM in order to give order of magnitude estimates for inflows from fractures sets encountered through pit development. This flow rate was assigned at a set 20 l/s on top of analytically calculated flow rates from the overburden and bulk basement units. No factor has been assigned to fracture flow rate degradation or expansion during pit expansion due to lack of available information.

These results should provide initial estimates for sizing of settlement lagoons, pit sumps and dewatering requirements, however, should at this stage be viewed as preliminary and subject to change upon further hydrogeological investigation.

Total average daily inflows to the pit (groundwater and surface water) have been estimated to increase from approximately 4,500 m^3/d in Year 1 to 7,700 m^3/d by Year 28. Inflows are estimated at their highest in September and lowest in January.

18.8.3.3 WRSA

Surface water inflows to the WRSA, comprising waste rock and overburden, have been estimated, based average annual climatic data[4]. Results are presented in Table 18.2.

Water reporting from the WRSA for the sake of this PEA, in-line with previous reports has been assumed as non-contact water. Further characterization of the overburden and waste rock generated over the LoM is required in order to confirm this assumption. If treatment is required prior to discharge, it will be done so in accordance with applicable regulations.

18.8.3.4 Site Infrastructure

Surface water run-off from site infrastructure, roads etc. have been estimated, based average annual climatic data1. Results are presented in Table 18.2.

[4] Environment and Climate Change Canada.

Table 18.2: Non-Contact Water Inflows to the Project Throughout LoM

Development Stage	Pit Water Inflows				WRSA		Water to Site, Process Facility Footprint and Roads		Total	
	Groundwater (m³)	Surface Water (m³)	Total (m³)	Average Inflow per day (m³/d)	Water Reporting to WRSA (m³)	Average Inflow per day (m³/d)	Water Reporting to Site, Process Area and Roads (m³)	Average Inflow per day (m³/d)	Annual Non-Contact Water (m³)	Daily Non-Contact Water (m³/d)
Year 1	1,280,464	386,007	1,666,471	4,564	1,021,110	2,792	78,472	215	2,766,053	7,571
Year 5	1,428,327	434,162	1,862,490	5,101	1,021,110	2,792	78,472	215	2,962,072	8,108
Year 10	1,720,351	580,457	2,300,809	6,301	1,021,110	2,792	78,472	215	3,400,391	9,308
Year 15	1,728,115	672,370	2,400,484	6,573	1,021,110	2,792	78,472	215	3,500,066	9,580
Year 20	1,887,709	672,370	2,560,079	7,011	1,021,110	2,792	78,472	215	3,659,660	10,018
Year 25	2,030,055	682,145	2,712,200	7,427	1,021,110	2,792	78,472	215	3,811,782	10,434
Year 28	2,111,351	683,164	2,794,515	7,653	1,021,110	2,792	78,472	215	3,894,097	10,660

18.8.4 Discharge

All water not consumed by the Project will ultimately be discharged to the Pitopiko River, provided all relevant permits are duly made and granted and adequate treatment is applied.

- Domestic waste will be treated within a sewerage treatment plant.
- Contact water will be treated to appropriate standards within an effluent treatment facility.
- Non-contact waters will be dealt with using low-level settlement and separation.

18.8.5 Conclusion

The Project is expected to have a significant net-positive water balance, making effective water and waste management a key consideration in the Project's design, environmental impact and capital and operating costs.

Further investigation, data collection and technical analysis is required in order to reduce key uncertainties identified within the PEA and to advance the Project to the level of confidence and understanding required for the next stage of study and a PFS.

Recommendations to achieve the level of confidence required for the next stage of study are provided in Section 26.

18.9 TAILINGS DESIGN

The PEA considers a perimeter embankment TSF developed through a series of staged embankment raises over the life of the Project. The current conceptual design comprises an initial embankment approximately 10 m high, providing storage for approximately 9.4 Mt of tailings. Stage 2 comprises an approximately 4 m embankment raise and provides additional storage for approximately 6.4 Mt of tailings. Stage 3 comprises a further approximately 5 m raise, providing additional storage for approximately 7.5 Mt, followed by a final approximately 5 m raise providing storage for approximately 7.3 Mt of tailings. The ultimate embankment height is expected to be approximately 24 m to 25 m. At the end of the LoM, the TSF is expected to have a footprint of approximately 150 ha to 170 ha.

The proposed TSF configuration, embankment geometry, staging, and storage capacities are preliminary and conceptual in nature and have been developed for the purposes of the PEA based on the information currently available. Tailings characterization and geotechnical testwork will be undertaken during the next phase of Project development to establish the physical and geotechnical properties of the tailings and foundation materials. The TSF design, including the facility footprint, embankment configuration, raise sequence, construction materials, deposition strategy, and storage capacities, will be reviewed and may be modified as additional testwork, site investigation data, and engineering information become available.

18.9.1 Introduction

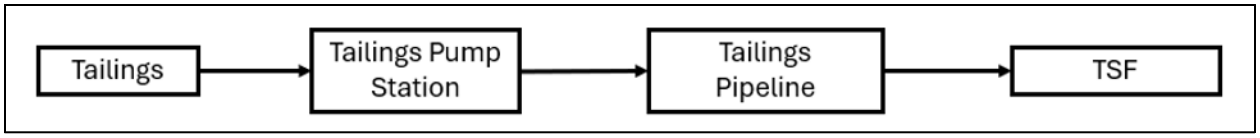
This section presents the conceptual design for the tailings transportation, deposition and reclaim water system forming part of the proposed TSF. The design reflects the level appropriate for a PEA and is therefore based on high-level assumptions and order of magnitude engineering.

Following processing, the conventional tailings slurry will be pumped approximately 0.3 km from the process plant to the TSF. Tailings will then be distributed through a relocatable High-Density

Polyethylene (HDPE) spigot pipeline, with up to approximately 1.5 km of distribution pipeline deployed along selected sections of the TSF perimeter to allow controlled deposition from multiple discharge locations.

Figure 18.7 presents the conceptual tailings system Block Flow Diagram.

Figure 18.7: Conceptual Tailings System Block Flow Diagram



Source: Micon, 2026.

18.9.2 Design Criteria

The values and assumptions presented in Table 18.3 have been adopted for this section of the Report.

Table 18.3: Design Criteria Values and Assumptions

Item	Unit	Value/Assumption
Dry Tailings Production	t/h	106
Slurry Mass Flow	t/h	330.2
Slurry Flowrate	m^3/h	264
Solids Concentration	wt%	32.2
Slurry Density	t/m^3	1.25
TSF Dimensions	(L x w) km	Approximately 1.0 x 0.5
Static Elevation at TSF	m	20 (assumed)
Residual Spigot Pressure	kPag	125 (provisional)
Pipeline Length – Plant to TSF	km	0.3
Maximum Deployed Distribution Pipeline	km	1.5
Maximum Operating Pipeline Length	km	1.8
Design Slurry Velocity	m/s	1.5 - 3.0
SF Beach Slope	%	TBD following tailings characterisation and deposition testing
Reclaim Water Design Flow Rate	m^3/h	225

18.9.3 Site Layout and Tailings System Arrangement

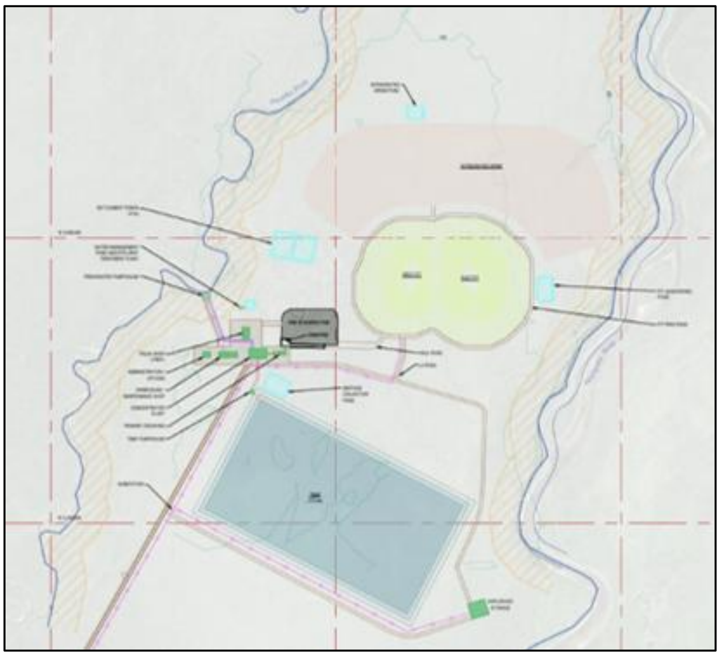
Figure 18.8 illustrates the conceptual site layout and the relative locations of the principal Project infrastructure, including the process plant, open pits, waste rock storage areas and the proposed TSF. The process plant is centrally located to minimise haulage distances from the East and West Pits while providing convenient access to the proposed TSF.

The TSF is located approximately 0.3 km south-west of the process plant and has been positioned to utilise the available topography while maintaining practical pipeline routing and operational access. Tailings produced by the process plant will be pumped directly to the TSF via a dedicated HDPE slurry pipeline before being distributed around the TSF perimeter through a spigot distribution system.

The proposed pipeline alignment generally follows existing site access corridors where practicable, reducing construction complexity and facilitating future inspection and maintenance. The reclaim water pipeline will return process water from the reclaim pond within the TSF to the process plant, forming an integral part of the overall site water management strategy.

The conceptual arrangement shown in Figure 18.8 provides the basis for the preliminary hydraulic design presented in the following sections. Final pipeline routing, TSF configuration and associated infrastructure will be confirmed during subsequent stages of engineering following the completion of the detailed topographical surveys, geotechnical investigations and hydraulic design.

Figure 18.8: Site Layout and Infrastructure



Source: Micon/Halyard, 2026.

18.9.4 Tailings Characteristics

No tailings laboratory characterization has been completed at this stage of the study. Consequently, the preliminary hydraulic design has been developed using the available process design criteria and industry standard assumptions appropriate to conventional slurry tailings transportation.

The tailings stream is estimated to have a total slurry mass flow of approximately 330.2 t/h at a solids concentration of 32.2% by weight. At an assumed slurry density of 1.25 t/m^3, this corresponds to a volumetric flowrate of approximately 264 m^3/h. The resulting dry solids flow is roughly 106 t/h with the balance comprising process water.

The resulting tailings-water flowrate is approximately 224 m^3/h during operation. Based on the process grinding and flotation circuit operating utilisation of approximately 92%, equivalent to 22.1 operating hours per day, this corresponds to approximately 4,950 m^3/d of water reporting to the TSF and is in close agreement with the 4,934 m^3/d adopted in the Project water balance.

For conceptual pipeline sizing, a slurry transport velocity range of between 1.5 m/s and 3.0 m/s has been adopted. On this basis, a 250 mm outside diameter HDPE pipeline has been provisionally selected.

Assuming an SDR11 pipe with an approximate internal diameter of 205 mm, the calculated slurry velocity is roughly 2.2 m/s, which lies within the adopted transport velocity range.

18.9.5 Tailings Pipeline Arrangement

The main tailings pipeline will extend approximately 0.3 km from the process plant to the TSF. Within the TSF, a relocatable HDPE distribution pipeline of up to approximately 1.5 km will be deployed along selected sections of the TSF perimeter to permit rotational spigotting and controlled deposition from different areas of the TSF. The distribution pipeline will be repositioned between deposition areas as required and raised progressively as successive TSF embankment raises are constructed. The maximum conceptual hydraulic flow path is therefore approximately 1.8 km from the tailings pump station to the most hydraulically remote active spigot.

The final height and staged development of the TSF have not yet been established. For conceptual hydraulic design, a static elevation lift of 20 m has been adopted between the plant pipeline datum and the operating TSF crest. The conceptual TSF design currently indicates an ultimate embankment height of approximately 24 m to 25 m; however, embankment height does not directly represent the static hydraulic lift from the tailings pump station. The adopted 20 m static lift therefore remains provisional and will be confirmed following detailed topographical survey and development of the staged TSF elevations. A sensitivity range of approximately 15 m to 30 m has been considered for PEA-level design.

18.9.6 Hydraulic Design

For the maximum conceptual hydraulic flow path of approximately 1.8 km, preliminary calculations indicate a discharge-line head loss of approximately 40 m at the normal operating slurry flowrate of 264 m^3/h. The hydraulic assessment includes losses through the main pipeline, perimeter distribution pipeline, bends, valves and other minor fittings.

When combined with the assumed static elevation lift of 20 m and a provisional residual pressure of 125 kPag at the active spigot, the calculated operating total dynamic head is approximately 70 m, assuming atmospheric pressure within the tailings pump-box and approximately 1 m of flooded suction head. A conceptual operating duty of 264 m^3/h at approximately 70 m total dynamic head (TDH) has therefore been adopted.

The relocatable TSF distribution pipeline will incorporate isolation valves at appropriate intervals to enable slurry to be directed to the selected active spigotting section. Only the pipeline leading to the active deposition area would normally carry the full slurry flow. Spigots will be operated rotationally to promote controlled beach development, manage the location of the reclaim pond and make efficient use of the available storage area.

The final pipeline diameter, pressure class, pump selection, motor rating, static lift and operating duty will be confirmed following detailed route survey, TSF embankment design, tailings particle-size analysis, settling tests, hydraulic modelling and transient pressure assessment.

18.9.7 Tailings Pumping System

The conceptual pumping system has been developed from the preliminary hydraulic assessment described above and is intended to provide sufficient capacity to transport the design slurry flowrate from the process plant to the TSF under the assumed operating conditions.

For conceptual design purposes, the pumping system is assumed to comprise two heavy-duty horizontal centrifugal slurry pumps operating in series. Pumps equivalent to the Warman 8/6 AH configuration, or approved equivalent, have been adopted for preliminary design purposes based on the estimated operating duty of approximately 264 m^3/h at 70 m TDH. Each pump is provisionally assumed to provide approximately 35 m differential head at the operating flowrate, resulting in a combined operating duty of approximately 70 m TDH. Final pump selection, including impeller diameter, rotational speed, efficiency, slurry derating and installed motor power, will be confirmed following detailed hydraulic modelling and review of the manufacturer's performance curves.

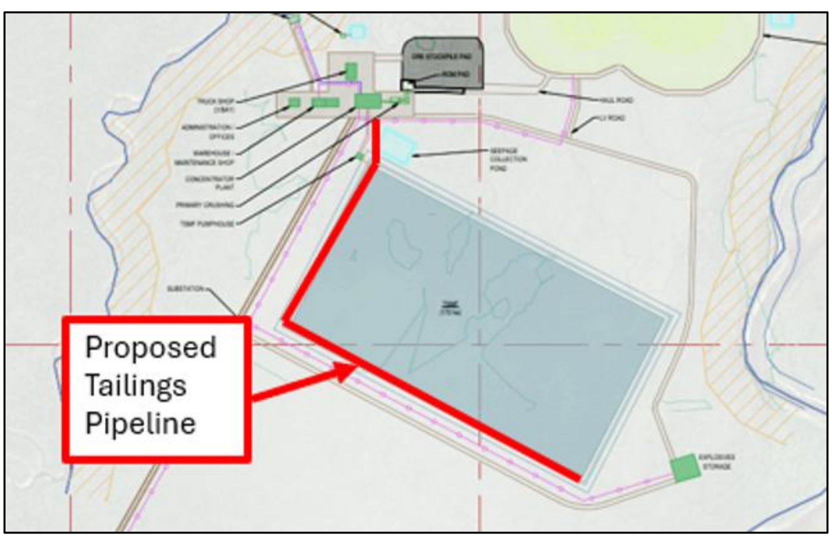
Standby pumping capacity will be provided, with the final arrangement provisionally comprising a complete standby pump train. The final operating and standby configuration will be confirmed during subsequent stages of engineering.

18.9.8 Tailings Pipeline Design

The tailings will be transported through a 250 mm outside-diameter HDPE pipeline, with an approximate internal diameter of 205 mm, extending approximately 0.3 km from the process plant to the TSF. A relocatable distribution pipeline of up to approximately 1.5 km will be deployed along selected sections of the TSF perimeter. The distribution pipeline will be repositioned to serve the required deposition area and raised progressively in conjunction with staged TSF embankment development. The selected pipeline diameter provides sufficient hydraulic capacity for the design throughput while producing a calculated slurry velocity of approximately 2.2 m/s, which lies comfortably within the adopted transport velocity range and is considered appropriate for conceptual design purposes.

As shown in Figure 18.9, the pipeline will be routed to follow existing roadways and natural topography where practicable, thereby minimising construction requirements and facilitating future inspection and maintenance. The pipeline will incorporate air-release and vacuum valves at major high points, together with drain valves at low points to facilitate controlled filling, draining and maintenance.

Figure 18.9: TSF and Pipeline Proposed Location



Source: Micon/Halyard, 2026.

The pressure rating, wall thickness and final pipe specification will be confirmed during subsequent stages of the study following completion of the Hydraulic Grade Line (HGL) assessment and transient surge analysis.

18.9.9 Tailings Storage Facility Concept

The TSF has been conceptually located approximately 0.3 km from the process plant and is proposed as a perimeter embankment facility developed through a series of stages embankment raises over the life of the Project.

The current conceptual design comprises an initial embankment approximately 10 m high, providing storage for approximately 9.4 Mt of tailings. Stage 2 comprises an approximately 4 m embankment raise providing additional storage for approximately 6.4 Mt, followed by an approximately 5 m Stage 3 raise providing additional storage for approximately 7.5 Mt. A final approximately 5 m raise provides additional storage for approximately 7.3 Mt. The ultimate embankment height is expected to be approximately 24 m to 25 m, with an ultimate TSF footprint of approximately 150 ha to 170 ha.

Tailings will be discharged around the perimeter of the facility using a relocatable spigot distribution system to promote controlled beach development and direct supernatant water towards the reclaim pond.

The TSF configuration and staging remain conceptual and will be refined during subsequent engineering. Final embankment elevations and deposition arrangements will be used to confirm the tailings pipeline routing, maximum hydraulic flow path, static lift and spigotting requirements.

18.9.10 Hydraulic Design Summary

The preliminary hydraulic design has been developed using the available process design criteria together with conceptual assumptions relating to the proposed pipeline route, TSF configuration and slurry characteristics. The resulting hydraulic design parameters provide the basis for the preliminary sizing of the tailings transportation system, including the pipeline diameter, estimated total dynamic head and conceptual pump selection. A summary of the principal hydraulic design parameters adopted for this study is presented in Table 18.4.

Table 18.4: Preliminary Hydraulic Design Summary

Item	Unit	Value / Assumption
Total Hydraulic Length	km	1.8
Selected Pipeline Material		HDPE SDR11
Pipeline OD	mm	250
Approximate Internal Diameter	mm	205
Slurry Velocity	m/s	2.22
Operating Flowrate	m^3/h	264
Total Dynamic Head	m	91
Pump Selection		Warman 8/6-AH or equivalent
Pump Arrangement		Two operating in series
Differential Head per Pump	m	~ 35

18.9.11 Spigotting System

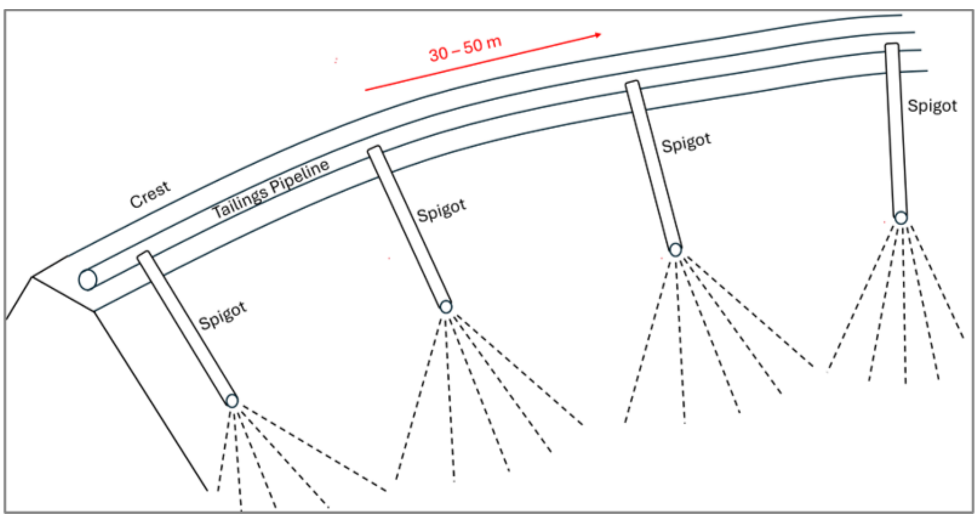
Tailings will be discharged from the crests of the north, east and south embankments using a spigotting system designed to promote controlled beach development and direct supernatant water towards the central reclaim pond. A relocatable 250 mm outside diameter (OD) HDPE distribution pipeline, with a maximum deployed length of approximately 1.5 km, will supply a series of discharge points along the active embankment sections.

Flexible branch pipes will convey tailings from the distribution pipeline to the individual discharge points. The final branch pipe and spigot diameters, configuration and number of simultaneously operating spigots will be confirmed during subsequent engineering following detailed hydraulic assessment and tailings deposition testing.

Spigot locations are provisionally anticipated at intervals of approximately 30 m to 50 m along the active embankment sections (Figure 18.10), with isolation valves provided to allow selective operation. Spigots will be operated rotationally and repositioned as required in response to beach development to promote even utilisation of the available storage area, maintain the reclaim pond in the desired location and manage segregation of coarse and fine tailings.

The distribution pipeline and associated spigots will be progressively relocated and raised in conjunction with staged development of the TSF embankments. The final spigot spacing, discharge arrangement, operating sequence and deposition strategy will be optimised following completion of tailings characterisation, settling and beaching testwork, hydraulic modelling and development of the detailed TSF staging plan.

Figure 18.10: Spigot Deposition into TSF



Source: Micon/Halyard December, 2026.

18.9.12 Reclaim Water System

The reclaim water system will recover contact water from the TSF reclaim pond and return it to the process plant for reuse. The Project water balance indicates a process make-up water requirement of approximately 4,958 m^3/d. Based on the grinding and flotation circuit operating utilisation of approximately 92%, equivalent to 22.1 operating hours per day, this corresponds to a reclaim-water requirement of approximately 224 m^3/h. A nominal design flowrate of 225 m^3/h has therefore been adopted for PEA-level design. Monthly average daily TSF inflows are estimated to range from approximately 6,524 m^3/d in January to 10,034 m^3/d in September, indicating that sufficient contact water should be available to satisfy the process make-up requirement throughout the year under the average climatic and operating conditions adopted for the PEA.

Reclaim water will be returned to the process plant through a dedicated pipeline approximately 0.3 km in length, following the same path as the slurry pipeline.

A floating reclaim barge will be positioned within the reclaim pond and will house the reclaim pump and intake structure. The floating arrangement will accommodate variations in pond elevation, with the intake designed to minimise entrainment of settled solids and maintain adequate pump submergence throughout the anticipated operating range (Figure 18.12).

Figure 18.11: Example of a Weir Multiflo Floating Pump Station Barge

Source: Image retrieved from Weir Group website, copyright 2024, by Weir Minerals.

The reclaimed water will be conveyed from the floating pump station through a flexible floating line before transitioning to a nominal 250 mm OD SDR11 HDPE pipeline routed approximately 0.3 km back to the process plant. At the adopted preliminary design flowrate of 225 m^3/h, the approximate 205 mm internal diameter results in a pipeline velocity of approximately 1.9 m/s, which is considered appropriate for conceptual design of the reclaim-water system.

Preliminary hydraulic calculations indicate approximately 4 m of straight-pipe friction loss at the adopted design flowrate of 225 m^3/h, increasing to approximately 5 m to 7 m when allowance is made for the floating hose, valves, bends and other minor losses. For PEA-level design, a provisional reclaim pump duty of approximately 225 m^3/h at 20 m TDH has been adopted. The total dynamic head remains subject to confirmation of the static elevation difference between the operating TSF reclaim pond and the process water receiving point. A preliminary TDH sensitivity range of approximately 15 m to 30 m should therefore be considered pending confirmation of the TSF operating pond levels, process water receiving elevation and final pipeline route.

Final pump selection, motor rating, pipeline pressure class and operating philosophy will be confirmed during subsequent engineering following detailed route survey and hydraulic grade line assessment.

18.10 ALTERNATIVE TAILINGS MANAGEMENT OPTIONS

The conceptual design presented in this study is based on the transportation and deposition of conventional slurry tailings at an estimated solids concentration of approximately 32.2 wt%. This design philosophy reflects the current Project basis provided by the client and represents a conventional and widely adopted approach for mineral processing operations. Alternative tailings management strategies, including thickened tailings and filtered (dry stack) tailings, may also be technically feasible and could be evaluated during subsequent stages of the Project if required.

18.10.1.1 Thickened Tailings

Increasing the tailings solids concentration through the installation of a high-rate or high-density thickener would reduce the volume of water reporting to the TSF. This could reduce the size of the reclaim pond, improve overall water recovery to the process plant and potentially reduce the environmental risks associated with large volumes of stored water.

However, increasing the solids concentration would also increase slurry viscosity and yield stress, resulting in significantly higher pipeline friction losses. Depending on the final thickened solids concentration, this may require higher pumping pressures, increased installed motor power, changes to the pipeline diameter or additional pumps. Detailed rheological testing would be required to determine the optimum transport velocity, pipeline diameter and pumping requirements.

Additional capital expenditure would also be required for the thickener, associated civil works, pumps, flocculant dosing system and process control equipment. Thickened tailings deposition behaviour would also require laboratory beaching tests to confirm achievable beach slopes and deposition characteristics.

18.10.1.2 Filtered (Dry Stack) Tailings

Filtered or dry stack tailings represent a further alternative in which the tailings are mechanically dewatered prior to disposal using pressure filters or vacuum filtration systems. This approach substantially reduces the quantity of free water reporting to the storage facility and can significantly reduce the risk associated with conventional tailings impoundments.

Dry stack facilities typically require a much smaller reclaim pond and can simplify long-term closure and rehabilitation. Water recovery to the process plant is generally higher than for conventional slurry deposition, reducing overall raw water demand.

However, filtered tailings require substantially higher capital investment, increased operating costs and significantly greater power consumption associated with filtration equipment. Tailings transport changes from hydraulic pipeline transport to mechanical conveying and/or truck haulage, requiring additional handling equipment and operational management. The suitability of dry stack tailings also depends on climatic conditions, production rate, long-term closure objectives, filter performance and the geotechnical properties of the filtered material.

18.10.1.3 Summary

At the current PEA stage, the conventional slurry tailings system forms an appropriate basis for conceptual design and cost estimation. Nevertheless, if reducing stored water volume within the TSF becomes a key environmental or permitting objective, further evaluation of thickened and filtered tailings should be undertaken during subsequent Project stages. Such work should include laboratory tailings characterisation, rheological testing, filtration trials, water balance modelling, trade-off studies and comparative economic assessment to determine the most appropriate long-term tailings management strategy.

Table 18.5 provides a high-level comparison of the principal characteristics of the three tailings management approaches considered at this stage of the study.

Table 18.5: Comparison of Alternative Tailings Management Options

Parameter	Conventional Slurry	Thickened Tailings	Filtered (Dry Stack)
Typical Solids Concentration	~ 30 – 40 wt%	~ 50 – 70 wt%	~ 80 – 90 wt%
Water to TSF	High	Moderate	Very low
Reclaim Water Recovery	Moderate	High	Very High
Pipeline Transport	Yes	Yes (higher pressure)	No
Pumping Power	Low - Moderate	Moderate - High	N/A
Thickener Required	No	Yes	Yes
Filters Required	No	No	Yes
Capital Cost	Lowest	Moderate	Highest
Operating Cost	Lowest	Moderate	Highest
Environmental Water Storage	Highest	Reduced	Lowest

18.11 LIMITATIONS

The design presented in this section is conceptual in nature and is subject to the following limitations appropriate to a PEA-level study:

- No geotechnical investigations of the TSF foundation or embankments have been completed. Embankment stability, seepage control and construction methodology will be established during further studies.
- No tailings characterisation data (Particle Size Distribution (PSD), rheology, settling or beaching behaviour) is currently available. All hydraulic and deposition assumptions are indicative and based on typical industry values.
- No detailed hydraulic grade line analysis or transient surge assessment has been undertaken. Pressure class requirements and booster pump locations (if required) will be confirmed during further studies.
- TSF geometry, pond configuration and storage capacity are based on conceptual layouts and approximate topography and will be refined through detailed survey, hydrological and water-balance assessment, and geotechnical input.
- Operational strategies for spigotting, reclaim pumping and beach management are preliminary and will be finalised once tailings behaviour is better understood.

18.12 CONCLUSION

The conceptual design indicates that a conventional slurry tailings transportation system can be developed using a 250 mm OD HDPE pipeline transporting approximately 264 m^3/h of slurry over a maximum hydraulic distance of approximately 1.8 km, including the TSF perimeter distribution pipeline.

Preliminary hydraulic calculations indicate a slurry velocity of approximately 2.2 m/s and an operating total dynamic head of approximately 70 m. Based on these assumptions, the required duty may be achieved using two Warman 8/6-AH equivalent slurry pumps operating in series, each providing approximately 35 m differential head. Standby pumping capacity will also be provided, with final pump selection, motor sizing and operating configuration to be confirmed during subsequent engineering.

Reclaim water will be recovered from the TSF reclaim pond using a floating pump station and returned to the process plant through an approximately 0.3 km, 250 mm OD SDR11 HDPE pipeline. The Project water balance indicates a process make-up water requirement of approximately 4,958 m^3/d which, based on the 22.1 h/day operating basis adopted for the grinding and flotation circuits, corresponds to approximately 224 m^3/h. A nominal reclaim-water design flowrate of 225 m^3/h and a provisional pump duty of approximately 225 m^3/h at 20 m TDH have therefore been adopted for PEA-level design, subject to confirmation of the TSF operating pond levels, process water receiving elevation and final pipeline route.

The Project water balance indicates that sufficient contact water should be available to satisfy the process make-up water requirement throughout the year under the average climatic and operating conditions adopted for the PEA. Surplus contact water will require management through the proposed effluent treatment and controlled discharge system.

The conventional slurry tailings and reclaim-water systems therefore provide an appropriate basis for PEA-level design and cost estimation. The design will be refined during subsequent Project stages following detailed topographical survey, hydraulic modelling, tailings characterisation, geotechnical investigation and further hydrological and water-balance assessment.

19 MARKET STUDIES AND CONTRACTS

19.1 BASIS AND SOURCES OF INFORMATION

The market information in this section is derived from two studies commissioned by AGC. A market research and economic analysis was prepared by AppEco Inc. dated July 10, 2026. A separate pricing analysis was prepared by American Energy Technologies Co. (“AETC”), a United States-based advanced graphite materials company located in Wheeling, Illinois, dated June 19, 2026. The qualifications of AETC, the extent of reliance on its analysis, the associated pricing risks, and the verification procedures undertaken by the QP are described in Item 3. Both studies evaluated pricing within the nuclear, defence and aerospace markets relevant to the Project's anticipated product specifications. The analyses benchmarked pricing against nuclear-grade graphite, developed price outlooks through to 2035 under multiple scenarios, and considered the potential impact of procurement preferences among buyers in allied markets (as defined below) for supply originating in allied jurisdiction. For purposes of this Item, “allied” or “specified” markets means Canada, the United States, member countries of the European Union, the United Kingdom, Japan, South Korea and Australia, and excludes Russia and China. References in this Item to buyers, producers, developers, projects or supply in the specified markets, and to “allied-origin” supply and the “allied-origin adjustment” in Item 19.6.3, are to those countries.

The grade-level prices applied in this Report are derived from the nuclear-grade graphite pricing compiled in the AppEco study from a specialist commercial market research database, QYResearch (2026), acquired for that purpose. That database reports nuclear-grade selling prices disaggregated by manufacturer, by graphite type, by reactor application and by production region, and the disaggregated values rather than the global average are the relevant comparators for the products contemplated by the Project.

The pricing information provided by AETC draws on AETC's experience in the ultra-high-purity graphite market, including prices realized on its own graphite products sold to customers in the United States. Commercial database information was used on a supplementary basis.

The products to which the AETC and AppEco price evidence relates differ in specification, form and degree of downstream processing from the products contemplated by the Project, and those differences may affect the applicability of the prices to the Project. That evidence provides relevant market evidence of prices achieved for ultra-high-purity graphite products. It does not establish that the Project will achieve equivalent prices, which remains contingent on commercial production and product qualification, neither of which has occurred.

The AppEco study additionally evaluated addressable graphite demand by end market, competitive positioning relative to the graphite project pipeline in the specified markets, and reviewed benchmark prices for potential co-products. AppEco graded each source from A to E using a ten-criterion reliability matrix that considered author credibility, peer review, data provenance, timeliness, methodology, sensitivity analysis, stated limitations and relevance. Based on this assessment, fifteen sources were identified as providing credible price or demand data.

19.2 PRODUCT GRADES AND MARKET SEGMENTATION

Graphite markets are segmented by purity and by the impurity sensitivity of the end application rather than by tonnage alone. Product grades in this section are expressed using the conventional purity shorthand: 4N (99.99% carbon), 4N+ (99.995%) and 5N (99.999%).

Three broad product-market groupings are relevant to the Project:

- Lower-purity applications, comprising flake concentrate sold into refractories, foundry, steelmaking, lubricants and similar industrial uses. These markets are mature and price-driven, and differentiation rests on grade, flake size, consistency and reliability of supply.
- Higher-purity applications in the 3N to 4N+ range, feeding battery value chains, specialty industrial uses, machined components and advanced electronics. Value capture in these segments depends substantially on downstream shaping and coating rather than on purity alone.
- Ultra-high-purity applications, comprising 5N material for nuclear, defence, aerospace and crystal-growth uses, where suitability is governed by boron-equivalent content and trace-impurity limits rather than by carbon purity alone. These are the highest-barrier segments, characterized by long qualification cycles. Synthetic graphite is the incumbent qualified material in most of these applications.

The product specifications assumed for the purposes of this section are those set out in Item 13. Testwork supporting those specifications has been conducted at bench scale. Very recent bench-scale testing has demonstrated that Albany graphite can be purified to 5N+ purity levels, with an average measured carbon purity of 99.9995 wt.% Cg (n=3) and a maximum reported value of 99.99985 wt.% Cg. These results demonstrate carbon purity only and do not establish compliance with any customer-specific nuclear, defence or aerospace material specification. Product qualification has not commenced.

19.3 MARKET SIZE AND GROWTH

Addressable demand was segmented into four end markets: nuclear and small modular reactors, defence and aerospace, batteries, and other industrial applications. China and Russia were excluded from the demand estimates to isolate demand accessible to suppliers located in the specified markets.

Nuclear and small modular reactor demand was estimated at the project level to 2031 from active and in-development graphite-intensive reactor projects, principally high-temperature gas-cooled and related designs, applying construction and operational graphite intensity factors derived from published reactor data. Defence and aerospace demand was anchored on the United States Defense Logistics Agency Annual Materials Plan figure for iso-moulded graphite for FY2025, scaled to specified-market demand using the ratio of NATO to United States defence expenditure. Battery and other non-battery demand was taken from the International Energy Agency Global Critical Minerals Outlook 2025 and adjusted to an allied share of global refined graphite demand.

These demand estimates are modelled estimates rather than reported purchase volumes. In particular, the defence and aerospace estimate assumes that graphite demand scales with defence expenditure, while the nuclear estimate depends on reactor construction schedules and assumed graphite-intensity factors. Actual demand may differ materially. The geographic coverage of the underlying data sources also differs: the nuclear estimate is built from individual reactor projects with China and Russia excluded, the defence and aerospace estimate is scaled on the ratio of NATO to United States defence expenditure, and the battery and other non-battery estimates apply a specified-market share of global refined graphite demand.

Under the moderate growth scenario, total specified-market graphite demand grows at a compound annual rate of approximately 9.0% between 2026 and 2031 and approximately 7.0% between 2026 and 2036. Across the first five years, total demand growth ranges from approximately 7.9% under the conservative scenario to approximately 12.3% under the optimistic scenario. Growth by segment over 2026 to 2036 is summarized in Table 19.1.

Table 19.1: Specified-Market Graphite Demand Growth by Segment, Moderate Growth Scenario

Segment	CAGR 2026 to 2031	CAGR 2026 to 2036
Nuclear	5.30%	3.50%
Defence and aerospace	9.80%	7.00%
Battery	14.90%	10.80%
Other non-battery uses	3.80%	3.40%
Total	**9.00%**	**7.00%**

Combined nuclear and defence and aerospace demand, representing the end markets most relevant to a 5N product, is estimated to increase from approximately 3,097 tonnes in 2026 to approximately 5,829 tonnes in 2035, representing a compound annual growth rate of 7.3%. Defence and aerospace applications account for the majority of this anticipated demand. Although these volumes are small relative to the battery and industrial markets, they are characterized by materially different pricing, qualification requirements and supply security considerations.

Strategic stockpiling and reserve-building activities were excluded from the demand estimates. Recent procurement initiatives in the allied jurisdictions, including a Government of Canada take-or-pay agreement for graphite concentrate and a United States Defense Logistics Agency solicitation for natural graphite flakes, relate to concentrate or flake specifications rather than ultra-high-purity products. Accordingly, such activities have been treated as potential upside rather than incorporated into the base-case forecast.

19.4 SUPPLY

Global graphite supply is highly concentrated. China accounts for approximately three quarters of the graphite anode supply chain and the substantial majority of refined graphite processing capacity. This concentration is the defining structural characteristic of the market in which the Project would operate and underpins graphite's designation as a critical mineral by both the Government of Canada and the United States Department of Energy.

Supply into the ultra-high-purity applications targeted by the Project is structured differently. Nuclear-grade graphite currently in use is predominantly synthetic and is produced from petroleum coke and needle coke feedstocks through high-temperature graphitization by a small number of established manufacturers, principally in Germany, Japan and the United States. These suppliers hold long-standing qualification positions in nuclear and defence applications, established over long periods and supported by extensive irradiation and performance data. As a result, synthetic graphite serves as the benchmark material against which any new entrants are evaluated.

Natural graphite supply from the allied markets into ultra-high-purity applications appears to be limited. Based on the market studies reviewed, existing North American refining capacity is reported to generally achieve purities of approximately 99.95%, and the authors are not aware of a natural graphite producer in the specified markets that has publicly reported commercial production and customer qualification for the ultra-high-purity applications considered in this Item. Several natural graphite developers in the specified markets are advancing projects; however, most of those identified in the market studies are focused on battery and specialty markets rather than ultra-high-purity grades. The market studies identified at least one other developer in the specified markets that has reported a bench-scale purity result comparable to that described in Item 13, achieved through a halogen-free thermal purification process.

Accordingly, the principal barrier to new supply from the specified markets entering these applications is not the demonstration of bench-scale purity. Rather, it is the combined requirement to achieve reproducible results at commercial, continuous-flow scale, maintain acceptable processing economics at that scale, and completion of customer qualification. The Albany Project has not yet satisfied these requirements and, based on the market studies reviewed, the authors are not aware of a natural graphite producer in the specified markets that has publicly reported satisfying all three.

Two aspects of this supply structure are particularly relevant to the price assumptions in Item 19.6. First, procurement and policy frameworks in the allied markets increasingly restrict, exclude or disadvantage supply originating outside the allied markets, thereby narrowing the effective supplier base available to certain purchasers. Second, the scarcity of qualified allied-origin supply reflects the current market conditions arising from supply concentration rather than a permanent structural feature. This condition is expected to persist only until competing projects in the specified markets or incumbent synthetic suppliers address the existing supply gap.

19.5 MARKET ENTRY STRATEGY

The Project is not intended to compete in the commodity graphite market. Management's anticipated market position for the Project is in segments where purity, impurity profile, jurisdiction of origin, traceability and qualification status carry greater weight than commodity price.

Management contemplates a staged market-entry strategy in which entry would occur rather than across all segments simultaneously, reflecting the qualification requirements of each end market. Management considers that defence and aerospace applications may be accessible earlier because their qualification pathways are application-specific and comparatively shorter than nuclear reactor-core qualification. In management's view, nuclear applications, particularly small modular reactor, high-temperature gas-cooled reactor and molten salt reactor applications, represent a longer-term opportunity, as reactor-specific qualification may require multi-year irradiation and performance testing. Commodity battery-anode material is considered by management a fallback rather than a primary target, as realized prices in that segment are generally lower; the specialized battery applications described in Items 13 and 17, including coated spherical purified graphite and conductive additives, are target markets for the 4N products.

A distinction is drawn between material qualification and end-system qualification. Albany Graphite Corp. does not qualify a reactor design, aircraft platform or end-use system. Rather, its product must be qualified as a material input, before it can be incorporated into customer-specific programs. The QP has not independently confirmed customer acceptance of this strategy, and no formal qualification program or commercial negotiation has commenced.

Management expects the Project's positioning relative to established synthetic graphite producers to be complementary rather than directly substitutive. As discussed in Item 19.4, synthetic graphite is the incumbent qualified material in most nuclear and defence applications. The commercial question is whether Albany material can qualify alongside, or in place of, incumbent synthetic supply.

The revenue model contemplated by management is long-term, qualification-linked supply agreements rather than spot-market sales.

19.6 PRICES

19.6.1 Market Structure and Price Transparency

Price transparency in the ultra-high-purity graphite market is limited. Buyers of material at this grade typically qualify suppliers before entering into commercial agreements, and transactions are often negotiated directly rather than referenced to established index prices. Published price series for natural graphite products at 4N+ and above were not identified. Nuclear-grade graphite was therefore used as the closest observable pricing analogue for the 5N product, on the basis that its qualification requirements, purity specifications and end-use applications are the most comparable.

This market structure has two implications for the analysis presented in this Report. First, prices in the target segments are determined by product specification, qualification status, and negotiated contractual terms rather than by reference to a transparent commodity index. That characteristic is one of the considerations supporting the discount rate applied in Item 22. Second, observed price information is derived from a limited number of sources rather than a liquid market, and the level of confidence associated with those observations is correspondingly lower than for commodities supported by transparent benchmark pricing.

19.6.2 Observed Prices

Observed nuclear-grade graphite pricing was principally derived from a specialist commercial market research database that reports pricing by manufacturer, product type, application and production region. The reported values represent average manufacturer or ex-factory selling prices rather than spot-market transactions. Observed pricing varies materially by product type, end use, production region, with European and Japanese producers generally commanding a premium relative to Chinese producers. The source was assessed at moderate reliability because it is a commercial market report, is not peer reviewed, and relies in part on interview-based information. No comparable published source was identified against which the reported values could be independently cross-checked, and sufficient information was not available to construct confidence intervals.

Observed prices for flake concentrate and for 4N material were also compiled for reference. These prices are materially lower than observed nuclear-grade graphite pricing and relate to market segments in which the Project does not intend to compete.

19.6.3 Price Projections

Both underlying studies developed price outlooks through to 2035 under multiple scenarios. These outlooks are disclosed for context; the base case does not use them. The price applied in the economic analysis is held constant in real terms over the Project life (Item 19.6.4). One scenario, derived from the commercial market research database discussed above, projects nuclear-grade prices increasing in the near term before declining over the balance of the forecast period. Two additional scenarios were developed using the long-run price behaviour observed of comparable industrial raw materials. These scenarios were constructed on the premise that a sustained decline in real prices would be inconsistent with the demand growth described in Item 19.3 and the supply concentration described in Item 19.4. Under both scenarios, real prices increase over the forecast period.

Procurement and policy frameworks in allied jurisdictions restrict, exclude or disadvantage non-allied supply for certain applications, and buyers subject to those frameworks may be prepared to pay more for allied supply. The magnitude of any such effect is a matter of judgment rather than direct market observation, and no comparable evidence from graphite transactions was identified. No country-of-origin premium has been applied to any price used in this Report, and none is included in the economic analysis in Section 22..

19.6.4 Price Applied in This Assessment

The selling prices for each grade of final graphite product were directly applied to the estimated annual outputs of each.

The nominal annual tonnages produced of each of the three products, their share of overall production and the assumed prices for each are set out in Table 19.2.

Table 19.2: Realized Product Prices

Product Grade	Annual production (t)	Share of Production (%)	Price (US$/t)
4N	24,240	80.8	20,541
4N+	2,640	8.8	19,300
5N	3,120	10.4	50,000
Total	30,000	100	-

The prices in Table 19.2 are derived from the disaggregated nuclear-grade pricing compiled in the AppEco study from the QYResearch database. That source reports a 2025 global average selling price of US$17,544 per tonne, and within it reports isotropic material at US$19,613 per tonne, nuclear reactor moderator material at US$19,605 per tonne, and, by production region, Europe at US$20,949 per tonne, Japan at US$18,588 per tonne and China at US$14,548 per tonne. The prices applied to the 4N and 4N+ grades sit within the range reported for the established manufacturers and production regions that supply the applications the Project targets, rather than at the global average, which includes producers that do not serve those applications. The difference between the 4N and 4N+ prices reflects the different points in that observed range to which each grade is referenced, and not a price discount for higher purity. None of the prices in Table 19.2 includes a country-of-origin premium.

The product prices applied in Section 22 are held constant in real terms over the Project life. Taken together, they imply an average realized selling price of approximately US$23,500 per tonne of finished graphite product over the life of mine. This overall pricing level may be compared with the independent price projections prepared for nuclear-grade graphite, which was considered the closest observable analogue for the highest-value products contemplated by the Project. Those projections increase from an observed price of US$17,544 per tonne in 2025 to between approximately US$26,500 and US$28,900 per tonne by 2035. The overall price level implicit in the economic analysis falls within that range and below its upper case.

The prices used in the economic analysis reflect the Project's anticipated positioning as a supplier of high-purity and ultra-high-purity graphite products into specialized, higher-value applications rather than commodity graphite markets. The assumed prices are contingent upon successful commercial production, product qualification and customer acceptance, none of which has yet been demonstrated. Price sensitivity is evaluated in Section 22.

19.7 SALES HISTORY AND CONTRACTS

Albany Graphite Corp. has no history of graphite product sales. The Project remains at the assessment stage and has not produced material for commercial sale.

As at the effective date of this Report, Albany Graphite Corp. has no signed offtake agreements, letters of intent, memoranda of understanding or contractually agreed prices with prospective customers for graphite products. Commercial discussions remain at a pre-qualification and pre-pricing stage. The Company has no contracts related to refining, transportation, handling, hedging or forward sales, or other marketing arrangements. Accordingly, no contractual terms are available to inform the price or sales-volume assumptions used in this Report, and no assessment of consistency with industry practice can be made.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This section of the report summarizes the legal requirements, permitting status and progress with environmental studies for the Albany Graphite Project. It briefly describes the environmental and social characteristics of the Project area and identifies potential risks and associated management measures at a strategic level. The conceptual approach to closure planning is also considered. Information is based on secondary data provided by Zentek, publicly available information from the Government of Ontario, and feedback from a site helicopter flyover undertaken by Micon's QPs in June, 2026. A site visit has not been undertaken by the QP.

20.1 REGULATORY FRAMEWORK AND PROJECT PERMITTING

The Albany Project is subject to the laws and regulations of the Federal Government of Canada and the provincial Government of Ontario.

20.1.1 Federal Environmental Assessment

At federal level, projects or physical activities that have a potentially significant impact on the environment are governed by the Canadian Impact Assessment Act of 2019 (S.C. 2019, C28, s.1), which replaced the Canadian Environmental Assessment Act of 2012 (S.C. 2012, C19, s.52). These 'designated projects' are listed in the Physical Activities Regulations (SOR/2019-285) and include various mining and processing activities. Graphite mining is not specifically identified by commodity in the Physical Activities Regulations; however, mining projects may be designated based on project characteristics and thresholds. Federal impact assessment requirements or other federal approvals might apply depending on the scale and potential effects of the Project.

The Canadian government is actively promoting mining of critical minerals to support the green and digital economy, and graphite is listed as one of six priority critical minerals (from a total of 31) in Canada's Critical Minerals Strategy (Natural Resources Canada, 2022). In 2025 the Project received a grant of US$500,000 from the Ontario Government's Critical Minerals Innovation Fund (CMIF). Micon's QP has assumed that a federal Environmental Assessment would not be applicable to the Project, however this would need to be confirmed by independent legal opinion and with the relevant regulatory authorities as the Project advances.

20.1.2 Provincial Environmental Assessment

Mining projects in Ontario are primarily governed by the Ontario Mining Act (R.S.O. 1990, c.M.14) and the Ontario Environmental Assessment Act (R.S.O. 1990, c.E.18), together with their associated Regulations. Relevant supporting legislation within Ontario includes the Public Lands Act (R.S.O. 1990, c.P.43), Lakes and Rivers Improvement Act (R.S.O. 1990, c.L.3), Environmental Protection Act (R.S.O. 1990, c.E19), Ontario Water Resources Act (R.S.O.). 1990, c.O.40), Fish and Wildlife Conservation Act (S.O. 1997, c.41), Heritage Act (R.S.O. 1990, c.O18), Highway Traffic Act (R.S.O. 1990, c.H8), and Public Transportation and Highway Improvement Act (R.S.O. 1990, c.P50).

Unlike certain other Canadian jurisdictions, Ontario does not generally require a stand-alone environmental assessment for private-sector mine development projects. Environmental review is largely integrated into the Mining Act permitting and closure planning framework, although specific project components or associated undertakings may be subject to requirements under the Environmental Assessment Act or other provincial legislation. In 2025 the Government of Ontario enacted new legislation, the 'Protect Ontario by Unleashing our Economy Act', known as Bill 5 (S.O.

2025, Chapter 4), to promote economic development in Ontario and update various acts including those for mining and environmental assessment.

20.1.3 Permitting Process

The Government of Ontario has recently developed a One Project, One Process (1P1P) Framework, which aims to provide a more efficient and integrated approach for mine permitting. The framework is led by the Ministry of Energy and Mines (MEM) in collaboration with the Ministry of the Environment, Conservation and Parks (MECP), the Ministry of Natural Resources (MNR), the Ministry of Transportation (MTO), and the Ministry of Citizenship and Multiculturalism (MCM). Under the 1P1P Framework, a Mine Authorization and Permitting Delivery Team (MAPDT) will be established for each Project, to provide dedicated support and coordination for project management, Indigenous consultation and align the application, review and decision-making processes for obtaining all necessary permits, authorizations and approvals.

A summary of the 1P1P Framework, which is in the early stages of implementation and subject to change, is as follows:

- **Project Designation Process:** A formal 'Project Definition' document is submitted to MEM, either through direct application by the project proponent, or via referral from an indigenous community or another provincial ministry. Prior to the submission, project proponents can request a preliminary meeting with MEM for guidance on the application process. The MAPDT is established with a Team Lead as the designated point of contact, and meetings with the project proponent will be held as needed.
- **Integrated Authorization and Permitting Plan (IAPP):** Once the Project Definition is formally accepted and confirmed as complete and eligible for the 1P1P process, the MAPDT will develop a project-specific IAPP (within ten days) which must be implemented by the project proponent. The IAPP sets out the necessary steps for obtaining all the required permits, authorizations and approvals for the project. It also facilitates coordination between different Ministries, and ensures Aboriginal rights are considered.
- **Indigenous Consultation:** Within 30 days of IAPP completion, the MAPDT will identify all Aboriginal communities that may be affected by the project. A Direction Letter will be sent to the project proponent with details of the affected communities and the communities themselves will receive a Letter of Notification. The project proponent must then prepare and submit a Plan for Consultation to MAPDT, and within 15 days of receipt, MAPDT will prepare an Integrated Consultation Plan (ICP). The project proponent is responsible for preparing quarterly Interim Consultation Reports (ICR).
- **Permit Application, Review, Consultation and Decision Making:** Once the IAPP, Plan for Consultation, and the ICP are finalized, the project proponent is responsible for submitting all necessary applications for permits, authorizations and approvals as specified in the IAPP directly to each relevant ministry. MAPDT will coordinate the review process and hold monthly progress meetings with the project proponent. If any issues are identified during the review process, the various Plans may be updated.
- **Completion or Suspension of 1P1P:** The work of the MAPDT concludes once all decisions with respect to permits, authorizations or approvals specified in the IAPP have been made. If

circumstances arise which cause the project to be delayed by the proponent, all relevant parties will be notified and the 1P1P process suspended.

Guidelines are available from the Government of Ontario (www.ontario.ca/page/mining-one-project-one-process-framework) for completion of the Project Definition document, which amongst other information must include: a thorough description of all project activities and infrastructure, details of the physical and biological environment, cultural heritage and socio-economic status, baseline studies and monitoring, anticipated impacts and mitigation measures, stakeholder engagement and closure planning. Micon's QP understands that the 1P1P framework would likely be applicable to the Albany Project, however this would need to be confirmed with MEM in due course.

20.1.4 Project Permitting Status

The Albany Project is based on 521 Mining Claims within the Pitopiko River Area and Feagan Lake Area of the Porcupine Mining District of Ontario. The Claims cover a total area of 9,760 ha (97.6 km^2) and include 461 Single Cell Mining Claims and 60 Boundary Cell Mining Claims. The total Albany Claim area was previously known as Claim Block 4F.

All 521 Claims are 100% owned by Albany Graphite Corp., a subsidiary of Zentek Ltd, and are in good standing with the Government of Ontario Mining Lands Administrative System (MLAS). Micon's QP has not independently verified the ownership status or the current standing of the mineral permits associated with the Project and has relied in good faith on information provided by Zentek.

The individual Claims are typically renewable on an annual basis (Anniversary Date) subject to reporting of exploration activity to bank 'work credits' or by making substitute payments. Where additional exploration work has been undertaken beyond the minimum requirements, the work credits can be used to extend the Anniversary Date for Claim renewal beyond one year. The Albany Claims have Anniversary Dates ranging between 2027-2029, with the earliest anniversary date being February 28, 2027, for approximately 40% of the Claims.

The Albany Project is still at exploration stage, and therefore no application has yet been made to convert any of the Mining Claims into Mining Leases. Micon's QP assumes that all Mining Claims will be maintained and routinely renewed in the interim period.

Permission was granted in 2019 for bulk sampling and associated testwork on Mining claims 253668 and 265162, which represent the main location of the Albany graphite deposit (East Pipe and West Pipe).

20.2 STATUS OF ENVIRONMENTAL AND SOCIAL STUDIES

Two phases of environmental studies have been undertaken for the Project to date:

- **2011-2014:** Prior to the previous PEA being issued for the Project (RPA, 2015), aerial reconnaissance surveys were undertaken for archaeology and woodland caribou/other large mammals. Preliminary geochemical testwork was also undertaken for tailings material.
- **2019-2020:** The following baseline studies were undertaken by ERM Consultants Canada Ltd, with fieldwork done in collaboration with representatives from Constance Lake First Nation (CLFN): Desktop socio-economic study, Hydrology baseline study, Aquatics and fisheries baseline study, Vegetation and wildlife baseline study, and a Winter aerial wildlife survey.

A separate report was also prepared by ERM in 2019 for the Nagagamasis Provincial Park Authority, summarizing the water and ecology baseline information specific to the park.

Key findings from the environmental baseline studies are included in section 20.3. Additional geochemical testwork was undertaken for waste rock from 2019-2022 and is referred to in Section 20.5. The baseline studies undertaken to date have not identified any significant barriers to Project development, and it is acknowledged that Zentek plans to undertake additional studies as the Project advances.

20.3 ENVIRONMENTAL AND SOCIAL CONTEXT

The Project is located in the James Bay-Hudson Bay Lowlands of Northern Ontario, Canada, on traditional lands of CLFN and is characterized by extensive surface waterbodies and forest cover. The Project site is constrained by the Nagagami River to the east and the Pitopiko River to the west. The Nagagamasis Provincial Park, a protected area which forms the eastern boundary of the property, incorporates the Nagagami River and Nagagamasis Lake further to the south (Figure 20.1).

The Project area has a humid continental climate with warm summers and cold winters. Snow cover is prevalent during the winter season and watercourses typically freeze between November and May. The property has a relatively uniform low relief, with a thick overburden dominated by wetland complexes which results in peaty/boggy ground conditions. Slightly elevated areas exist to the south and alongside the Nagagami River. Exploration drilling has been undertaken but there is currently no infrastructure at the property. The Project site is approximately 30 km north of the Trans-Canada Highway (Highway 11) and 68 km northwest of the town of Hearst. Access is via helicopter or an all-weather logging road which extends from the highway to within 10 km of the Project site, followed by a seasonal winter trail.

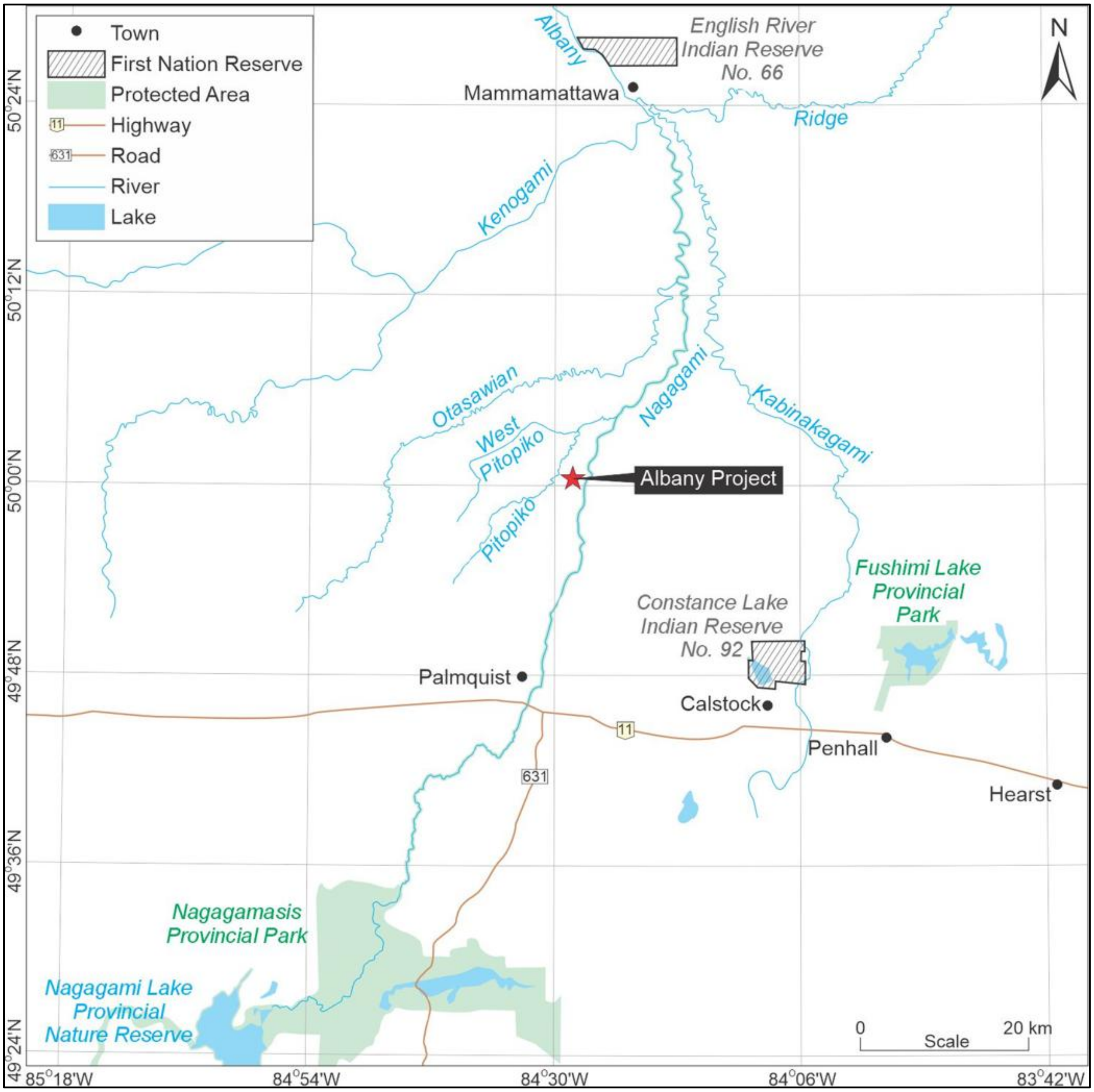
20.3.1 Water Resources

The Albany property is located in the lower sub-basin of the Nagagami River and is part of the larger Kenogami watershed. Regional water flow is from south to northeast, eventually discharging into James Bay through the Albany River.

Surface watercourses within and around the proposed Project site include the following:

- **Nagagami River:** This river flows northwards from Nagagami Lake and its mid-section forms the eastern boundary of the property. The total length of the river is approximately 160 km and a 200m buffer on either side delimits the boundary of the Nagagamisis Provincial Park.
- **Pitopiko River:** This river represents the western boundary of the Project site and it flows northwards and into the Nagagami at the northern extent of the property.
- **West Pitopiko River:** This is a tributary of the Pitopiko, flowing from the west to the confluence within the property, a few kilometres upstream of the Nagagami-Pitopiko confluence.
- **Tributary 1:** This unnamed channel is a tributary on the eastern side of the Pitopiko River and is located entirely within the property, upstream of the other river channels.
- **Tributary 2:** This unnamed channel is a tributary within the property on the western side of the Nagagami River and is suspected to be spring-fed.

Figure 20.1: Environmental and Social Context of the Albany Project



Source: Micon, 2026.

Feagan Lake, with a surface area of approximately 0.5 km^2, is located in the western portion of the property, approximately 3 km west of the Pitopiko River and outside of the proposed Project footprint.

A baseline hydrology study was undertaken for the Project in 2019 (ERM, 2020a) which included installation of three temporary monitoring stations to assess surface water flow within the property for one season. The results indicate a nival regime i.e. a seasonal flow pattern dominated by snowmelt. Spring snow melt was found to begin in late April and river water levels subsequently peaked in mid May. Water levels were lowest in July-September. This pattern is generally consistent with data from regional hydrometric stations operated by Water Survey of Canada (WSC). Surface run-off at the Project site is likely to flow from east to west, with predominantly sheet flow towards the Pitopiko River (ERM, 2020a). Further studies are needed to confirm local on-site drainage patterns and more than one year of hydrological data collection will be required.

A hydrogeology baseline study has not yet been undertaken for the Project and therefore groundwater conditions are not yet understood. The close proximity of the Project site to the Pitopiko and Nagagami Rivers and wet ground conditions suggest that infiltration and groundwater-surface water interactions will be influential.

20.3.2 Biodiversity and Protected Areas

The Albany property is situated at the boundary of the James Bay Lowlands Ecoregion to the north and the Lake Abitibi Ecoregion to the south. The area hosts two Boreal Forest types, the Northern Clay Forest and the Central Plateau Forest which together with the extensive surface water network, provides good quality habitat for a wide range of wildlife.

Nagagamasis Provincial Park represents the closest Protected Area to the Project. It covers a total area of 40,683 ha (>400 km^2) and is part of the larger Nagagamisis Central Plateau Signature Site due to its natural and cultural significance. The park is used for recreation and tourism, including seasonal camping, hiking, canoeing, birdwatching fishing, and hunting and it also incorporates the Nagagami Lake Provincial Nature Reserve and the Nagagamasis Lake Enhanced Management Area. The Fushimi Lake Provincial Park is located approximately 40km to the east of the Property.

20.3.2.1 Aquatics and Fisheries

A baseline study was conducted for aquatics and fisheries in 2019 (ERM, 2020b) which comprised sampling for water quality and sediment quality and assessment of periphyton, benthic invertebrates and fish. In general, rivers and streams in the study area had similar physical conditions and water quality was found to be alkaline with low nutrient concentrations and low metal concentrations, with the exception of elevated background iron levels. Suspended solids and turbidity were elevated in April, likely due to snowmelt and associated run-off. Sediment quality showed similar trends (ERM, 2020b).

Periphyton was dominated by blue-green algae and diatoms, with greater quantities found in the Pitopiko River compared to the Nagagami. Macroinvertebrates were dominated by mayflies, caddisflies and non-biting midges. Nine fish species were found in the study area, with Johnny Darter *(Etheostoma nigrum)*, Longnose Dace *(Rhinichthys cataractae)* and Walleye (Walleyed Pike/*Sander vitreus*) being the most common in the Nagagami River, and Longnose Dace, Lake Chub *(Couesius plumbeus)* and Sculpin *(Cottus confuses)* in the Pitopiko. Fish habitat was indicated as being good quality for all fish species at all life stages, with no barriers to movement observed in the rivers and streams. Possible spawning grounds were identified at Three Portages Rapids on the Nagagami River (south of the Project site) for Lake Sturgeon *(Huso fulvescens)*, which was found during the study and is listed in Schedule 1 of the Canada Species At Risk Act (SARA). Possible spawning grounds for other species were observed in the same location, as well as in the Pitopiko River (ERM, 2020). Additional periods of data collection will be required as the Project advances.

20.3.2.2 Vegetation and Wildlife

A baseline study was undertaken for vegetation and wildlife in 2019 by ERM. Fieldwork surveys indicated that most of the vegetation within the Project site was comprised of wetland fens with upland forest areas along the riverbanks, both of which host a wide variety of plant communities and provide good wildlife habitat. The native black ash tree *(Fraxinus nigra)* was observed in several locations and is included in the Species at Risk in Ontario (SARO) List (ERM, 2020c).

Fourteen wildlife species of concern have the potential to occur at the property. This includes eleven species of birds, two species of bats, and the boreal woodland caribou *(Rangifer tarandus caribou)* which is classified as Threatened at provincial and federal level (ERM, 2020c).

There is a diverse range of birdlife in the Project area. Observations made during baseline surveys of protected species include the common nighthawk *(Chordeiles minor)* and olive-sided flycatcher *(Contopus cooperi)*, both of which are classified as being of Special Concern at provincial and federal level. A bald eagle *(Haliaeetus leucocephalus)*, which is listed as Special Concern by SARO was also observed by ERM during the fisheries baseline study (ERM, 2020c).

Bats were recorded along both rivers during the baseline study, but no protected species were detected. The four most common species were found to be the big brown bat *(Eptesicus fuscus)*, hoary bat *(Lasiurus cinereus)*, eastern red bat *(Lasiurus borealis)* and silver-haired bat *(Lasionycteris noctivagans)*.

Wildlife recorded by a winter aerial survey for the Project in 2015 included moose, wolves, and caribou tracks north of the property. Wildlife cameras installed during the 2019 baseline study recorded beaver, black bear, moose and wolf/coyote, none of which are protected species. An otter was also observed during the fisheries baseline study (ERM, 2020c). An additional winter aerial survey was undertaken by ERM in February 2020, which only observed moose (ERM, 2020d).

Although caribou were not observed during the most recent baseline studies, the Albany property provides suitable caribou habitat and there is potential that it may provide connectivity between two known herds of Pagwachuan caribou, located north and south of the property. Observations of caribou in close proximity to the northern boundary of the property have been documented by MNR in previous years and it will therefore be important to undertake routine monitoring.

20.3.3 Socio-Economic Conditions

CLFN is considered to be the closest community to the Project, in addition to the town of Hearst which is associated with the logging industry. There are two CLFN Reserves in proximity to the property: Constance Lake Indian Reserve No.92, approximately 30km to the southwest close to the community of Calstock where the majority of the community live, and English River Indian Reserve No.66, approximately 50km to the north near the historic settlement of Mammamattawa (Figure 20.1). ERM undertook a desk-based review of socio-economic conditions within the CLFN community in 2019. Opportunities for improvement were identified for employment, education, general services/infrastructure and medical support (ERM, 2019).

In addition to recreation and tourism activities associated with Nagagamasis provincial park, traditional hunting and fishing activities are undertaken in the local area. The property falls within Wildlife Management Unit (WMU) 24 which is designated for hunting and is covered by two traplines, which allow capture and harvesting of furbearing mammals for commercial use; one alongside the Pitopiko River (Trapline Area Number: HE009) and the other alongside the Nagagami River (Trapline Area Number: HE014). There are no known sites of archaeological or cultural importance at the property.

20.4 STAKEHOLDER ENGAGEMENT

The Ontario Mining Act (R.S.O. 1990, c. M.14) includes specific provision for consultation with Aboriginal communities and resolution of potential disputes. Zentek has established and maintained a long-standing partnership with CLFN since the Albany Project is located on their traditional territory. This partnership has included a series of formal agreements that establish governance, collaboration, and a framework for long-term Project development:

- **July 13, 2011 Exploration Agreement:** This initial agreement sets out the terms of a mutually beneficial arrangement with respect to Zentek's exploration activity for the Albany Project. It acknowledges the Project is located on CLFN Lands and includes the formation of an Implementation Committee to ensure the provision of traditional knowledge on environmental, social and cultural issues. Zentek committed to funding the committee on a yearly basis and to providing additional financial support through a social fund for children within the CLFN community.
- **July 19, 2018 Memorandum of Understanding (MOU):** This MOU represents an amendment to the initial exploration agreement and establishes a project partnership structure that includes shared governance, decision-making and support for community engagement; shared objectives and expectations; and shared economic expectations and benefits.
- **January 14, 2021 Implementation Agreement:** This latest agreement defines the terms under which the 2018 MOU will be implemented and provides more detail on the joint implementation committee for the Project. It also covers the potential to establish sub-committees, such as an Environmental Working Group and a Traditional Knowledge Working Group.

Micon's QP understands that Zentek has also engaged with representatives from the Town of Hearst and the District of Cochrane about the Albany Project. Ongoing communication with all potentially affected parties will continue as the Project advances.

20.5 MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS

The Albany Project will be designed to limit potential environmental impacts as far as possible and enhance socio-economic benefits. A full review of environmental and social impacts will be undertaken as part of the future environmental assessment process. Based on the current conceptual Project design, potential environmental and social risks have been identified as follows:

- **Natural Hazards:** The Project is located in a lowland area with extensive surface waterbodies and may therefore be at risk of flooding, especially during the spring ice melt/snowmelt (freshet) season. A flood risk study has not yet been undertaken for the Project and further studies are needed to understand drainage patterns on site. Water management infrastructure will be designed to include emergency storage, appropriate drainage diversion channels and separation of potential contaminants. Wildfires are also a significant risk in summer months due to the higher temperatures and extensive forest cover. Northern Ontario has a low level of seismic activity.
- **Water Management:** Water supply for the Project will primarily be obtained through recovery from operational processes and recirculated on site to the extent possible. The conceptual water balance for the Project indicates that it will be positive (refer to section 18.7), with surplus water needing to be discharged to the Pitopiko River subject to further studies, appropriate treatment and permitting. Freshwater abstraction from the Pitopiko River will likely also be

required. Adequate provision for drainage infrastructure and water storage will be needed for routine operations and to accommodate seasonal fluctuations and emergency situations. Water management is considered to be one of the major challenges of the Project and additional technical/trade-off studies will be important as the Project advances. As extensive exploration activity has been undertaken in the area, pre-construction surveys will also be needed to ensure that drill holes have been adequately sealed, to minimize the risk of seepage to groundwater.

- **Waste Management:** The Albany graphite deposit is located in an area constrained by two rivers and therefore available land space for Project infrastructure is limited. Large volumes of mining waste (waste rock/overburden) and processing waste (tailings) will be generated and will need to be stored on site. Detailed design has not yet been undertaken for the WRMF or the TSF, however both facilities will adhere to provincial guidelines and industry best practice and will include appropriate provision for drainage and monitoring systems.

  Preliminary geochemical testwork undertaken for tailings material in 2015 indicated that effluent from the TSF would be likely to meet Ontario water quality guidelines for metals. The potential for acid generation was more uncertain, due to the presence of some sulphide material (pyrite and pyrrhotite) and insufficient neutralization potential from carbonate material (SGS, 2015). A review of the testwork by ERM suggested that tailings are not likely to pose a significant risk to the environment provided generally accepted management practices are implemented (RPA, 2015), however further testwork is needed as the Project advances.

  A geochemical testwork program undertaken for waste rock in 2019-2022 indicated that there is the potential for slightly elevated metal concentrations in leachate from some of the material, including fluoride, arsenic, molybdenum, vanadium and uranium. The majority of samples were assessed as Non Acid Generating (NAG), however there were indications of some Potentially Acid Generating (PAG) material in samples of syenite sill, and uncertainty for samples from the graphite overprint (ERM, 2020e, 2021 and 2022). Further testwork is needed as the Project advances to help refine the design for waste infrastructure. Options to minimize the risk of Acid Rock Drainage and Metal Leaching (ARDML) include blending of the PAG material with the limestone found on site that has good Neutralizing Potential (NP) and using limestone for construction material such as perimeter embankments and access roads. A Geochemical Management Plan will be developed for the Project prior to operations commencing.

- **Biodiversity:** The Project is located in an area of high natural biodiversity value, with extensive habitat for fish, birds and large mammals, including the potential for protected species. Dust, noise, vibration and artificial lighting from Project activities will likely cause disturbance to wildlife, particularly during the construction phase, and any unplanned water releases may impact aquatic habitats. A combination of engineering and operational controls can be used to help minimize biodiversity impacts. Wildlife monitoring will take place throughout the life of the Project and additional studies are needed to better understand caribou movements.

- **Cultural Heritage and Archaeology:** There are currently no known sites of archaeological or cultural importance located on the property, however given the large scale and historical significance of the area as traditional lands of CLFN, there is potential for undocumented sites to exist. Provision has been made for Chance Finds in the Implementation Agreement with CLFN, should any cultural sites be identified in the course of ongoing exploration activity and Project development.

- **Socio-Economic Impacts:** Overall, the Project is expected to have a positive impact on the local and regional economy, through creation of direct and indirect jobs and associated training opportunities. The Project may result in some disturbance to rural livelihoods and traditional pastimes such as hunting and fishing, however the well-established partnership with CLFN should ensure that all affected parties are aware of ongoing Project developments.

  The off-site graphite purification plant will require concentrate from the on-site processing facility to be transported by truck using existing public highways. The location of the purification plant has not yet been confirmed, but is assumed to be within an existing industrial area of Ontario. The potential impacts on traffic and community safety will be evaluated as the Project advances, and provision for dealing with off-site accidents/spills will be incorporated.

At this stage of the Project, the environmental and social issues can be considered typical of similar mining operations. The most significant challenges are likely to be water and waste management, and further studies are needed to evaluate the risk to caribou. Trade-off studies are recommended for the next stage of Project development, to identify the most environmentally responsible and cost-effective infrastructure options.

20.6 PROJECT CLOSURE PLANNING

A preliminary Closure Plan for the Albany Project has not yet been developed but will be prepared and submitted to MEM as part of the future permitting process.

Closure and rehabilitation requirements for the Project will be governed by Part VII of the Ontario Mining Act (R.S.O. 1990, c. M.14) which covers Rehabilitation and Remediation of Lands, and the Mine Rehabilitation Code of Ontario (O. Reg 35/24). Mining projects in Ontario cannot commence operations until a documented Closure Plan and associated Financial Assurance have been approved and officially filed by MEM.

The Mine Rehabilitation Code prescribes Ontario's standards for the rehabilitation of mining projects and the required content of closure plans. The objectives are to reduce public safety risks, limit potential hazards, ensure long-term physical stability, demonstrate environmental compliance and promote natural recovery of the site. The Code covers specific requirements for open pit mining areas, tailings dams and other containment structures, long term surface water and groundwater monitoring requirements, assessment of acid rock drainage and metal leaching potential, physical stability of mining and waste structures remaining in-situ, revegetation, and decommissioning and maintenance of site infrastructure and equipment.

At this stage of the Project, the approach to closure and rehabilitation is anticipated to include the following:

- Progressive rehabilitation, to the extent possible.
- Safety berms will be installed around open pit mining areas, which will ultimately be allowed to flood.
- Mining and processing waste storage structures will remain in place, with slopes appropriately contoured and surfaces revegetated (the TSF will also be capped).
- The process plant and supporting infrastructure will be dismantled and removed from site.
- Access routes and utility infrastructure may be left in situ, if beneficial for nearby communities and subject to stakeholder consultation.

- Long-term environmental monitoring.

The Ontario Mining Act (R.S.O. 1990, c. M.14) specifies that closure costs and details of the associated financial assurance shall be specified in the Closure Plan. The financial assurance can be phased and may take the form of cash, a letter of credit from an approved bank, a bond from a licensed insurer, a mining reclamation trust, or other appropriate security guarantee. At this stage of the Project, a provisional estimate of US$122.9 million has been allocated for closure costs. This represents 10% of total CAPEX and includes additional provision for surety bonds, contingency, and closure of the off-site graphite purification facility.

20.7 RECOMMENDATIONS

Recommendations for ongoing development of the Project into PFS stage and beyond include the following:

- Ensure all previous exploration drill holes are sealed and disturbed areas are remediated. This will be particularly important for potential development of waste storage infrastructure, to ensure there are no pathways for groundwater connectivity.
- Undertake additional environmental baseline studies for water quality and biodiversity. In particular it will be important to understand seasonal variations over multiple years and establish migration routes for birdlife and caribou. Baseline conditions should also be established for other aspects such as climate data, air quality, and noise levels.
- Undertake additional hydrology studies and initiate hydrogeology studies to facilitate a better understanding of baseline conditions and enable more accurate assessment of water management needs for the Project. A site-specific Flood risk study is also advised.
- Undertake a ground-based archaeological survey in the proposed Project footprint area and ensure a Chance Finds procedure is in place for future drilling activity and ongoing site visits.
- Undertake additional geochemical testwork as the Project design evolves, to better understand ARDML risks in waste rock and tailings material.
- Undertake a trade-off study to evaluate different options for the Project’s water supply, including provision for water storage, treatment and discharge.
- Undertake a trade-off study to evaluate alternative options for tailings storage/disposal, including the potential for a dry stack tailings facility.
- Undertake a trade-off study to evaluate alternative options for mine fleet fuel and power supply, taking sustainability and newer technologies into account.
- Ensure local stakeholders, in particular CLFN, remain actively engaged in all Project developments and are specifically consulted on options for the proposed access route. All formal and informal consultation should be documented to support the future permitting process.
- Confirm project-specific permitting requirements and timelines with the Government of Ontario.

Additional environmental and social recommendations will be identified as the Project advances, including from ongoing stakeholder consultation with CLFN.

21 CAPITAL AND OPERATING COSTS

21.1 INTRODUCTION

The capital and operating costs in this Report section are based on the design criteria and engineering work performed by the individual QPs under their areas of responsibility and expertise.

Sources used for the cost estimates include historical data, benchmark costs, empirical factors and first principle calculations where and as appropriate.

The Albany Graphite Project (PEA) involves the development of an open pit mine, the construction of on-site milling facilities, the construction of off-site graphite purification facilities, and all on and off infrastructure required to support those activities.

The main components of the Albany Mine site that form the basis of this study include:

- An exploration facility / core shack facility.
- An open pit mine and directly associated costs that include pre-stripping, site preparation, buildings, utilities and services, equipment, truck shop and explosives magazine.
- RoM low grade, mid grade and high-grade stockpiles.
- Mine waste rock storage areas and stockpiles.
- Site infrastructure and buildings.
- Onsite concentrator plant with a feed nominal capacity of 894,454 t/a and nominal concentrate production capacity of 34,483 t/a.
- Tailings storage facility and water management systems.
- All weather site access road and power transmission line from Ontario Highway 11 to the Albany Mine site.
- An onsite TSF.
- Power transmission from the provincial power grid to site and distribution.
- Explosives and cap storage facilities.
- Mine closure and reclamation.

In addition, the cost estimates also includes a graphite purification facility that was assumed to be located at an existing brownfield industrial site elsewhere in Ontario where the necessary infrastructure, utilities, and supporting services are already available. will include:

- Five state of the art FBRs capable of producing a total of 30 kt/a of saleable products when the mine reaches steady state production
- Processing site infrastructure and buildings

It was assumed that the graphite concentrate produced at the Albany Mine site will be transported by road to the graphite purification facility for conversion into market grade graphite products, specifically 4N, 4N and 5N grades.

The cost estimates for each report section have been prepared by the following parties:

- Open pit capital and operating costs – Micon's QP.

- Albany Mine site concentrator plant capital and operating costs – Micon's QP.
- Albany Mine site infrastructure capital and operating costs – Micon's QP.
- Albany Mine site closure capital costs – Micon's QP.
- Construction and Indirect costs – Micon's QP.

In addition, the capital and operating cost estimates for the Graphite Purification site capital and operating costs prepared by Micon's QPs were directly based on equipment lists, designs and costs provided by AETC for the FBRs.

21.2 CAPITAL COSTS

21.2.1 Basis of Estimate

The capital cost estimate has been classified as an AACE Class 5 estimate in accordance with the principles of AACE Recommended Practice 47R-11 for the mining and mineral-processing industries. The classification reflects project-definition maturity of approximately 0% to 2% and the conceptual nature of the underlying engineering deliverables. The estimate was prepared using a combination of factored, parametric, benchmark, budgetary-quotation, and analogous-project estimating methods, as applicable to each cost area.

A contingency of 25% was applied to building and equipment costs. While these cost categories are separately identified in the capital cost model, engineering definition for the process plant and site facilities is insufficiently developed to support differentiated contingency rates. In the opinion of the QP, applying a uniform 25% contingency is appropriate for the current level of study and avoids implying unsupported precision within individual cost categories.

The overall capital cost estimate is considered to have an accuracy range of approximately ±50%, expressed relative to the estimated capital cost inclusive of contingency. This range reflects the conceptual level of project definition, the limited supporting engineering and cost detail available for major process-plant and site-facility components, and the resulting uncertainty in quantities, equipment selection, installation requirements, indirect costs, and project-execution assumptions.

The stated accuracy range represents the QP's assessment of the potential variability of the overall capital cost estimate at the current level of study. It is not a statistical confidence interval or a guaranteed limit on potential cost outcomes. The accuracy range is distinct from the 25% contingency allowance: contingency provides an allowance for uncertainty and variability within the presently defined Project scope, whereas the accuracy range communicates the broader uncertainty associated with the estimate as a whole. Material changes in Project scope, design criteria, execution strategy, schedule, market conditions, or presently unidentified requirements may result in costs outside the stated range.

21.2.2 Pre-Production Capital Costs

The total pre-production capital costs will be US$817 million as shown in Table 21.1, which includes capitalized operating costs incurred before the open pit mine enters the production phase.

Table 21.1: Pre-Production Capital Costs

Cost Centre	Description	Cost (US$ million)
Direct CAPEX Costs		
1000	Geology	0.5
2000	Mining	99.3
3000	Infrastructure	18.8
4000	Concentrator	74.9
5000	Tailings and Water Management	26.4
6000	Offsite Infrastructure (1)	382.6
Total Direct CAPEX Costs		**602.5**
Owner and Indirect CAPEX Cost Summary		
7000	Construction Indirects and Capital Contingency	156.1
8000	Owner's Costs	55.8
Total Indirect CAPEX Costs		**212.0**
9000	Closure and Rehabilitation Surety Bond	2.5
Total Pre-Production CAPEX Costs		**817**

Notes:
1. Includes FBR site and costs
2. Does not include &102.2M working capital

21.2.3 Sustaining Capital Cost Summary

Total sustaining capital (SUSEX) costs incurred over the production phase of the mine will be US$1,161.6 million as shown in Table 21.2.

Table 21.2: Sustaining Capital Costs

Cost Centre	Description	Cost (US$ million)
Direct SUSEX Costs		
1000	Geology	0.3
2000	Mining	7.7
3000	Infrastructure	10.4
4000	Concentrator	82.8
5000	Tailings and Water Management	25.9
6000	Offsite Infrastructure (1)	499.0
Total Direct SUSEX Costs		**626.1**
Owner and Indirect SUSEX Cost Summary		
7000	Construction Indirects and Capital Contingency	119.0
8000	Owner's Costs	381.0
Total Indirect SUSEX Costs		**500.0**
9000	Closure and Rehabilitation Surety Bond	35.6
Total Pre-Production SUSEX Costs		**1,161.6**

21.2.4 Geology Capital Costs

Geology capital costs include the exploration and core shack facilities. Initial capital expenditure was estimated at US$0.8 million whereas sustaining capital costs were estimated at US$0.3 million as shown in Table 21.3.

Table 21.3: Geology Capital Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
Core Shack / Exploration Facility	0.5	0.3	0.8
Total	**0.5**	**0.3**	**0.8**

21.2.5 Open Pit Mine Capital Costs

Total open pit capital (CAPEX) costs during the pre-production phase were estimated to be US$99.3 million. Sustaining capital costs (SUSEX) were estimated to be US$7.7 million as shown in Table 21.4.

Table 21.4: Open Pit Mine Capital Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
Pre-Stripping	86	-	86
Site Preparation	0.5	0.6	1.1
Buildings	1	0.6	1.6
Utilities and Services	1	0.3	1.3
Equipment	0.5	6	6.5
Truck Shop	10	0.2	10.2
Explosives Magazine	0.25	0	0.3
Total	**99.3**	**7.7**	**106.9**

21.2.6 Albany Mine Site Infrastructure Capital Costs

Infrastructure CAPEX costs were estimated to be US$18.8 million and a further US$10.4 million will be required in sustaining capital costs as shown in Table 21.5.

Table 21.5: Site Infrastructure Capital Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
Overall Site Preparation	1.5	0.0	1.5
Fire Protection	1.5	0.9	2.4
Roads, Bridges, Gates and Fencing	2.1	1.3	3.4
First Aid + Equipment	0.5	0.3	0.8
Admin Building	0.8	0.5	1.3
Camp Facilities	0.0	0.0	0.0
Warehouses	1.5	0.9	2.4
Fuel Systems Storage	1.3	0.8	2.1
Electrical Substation	4.5	2.7	7.2
Power, Communications and Distribution	5.0	3.0	7.9
Solid Waste Management	0.2	0.1	0.2
Total	**18.8**	**10.4**	**29.2**

21.2.7 Albany Site Concentrator Capital Costs

Initial capital costs for the Albany Mine site concentrator plant were estimated at US$74.9 million, while sustaining capital costs were estimated to be US$82.8 million as shown in Table 21.6.

Table 21.6: Concentrator Capital Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
Primary Crushing Station	5.7	6.3	12.1
Crushed Ore Stockpile	7.8	8.6	16.4
Secondary and Tertiary Crushing	7.3	8.1	15.5
Grinding	24.5	27.1	51.6
Flotation and Regrinding	10.5	11.7	22.2
Concentrate Thickening	0.8	0.9	1.7
Concentrate Filtration	2.3	2.5	4.8
Concentrate Dryer	5.1	5.6	10.7
Assay Lab	1.1	1.2	2.4
Packaging and Storing	0.8	0.9	1.7
Auxiliaries	8.8	9.8	18.6
Total	**74.9**	**82.8**	**157.7**

21.2.8 Tailings and Water Management Capital Costs

The tailings and water management systems pre-production period capital costs were estimated at US$26.6 million. Similarly, sustaining capital costs were estimated to be US$25.9 million as shown in Table 21.7.

Table 21.7: Tailings and Water Management Capital Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
Fresh Water Supply	0.3	0.2	0.5
Water Storage Ponds and Distribution	0.4	0.2	0.6
Settling Ponds	0.5	0.3	0.8
Potable Water	0.3	0.2	0.5
Sewage Treatment Plant	0.7	0.4	1.1
TSF Infrastructure: power, roads, monitoring	1.0	0.6	1.6
Discharge Water Pipeline	0.1	0.0	0.1
Effluent Water Treatment	5.0	3.0	8.0
Tailings Storage Facility (TSF)	15.0	19.0	34
Supernatant Reclaim System	2.0	1.2	3.2
Slurry Pipeline	1.0	0.6	1.6
Plant site - culverts, trenches, etc.	0.1	0.0	0.1
Diversion Ditches	0.1	0.1	0.2
Total	**26.4**	**25.9**	**52.3**

21.2.9 Albany Mine Offsite Infrastructure Capital Costs

The offsite capital costs for the Albany Mine were estimated for the all season access road and power transmission line from Highway 11 to site.

Total pre-production capital (CAPEX) costs for all of the above offsite items were estimated to be US$56.0 million whereas sustaining capital (SUSEX) costs were estimated at US$33.6 million as shown in Table 21.8.

Table 21.8: Offsite Infrastructure Capital Costs - Albany Mine Site

Description	Pre-Production (US$ million)	Sustaining/ Expansion (US$ million)	Total (US$ million)
Site Access Road	26.3	15.8	42.0
Power Transmission Line	29.8	17.9	47.6
Total	**56.0**	**33.6**	**89.6**

21.2.10 Graphite Purification Plant Site Capital Costs

Estimated pre-production capital costs for the graphite purification plant site were estimated to be US$326.6 million while sustaining capital costs were estimated at US$465.4 million as shown in Table 21.9.

Table 21.9: Graphite Purification Plant Site Capital Costs

Description	Pre-Production (US$ million)	Sustaining/ Expansion (US$ million)	Total (US$ million)
Phase 1 FBR Plant - Equipment	62.3	0.0	62.3
Phase 1 FBR Plant - Other Direct Costs	124.6	0.0	124.6
Phase 1 FBR Plant - Indirect Costs	62.3	0.0	62.3
FBR Plant Site Construction	77.4	0.0	77.4
Phase 2 FBR Plant - Equipment	0.0	93.5	93.5
Phase 2 FBR Plant - Other Direct Costs	0.0	186.9	186.9
Phase 2 FBR Plant - Indirect Costs	0.0	93.5	93.5
FBR Site and Plant - Sustaining Capital	0.0	91.6	91.6
Total	**326.6**	**465.4**	**792.1**

21.2.11 Construction and Indirect Costs

Overall construction and indirect costs incurred during the pre-production period were estimated to be US$63.4 million. as shown in Table 21.10.

Table 21.10: Construction and Indirect Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
EPCM and Studies	44.3	0.0	44.3
Construction Offices, Facilities, Services	5.9	0.0	5.9
Construction Equipment & Tools	3.5	0.0	3.5
Construction Power and Utilities	3.2	0.0	3.2
Aggregate and Concrete Batch Plant	3.0	0.0	3
First Fill, Spares & Consumables	2.0	0.0	2
Other Expenses	1.5	0.0	1.5
Total	**63.4**	**0.0**	**63.4**

21.2.12 Owner's Costs

Owner's costs incurred during the pre-production period were estimated to be US$55.8 million. In addition, owner's costs incurred over the Albany Mine production period were estimated to be US$381 million as shown in Table 21.11.

Table 21.11: Owner's Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
Corporate Office Team	17.7	177.2	194.9
Pre-operation	17.7	0.0	17.7
Communities and Environmental	11.5	115.2	126.7
Other Expenses	8.9	88.6	97.5
Total	**55.8**	**381**	**436.8**

21.2.13 Contingency Costs

Contingency costs were calculated for capital expenses using a factor of 25% for applicable equipment, infrastructure and buildings. A total of US$92.7 million of contingency will be required in the pre-production period whereas US$119.0 million will be required during the production period of the mine as shown in Table 21.12.

Table 21.12: Contingency Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
Contingency - Equipment	35.1	42.2	77.2
Contingency - Buildings & Infrastructure	57.7	76.8	134.5
Total	**92.7**	**119**	**211.7**

21.2.14 Environmental, Mine Rehabilitation and Closure

Environmental, mine rehabilitation and closure costs were calculated to be US$208.2 million as shown in Table 21.13. Surety bonds costs of US$2.5 million incurred during the pre-production period were assumed to be part of CAPEX whereas overall mine closure and rehabilitation costs over the entire duration of the Project would be US$122.9 million. The remainder of the overall costs would be classified as communities, environmental and other related costs. A summary of these costs are shown in Table 21.13.

Table 21.13: Mine Rehabilitation and Closure Costs

Description	Pre-Production (US$ million)	Sustaining (US$ million)	Total (US$ million)
Communities and Environmental	0.0	42.5	42.5
Other Expenses	0.0	42.8	42.8
Closure/Rehab.	0.0	84.8	84.8
Surety Bond	2.5	35.6	38.1
Total	**2.5**	**205.7**	**208.2**

21.2.15 Working Capital

Working capital requirements were assumed to be equivalent to 10% of the total capitalized expenses incurred during the pre-production phase inclusive of contingency costs and were estimated to be US$72.8 million.

21.2.16 Exclusions

Costs associated with the following list of items are not included in the capital cost estimates:

- Federal and provincial taxes.
- Force majeure, labor disputes or major strikes.
- Contaminated soil and/or hazardous waste excavation, treatment, disposal or removal.
- Significant variations in assumed hourly rates or skill levels of labor cost inputs.
- Significant changes in assumed foreign currency exchange rates.
- Pre-feasibility, definitive feasibility or value engineering studies.
- Capitalized interest payments or financing costs.

21.3 OPERATING COSTS

21.3.1 Life-of Mine Operating Costs

A summary of overall operating costs is presented in Tables 21.14 while a summary of the unit operating costs is shown in Table 21.15.

Table 21.14: Summary of Total Operating Costs

Parameter	Value	Unit
Total Mining Costs	646.0	USD$ millions
Total Concentrator/Milling Costs	303.5	USD$ millions
Total G&A Costs	256.6	USD$ millions
Total Purification Plant Costs	5,353	USD$ millions
Total Site Operating Costs	**6,559**	**USD$ millions**
Total Transport Costs	107.0	USD$ millions
Total Operating Costs	**6,666**	**USD$/t mill feed**

Table 21.15: Summary of Unit Operating Costs

Parameter	Value	Unit
Mining	3.74	USD$/t mined
Mining	28.26	USD$/t mill feed
Concentrator/Milling	11.72	USD$/t mill feed
General and Administration (G&A)	9.91	USD$/t mill feed
Purification Plant	206.67	USD$/t mill feed
Total Site Operating Costs	**256.56**	**USD$/t mill feed**

Parameter	Value	Unit
Concentrate Transport	4.13	USD$/t mill feed
Total Operating Costs	260.69	USD$/t mill feed

21.3.2 Basis of Estimate

The operating cost estimate is based on the assumed total amounts of labour, materials and consumables that will be required to fully execute the mining and processing plans as described in the previous sections of this Report.

The total operating costs incurred over the life of the Project are based on sufficient mill feed material being available to begin processing plant operations in Year 1 of the overall Project schedule.

21.3.3 Open Pit Mine Operating Costs

Open pit mine operating costs were calculated based on the types and quantities of equipment, labour, materials and consumables that would be required to meet the proposed mining schedule.

All mine operating costs were built up from first principles, with unit costs for labour, materials and consumables being based on historical data at other mines in northwestern Ontario where they were available and vendor quotations or industry standards and benchmarks where they were not.

It was also assumed that all open pit mining tasks would be performed by contractors.

The main activities included in the cost calculations include drilling and blasting, loading, hauling, mining support services, labour and general site support and maintenance.

The total operating expenditures required to mine the quantities of mill feed and waste scheduled over the production period of the open pit mine were estimated to be US$646 million, or a unit cost of US$3.74/t mined as shown in Table 21.16.

Table 21.16: Open Pit Mining Operating Costs

Description	Total Cost (USS million)	Unit Cost (US$/t Mined)
Open Pit Mining - Resource Material Mined	96.70	3.74
Open Pit Mining - Waste	422.00	3.74
Open Pit Mining - Overburden	127.30	3.74
Total	**646.00**	**3.74**

21.3.4 Albany Site Concentrator Operating Costs

Operating costs for the Albany Site concentrator were calculated based on the types and quantities of equipment, labour, materials, and consumables that would be required to meet the proposed crushing and milling schedules.

All crushing and milling plant costs were built up from first principles with unit costs for labour, materials and consumables being based on historical data at other mines when they were available and vendor quotations or industry standards and benchmarks when they were not.

The total operating expenditures for the beneficiation over life of mine were estimated to be US$303.5 million, or US$11.72/t of mill feed processed into the final 87% Cg concentrate product as shown in Table 21.17.

Table 21.17: Concentrator Operating Costs

Description	Total Cost (USS million)	Unit Cost (US$/t Mill Feed)
Wear Parts	142.60	5.51
Reagents	17.10	0.66
Chemical/Mill Laboratory Supplies	5.40	0.21
Fuel	4.10	0.16
Electrical Power	83.10	3.21
Maintenance Supplies	51.20	1.98
Total	**303.50**	**11.72**

Source: Micon, 2026

21.3.5 Graphite Purification Site Operating Costs

Operating costs for the Graphite Purification Plant are based on the fixed and variable costs supplied by AETC in the document titled "AETC Report CC2605-01 Zentek – Business.pdf".

The total operating expenditures required to produce the final saleable 4N, 4N+ and 5N products over the production period of the Project were estimated to be US$5353.1 million, or US$206.67/t of mill feed processed as shown in Table 21.18.

Table 21.18: Graphite Purification Facility Operating Costs

Description	Total Cost (USS million)	Unit Cost (US$/t Mill Feed)
FBR Plant - Variable Costs	5,109.70	197.27
FBR Plant - Fixed Costs	243.40	9.40
Total	**5,353.10**	**206.67**

21.3.6 General and Administration Costs

General and administration or G&A costs consists of costs that are not directly related to the mining or processing activities over the production period of the Project life.

Total G&A costs for both the mine and purification sites were estimated to be US$256.6 million, or US$9.91/t of mill feed as shown Table 21.19.

Table 21.18: General and Administration Costs

Description	Total Cost (USS million)	Unit Cost (US$/t Mill Feed)
Communities and Environmental	42.50	1.64
Other Expenses	42.80	1.65
G&A Costs - Mine Site	165.00	6.37
G&A costs – Purification Plant Site	6.30	0.24
Total	**256.60**	**9.91**

21.3.7 Road Transport of Concentrate Costs

Road transportation costs incurred over the production life of the Project assume that the graphite concentrate produced at Albany Site would be transported by truck to the purification processing facility .

A total cost of US$108/t of concentrate was assumed based on a conservative truck haulage cost of US$78/t and total loading/unloading costs of US$12/t of concentrate, or US$4.13/t of mill feed for a total cost of US$107.0 million.

21.3.8 Royalties

The economic analysis includes a conservative royalty allowance equal to 1.3% of gross revenue, less transportation costs from the mine site to the purification plant. This allowance is modeled separately from Ontario mining tax. Applicable royalties, mineral-title encumbrances and other project-specific payment obligations should be confirmed during subsequent study and due-diligence activities.

22 ECONOMIC ANALYSIS

22.1 INTRODUCTION

The economic analysis of the Albany Graphite Project is based on cost models prepared for each major component of the overall Project. This includes:

- The Albany Mine Site which includes the open pit mine, beneficiation plants, supporting surface infrastructure and a tailings storage facility.
- The Purification Plant site which includes the FBR plants and supporting surface infrastructure.

The capital cost estimate used in the economic analysis is classified as an AACE Class 5 estimate and has an estimated accuracy range of approximately ±50%, expressed relative to the capital cost estimate inclusive of contingency. The accuracy range reflects the conceptual level of Project definition and is distinct from the contingency included in the capital cost estimate. The basis, qualifications, exclusions, contingency, and accuracy range of the capital cost estimate are discussed in Section 21.2.1.

The assumed 4N, 4N+ and 5N graphite product selling prices and cost calculations are all expressed in US dollars unless otherwise noted, with an exchange rate of 1.33 CD$/US$ being used for currency conversions.

The calculated internal rate of return (IRR) of the Project does not include potential external financing costs and assumes that all required funding will be equity based. The net present value (NPV) calculations assumed a discounting rate of 5%.

The discounted cash flow model includes revenues, costs, taxes and other known factors directly related to the Project but excludes indirect factors such as financing costs, sunk costs and corporate obligations. The pre-tax economic indicators of the Project include a total cash flow of US$10,878 million, a pre-tax NPV of US$4,179 million with an assumed discounting rate of 5% and an IRR of 27.7%.

The post-tax economic indicators of the Project include a total cash flow US$9,895 million, a post-tax NPV of US$3,855 million with an assumed discounting rate of 5% and an IRR of 27.4%.

The post tax payback period payback period will be 4.4 years measured from the date all pre-production construction tasks have been completed and steady state mining production begins.

22.2 CAUTIONARY STATEMENT

The Project economic analysis and its results are based on forward looking information whose validity and accuracy may vary significantly in the future from what has been assumed in this study based on all currently available information.

Forward looking statements that might significantly affect the Project economics include but are not limited to the following items:

- Changes in mineral resource and mineral reserve estimates.
- Variances in Project construction and mining schedules due to delays induced by financing, environmental assessment processes or other factors.
- The future availability and costs of skilled labour, equipment, materials, and consumables, including power and fuel costs.

- Variances in processing methods, rates and recoveries.
- Changes in provincial and federal legislative and taxation frameworks.
- Variations in future saleable graphite product prices, selling costs and other offsite costs such as transportation, duties, offtakes, or royalties.
- General business and economic conditions, both globally and domestically.
- Currency rate fluctuations.

22.3 GENERAL ASSUMPTIONS

The assumptions that form the basis of the economic analysis of the Albany Graphite Project are outlined in greater detail in other sections of the report, whereas the general assumptions used for the economic analysis itself are as follows:

- There are no unpredictable extenuating circumstances that would disrupt or delay the development or operation of the Project.
- The assumed costs for labour, equipment, materials, and consumables, including power and fuel, are reasonable stable and consistent with the costs used in the analysis.
- The timelines for the completion of time critical tasks such as baseline studies and local stakeholder consultations required for the completion of environmental and impact assessments are reasonably accurate.
- Environmental approvals, permits, licences and authorizations are obtained from government and local stakeholders are obtained as planned.
- The detailed and typically highly complex taxation structures that will ultimately apply to the Project on an operational basis are represented reasonably well by the simplified assumptions used in the discounted cash flow model.
- All assumptions made regarding the MRE and the potential economically viable portions thereof are as accurate as they can reasonably be given the level of the currently available information. This includes but is not limited to geological interpretations, commodity pricing and operating costs, mining, and processing rates, and geotechnical, hydrological and hydrogeology characterizations.
- Year -3 of the overall Project schedule in the economic analysis assumes that all critical tasks including but not limited to permitting, detailed engineering, financing and procurement will be completed so that construction of the mine can begin in Year -2 and proceed without delays until the start of the mine production phase in Year 1.
- The realization of revenues from graphite product sales fall within the same year as they are produced.
- Sales contracts or agreements for the various grades of graphite products have been established with one or more parties prior to the production thereof at the Albany Mine and purification plant sites.
- The weighted average sales price of the three planned graphite products is US$23,485/t.

- The Canadian to United States dollar exchange rate remains relatively consistent at around CD$1.33 per US$ over the Project life.
- The mine rehabilitation and closure costs do not vary significantly in scope due to major changes in the requirements assumed for this study.
- The costs of future exploration activities on the property are excluded.
- A conservative royalty allowance equal to 1.3% of gross revenue, less transportation costs from the mine site to the purification plant will be applicable to the Project.
- Any Project costs incurred prior to Year -3 of the overall Project schedule are fully sunk.

The basic mining, processing, scheduling and economic parameters used for the base case cash flow modelling and Project financial analysis are summarized in Table 22.1.

Table 22.1: Summary of Base Case Parameters

Parameter	Unit	Value
Overall Project Life	Years	35
Mine Life	Years	30
Total Mill Feed	Mt	25.9
Average Mill Feed Grade	% Cg	3.87
Average Open pit Mining Rate	t/d	2,703
Overall Beneficiation Plant Recovery Factor	%	86
Total Concentrate Produced - 87% Cg	kt	990
Graphite Purification Plant Recovery Factor	%	96.4
Total Graphite Products Produced -All Grades	kt	832
Commodity Price - Average	US$/t	23,485
Exchange Rate	CD$/US$	1.33

22.4 TAXATION AND ROYALTIES

22.4.1 Basic Taxation Framework

The taxation structure that will ultimately be applied to the Project is highly complex, therefore the tax calculations for the economic analysis have been simplified to approximate what taxes might be paid over the entire Project life.

The basic taxation scheme for the Albany Mine and Graphite Purification sits and facilities, however, is that the Project will be subject to a Canadian federal income tax of 15%, an Ontario provincial income tax of 11.5% and a provincial mining tax rate that varies according to the annual profit margins realized by the Project.

The tax calculations in the discounted cash flow model consider federal and provincial income tax after the application of exemptions and allowances for processing, depreciation and other allowable reductions to the net project revenue used to calculate the payable amounts of Ontario and Canada income taxes.

22.4.2 Royalties

The economic analysis includes a conservative royalty allowance equal to 1.3% of gross revenue, less transportation costs from the mine site to the purification plant. This allowance is modeled separately from Ontario mining tax. Applicable royalties, mineral-title encumbrances and other project-specific payment obligations should be confirmed during subsequent study and due-diligence activities.

22.5 ECONOMIC ANALYSIS RESULTS

22.5.1 Base Case

A summary of the base case capital and operating costs calculated and used in the economic analysis exercise is shown in Table 22.2.

Table 22.2: Summary of Base Case Capital and Operating Costs

Parameter	Value (US$ million)
Operating Costs - Production Period	
Total Mining Costs	646
Total Concentrator/Milling Costs	304
Total G&A Costs	257
Total Transport Costs	107
Total Purification Plant Costs	5,353
Total Operating Costs	**6,666**
Capital Costs	
Initial Capital (CAPEX) Costs	817
Sustaining Capital (CAPEX) Costs	1,162
Closure and Rehabilitation Costs	85
Total Capital Costs	**2,063**

Similarly, a summary of the graphite product selling prices by grade and their contributions to total base case revenues used in the economic analysis exercise is shown in Table 22.3.

Table 22.3: Graphite Selling Prices and Revenues

Description	Selling Price (US$/t)	Total Revenue (US$ million)
4N Grade Graphite	20,541	13,791
4N+ Grade Graphite	19,300	1,427
5N Grade Graphite	50,000	4,321
Total		**19,540**

Finally, a summary of the pre- and post-tax economic analysis results is shown in Table 22.4.

Table 22.4: Summary of Economic Analysis Results

Parameter	Unit	Value
Discount Rate	%	5
Pre-Tax Cashflow	US$ million	10,878
Pre-Tax NPV	US$ million	4,179
Pre-Tax IRR	%	27.70
Pre-Tax Payback Period	Years	4.4
Post-Tax Cashflow	US$ million	9,895
Post-Tax NPV	US$ million	3,855
Post-Tax IRR	%	27.40
Payback Period	Years	4.4

The overall cash flow analysis is shown in Table 22.5.

22.5.2 Overall Cash Flow Analysis

The overall cash flow analysis is provided in Appendix A.

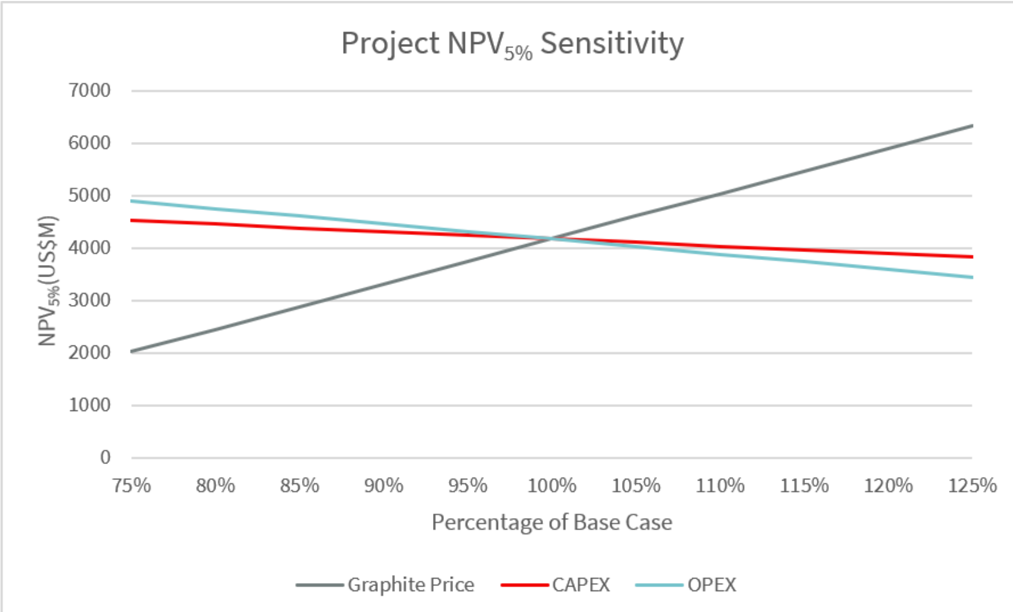
22.6 SENSITIVITY ANALYSIS

22.6.1 Pre-Tax Basis

Sensitivity analyses were performed on the pre-tax cash flow model to determine the relative influence of fluctuations in graphite product selling prices, operating costs and capital costs on overall Project economics.

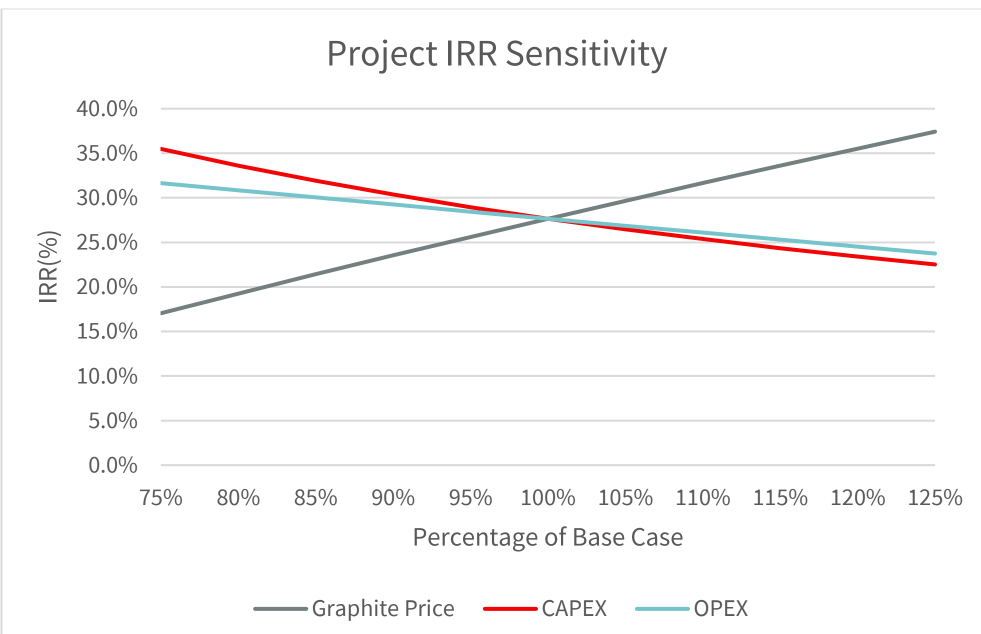
The pre-tax Net Present Value (NPV) of the Project was found to be most sensitive to the selling price of the graphite products as shown in Figure 22.1.

Figure 22.1: Pre-Tax NPV Sensitivity – Discount Rate 5% Per Annum



Similarly, the pre-tax Internal Rate of Return (IRR) of the Project was also found to be most sensitive to the selling price of the graphite products as shown in Figure 22.2.

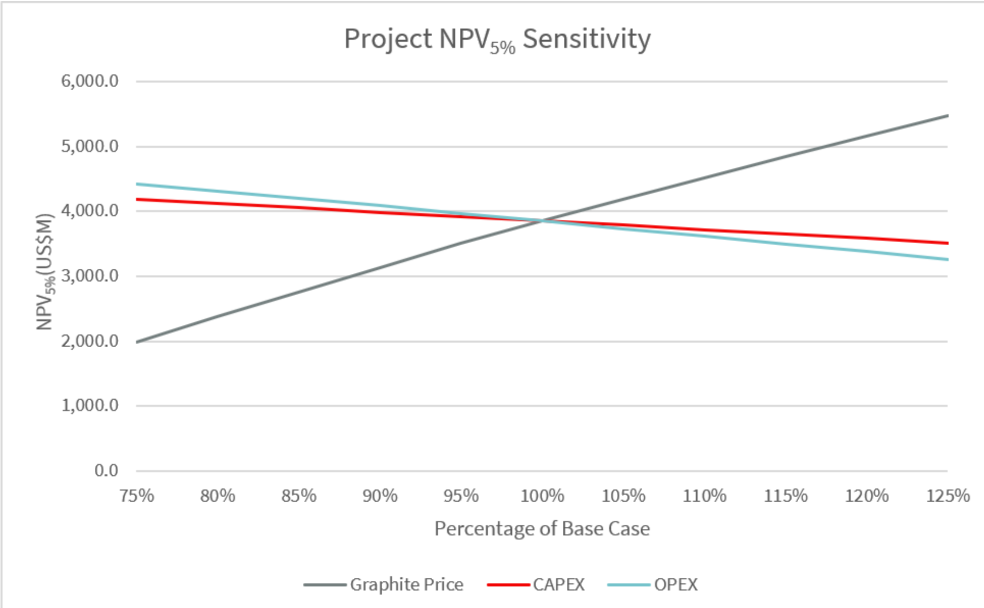
Figure 22.2: Pre-Tax IRR Sensitivity



22.6.2 Post-Tax Basis

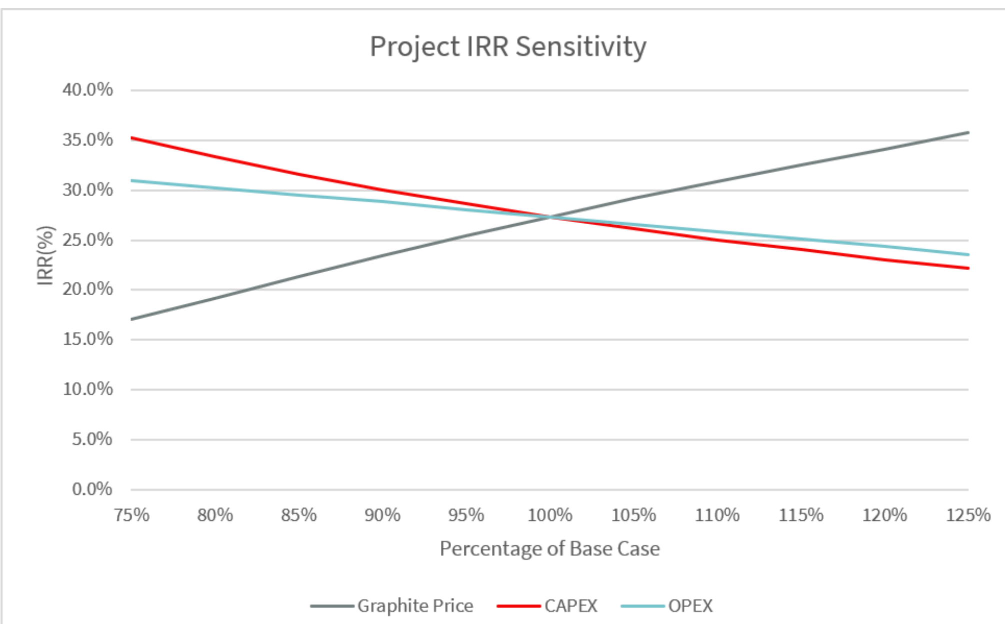
On a post-tax basis, the Albany Graphite Project NPV was found to be most sensitive to the selling price of the graphite products as shown in Figure 22.3.

Figure 22.3: Post-Tax NPV Sensitivity – Discount Rate 5% per annum



Also on a post-tax basis Project IRR was found to be most sensitive to the selling price of the graphite products as shown in Figure 22.4.

Figure 22.4: Post-Tax IRR Sensitivity



23 ADJACENT PROPERTIES

There are no immediate adjacent properties which affect either the geological interpretation or the potential exploitation of the Albany Project as the extent of the mineralization established to date is wholly contained within the boundaries of the Project.

24 OTHER RELEVANT DATA AND INFORMATION

Micon's QPs are not aware of any other data/information that would make a material difference to the quality of this Technical Report, make it more understandable, or without which the Report would be incomplete or misleading.

25 INTERPRETATION AND CONCLUSIONS

25.1 OVERVIEW

The Micon 2026 PEA evaluates Albany's integrated production pathway, encompassing resource extraction, through flotation processing and FBR purification to produce ultra-high-purity graphite products for nuclear, defence, and other strategic critical mineral supply chains increasingly seeking secure, traceable, North American sources of graphite. In the opinion of Micon's QPs, the PEA demonstrates that positive economic results can be obtained for the Project as detailed in section 22 and summarized here.

25.2 GEOLOGY AND MINERALISATION

25.2.1 Key Geological Features

The Albany deposit is a hydrothermal graphite deposit hosted in two separate breccia pipes (the East Pipe and West Pipe) within the AAC. The West Pipe consists of a single mineralized zone, which encompasses graphitic breccia and some lower grade graphitic overprint in some marginal areas. The East Pipe consists of two mineralized zones: graphitic breccia and a low-grade halo.

Completed petrography indicates that the graphite-hosting breccias range in composition from diorite to granite and are generally described as "syenite". Graphite occurs both in the matrix, as disseminated crystals, clotted to radiating crystal aggregates and veins and along crystal boundaries, and as small veins within the breccia fragments.

In addition to graphite, the matrix consists primarily of quartz, alkali feldspar, and plagioclase feldspar with minor phlogopite and amphibole and trace amounts of pyrite-pyrrhotite and magnetite.

Drill hole data shows variations in grade distribution both on a local scale and globally. There is also a general decrease in grade with increasing depth from surface.

The deposit remains open down dip.

25.3 MINERAL RESOURCES

Table 25.1 summarizes the August 19, 2026, MRE for the Albany Graphite Project.

Table 25.1: Summary of the Albany Project Mineral Resources Effective Date June 30, 2026

Mining Method	Resource Category	Cut-Off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
Open Pit	Indicated	1.48	23.1	4.14	957,075
	Inferred	1.48	9.35	2.73	254,747
Underground	Indicated	-	-	-	-
	Inferred	1.77	3.94	3.23	127,383
Total Indicated		**1.48**	**23.1**	**4.14**	**957,075**
Total Inferred		**Variable**	**13.3**	**2.88**	**382,130**

Notes:

1. The effective date of the MRE is June 30, 2026.
2. The Micon QPs with responsibility for the MREs are Oktay Erten, P.Eng. and Charley Murahwi, P.Geo.
3. CIM Best Practice Guidelines and Definitions Standards were employed in the estimation and reporting.
4. Mineral Resources are estimated using a long-term weighted average price of US$23,485/t Cg, and an exchange rate of US$1.00 = CD$1.33.

5. Bulk density is 2.62 t/m³ and 2.61 t/m³ for West Pipe domains 20 and 21, respectively, and 2.59 t/m³ and 2.63 t/m³ for East Pipe domains 10 and 14, respectively.
6. Open pit mineral resource estimates are constrained by a pit-shell generated in Datamine NPVS software above a cut-off grade of 1.48% Cg.
7. Underground mineral resource estimates are constrained within underground reporting shapes to demonstrate RPEEE and reported above a cut-off grade of 1.77% Cg.
8. The pit optimization parameters used are: pit slope = 50°, metallurgical overall recovery = 86%.
9. Totals may not sum due to rounding.

25.3.1 MRE Risks and Opportunities

All MREs have a degree of uncertainty or risk associated with them, due to technical, environmental, permitting, legal, title, taxation, socio-economic, marketing or political factors, among others. All MREs also present their own opportunities.

25.3.1.1 Risks and Uncertainties

Factors that may affect the MRE in this Report include fluctuations in the price of graphite products, and hinges on the metallurgical recoveries and bulk density assignments. In addition, it is the QP's opinion that the factors set out below could affect the MRE:

- The confidence assumptions and methods used in the mineral resource classification which is subject to refinement with additional drilling.
- Economic assumptions used in the cut-off grade determination.
- Input and design parameter assumptions that pertain to the open pit mining constraints.
- Assumptions as to the continued ability to access the Project site, retain mineral and surface rights titles, maintain the operation within environmental and other regulatory permits, and maintain the social licence to operate.

To mitigate risks related to metallurgy and bulk density, additional detailed investigations involving further testing and even pilot plant tests are recommended prior to undertaking advanced economic studies. Risks associated with fluctuations in the price of graphite products are uncontrollable; however, a conservative long-term graphite price has been considered in determining the economic factors for the MRE.

25.3.1.2 Opportunities

The following opportunities have been considered for the Albany Graphite Project:

- Resource growth in both the short and long term. The deposits maintain the approximately the same thickness from surface to the current intersection depth and remain open at depth.
- The Project location within close proximity to major infrastructure should reduce potential development/construction and operating costs.

25.4 MINING METHODS - RISKS AND OPPORTUNITIES

The following factors have been identified as key risks to mining activities on the Project including:

- Mine schedule and productivities are completed based on benchmark fleet productivity however a robust mine plan should consider the selected contractor and the respective fleet for the mining operation.

- Mining dilution and recovery are based on assumptions and require further refinement to evaluate adequate impact to mine plan.

25.4.1.1 Opportunities

- Look at opportunities from the geotechnical drilling programs to increase overall inter-ramp slope angle well above the limits tested in this study where supported as to reduce strip ratio and waste movement improving overall Project economics.
- Do a detailed trade-off study of contractor versus owner mining fleet scenarios and evaluate opportunities to improve overall Project economics.

25.5 METALLURGY AND PROCESSING METHODS

The process flowsheet selected for the PEA is based on batch bench scale and pilot scale metallurgical testwork completed at SGS. The mineral processing flowsheet comprises conventional crushing and grinding, rougher flotation and multi stages of flotation cleaning and intermediate regrinding concentrate to produce a graphite concentrate containing over 85% total carbon. The purification process consists of ultra-high temperature thermal treatment to produce speciality graphite products with purities up to 5N (99.999% C).

Testwork has been completed using composite samples representing both the East and West deposits. It is the QP's opinion that the samples used were a good representation of the mineralization occurring within the two deposits. The QP also notes that there appears to be no material deleterious elements or compounds measured in the samples.

East Pipe samples tended to be higher grade than the West Pipe samples and flotation testwork indicated better carbon recoveries for this higher grade mineralization. The flotation test results showed a significant negative concentrate grade / recovery relationship, although recoveries for all types of mineralization tended to be over 80% with graphite concentrate grades of up to 90% C(t) or higher.

For the purposes of the PEA an average beneficiation plant metallurgical graphite recovery of 86% has been selected with a final flotation concentrate grading 87% C(t).

The thermal purification process represents an important component of the Project flowsheet and is based on testwork and preliminary engineering information provided by AETC. While the testwork demonstrated the ability to produce high-purity graphite products, the current design basis remains subject to uncertainties associated with scale-up from scoping-level batch testing to continuous commercial operation, achievement of the required product purity and throughput, high-temperature equipment performance, energy consumption, and the associated capital and operating costs. These aspects should be further investigated and confirmed during the next phase of Project development.

25.6 INFRASTRUCTURE

The Project infrastructure has been developed to a PEA level and is considered adequate to support the proposed mining and concentrator operations at the level of definition required for this study. The proposed infrastructure includes site access and internal roads, electrical power supply and distribution, mine and concentrator support facilities, water management, tailings management, fuel and explosives storage, communications, and other ancillary facilities. Where practical, mine and concentrator infrastructure have been integrated to reduce duplication and provide a compact site layout.

The preliminary site water balance indicates that the Project is expected to have a net-positive water balance, with recycled water from the TSF expected to provide the majority of the process water requirements. Surplus contact water will require treatment prior to discharge. The current water balance and estimates of surface water and groundwater inflows are based on limited site-specific information and should therefore be considered preliminary. Further hydrological and hydrogeological investigations are required to confirm the water supply, pit inflows, groundwater-surface water interactions, treatment requirements, and overall site water management strategy.

No infrastructure constraints have been identified at the PEA level that would preclude advancement of the Project. The principal infrastructure uncertainties relate to site ground conditions, water management, TSF design, and the definition of major off-site infrastructure. These items should be further investigated and developed during the PFS to improve engineering definition and confidence in the associated capital and operating cost estimates.

25.7 TAILINGS MANAGEMENT AND RECLAIM WATER

The conceptual assessment indicates that the proposed conventional slurry tailings transportation and deposition system provides a practical basis for PEA-level design and cost estimation. Preliminary hydraulic assessment supports the use of a 250 mm OD HDPE pipeline to transport approximately 264 m^3/h of tailings slurry to the TSF, with perimeter distribution and rotational spigotting providing flexibility to manage deposition and development of the reclaim pond.

The Project water balance indicates that sufficient contact water should be available to satisfy the process make-up water requirement throughout the year under the average climatic and operating conditions adopted for the PEA. A nominal reclaim-water design flowrate of 225 m^3/h has been adopted, with water recovered from the TSF reclaim pond and returned to the process plant through an approximately 0.3 km, 250 mm OD HDPE pipeline. Surplus contact water will require appropriate treatment and controlled discharge.

No material technical constraints have been identified at the PEA level that would preclude development of the proposed conventional slurry tailings and reclaim-water systems. However, the design remains conceptual and will require further tailings characterisation, geotechnical and hydrogeological investigation, topographical survey, hydrological and water-balance assessment, and detailed hydraulic modelling. Thickened and filtered tailings should also be considered during future Project development where improved water recovery, reduced stored water inventory or other environmental and closure benefits may justify the additional capital and operating requirements.

25.8 ENVIRONMENTAL

Environmental and social risks associated with the Albany Project are considered typical of similar mining operations at this stage of development. The natural characteristics of the area mean that a high level of diligence will need to be given to water and waste management. This is due to the fact that the proposed Project site is constrained by the Pitopiko and Nagagami Rivers, resulting in a limited surface area for infrastructure development and therefore higher potential for impacts on shallow groundwater and surface watercourses. Potential caribou migration routes will also need to be considered. These risks can likely be managed to an acceptable level, provided that appropriate mitigation features are incorporated into the Project design, and robust monitoring and management systems are implemented.

25.9 CAPITAL AND OPERATING COSTS

The capital and operating cost estimates are considered appropriate for a PEA-level evaluation of the Albany Graphite Project. The estimates cover the principal mining, processing, infrastructure, transportation, purification, and closure components and were developed using vendor information, benchmark and historical costs, empirical factors, and first-principles calculations, as applicable.

Pre-production capital is estimated at US$817.0 million, with a further US$1,161.6 million estimated for sustaining and expansion capital. The principal capital-cost drivers are the graphite purification facilities, mine pre-stripping and development, the concentrator, and off-site road and power infrastructure.

Life-of-Project operating costs are estimated at US$6.666 billion, or US$260.69/t of mill feed. Graphite purification accounts for approximately 80% of total operating costs and is therefore the principal operating-cost driver. Project costs are particularly dependent on purification-plant availability, recovery, energy and consumable requirements, maintenance, and commercial-scale performance.

The capital estimate is classified as an AACE Class 5 estimate, with an approximate accuracy range of ±50%, inclusive of contingency. Further process demonstration, engineering, execution planning, and vendor pricing sources are required to improve the cost estimate definitions and accuracies.

25.10 ECONOMIC ANALYSIS

The results of the PEA economic analysis indicate that the Albany Graphite Project has the potential to generate positive economic returns under the assumptions used in the study. The Project remains economically positive within the ranges of capital cost, operating cost, and graphite product price variations evaluated in the sensitivity analysis.

The overall economic performance of the Project is most sensitive to the selling prices and product mix that were assumed for the 4N, 4N+, and 5N graphite products that will be sold. Confirmation of product specifications, marketability, achievable sales volumes, and long-term pricing will therefore be central to demonstrating the Project's economic potential in subsequent studies.

The economic analysis also demonstrates that the proposed downstream purification operation is a fundamental component of the Project's estimated value proposition. While purification represents the largest component of operating expenditure and a significant component of capital investment requirements for the Project it also enables the production and assumed sale of higher-value specialty graphite products. Accordingly, the technical scale-up, operating performance, product qualification, and commercial validation of the purification process represent key areas for future Project development.

The base case economic results should be considered in the context of the conceptual level of project definition and the stated approximate ±50% accuracy range of the capital cost estimate. The sensitivity analysis indicates that the Project remains economically positive under the capital-cost variations evaluated. However, further engineering is required to improve quantity definition, equipment selection, execution planning, schedule development, and cost accuracy at later stages of study.

26 RECOMMENDATIONS

Micon QPs recommend that Zentek advance the Project to the PFS stage and offers the following recommendations.

26.1 BUDGET SUMMARY

An overview of the proposed Project budget is presented in Table 26.1. Zentek's primary objective is to initiate the work required to advance the Project toward a production decision, subject to receipt of the necessary approvals. This work will include the required environmental studies, together with detailed geotechnical investigations and engineering studies to PFS level.

Table 26.1: Summary Of The Albany Project Budget For The PFS Phase

Item	Detail	US$
Geological Studies	Petrographic/petrological and mineralogical	400,000
Geotechnical & Hydrogeological studies	Mine design and surface infrastructure	1,250,000
Metallurgical Testwork	Albany site beneficiation plant only	500,000
PFS Engineering	Open pit, TSF, concentrator and infrastructure	2,000,000
Environmental Baseline Study	Albany mine site and access corridor only	2,200,000
Carbon Purification Plant Design	Thermal purification plant	1,000,000
Purification Plant Site	Site engineering	1,000,000
Contingency	25%	2,087,500
Total	preliminary	10,437,500

Micon's QPs have reviewed the proposed annual Project budget and agree with the nature of the proposed expenditures. The budget is subject to Zentek's ability to secure the required funding, obtain the necessary approvals and agreements to advance the Project, and receive approval from Zentek's Board of Directors.

26.2 GEOLOGY AND MINERAL RESOURCES

Whist the geology of the Albany deposit is well understood, further detailed petrographic/petrological and mineralogical studies are recommended to determine currently unforeseen by-products and at the same time assist in metallurgical optimizations.

As demonstrated in the PEA, the Measured and Indicated Mineral Resources are adequate to kick start a possible open-pit mining operation. However, the expansion and upgrading of the Inferred Mineral Resources should still be considered particularly in view of the fact that the bigger the resource size, the greater the opportunity for capital injection into the Project. Accordingly, infill and deeper drilling in the medium to long term are recommended for both resource upgrading and growth.

26.3 MINING METHODS

The following work activities are recommended for the next phase of Project development to improve confidence in the mine design, sequencing, and production strategy:

- Undertake a targeted geotechnical drilling program across both the East Pit and West Pit, encompassing overburden and fresh rock domains. The program should refine geotechnical domains and sector-specific slope design criteria, support pit wall stability assessments for interim and ultimate pit configurations and evaluate opportunities to optimize pit slopes while reducing risks to the production schedule and mill feed delivery.

- Complete a detailed hydrogeological investigation to improve understanding of groundwater conditions, establish dewatering requirements throughout the mine life, and assess the impacts of dewatering on mine planning scenarios for overall Project execution and operating costs from a first principles buildup.
- Conduct a mine fleet optimization study to evaluate smaller fleet configurations as total material movement declines during the latter stages of the mine life. The study should assess opportunities to improve operational flexibility, reduce sustaining capital requirements, and enhance overall Project economics.

26.4 METALLURGY AND PROCESSING METHODS

The PEA flowsheet includes two stages of concentrate regrinding and a total of six stages of flotation cleaning. Bench-scale testing has shown this circuit to be adequate to achieve the target concentrate grade of >85% carbon with reasonable recoveries, especially when treating higher grade East Pipe mineralization; however, the most recent pilot plant operation utilized three regrind and nine cleaning stages. Additional flotation testing is recommended to optimize the circuit and quantify the impact of feed grade and spatial variability of both deposits on flotation performance. Separate recovery models for each deposit should be developed that can be used for future more advanced Project development studies.

The QP also recommends additional liquid-solid separation testing for both concentrate and tailings process streams, and standard characterization studies using representative samples of process tailings.

Further purification optimization testwork is recommended to validate and to confirm process efficiencies and robustness of the overall process design and product qualities.

The QP recommends conducting a study comparing the conventional staged crushing and grinding circuit adopted for the PEA with an alternative comminution circuit incorporating SAG milling. The study should consider energy consumption, equipment configuration, operability, and capital and operating costs. The QP also recommends evaluating alternative flotation technologies, including Glencore Jameson Cell technology, to assess potential improvements in metallurgical performance, circuit configuration, and equipment footprint that may result in capital and operating cost savings.

The QP recommends advancing the thermal purification facility design during the next phase of Project development to reduce the technical and cost uncertainties associated with scale-up from batch testing to commercial operation. The work should include additional testwork, as required, to confirm product purity, recovery, and operating conditions, together with early engagement with a qualified furnace/reactor manufacturer or technology supplier to support scale-up of the process, confirm commercial-scale equipment configuration, capacity, operating temperature, energy requirements, materials of construction, and equipment performance. Consideration should also be given to pilot scale or continuous testing, where practical, followed by further development of the process design, equipment sizing, and capital and operating cost estimates.

26.5 INFRASTRUCTURE

The following work activities are recommended for the next phase of Project development to address the key infrastructure uncertainties identified in the PEA and improve the level of engineering definition and cost estimate confidence:

- Complete a study to evaluate alternative transmission-line routes and connection options, considering constructability, environmental considerations, schedule, and capital and operating costs, and identify the preferred power supply configuration and transmission-line route for advancement during the next phase of Project development.
- Complete a study to evaluate alternative access-road routes, considering ground conditions, drainage requirements, constructability, environmental considerations, construction schedule, and capital and operating costs, and identify the preferred route for advancement during the next phase of Project development.
- Geotechnical, hydrological, and hydrogeological investigations should be initiated as soon as practical to support the next phase of Project development. The investigations should characterize site ground conditions and establish appropriate design parameters for the TSF, buildings, roads, and other major infrastructure, while also providing the information required to refine the site water balance, pit inflow estimates, water supply requirements, groundwater-surface water interactions, and water treatment requirements.
- Undertake geotechnical and geochemical characterization of mine waste rock and overburden to assess its suitability for use as construction material for site roads, building pads, embankments, and other Project infrastructure.

26.6 TAILINGS MANAGEMENT AND RECLAIM WATER

It is recommended that the conventional slurry tailings and reclaim-water systems adopted for the PEA be advanced during the next stage of engineering, with particular emphasis on confirming the assumptions used in the conceptual design. Recommended work includes:

- Undertake detailed topographical survey of the TSF, pipeline corridors and process plant interface to confirm pipeline routing, static elevations and the relative elevations of the reclaim pond and process-water receiving point.
- Complete representative tailings characterisation and testwork, including particle-size distribution, slurry density, settling behaviour, rheology and beaching characteristics, to confirm pipeline transport and deposition parameters.
- Develop the TSF design and deposition plan to further refine the spigot design and arrangement.
- Refine the tailings and reclaim-water hydraulic models using confirmed survey and testwork data, including hydraulic grade line and transient surge assessments, to confirm pipeline specifications, pump selection, motor sizing and operating configuration.
- Undertake a trade-off assessment of conventional slurry, thickened and filtered tailings considering technical performance, water recovery, environmental and permitting considerations, closure requirements and capital and operating costs.

26.7 ENVIRONMENTAL

Recommendations for ongoing development of the Project into PFS stage and beyond include the following:

- Ensure all previous exploration drill holes are sealed and disturbed areas are remediated. This will be particularly important for potential development of waste storage infrastructure, to ensure there are no pathways for groundwater connectivity.
- Undertake additional environmental baseline studies for water quality and biodiversity. In particular it will be important to understand seasonal variations over multiple years and establish migration routes for birdlife and caribou. Baseline conditions should also be established for other aspects such as climate data, air quality, and noise levels.
- Undertake additional hydrology studies and initiate hydrogeology studies to facilitate a better understanding of baseline conditions and enable more accurate assessment of water management needs for the Project. A site-specific Flood risk study is also advised.
- Undertake a ground-based archaeological survey in the proposed Project footprint area and ensure a Chance Finds procedure is in place for future drilling activity and ongoing site visits.
- Undertake additional geochemical testwork as the Project design evolves, to better understand ARDML risks in waste rock and tailings material.
- Undertake a trade-off study to evaluate different options for the Project's water supply, including provision for water storage, treatment and discharge.
- Undertake a trade-off study to evaluate alternative options for tailings storage/disposal, including the potential for a dry stack tailings facility.
- Undertake a trade-off study to evaluate alternative options for mine fleet fuel and power supply, taking sustainability and newer technologies into account.
- Ensure local stakeholders, in particular CLFN, remain actively engaged in all Project developments and are specifically consulted on options for the proposed access route. All formal and informal consultation should be documented to support the future permitting process.
- Confirm Project-specific permitting requirements and timelines with the Government of Ontario.

26.8 HYDROGEOLOGY, HYDROLOGY AND WATER MANAGEMENT

Further hydrogeological and hydrological investigations are recommended to improve the understanding of surface water and groundwater systems within the Project area, how they interact and what potential considerations and Project implications may arise as a result. Results from further investigation will support mine design, water management infrastructure, dewatering requirements, environmental assessments, permitting requirements and capital and operating cost estimates for PFS.

- Desktop hydrogeological review – utilising available data and literature to develop initial conceptual site model.
- Hydrogeological field investigation:

  - Drilling of new boreholes in order to constrain water bearing units, across the Project's footprint. Drill holes to be completed in; shallow wetland area, overburden and bedrock (utilisation of existing capped boreholes (if possible), including eastern pipe drill holes which intersected water bearing fracture system. Depending on access/coverage, may need to drill additional holes.
  - Undertaking of hydrogeological testwork program, incorporating packer, pump and slug tests in order to assess hydrogeological properties. Results will be utilised to feed into updated groundwater inflow assessment and 3D numerical groundwater flow model.
  - Long-term groundwater elevation monitoring using automated pressure transducer to determine seasonal variation as well as hydraulic gradients and baseline characterization.
  - Groundwater geochemical sampling campaign and assessment in order to ascertain discharge viability, treatment requirement and baseline characterization.
- Update of conceptual site model following field investigation program.
- Groundwater Inflow assessment, utilising 3D numerical groundwater flow model to simulate flow conditions at different stages in LoM in order to quantify hydrogeological risks to pit design and dewatering requirements.
- Hydrogeological impact appraisal, including a review of the groundwater fed fen area, surrounding and the Project.
- Hydrological field investigation:
  - Build upon 2019 baseline characterisation, including ongoing stage, flow and quality measurements for permitting and treatment requirements.
- Assessment of Pitopiko River to produce freshwater requirement for the Project.
- Climatic data analysis and interpretation, in order to account for variation in weather patterns, seasonal extremes and storm events and snow melt freshet.
- Lagoon placement review and sizing.

Trade-Off Study

- Groundwater and surface water inflow to pit as a freshwater supply source instead of Pitopiko.

26.9 CAPITAL AND OPERATING COSTS

Recommendations for the capital and operating costs section of this Report at the PFS level of study are as follows:

- Advance engineering sufficiently to bring the definition and accuracy of the capital and operating cost estimates to levels that are appropriate for the later stages of study being undertaken.
- Confirm Albany concentrator throughputs and reconcile annual capacities with the mine schedule and operating calendar.

- Develop a fully integrated project execution schedule covering permitting, road and power construction, mine development, concentrator construction, purification commissioning, and staged expansion.
- Obtain updated vendor and contractor quotations for major equipment, power infrastructure, access-road construction, purification systems, and transportation.
- Prepare separate contingencies supported by their cost-category risks and level of engineering maturity as they become better categorized and quantified at later stages of study.
- Complete quantitative cost and schedule risk assessments.

26.10 ECONOMIC ANALYSIS

Recommendations for the economic analysis section of this Report at the PFS level of study are as follows:

- Reconcile the working capital, royalties, closure costs, and surety-bond treatment assumptions.
- Perform independent validation of the taxation model used for the economic analysis.
- Examine delayed start-up, slower ramp-up, reduced availability, lower recovery, and delayed purification plant expansion cases to better evaluate and assess their effects on the project cash flow streams and their subsequent effects on the overall project economics.
- Evaluate whether staged development or alternative production scales could reduce initial funding requirements, reduce exposure risks associated with the construction, commissioning and operational phases of the project or some combination of all of those factors, specifically with respect to the graphite purification facility in particular.

27 REFERENCES

American Energy Technologies Co., Overview of Value-Added Markets and Business Opportunity for Natural Flake Graphite for Zentek Ltd., June 2026.

American Energy Technologies Co., Preliminary Engineering Scoping Study of Zentek Ltd. Natural Crystalline Flake Graphite Processing Facility, June 2026.

AppEco, Market research and economic analysis of the Albany Graphite Project, June 12, 2026

BGC Engineering Inc., 2014, Albany Preliminary Economic Assessment Open Pit Preliminary Geotechnical Evaluation, prepared for Zenyatta Ventures Ltd. (July 18, 2014).

Canadian Institute of Mining, Metallurgy and Petroleum (CIM), 2014, CIM Definition Standards for Mineral Resources and Mineral Reserves, adopted by the CIM Council on May 10, 2014.

CIM, 2019, CIM Estimation of Mineral Resources & Mineral Reserves Best Practice Guidelines, adopted by the CIM Council on November 29, 2019.

Carey, G., 2012, Albany Project Block 4F, 2012 Assessment Report, Phase II Diamond Drill Program, Porcupine Mining District, Ontario, Pitopiko River, Feagan Lake Townships, NTS: 42K/01,02, 42F/15,16, August 20, 2012.

Carey, G., 2014, Albany Project, Block 4F, Porcupine Mining District, Ontario, 2013 Drill Assessment Report, Reconnaissance Drilling, Pitopiko River and Feagan Lake Areas, NTS: 42K/01,02 and 42F/15,16, January 16, 2014.

Conly, A. 2014a, Albany Graphite Deposit Genetic Model, Zenyatta Ventures Ltd., internal company memorandum, 8p.

Conly, A.G., 2014b, The Albany graphite deposit: a new sub-class of igneous-hosted graphite: Geological Association of Canada - Mineralogical Association of Canada Program with Abstracts, v. 37, pp. 60-61.

Conly, A.G., and Moore, L.C., 2015a, Role of hypabyssal subvolcanic magmas in the genesis of the Albany graphite deposit: Joint Assembly (GAC-MAC-AGU) 2015 Program with Abstracts, Abstract number MD34A-0201.

Conly, A.G. and Moore, L.C., 2015b, Geology, ore characteristics, and origin of the Albany graphite deposit. In: Simandl, G.J. and Neetz, M., (Eds.), Symposium on Strategic and Critical Materials Proceedings, November 13-14, 2015, Victoria, British Columbia. British Columbia Ministry of Energy and Mines, British Columbia Geological Survey Paper 2015-3, pp. 173-185.

Crone Geophysics & Exploration Ltd., 2013, Geophysical Interpretation Report covering Surface Pulse EM Surveys over the Albany Graphite Project for Zenyatta Ventures Limited during February – March 2013, 17 p.

ERM, 2019. Constance Lake First Nation Review of Socio-economic Conditions - Based on available secondary information, 32 pp.

ERM, 2020a. Albany Graphite Deposit: 2019 Hydrology Baseline Study Report, 56 pp.

ERM, 2020b. Albany Graphite Deposit: 2019 Aquatics and Fisheries Baseline Study Report, 202 pp.

ERM, 2020c. Albany Graphite Deposit: 2019 Vegetation and Wildlife Baseline Study Report, 84 pp.

ERM, 2020d. Albany Graphite Deposit February 2020 Aerial Wildlife Survey Memorandum, 4 pp.

ERM, 2020e. Albany Graphite Deposit: Phase 1 Geochemical Characterization Summary Memo, 47 pp.

ERM, 2021. Albany Graphite Deposit Humidity Cell Tests – 20-Week Update and Recommendations Memo, 12 pp.

ERM, 2022. Albany Graphite Deposit Humidity Cell Tests –Week 85 Update and Recommendations Memo, 14 pp.

Geotech Ltd., 2010, Report on a Helicopter-Borne Versatile Time Domain Electromagnetic (VTEM) and Aeromagnetic Survey, 1(A-D), 2(A-L), 3(A-F), 4(A-F), Hearst, Ontario, July 2010.

Harben, P.W., and Kuzvart, M., 1996, A Global Geology. Industrial Minerals Information Ltd., London, 462 p.

James, R., 2013, Petergraphic Descriptions, Zenyatta Venture Ltd., Albany Graphite Project, unpublished report, October 14, 2013, 21 p.

JKTech Pty Ltd., 2014, SMC Test Report, JKTech Job No. 14007/P1, prepared for Zenyatta Ventures Ltd. (January 2014).

Koulomzine, T., 1959, Report on Mag Survey, Assessment Report File GM 08473.

Legault, J.M., Lymburner, J., Ralph, K., Wood, P., Orta, M. and Prikhodko, A., 2015, The Albany Graphite Discovery, Airborne and Ground Time-Domain EM, presented at KEGS Geophysics Symposium at PDAC 2015, February 28, 2015.

Natural Resources Canada, 2022. The Canadian Critical Minerals Strategy: From exploration to recycling. Powering the Green and Digital Economy for Canada and the World, 52 pp.

RPA, 2015. Technical Report on the Preliminary Economic Assessment of the Albany Graphite Project, Northern Ontario, Canada. NI43-101 Report, 224 pp.

RPA Inc., 2014, Technical Report on the Albany Graphite Deposit, northern Ontario, Canada, prepared for Zenyatta Ventures Ltd., filed on SEDAR/available at www.sedar.com (January 16, 2014).

RPA Inc., 2015, Technical Report on the Albany Graphite Deposit, northern Ontario, Canada, prepared for Zenyatta Ventures Ltd., filed on SEDAR/available at www.sedar.com (July 9, 2015).

Sage, R.P., 1988, Nagagami River Alkalic Rock Complex, Ontario Geological Survey, Study #43.

SGS Canada Inc., 2013, An investigation into the Purification of Zenyatta Graphite from the Albany Graphite Deposit, prepared for Zenyatta Ventures Ltd. (April 22, 2013).

SGS Canada Inc., 2014a, An Investigation into a Graphite Flotation Pilot Plant Campaign from the Albany Deposit, Project 13621-003 – Final Report, prepared for Zenyatta Ventures Ltd. (June 26, 2014).

SGS Canada Inc., 2014b, Zenyatta Data Oct 2'14.xlsx, (October 2, 2014).

SGS Canada Inc., 2014c, Zenyatta PDPRDM Nov14'14.xlsx, (November 14, 2014).

SGS Canada Inc., 2014d, Zenyatta Dec 2'14 Submitted.xlsx, (December 2, 2014).

SGS Canada Inc., 2014e, An Investigation into Flotation Optimization and Pilot Plant Concentrate Upgrading on Samples from the Albany Graphite Project, Project 13621-006 – Progress Report #1, prepared for Zenyatta Ventures Ltd. (December 3, 2014).

SGS, 2015. An investigation into environmental characterization of flotation pilot plant tailings from the Albany deposit, 204 pp.

SGS Canada Inc., 2015a, Process Design Package for the Albany Graphite Project Graphite Purification Flowsheet, Preliminary Assessment Study, SGS Project Reference: CALR 13621-008 and 009, prepared for Zenyatta Ventures Ltd., (May 3, 2015).

SGS Canada Inc., 2015b, Unrevised Version R0 - Process Design Package for the Albany Graphite Project Graphite Purification Flowsheet, Preliminary Assessment Study, SGS Project Reference: CALR 13621-008 and 009, prepared for Zenyatta Ventures Ltd., (May 19, 2015).

SGS Canada Inc., 2015c, Zenyatta May 19 2015 PDP R0Values.xlsx, (May 19, 2014).

SGS Canada Inc., 2017, An Investigation into a Graphite Flotation Pilot Plant Campaign from the Albany Deposit, prepared for Zenyatta Ventures Ltd. (April 20, 2017).

SGS Canada Inc., 2018, An Investigation into the Hydrometallurgical Upgrading of a Graphite Concentrate Produced by Flotation from the Albany Deposit, prepared for Zenyatta Ventures Ltd. (September 5, 2018).

SGS Canada Inc., 2019, An Investigation into Locked Cycle Testing of the Hydrometallurgical Upgrading of Graphite Flotation Concentrate from the Albany Deposit, prepared for Zenyatta Ventures Ltd. (April 15, 2019).

SGS Canada Inc., 2026, A Summary of The Production of Graphite Concentrate Via a Flotation Pilot Plant on a Sample from the Albany Deposit, prepared for Albany Graphite Corp. (August 27, 2026).

Stott, G.M., and Corfu, F., 1991: Uchi Subprovince; in Geology of Ontario, Ontario Geological Survey, Special Volume 4, Part 1, pp.145-236.

Stott, G.M., Corkery, T., Leclair, A., Boily, M., and Percival, J., 2007, A revised terrane map for the Superior Province as interpreted from aeromagnetic data; in Woodruff, L. (ed.), Institute on Lake Superior Geology Proceedings, 53rd Annual Meeting, Lutsen, Minnesota, v.53, Part 1, pp.74-75.

Stott, G.M., 2008, Precambrian geology of the Hudson Bay and James Bay lowlands region interpreted from aeromagnetic data – south sheet; Ontario Geological Survey, Preliminary Map P.3599, scale 1:500 000.

Vaillancourt, C., Sproule, R.A., MacDonald, C.A., and Lesher, C.M., 2003, Investigation of Mafic-Ultramafic Intrusions in Ontario and Implications for Platinum Group Element Mineralization: Operation Treasure Hunt; Ontario Geological Survey File Report 6102.

Venn, V. R., 1964, Preliminary Map P.237, Algoma Ore Properties, Assessment Files, Sault Ste. Marie.

Zentek Ltd., Zentek Announces Agreement to Transfer Albany Graphite Project to Subsidiary and Intention of Albany Graphite Corp. to Complete a Private Placement Financing, news release, April 24, 2023.

28 CERTIFICATES

CERTIFICATE OF QUALIFIED PERSONS

CERTIFICATE OF QUALIFIED PERSON CHARLEY MURAHWI

As the co-author of this Report for Albany Graphite Corp., entitled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026 with an effective date of June 30, 2026, I, Charley Murahwi, P.Geo., do hereby certify that:

1. I am employed as a Senior Economic Geologist by, and carried out this assignment for, Micon International Limited, 212 King Street West, Toronto, Ontario, Canada M5H 1K5, telephone 416 362 5135, e-mail cmurahwi@micon-international.com
2. This certificate applies to the technical report entitled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026 with an effective date of June 30, 2026.
3. I hold the following academic qualifications:

BSc. (Geology) University of Rhodesia, Zimbabwe	1979.
Diplome d ʹ Ingénieur Expert en Techniques Minières, Nancy, France	1987.
MSc. (Economic Geology), Rhodes University, South Africa	1996.

4. I am a registered Professional Geoscientist in Ontario (membership # 1618) and in PEGNL (membership # 05662), a registered Professional Natural Scientist with the South African Council for Natural Scientific Professions (membership # 400133/09) and am a Fellow of the Australasian Institute of Mining & Metallurgy (FAusIMM) (membership number 300395).
5. I have worked as a mining and exploration geologist in the minerals industry for over 40 years. During this time, I have gained experience in a wide variety of deposits including nickel in laterites and komatiitic environments, gold-silver in skarn/lode/vein and shear hosted/orogenic systems, and gold-copper-lead-zinc in VMS/porphyry systems, amongst others. As an independent consultant, I have undertaken the technical and financial evaluation of mining and exploration projects in a number of countries in Central and Southern Africa, Canada, USA, Spain, Portugal, Turkey, Panama, Brazil, Bolivia, Mexico, West Africa, and Australia.
6. I have read the definition of "Qualified Person" as set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, work experience and professional registration, I fulfil the requirements of a Qualified Person for those sections of the Technical Report that I am responsible for preparing as defined in NI 43-101.
7. I visited the Albany Graphite Project on June 15, 2026.
8. I am responsible for Sections 2 to 12, 14, 23, 24 and their related summaries in Sections 1, 25 and 26.
9. I am independent of the parties involved in Albany Graphite Project as described in Section 1.5 of NI 43-101.
10. I have had no prior involvement on the Albany Graphite Project.
11. I have read NI 43-101 and the portions of this Technical Report for which I am responsible have been prepared in compliance with this Instrument.
12. As of the Effective Date of the Technical Report, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make this Report not misleading.
13. Technical Report dated this September 18, 2026 with an effective date of June 30, 2026.

"Charley Murahwi" {signed and sealed as of the report date}

Charley Murahwi, MSc., P. Geo. FAusIMM, QP
Senior Economic Geologist
Micon International Limited
Effective Date: **June 30, 2026**
Signed Date: **September 18, 2026**

CERTIFICATE OF QUALIFIED PERSON OKTAY ERTEN

As the co-author of this Report for Albany Graphite Corp., entitled “NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada” dated September 18, 2026 with an effective date of June 30, 2026, I, Oktay Erten do hereby certify that:

1. I am employed as Senior Resource Geologist & Geostatistician by, and carried out this assignment for, Micon International Limited, Suite 501, 212 King Street West, Toronto, Ontario M5H 1K5, tel. (416) 362-5135, e-mail: oerten@micon-international.com
2. This certificate applies to the Technical Report titled “NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada” , dated September 18, 2026 with an effective date of June 30, 2026.
3. I hold the following academic qualifications:

Post-Master Degree in Geostatistics, Mines Paris Tech, France	2018.
Ph.D. in Mining Engineering, The University of Queensland, Australia	2012.
MSc. in Mining Engineering, Dokuz Eylul University, Turkiye	2007.
BSc. in Mining Engineering, Dokuz Eylul University, Turkiye	2004.

4. I am a registered Professional Engineer (P.Eng.) with the Association of Professional Engineers and Geoscientists of Alberta (APEGA), and I am a Chartered Professional (Geology) with the Australasian Institute of Mining and Metallurgy (AusIMM #306184).
5. I am familiar with NI 43-101 and, by reason of my education, relevant professional experience and professional registration, fulfil the requirements of a Qualified Person as defined in NI 43-101. My professional experience includes mineral resource estimation, geological modelling, geostatistical analysis, spatial uncertainty assessment, and the evaluation of mineral deposits. I have read NI 43-101, and this Technical Report has been prepared in compliance with the instrument.
6. I have not visited the Property.
7. I have had no prior involvement in the Albany Graphite Project.
8. I am independent of Albany Graphite Corp. and its related entities, as defined in Section 1.5 of NI 43-101.
9. I am responsible for Sections 14, 25.2.2 and 26.1 of this Technical Report.
10. As of the date of this certificate, to the best of my knowledge, information and belief, the sections of the Technical Report for which I am responsible contain all the scientific and technical information that is required to be disclosed to make this technical report not misleading.
11. Technical Report dated this September 18, 2026 with an effective date of June 30, 2026.

“Oktay Erten” {signed and sealed as of the report date}

Oktay Erten P.Eng. (299412), QP
Senior Resource Geologist & Geostatistician
Micon International Limited
Effective Date: **June 30, 2026**
Signed Date: **September 18, 2026**

CERTIFICATE OF QUALIFIED PERSON RICHARD GOWANS

As the co-author of this Report for Albany Graphite Corp., entitled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026 with an effective date of June 30, 2026, I, Richard Gowans do hereby certify that:

1. I am employed as Principal Metallurgist by, and carried out this assignment for, Micon International Limited, Suite 501, 212 King Street West, Toronto, Ontario M5H 1K5, tel. (416) 362-5135, e-mail rgowans@micon-international.com
2. This certificate applies to the Technical Report titled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026 with an effective date of June 30, 2026.
3. I hold the following academic qualifications:

   B.Sc. (Hons) Minerals Engineering, The University of Birmingham, U.K. 1980.
4. I am a registered Professional Engineer of Ontario (membership number 90529389); as well, I am a member in good standing of the Canadian Institute of Mining, Metallurgy and Petroleum.
5. I am familiar with NI 43-101 and, by reason of education, experience and professional registration, fulfil the requirements of a Qualified Person as defined in NI 43-101. My work experience includes over 40 years of the management of technical studies, project due diligence, and design of numerous metallurgical testwork programs and metallurgical processing plants, including several graphite projects.
6. I have read NI 43-101, and this Technical Report has been prepared in compliance with the instrument.
7. I have not visited the Property.
8. I have not participated in the preparation of prior Technical Reports, nor have I had any prior involvement in the Albany Graphite Project.
9. I am independent of Albany Graphite Corp. and its related entities, as defined in Section 1.5 of NI 43-101.
10. I am responsible for Sections 13 and 17 of this Technical Report.
11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading.
12. Technical Report dated this September 18, 2026 with an effective date of June 30, 2026.

"Richard M. Gowans" {signed and sealed as of the report date}

Richard Gowans P.Eng. (90529389), QP
Principal Metallurgist
Micon International Limited
Effective Date: **June 30, 2026**
Signed Date: **September 18, 2026**

CERTIFICATE OF QUALIFIED PERSON GARTH LIUKKO

I, Garth Liukko, as co author of this Report for Albany Graphite Corp. entitled “NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada”, dated September 18, 2026 with an effective date of June 30, 2026, do hereby certify that:

1. I am employed as a Principal Mining Engineer by Micon International Limited, Suite 501, 212 King Street West, Toronto, Ontario, M5H 1K5; telephone (416) 362 5135; e mail: gliukko@micon international.com. I carried out this assignment for Micon International Limited.
2. This certificate applies to the Technical Report titled “NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada”, dated September 18, 2026 with an effective date of June 30, 2026.
3. I hold the following academic qualification:

   B.Eng., Mining Engineering, Laurentian University, Sudbury Ontario, 1991.

4. I am a registered Professional Engineer with Professional Engineers Ontario (membership #90533399).
5. I have worked as a Mining Engineer in the mining industry for over 34 years.
6. I am familiar with NI 43 101 and that by reason of education, experience, and professional registration I fulfill the requirements of a Qualified Person as defined in NI 43 101. My work experience includes over 34 years as an Underground Mining Engineer across a range of base metals, precious metals and critical minerals. My experience includes underground mine planning and design, mineral reserve estimation, life-of-mine scheduling, cost estimation, and financial modelling, as well as the design and optimization of mine infrastructure systems including but not limited to ventilation, backfill, dewatering, materials handling, and mobile equipment. I have acted as Qualified Person and lead author on NI 43-101 and other code-compliant technical reports, including preliminary economic assessments, prefeasibility and feasibility studies, and have supported projects through all stages of the mining lifecycle from scoping and evaluation through operations support and mine closure. I have worked on projects globally and have extensive experience in technical due diligence, independent technical reviews, and regulatory and Environmental Social and Governance (ESG) audits, supporting investment decisions and project development across multiple jurisdictions. I have read NI 43-101 and the portions of this Technical Report for which I am responsible have been prepared in compliance with the instrument.
7. I have not visited the Albany Graphite Project Property.
8. This is the first Technical Report I have co authored for the mineral property that is the subject of this Technical Report, and I have not been previously involved with the Project that is the subject of this Report.
9. I am independent of Albany Graphite Corp. and its subsidiaries, as defined in NI 43 101 and Companion Policy 43 101CP.
10. I am responsible for Sections 19, 21 and 22 of this Technical Report.
11. As of the date of this certificate, to the best of my knowledge, information, and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
12. Technical Report dated this September 18, 2026 with an effective date of June 30, 2026.

“Garth Liukko” {signed and sealed as of the report date}

Garth Liukko, P.Eng. (90533399), QP
Principal Mining Engineer
Micon International Limited
Effective Date: June 30, 2026
Signed Date: September 18, 2026

CERTIFICATE OF QUALIFIED PERSON MOHSIN HASHMI

I, Mohsin Hashmi, as co-author of this Report for Albany Graphite Corp. entitled “NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada” dated September 18, 2026, with an effective date of June 30, 2026, do hereby certify that:

1. I am employed as a Senior Open Pit Mine Engineer by Micon International Limited, Suite 501, 212 King Street West, Toronto, Ontario, M5H 1K5; telephone (416) 362 5135; e mail: mhashmi@micon international.com. I carried out this assignment for Micon International Limited.
2. This certificate applies to the Technical Report titled “NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada” dated September 18, 2026, with an effective date of June 30, 2026.
3. I hold the following academic qualification:

   B.Eng. (Mineral Resources), Dalhousie University 2018.
4. I am a registered Professional Engineer with Professional Engineers Ontario (membership #100597681). I am also a member in good standing of the following professional association Project Management Institute (membership #4027101)
5. I have worked as a Mining Engineer in the mining industry for over 8 years.
6. I am familiar with NI 43-101 and, by reason of education, experience, and professional registration, I fulfil the requirements of a Qualified Person as defined in NI 43 101. My work experience includes 8 years as an Open Pit Mining Engineer across precious metals, critical minerals, and energy projects. I have contributed to multiple Canadian mining operations, with expertise in developing rolling mine forecasts to support mine construction and production, coordinating capital projects to facilitate mine operations, and integrating technology systems such as fleet management systems, private LTE networks, and autonomous drilling solutions to support operational efficiency.
7. I have read NI 43 101, and this Technical Report has been prepared in compliance with the instrument.
8. This is the first Technical Report I have co-authored for the mineral property that is the subject of this Technical Report.
9. I am independent of Albany Graphite Corp. and its subsidiaries, as defined in NI 43 101 and Companion Policy 43 101CP.
10. I am responsible for Section 16 of this Technical Report.
11. As of the date of this certificate, to the best of my knowledge, information, and belief, this Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.
12. Technical Report dated this September 18, 2026 with an effective date of June 30, 2026.

“Mohsin Hashmi” {signed and sealed as of the report date}

Mohsin Hashmi, P.Eng., PMP, QP
Senior Open Pit Mining Engineer
Micon International Limited
Effective Date: June 30, 2026
Signed Date: September 18, 2026

CERTIFICATE OF QUALIFIED PERSON BECKY HUMPHREY

As the co-author of this Report for Albany Graphite Corp., entitled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026 with an effective date of June 30, 2026, I, Becky Humphrey, CEnv, MIMMM, do hereby certify that:

1. I am employed as an Associate Environmental Consultant by, and carried out this assignment for, Micon International Co Limited, with an office address of Suite 10, Keswick Hall, Norwich, Norfolk, NR4 6TJ, UK, telephone +44 1603 501 501; e-mail: bhumphrey@micon-international.co.uk
2. This certificate applies to the technical report titled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" with an effective date of June 30, 2026 ("the "Effective Date").
3. I hold the following academic qualifications:

BSc. (Hons) Geography, University of Wales Aberystwyth	2001.
MSc. Water Resources, University of Wales Bangor	2002.

4. I am a Full Member of the Institute of Sustainability and Environmental Professionals (MISEP) (membership number 0060192), a Professional Member of the Institute of Materials, Minerals and Mining (MIMMM) (membership number 667165) and a Chartered Environmentalist (CEnv) registered with the Society for the Environment (Registration No. 10664).
5. I have worked as an environmental professional for over 20 years as both a consultant and senior operational staff on mine sites. I have experience with a variety of deposits in Europe, Africa and the Americas.
6. I have read the definition of "Qualified Person" set out in the National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and certify that by virtue of my education, experience, and professional registration, I fulfill the requirements of a Qualified Person for those sections of the Technical Report that I am responsible for preparing as defined in NI 43-101.
7. I have not visited the property.
8. I am responsible for Section 20, and summaries therefrom in Sections 1, 25 and 26 of this Technical Report.
9. I am independent of Albany Graphite Corp. and its related entities, as defined in Section 1.5 of NI 43-101.
10. I have no prior involvement with the Albany Graphite Project.
11. I have read NI 43-101 and the portions of this Technical Report for which I am responsible have been prepared in compliance with the Instrument.
12. As of the Effective Date of this Technical Report, to the best of my knowledge, information and belief, the sections of this Technical Report for which I am responsible contain all scientific and technical information that is required to be disclosed to make this Report not misleading.
13. Technical Report dated this September 18, 2026 with an effective date of June 30, 2026.

"Becky Humphrey" {signed and sealed as of the report date}

Becky Humphrey, BSc (Hons), MSc, CEnv, MISEP, MIMMM, QP
Associate Environmental Consultant
Micon International Limited
Effective Date: **June 30, 2026**
Signed Date: **September 18, 2026**

CERTIFICATE OF QUALIFIED PERSON SEPEHR ARYAN

As the co-author of this Report for Albany Graphite Corp. entitled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026, with an effective date of June 30, 2026, I, Sepehr Aryan do hereby certify that:

1. I am employed as Manager of the Civil Structural and Architectural Department (CSA) by Halyard Inc., Suite 501, 212 King St. West, Toronto, Ontario M5H 1K5, and carried out this assignment for Micon International Limited, Suite 501, 212 King Street West, Toronto, Ontario, M5H 1K5; telephone (416) 362 5135, e-mail: sepehr@halyard.ca
2. This certificate applies to the Technical Report titled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026, with an effective date of June 30, 2026.
3. I hold the following academic qualifications:

   MSc. (Civil and environmental engineering) Utah State University 1979.

4. I am a registered Professional Engineer with the Association of Professional Engineers Ontario (Membership # 100035850); as well, as a member in good standing of the Professional Management Institute, PMI (Membership # 402270) and holder of PMP Certificate (#209329).
5. I have worked as a Civil and Structural in the minerals industry for over 30 years.
6. I am familiar with NI 43-101, and, by reason of education, experience and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 15 years as a Civil and Structural Engineer working in mining projects, more than 5 years as Engineering Manager supervising industrial projects including mining projects, 8 years as Senior Structural Engineer in underground mines and 3 years as a manager of CSA team working in mining mostly gold mining projects.
7. I have read NI 43-101, and this Technical Report has been prepared in compliance with the instrument.
8. I have not visited the property
9. This is the first Technical Report I have co-authored for the mineral property that is the subject of this Technical Report.
10. I am independent of Albany Graphite Corp. and its subsidiaries according to the definition described in NI 43-101.
11. I am responsible for Section 18 infrastructure of this Technical Report.
12. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading.
13. Technical Report Dated this 18th day of September, 2026 with an effective date of 30th June, 2026.

"Sepehr Aryan" {signed and sealed as of the report date}

Sepehr Aryan, MSc., P. Eng., QP
Manager of Civil Structural and Architectural Team
Halyard Inc.
Effective Date: June 30, 2026
Signed Date: September 18, 2026

CERTIFICATE OF QUALIFIED PERSON MORWENNA ROGERS

As the co-author of this Report for Albany Graphite Corp., entitled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026, with an effective date of June 30, 2026, I, Morwenna Rogers do hereby certify that:

1. I am employed as Project Engineer by, and carried out this assignment for, Micon International Limited, Suite 501, 212 King Street West, Toronto, Ontario M5H 1K5, tel. (416) 362-5135, e-mail morwenna@halyard.ca
2. This certificate applies to the Technical Report titled "NI 43-101 Preliminary Economic Assessment (PEA) Technical Report on the Albany Graphite Project, Northern Ontario, Canada" dated September 18, 2026, with an effective date of June 30, 2026.
3. I hold the following academic qualifications:

   MSc. (Hons) Mining Engineering, Camborne School of Mines, U.K. 2014.
4. I am a professional member in good standing of: The Institute of Materials, Minerals and Mining.
5. I am familiar with NI 43-101 and, by reason of education, experience and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes over 11 years of the management of technical studies and design of numerous tailings and backfill testwork programs and plants.
6. I have read NI 43-101, and this Technical Report has been prepared in compliance with the instrument.
7. I have not visited the Property.
8. I have not participated in the preparation of prior Technical Reports, nor have I had any prior involvement in the Albany Graphite Project.
9. I am independent of Albany Graphite Corp. and its related entities, as defined in Section 1.5 of NI 43-101.
10. I am responsible for Sections 18.10 of this Technical Report.
11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading.
12. Technical Report Dated this 18th day of September, 2026 with an effective date of 30th June, 2026.

"Morwenna C Rogers" {signed and sealed as of the report date}

Morwenna C. Rogers, MSc., MIMMM, QP
Project Engineer
Halyard Inc.
Effective Date: **June 30, 2026**
Signed Date: **September 18, 2026**

29 APPENDIX

29.1 APPENDIX A

Table 29.1: Cash Flow Analysis

PROJECT SCHEDULE																																								
Calendar Yr.				**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**
Duration (calendar months)				12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Project Yr				-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Discount period (yrs)				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Period Start date				1/1/2028	1/1/2029	1/1/2030	1/1/2031	1/1/2032	1/1/2033	1/1/2034	1/1/2035	1/1/2036	1/1/2037	1/1/2038	1/1/2039	1/1/2040	1/1/2041	1/1/2042	1/1/2043	1/1/2044	1/1/2045	1/1/2046	1/1/2047	1/1/2048	1/1/2049	1/1/2050	1/1/2051	1/1/2052	1/1/2053	1/1/2054	1/1/2055	1/1/2056	1/1/2057	1/1/2058	1/1/2059	1/1/2060	1/1/2061	1/1/2062	1/1/2063	1/1/2064
Period End date				12/31/2028	12/31/2029	12/31/2030	12/31/2031	12/31/2032	12/31/2033	12/31/2034	12/31/2035	12/31/2036	12/31/2037	12/31/2038	12/31/2039	12/31/2040	12/31/2041	12/31/2042	12/31/2043	12/31/2044	12/31/2045	12/31/2046	12/31/2047	12/31/2048	12/31/2049	12/31/2050	12/31/2051	12/31/2052	12/31/2053	12/31/2054	12/31/2055	12/31/2056	12/31/2057	12/31/2058	12/31/2059	12/31/2060	12/31/2061	12/31/2062	12/31/2063	12/31/2064
Duration (days)				366	365	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366	365	365	365	366
ROM ore delivery (days)																																								
Plant Operations (days)																																								
Item	**Units**	**Value**	**LOM Total**	**Y-5**	**Y-4**	**Y-3**	**Y-2**	**Y-1**	**Y1**	**Y2**	**Y3**	**Y4**	**Y5**	**Y6**	**Y7**	**Y8**	**Y9**	**Y10**	**Y11**	**Y12**	**Y13**	**Y14**	**Y15**	**Y16**	**Y17**	**Y18**	**Y19**	**Y20**	**Y21**	**Y22**	**Y23**	**Y24**	**Y25**	**Y26**	**Y27**	**Y28**	**Y29**	**Y30**	**Y31**	**Y32**
PRODUCTION PHYSICALS																																								
Mineral Resource Tonnes Mined	kt		25,902				-	35	276	665	598	966	889	897	903	674	468	584	936	1,010	1,098	1,127	917	1,050	933	985	932	1,000	953	924	1,414	1,171	1,155	1,016	1,125	1,203	-	-	-	-
Mineral Resource Grade Mined	% Cg						-	5.67	5.80	6.32	5.60	4.01	4.19	3.86	3.74	4.65	5.83	6.04	3.94	3.85	3.76	3.28	3.55	3.97	3.84	3.61	4.27	3.69	3.54	4.02	3.65	3.65	3.59	2.75	2.62	2.47	-	-	-	-
Overburden Moved	kt		53,498				7,134	12,335	7,134	6,991	2,532	377	1,870	893	-	8,045	788	918	192	-	1,845	1,862	476	0	-	-	-	-	-	-	-	-	-	-	-	105	-	-	-	-
Open Pit Waste Mined	kt		116,332				2,366	1,130	6,100	5,844	4,353	4,451	3,050	4,859	6,580	1,040	8,691	6,967	6,354	5,633	2,819	2,803	4,416	4,802	4,933	4,869	4,885	4,822	4,894	3,417	1,141	1,343	1,350	866	877	678	-	-	-	-
GRAPHITE CONTENT - INSITU																																								
Graphite	kt		1,000						16.0	42.1	33.4	38.8	37.3	34.6	33.7	31.3	27.3	35.3	36.9	38.9	41.3	37.0	32.6	41.7	35.8	35.6	39.8	36.9	33.8	37.1	51.6	42.8	41.4	28.0	29.4	29.7	-	-	-	-
Cg grade	%								5.80	6.32	5.60	4.01	4.19	3.86	3.74	4.65	5.83	6.04	3.94	3.85	3.76	3.28	3.55	3.97	3.84	3.61	4.27	3.69	3.54	4.02	3.65	3.65	3.59	2.75	2.62	2.47	-	-	-	-
ROM STOCKPILES																																								
HG/MG/LG Stockpiles - Material In	kt								-	137	-	173	98	-	-	-	-	20	86	179	282	93	-	296	42	32	227	95	-	111	642	350	306	-	-	-	-	-	-	-
HG/MG/LG Stockpiles - Material In Grade	% Cg								-	5.25	-	2.25	2.40	-	-	-	-	1.92	2.34	2.22	2.26	2.30	-	2.30	2.28	2.14	2.16	2.09	-	2.03	2.60	2.25	2.13	-	-	-	-	-	-	-
HG/MG/LG Stockpiles - Material Out	kt								24	-	22	-	-	4	17	69	306	-	-	-	-	-	102	-	-	0	-	-	48	-	-	0	-	185	110	32	1,235	1,048	-	-
HG/MG/LG Stockpiles - Material Out Grade	% Cg								6.11	-	6.57	-	-	6.57	6.57	5.12	2.47	-	-	-	-	-	2.26	-	-	3.72	-	-	2.32	-	-	3.89	-	3.74	2.19	2.19	2.19	2.19	-	-
HG/MG/LG Stockpiles - Balance	kt								11	148	126	299	397	393	376	307	0	20	106	285	567	660	558	853	895	927	1,154	1,249	1,200	1,311	1,953	2,304	2,610	2,425	2,315	2,283	1,048	-	-	-
HG/MG/LG Stockpiles - Balance - Grade	% Cg								4.72	5.21	4.97	3.40	3.15	3.12	2.96	2.47	2.31	1.93	2.26	2.24	2.25	2.26	2.26	2.27	2.27	2.27	2.25	2.23	2.23	2.21	2.34	2.33	2.30	2.19	2.19	2.19	2.19	-	-	-
PROCESSING - CONCENTRATOR																																								
Mill Feed Processed	kt		25,902						299	528	620	793	791	900	920	743	775	564	850	831	816	1,035	1,019	754	892	952	705	905	1,001	813	772	821	849	1,200	1,235	1,235	1,235	1,048	-	-
Mill Feed Grade	% Cg								5.83	6.60	5.63	4.40	4.41	3.87	3.79	4.69	4.50	6.18	4.10	4.20	4.27	3.37	3.42	4.63	3.91	3.66	4.95	3.85	3.48	4.29	4.52	4.25	4.11	2.91	2.58	2.46	2.19	2.19	-	-
Contained Cg	kt		1,002						17.4	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	31.8	30.4	27.1	23.0	-	-
Concentrator Recovery	%								86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	86.0	-	-
Concentrate Produced	kt		990						17.2	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	31.5	30.0	26.8	22.7		
Cg Concentrate Grade	% Cg								87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	-	-
Recovered Cg in Concentrate	kt		862						15.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	27.4	26.1	23.3	19.8	-	-
Offsite Costs - Cg Concentrate																																								
Offsite Costs																																								
PROCESSING - FBR																																								
FBR Plant Capacity - Concentrate	ktpy								17.9	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8		
Concentrate Processed	kt		990						17.2	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	31.5	30.0	26.8	22.7		
Concentrate Grade	% Cg								87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0	87.0		
Contained Cg	kt		862						15.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	27.4	26.1	23.3	19.8		
Process Reccovery	%								96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4	96.4		
4N Grade Graphite Produced	kt		671						11.7	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	21.3	20.4	18.2	15.4		
4N+ Grade Graphite Produced	kt		74						1.3	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.4	2.2	2.0	1.7		
5N Grade Graphite Produced	kt		86						1.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.7	2.6	2.3	2.0		
REVENUES																																								
4N Grade Graphite	$USD/t	@ 20,541 USD$/t Product	616,230						20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541	20,541		

4N Grade Graphite Revenue	M$ USD		13,791						240.1	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	480.2	438.4	418.4	373.1	316.6		
4N+ Grade Graphite	$USD/t	@ 19,300 USD$/t Product	579,000						19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300	19,300		
4N+ Grade Graphite Revenue	M$ USD		1,427						24.8	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	45.4	43.3	38.6	32.8		
5N Grade Graphite	$USD/t	@ 50,000 USD$/t Product	1,500,000						50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000		
5N Grade Graphite Revenue	M$ USD		4,321						75.2	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	150.4	137.3	131.1	116.9	99.2		
Gross Graphite Sales Revenue	M$ USD		19,540						340.2	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	621.1	592.8	528.7	448.6		
(-) Product transport and insurance	M$ USD		(107)						(1.9)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.7)	(3.4)	(3.2)	(2.9)	(2.5)		
Net Sales Revenue	M$ USD		19,433						338.3	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	676.6	617.7	589.6	525.8	446.1		
(-) Royalty payments	M$ USD		(253)						(4.4)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.8)	(8.0)	(7.7)	(6.8)	(5.8)		
Net Sales after Royalty	M$ USD		19,180						333.9	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	667.8	609.6	581.9	518.9	440.3		
Unit Net Revenue	$USD/t Mill Feed								**1,115.9**	**1,264.0**	**1,077.8**	**841.7**	**844.5**	**741.7**	**725.6**	**898.8**	**862.2**	**1,183.7**	**785.4**	**804.0**	**818.2**	**645.5**	**655.2**	**885.7**	**749.0**	**701.3**	**946.9**	**737.8**	**667.1**	**821.2**	**865.5**	**813.5**	**786.9**	**556.4**	**493.6**	**471.2**	**420.2**	**420.2**		
OPERATING COSTS																																								
Mining																																								
OP Mine Operating Costs - Ore	000$ USD	@ 3.74 USD$/t	96,872				-	130.4	1,030.5	2,486.8	2,235.4	3,613.5	3,325.7	3,353.4	3,377.0	2,519.8	1,751.2	2,183.0	3,500.9	3,777.8	4,106.8	4,216.6	3,429.7	3,925.6	3,490.5	3,682.4	3,485.2	3,739.2	3,563.6	3,456.2	5,286.6	4,380.0	4,319.3	3,798.7	4,207.2	4,499.0	-	-	-	-
OP Mine Operating Costs - Waste	000$ USD	@ 3.74 USD$/t	435,083				8,847.1	4,225.3	22,813.2	21,857.5	16,279.4	16,647.9	11,406.2	18,173.6	24,607.5	3,887.8	32,504.6	26,058.2	23,765.6	21,065.9	10,541.4	10,484.4	16,516.8	17,959.4	18,447.6	18,211.1	18,271.5	18,034.7	18,303.9	12,779.2	4,266.9	5,023.4	5,048.9	3,237.1	3,279.7	2,537.4	-	-	-	-
OP Mine Operating Costs - Overburden	000$ USD	@ 3.74 USD$/t	200,084				26,682.8	46,134.2	26,682.4	26,145.8	9,469.7	1,409.6	6,993.8	3,338.9	-	30,088.9	2,945.6	3,434.3	717.9	-	6,901.7	6,964.7	1,781.6	0.5	-	-	-	-	-	-	-	-	-	-	-	391.4	-	-	-	-
Concentrator																																								
Wear Parts	000$ USD	@ 5.51 USD$/t Mill Feed	142,649						1,647.9	2,909.8	3,412.3	4,369.4	4,354.9	4,958.4	5,069.0	4,092.1	4,265.5	3,107.0	4,682.9	4,574.5	4,494.8	5,697.8	5,613.1	4,152.3	4,910.1	5,244.6	3,884.2	4,985.0	5,513.4	4,478.8	4,249.3	4,520.9	4,674.1	6,610.5	6,801.6	6,801.6	6,801.6	5,771.5		
Reagents	000$ USD	@ 0.66 USD$/t Mill Feed	17,051						197.0	347.8	407.9	522.3	520.6	592.7	605.9	489.1	509.9	371.4	559.8	546.8	537.3	681.1	670.9	496.3	586.9	626.9	464.3	595.9	659.0	535.4	507.9	540.4	558.7	790.2	813.0	813.0	813.0	689.9		
Chemical/Mill Laboratory Supplies	000$ USD	@ 0.21 USD$/t Mill Feed	5,443						62.9	111.0	130.2	166.7	166.2	189.2	193.4	156.1	162.8	118.6	178.7	174.6	171.5	217.4	214.2	158.4	187.4	200.1	148.2	190.2	210.4	170.9	162.1	172.5	178.4	252.2	259.5	259.5	259.5	220.2		
Fuel	000$ USD	@ 0.16 USD$/t Mill Feed	4,137						47.8	84.4	99.0	126.7	126.3	143.8	147.0	118.7	123.7	90.1	135.8	132.7	130.4	165.2	162.8	120.4	142.4	152.1	112.6	144.6	159.9	129.9	123.2	131.1	135.6	191.7	197.2	197.2	197.2	167.4		
Electrical Power	000$ USD	@ 3.21 USD$/t Mill Feed	83,094						959.9	1,695.0	1,987.7	2,545.2	2,536.8	2,888.3	2,952.7	2,383.7	2,484.7	1,809.8	2,727.9	2,664.7	2,618.3	3,319.0	3,269.7	2,418.7	2,860.2	3,055.0	2,262.6	2,903.8	3,211.6	2,609.0	2,475.3	2,633.5	2,722.7	3,850.7	3,962.0	3,962.0	3,962.0	3,361.9		
Maintenance Supplies	000$ USD	@ 1.98 USD$/t Mill Feed	51,166						591.1	1,043.7	1,224.0	1,567.3	1,562.1	1,778.5	1,818.2	1,467.8	1,530.0	1,114.4	1,679.7	1,640.8	1,612.2	2,043.7	2,013.3	1,489.4	1,761.2	1,881.2	1,393.2	1,788.1	1,977.6	1,606.5	1,524.2	1,621.6	1,676.6	2,371.1	2,439.6	2,439.6	2,439.6	2,070.2		
Tailings Storage Facility																																								
FBR Plant																																								
FBR Plant - Variable Costs	000$ USD	@ 6,143 USD$/t Cg Products	5,109,708						88,955	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	177,910	162,415	155,026	138,247	117,310		
FBR Plant - Fixed Costs	000$ USD / Year	@ 8,113,644 USD$/Year	243,409						8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114	8,114		
GENERAL AND ADMINISTRATIVE COSTS																																								
Communities and Environmental	000$ USD		42,528	0.0	0.0	0.0	0.0	0.0	1445.4	1923.0	1736.8	1500.7	1503.5	1400.8	1384.6	1557.8	1521.2	1842.7	1444.4	1463.0	1477.3	1304.5	1314.2	1544.8	1408.0	1360.3	1605.9	1396.8	1326.1	1480.2	1524.5	1472.5	1445.9	1215.4	1095.3	1045.4	932.3	854.7	0.0	0.0
Other Expenses	000$ USD		42,781	0.0	0.0	0.0	0.0	0.0	1449.8	1931.8	1745.6	1509.5	1512.3	1409.6	1393.4	1566.6	1530.0	1851.5	1453.2	1471.8	1486.1	1313.3	1323.0	1553.6	1416.8	1369.1	1614.7	1405.6	1334.9	1489.0	1533.3	1481.3	1454.7	1224.2	1103.3	1053.1	939.1	860.5	0.0	0.0
G&A Costs - Mine Site	000$ USD		165,000	0.0	0.0	0.0	0.0	0.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	5500.0	0.0	0.0
G&A costs - FBR Plant Site	000$ USD	@ 210,000 USD$/Year	6,300						210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	0	0
Mining	000$ USD		732,039		0.0	0.0	35,529.8	50,489.8	50,526.1	50,490.1	27,984.5	21,671.0	21,725.7	24,865.9	27,984.5	36,496.5	37,201.5	31,675.5	27,984.5	24,843.6	21,550.0	21,665.8	21,728.2	21,885.5	21,938.2	21,893.5	21,756.7	21,773.9	21,867.5	16,235.4	9,553.5	9,403.4	9,368.2	7,035.8	7,486.9	7,427.9	0.0	0.0	0.0	0.0
Milling	000$ USD		303,541		0.0	0.0	0.0	0.0	3,506.5	6,191.7	7,261.1	9,297.7	9,266.8	10,550.8	10,786.3	8,707.5	9,076.6	6,611.3	9,964.8	9,734.0	9,564.4	12,124.4	11,944.0	8,835.5	10,448.2	11,159.9	8,265.2	10,607.5	11,732.0	9,530.5	9,042.1	9,620.0	9,946.0	14,066.3	14,473.0	14,473.0	14,473.0	12,281.0	0.0	0.0
FBR Plant Costs	000$ USD		5,353,117		0.0	0.0	0.0	0.0	97,068.7	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	186,023.9	170,528.6	163,139.7	146,360.8	125,423.1	0.0	0.0
G&A	000$ USD		256,609		0.0	0.0	0.0	0.0	8,605.3	9,564.7	9,192.4	8,720.3	8,725.9	8,520.3	8,487.9	8,834.4	8,761.3	9,404.3	8,607.6	8,644.8	8,673.3	8,327.8	8,347.3	8,808.3	8,534.9	8,439.4	8,930.6	8,512.4	8,371.0	8,679.1	8,767.8	8,663.9	8,610.5	8,149.6	7,908.5	7,808.5	7,581.4	7,425.2	0.2	0.2
Total Cash Operating Costs	**M$ USD**		**6,559.3**		**0.0**	**0.0**	**35.5**	**50.5**	**159.7**	**252.3**	**230.5**	**225.7**	**225.7**	**230.0**	**233.3**	**240.1**	**241.1**	**233.7**	**232.6**	**229.2**	**225.8**	**228.1**	**228.0**	**225.6**	**226.9**	**227.5**	**225.0**	**226.9**	**228.0**	**220.5**	**213.4**	**213.7**	**213.9**	**215.3**	**200.4**	**192.8**	**168.4**	**145.1**	**0.0**	**0.0**
Unit Operating Cost	**$CAD/t Mill Feed**				**0.0**	**0.0**	**0.0**	**0.0**	**533.7**	**477.5**	**372.0**	**284.5**	**285.5**	**255.4**	**253.5**	**323.1**	**311.2**	**414.3**	**273.5**	**276.0**	**276.7**	**220.5**	**223.7**	**299.2**	**254.5**	**238.9**	**319.0**	**250.7**	**227.7**	**271.1**	**276.6**	**260.3**	**252.1**	**179.4**	**162.3**	**156.2**	**136.4**	**138.5**	**0.0**	**0.0**
WORKING CAPITAL																																								
Working Capital Pool/Stream	000$ USD							72.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	- 72.85	0
CAPITAL EXPENDITURES																																								
Exploration																																								
Core Shack / Exploration Facility	000$ USD		780	-	-	-	375.0	125.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	-	-		

Mining																																								
Mine Site, General	000$ USD		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Mine Site, Site Preparation	000$ USD		500	-	-	-	-	500.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Mine Site, Buildings	000$ USD		1,600	-	-	-	-	1,000.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0		
Mine Site, Utilities and Services	000$ USD		1,600	-	-	-	-	1,000.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0		
Mine Site, Equipment	000$ USD		800	-	-	-	-	500.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		
Truck Shop	000$ USD		16,000	-	-	-	-	10,000.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0		
Explosives Magazine	000$ USD		400	-	-	-	-	250.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		
Site Infrastructure																																								
Overall Site Preparation	000$ USD		1,500	-	-	-	750.0	750.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Fire Protection	000$ USD		2,400	-	-	-	1,125.0	375.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0		
Roads, Bridges, Gates and Fencing	000$ USD		3,360	-	-	-	1,575.0	525.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0	42.0		
First Aid+Equipment	000$ USD		800	-	-	-	375.0	125.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		
Admin Building	000$ USD		1,344	-	-	-	630.0	210.0	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8	16.8		
Camp Facilities	000$ USD		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Warehouses	000$ USD		2,400	-	-	-	1,125.0	375.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0		
Fuel Systems Storage	000$ USD		2,080	-	-	-	975.0	325.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0	26.0		
Electrical Substation	000$ USD		7,200	-	-	-	3,375.0	1,125.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0		
Power, Communications and Distribution	000$ USD		7,920	-	-	-	3,712.5	1,237.5	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0		
Solid Waste Management	000$ USD		240	-	-	-	112.5	37.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		
Concentrator																																								
Primary Crushing Station	000$ USD		12,068	-	-	-	-	5,728.6	1,909.5	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8	152.8		
Crushed Ore Stockpile	000$ USD		16,447	-	-	-	-	7,807.1	2,602.4	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2	208.2		
Secondary and Tertiary Crushing	000$ USD		15,459	-	-	-	-	7,338.0	2,446.0	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7	195.7		
Grinding	000$ USD		51,570	-	-	-	-	24,479.2	8,159.7	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8	652.8		
Flotation and Regrinding	000$ USD		22,206	-	-	-	-	10,540.8	3,513.6	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1	281.1		
Concentrate Thickening	000$ USD		1,744	-	-	-	-	827.8	275.9	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1	22.1		
Concentrate Filtration	000$ USD		4,831	-	-	-	-	2,293.4	764.5	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2	61.2		
Concentrate Dryer	000$ USD		10,731	-	-	-	-	5,094.0	1,698.0	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8	135.8		
Assay Lab	000$ USD		2,370	-	-	-	-	1,125.0	375.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0		
Packaging and Storing	000$ USD		1,680	-	-	-	-	797.4	265.8	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3	21.3		
Auxilliaries	000$ USD		18,588	-	-	-	-	8,823.4	2,941.1	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3	235.3		
FBR Plant																																								
Phase 1 Plant - Equipment	000$ USD		62,305	-	-	-	-	62,304.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Phase 1 Plant - Other Direct Costs	000$ USD		124,610	-	-	-	-	124,609.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Phase 1 Plant - Indirect Costs	000$ USD		62,305	-	-	-	-	62,304.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FBR Site Construction	000$ USD		77,414					77,413.9	-																															
Phase 2 Plant - Equipment	000$ USD		93,457	-	-	-	-	-	93,457.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Phase 2 Plant - Other Direct Costs	000$ USD		186,915	-	-	-	-	-	186,914.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Phase 2 Plant - Indirect Costs	000$ USD		93,457	-	-	-	-	-	93,457.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
FBR Site and Plant - Sustaining Capital	000$ USD		91,588	-	-	-	-	-	1,246.1	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2	3,115.2		
Tailings and Water Management																																								
Fresh Water Supply	000$ USD		480	-	-	-	225.0	75.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	-	-
Water Storage Ponds and Distribution	000$ USD		640	-	-	-	300.0	100.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	-	-
Settling Ponds	000$ USD		800	-	-	-	375.0	125.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	-	-
Potable Water	000$ USD		480	-	-	-	225.0	75.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	-	-
Sewage Treatment Plant	000$ USD		1,120	-	-	-	525.0	175.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	-	-
TSF Infrastructure: power, roads, monitoring	000$ USD		1,600	-	-	-	750.0	250.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-

Discharge Water Pipeline	000$ USD		80	-	-	-	37.5	12.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-	-
Effluent Water Treatment	000$ USD		8,000	-	-	-	3,750.0	1,250.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	-	-
Tailings Storage Facility (TSF)	000$ USD		34,000	-	-	-	-	15,000.0	-	-	-	-	-	-	-	-	-	-	-	-	6,333.3	-	-	-	-	-	-	-	6,333.3	-	-	-	-	-	-	6,333.3	-	-	-	-
Supernatant Reclaim System	000$ USD		3,200	-	-	-	1,500.0	500.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	-	-
Slurry Pipeline	000$ USD		1,600	-	-	-	750.0	250.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	-	-
Plant site - culverts, trenches, etc	000$ USD		128	-	-	-	60.0	20.0	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	-	-
Diversion Ditches	000$ USD		160	-	-	-	75.0	25.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	-	-
			-																																					
Off-site Mine Site Infrastructure																																								
Site Access Road	000$ USD		42,000	-	-	26,250.0	-	-	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	525.0	-	-
Power Transmission Line	000$ USD		47,616	-	-	29,760.0	-	-	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	595.2	-	-
Gas Pipeline	000$ USD		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			-																																					
Construction Indirects																																								
EPCM and Studies	000$ USD		44,300	-	-	-	33,225.3	11,075.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction Offices, Facilities, Services	000$ USD		5,907	-	-	-	5,906.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction Equipment & Tools	000$ USD		3,544	-	-	-	3,544.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Construction Power and Utilities	000$ USD		3,249	-	-	-	3,248.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aggregate and Concrete Batch Plant	000$ USD		2,953	-	-	-	2,953.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
First Fill, Spares & Consumables	000$ USD		2,000	-	-	-	-	2,000.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Expenses	000$ USD		1,477	-	-	-	738.3	738.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Owner's Costs																																								
Corporate Office Team	000$ USD		194,922	-	-	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	5,906.7	-	-
Pre-operation	000$ USD		17,720	-	-	5,906.7	5,906.7	5,906.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Communities and Environmental	000$ USD		126,699	-	-	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	3,839.4	-	-
Other Expenses	000$ USD		97,461	-	-	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	2,953.4	-	-
Capital Contingency																																								
Contingency - Equipment	000$ USD	**25%**	77,233	-	-	-	3,768.8	31,282.9	28,164.2	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	483.3	-	-
Contingency - Buildings	000$ USD	**25%**	134,457	-	-	6,562.5	960.0	50,142.5	70,399.9	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	220.6	218.1	218.1	-	-
Financial																																								
				-																																				
GRAND TOTAL - Capital	**000$ USD**		**1,854,496**	**-**	**-**	**81,179**	**95,654**	**551,651**	**513,251**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**26,809**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**26,809**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**20,475**	**26,809**	**20,463**	**20,463**	**-**	**-**
Environmental and Closure																																								
Communities and Environmental	000$ USD		42,528	0.0	0.0	0.0	0.0	0.0	1445.4	1923.0	1736.8	1500.7	1503.5	1400.8	1384.6	1557.8	1521.2	1842.7	1444.4	1463.0	1477.3	1304.5	1314.2	1544.8	1408.0	1360.3	1605.9	1396.8	1326.1	1480.2	1524.5	1472.5	1445.9	1215.4	1095.3	1045.4	932.3	854.7	0.0	0.0
Other Expenses	000$ USD		42,781	0.0	0.0	0.0	0.0	0.0	1449.8	1931.8	1745.6	1509.5	1512.3	1409.6	1393.4	1566.6	1530.0	1851.5	1453.2	1471.8	1486.1	1313.3	1323.0	1553.6	1416.8	1369.1	1614.7	1405.6	1334.9	1489.0	1533.3	1481.3	1454.7	1224.2	1103.3	1053.1	939.1	860.5	0.0	0.0
Closure/Rehab.	000$ USD		84,761	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,714.2	12,714.2	29,666.4	29,666.4
Surety Bond	000$ USD		38,142	-	-	-	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	1,271.4	-	-	-	-
PROJECT CASHFLOW MODEL																																								
Gross Revenues	M$ USD		19,540	-	-	-	-	-	340.2	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	680.3	621.1	592.8	528.7	448.6	-	-
Cash Operating Costs																																								
Open Pit Mine	M$ USD		732	-	-	-	35.5	50.5	50.5	50.5	28.0	21.7	21.7	24.9	28.0	36.5	37.2	31.7	28.0	24.8	21.6	21.7	21.7	21.9	21.9	21.9	21.8	21.8	21.9	16.2	9.6	9.4	9.4	7.0	7.5	7.4	-	-	-	-
Concentrator	M$ USD		304	-	-	-	-	-	3.5	6.2	7.3	9.3	9.3	10.6	10.8	8.7	9.1	6.6	10.0	9.7	9.6	12.1	11.9	8.8	10.4	11.2	8.3	10.6	11.7	9.5	9.0	9.6	9.9	14.1	14.5	14.5	14.5	12.3	-	-
FBR Plant	M$ USD		5,353	-	-	-	-	-	97.1	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	186.0	170.5	163.1	146.4	125.4	-	-
Cash Operating Costs	M$ USD		6,389	-	-	-	35.5	50.5	151.1	242.7	221.3	217.0	217.0	221.4	224.8	231.2	232.3	224.3	224.0	220.6	217.1	219.8	219.7	216.7	218.4	219.1	216.0	218.4	219.6	211.8	204.6	205.0	205.3	207.1	192.5	185.0	160.8	137.7	-	-
Product Transport, etc	M$ USD		107	-	-	-	-	-	1.9	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.4	3.2	2.9	2.5	-	-

Royalties	M$ USD		253	-	-	-	-	-	4.4	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.0	7.7	6.8	5.8	-	-
Total Cash Costs	M$ USD		**6,748**	**-**	**-**	**-**	**36**	**50**	**157**	**255**	**234**	**230**	**230**	**234**	**237**	**244**	**245**	**237**	**236**	**233**	**230**	**232**	**232**	**229**	**231**	**232**	**229**	**231**	**232**	**224**	**217**	**218**	**218**	**220**	**204**	**196**	**171**	**146**	**-**	**-**
Net Cash Operating Margin (EBITDA)	M$ USD		12,791	-	-	-	(36)	(50)	183	425	447	451	451	446	443	437	436	443	444	447	451	448	448	451	449	449	452	449	448	456	463	463	462	461	417	397	358	303	-	-
Capital Expenditures	M$ USD																																							
Initial/expansion capital	M$ USD		728.5	-	-	81.2	95.7	551.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sustaining capital	M$ USD		1,126.0	-	-	-	-	-	513.3	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	26.8	20.5	20.5	20.5	20.5	20.5	20.5	20.5	26.8	20.5	20.5	20.5	20.5	20.5	20.5	26.8	20.5	20.5	-	-
Mine Closure / Surety Bond	M$ USD		122.9	-	-	-	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	12.7	12.7	29.7	29.7
Changes in Working Capital	M$ USD		-	-	-	-	-	72.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(72.8)	-
Clean Technology Manufacturing Investment Tax Credit (CTM ITC)	M$ USD		64.4	-	-	-	-	-	64.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Cash Flow Before Tax	M$ USD		10,878	-	-	(81.2)	(132.5)	(676.3)	(267.3)	403.4	424.8	429.1	429.0	424.6	421.3	414.8	413.8	421.8	422.1	425.5	422.6	426.2	426.4	429.3	427.7	427.0	430.0	427.7	420.1	434.3	441.4	441.0	440.7	438.9	395.4	368.8	324.9	269.5	43.2	(29.7)
Ontario Corporate Tax - Payable	M$ USD		119	-	-	-	-	-	2.4	-	-	-	-	-	3.6	2.7	3.5	4.4	4.9	4.9	5.8	5.5	5.9	6.0	5.7	6.0	6.0	4.9	6.4	8.1	8.9	8.8	8.6	3.4	2.1	-	-	-	-	-
Canada Corporate Tax - Payable	M$ USD		865	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13.2	23.0	32.6	39.1	44.4	47.6	50.1	52.4	53.5	51.8	55.0	57.0	57.5	57.9	58.0	51.8	46.4	40.3	32.4	0.5	-	-
Net Cash Flow after Tax	M$ USD		9,895	-	-	(81.2)	(132.5)	(676.3)	(269.7)	403.4	424.8	429.1	429.0	424.6	417.7	412.1	410.3	417.4	403.9	397.5	384.3	381.6	376.1	375.7	371.8	368.5	370.5	371.0	358.6	369.2	375.0	374.2	374.1	383.7	346.9	328.5	292.5	269.0	43.2	(29.7)
BASE CASE ECONOMIC RESULTS																																								
Pre-Tax Results																																								
Net cash flow before tax			10,878	0.0	0.0	81.2	132.5	676.3	267.3	403.4	424.8	429.1	429.0	424.6	421.3	414.8	413.8	421.8	422.1	425.5	422.6	426.2	426.4	429.3	427.7	427.0	430.0	427.7	420.1	434.3	441.4	441.0	440.7	438.9	395.4	368.8	324.9	269.5	43.2	29.7
Cumulative cash flow				0.0	0.0	81.2	213.6	889.9	1157.2	753.9	329.1	100.0	529.0	953.7	1374.9	1789.8	2203.5	2625.3	3047.4	3472.8	3895.4	4321.7	4748.0	5177.3	5605.0	6032.0	6462.0	6889.6	7309.8	7744.0	8185.5	8626.5	9067.2	9506.1	9901.6	10270.3	10595.3	10864.7	10907.9	10878.2
Pre-tax Payback period (undisc., yrs)	years	3.8		0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pre-tax IRR (XIRR)		27.7%																																						
Discount factor	5.0%					1.00	0.95	0.91	0.82	0.78	0.75	0.71	0.68	0.64	0.61	0.58	0.56	0.53	0.51	0.48	0.46	0.44	0.42	0.40	0.38	0.36	0.34	0.33	0.31	0.30	0.28	0.27	0.26	0.24	0.23	0.22	0.21	0.20	0.19	0.18
Discounted Cash Flow B/T (8.0%/y)	M$ USD	4,179				81.2	126.1	613.4	219.9	316.0	317.0	304.9	290.4	273.7	258.6	242.5	230.4	223.7	213.2	204.7	193.6	186.0	177.2	169.9	161.2	153.3	147.0	139.2	130.3	128.2	124.2	118.1	112.4	106.6	91.5	81.3	68.2	53.9	8.2	5.4
Cumulative DCF B/T (8.0%/y)				0.0	0.0	81.2	207.3	820.7	1040.6	724.6	407.6	102.7	187.7	461.4	720.0	962.6	1193.0	1416.6	1629.8	1834.5	2028.1	2214.0	2391.2	2561.1	2722.3	2875.5	3022.5	3161.8	3292.0	3420.3	3544.4	3662.6	3775.0	3881.6	3973.1	4054.4	4122.6	4176.4	4184.6	4179.3
Payback period (discounted, yrs)	years	4.4		0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Post-Tax Results																																								
Net cash flow after tax			9,895	0.0	0.0	81.2	132.5	676.3	269.7	403.4	424.8	429.1	429.0	424.6	417.7	412.1	410.3	417.4	403.9	397.5	384.3	381.6	376.1	375.7	371.8	368.5	370.5	371.0	358.6	369.2	375.0	374.2	374.1	383.7	346.9	328.5	292.5	269.0	43.2	29.7
Cumulative cash flow				0.0	0.0	81.2	213.6	889.9	1159.6	756.2	331.4	97.6	526.7	951.3	1369.0	1781.1	2191.4	2608.8	3012.7	3410.2	3794.5	4176.1	4552.2	4928.0	5299.8	5668.3	6038.9	6409.8	6768.5	7137.6	7512.7	7886.9	8261.0	8644.8	8991.7	9320.1	9612.7	9881.6	9924.8	9895.1
After-tax Payback period (undisc., yrs)	years	3.8		0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
After-tax IRR (XIRR)		27.4%																																						
Discount factor	5.0%					1.00	0.95	0.91	0.82	0.78	0.75	0.71	0.68	0.64	0.61	0.58	0.56	0.53	0.51	0.48	0.46	0.44	0.42	0.40	0.38	0.36	0.34	0.33	0.31	0.30	0.28	0.27	0.26	0.24	0.23	0.22	0.21	0.20	0.19	0.18
Discounted Cash Flow A/T (8.0%/y)	M$ USD	3,855				81.2	126.1	613.4	221.9	316.0	317.0	304.9	290.4	273.7	256.4	241.0	228.5	221.3	204.0	191.2	176.0	166.5	156.3	148.7	140.1	132.3	126.7	120.8	111.2	109.0	105.5	100.2	95.4	93.2	80.3	72.4	61.4	53.8	8.2	5.4
Cumulative DCF A/T (8.0%/y)				0.0	0.0	81.2	207.3	820.7	1042.6	726.5	409.6	104.6	185.8	459.5	715.9	956.9	1185.3	1406.7	1610.7	1801.9	1977.9	2144.4	2300.7	2449.4	2589.5	2721.8	2848.5	2969.3	3080.5	3189.5	3295.0	3395.2	3490.6	3583.9	3664.1	3736.5	3797.9	3851.7	3859.9	3854.5
Payback period (discounted, yrs)	years	4.4																																						