Technical Report on the Albany Graphite Project, Ontario, Canada Report for NI 43-101

Albany Graphite Corp.

SLR Project No: 233.03783.R0000

Effective Date: April 30, 2023

Signature Date: July 31, 2023

Prepared by: SLR Consulting (Canada) Ltd.

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FINAL

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1 copy – Albany Graphite Corp. 1 copy – SLR Consulting (Canada) Ltd.

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1.0 SUMMARY

1.1 Executive Summary

SLR Consulting (Canada) Ltd. (SLR) was retained by Albany Graphite Corp. (AGC), a wholly owned subsidiary of Zentek Ltd. (Zentek), to prepare an independent Technical Report on the Albany Graphite Project (the Project or the Property), located in northern Ontario, Canada. The purpose of this report is to support the execution of a property purchase agreement (the Agreement) and the listing of AGC on a Canadian stock exchange and to update the Mineral Resource estimate on the Property. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). SLR visited the Project in 2013 and most recently on March 15, 2023.

Roscoe Postle Associates Inc. (RPA), a predecessor company to SLR, has previously completed a Mineral Resource Estimate (RPA, 2014) and a Preliminary Economic Assessment (PEA) on the Project in 2015 (RPA, 2015).

The Project is located west of the communities of Constance Lake First Nation and Hearst, Ontario, within 30 km of the Trans-Canada Highway, close to established infrastructure including roads, rail, power transmission lines, and a natural gas pipeline. This Technical Report covers the Albany claim block, which includes the Albany graphite deposit.

SLR estimated Mineral Resources for the Albany graphite deposit using drill hole data available as of April 30, 2023 (Table 1-1). The Mineral Resource estimate is based on a potential combined open pit (OP) and underground (UG) mining scenario. Although SLR has estimated the Mineral Resource using an OP and UG scenario, additional future studies will be required to determine the most economic mining method(s) to develop the deposit.

	Cut-off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
ОР				
Indicated	1.22	22.9	4.07	933,000
Inferred	1.22	3.4	2.55	87,000
UG				
Indicated				
Inferred	1.76	9.7	2.98	288,000
Total Indicated	1.22	22.9	4.07	933,000
Total Inferred	Variable	13.1	2.87	375,000

Table 1-1:Mineral Resource Estimate – April 30, 2023Albany Graphite Corp. - Albany Graphite Project

Notes:

1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) were followed for Mineral Resources.

2. Cg – graphitic carbon, Mt – million tonnes

 Mineral Resources are estimated using a long-term price of US\$8,000 per tonne Cg, and an exchange rate of US\$0.75= C\$1.00.

4. 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.

5. Open pit Mineral Resources are constrained by a pit-shell generated in Whittle software above a cut-off grade of 1.22% Cg.

6. Underground Mineral Resources are constrained within underground reporting shapes to demonstrate Reasonable Prospects for Eventual Economic Extraction and reported above a cut-off grade of 1.76% Cg.

7. Numbers may not add due to rounding.

1.2 Conclusions

SLR offers the following conclusions on the Albany Graphite Project by area:

1.2.1 Geology and Mineral Resources

- Zentek, now AGC, discovered a unique graphite deposit of hydrothermal origin on the Property. The Albany graphite deposit is located in the Superior Province of the Canadian Shield, at the terrane boundary between the Quetico Subprovince to the north and the Marmion Subprovince to the south.
- The epigenetic deposit contains a large volume of highly crystalline, fluid-deposited graphite within an igneous host. 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. The deposit is interpreted as a vent pipe breccia that formed from carbon dioxide (CO₂)-rich fluids that evolved due to pressure-related degassing of syenites of the Albany Alkalic Complex.
- Diamond drilling has outlined two graphite mineralized breccia pipes with three-dimensional continuity, and size and grades that can potentially be exploited economically.

- AGC's protocols for drilling, sampling, analysis, security, and database management meet industry accepted practices. The drill hole database was verified by the QPs and is suitable for Mineral Resource estimation work.
- SLR estimated Mineral Resources for the Albany graphite deposit using drill hole data available as
 of April 30, 2023. The Mineral Resource estimate is based on a potential combined open pit and
 underground mining scenario. SLR estimates Indicated Mineral Resources to total 22.9 million
 tonnes (Mt) at an average grade of 4.1% Cg, containing 933,000 tonnes of Cg. In addition, Inferred
 Mineral Resources are estimated to total 13.1 Mt at an average grade of 2.9% Cg, containing
 375,000 tonnes of Cg.
 - In order to demonstrate Reasonable Prospects of Eventual Economic Extraction (RPEEE), open pit Mineral Resources were reported within an optimized Whittle pit shell at a cut-off grade of 1.22% Cg and UG Mineral Resources were reported within underground resource reporting shapes, satisfying the minimum mining size and continuity criteria, and using a cut-off grade of 1.76% Cg.
 - All of the Indicated Mineral Resources are estimated as open pit resources constrained by the Whittle pit shell.
 - Inferred Mineral Resources include 3.4 Mt Open Pit (OP) resources at an average grade of 2.5% Cg, containing 87,000 tonnes of Cg constrained by a Whittle pit shell, and 9.7 Mt of Underground (UG) resources below the pit shell at an average grade of 3.0% Cg, containing 288,000 tonnes of Cg.
- There are no Mineral Reserves estimated on the Property.
- The QPs are not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

1.2.2 Metallurgical Testing and Mineral Processing

- Test work was conducted to support a PEA that was completed in 2015; the test work was carried out primarily at SGS Canada Inc. (SGS) in Lakefield, Ontario.
- Metallurgical test results at a bench scale level have demonstrated the following:
 - Graphite concentrate can be produced via flotation targeting 88.6% graphitic carbon (Cg) and 84.54% recovery.
 - Graphite concentrate was purified to yield a final graphite product grading 99.94% Cg and 89.13% recovery, for an overall recovery from flotation and purification of 75.40%. However, it is important to note that the test work conducted was limited, i.e., these results are only indicative and based on a limited number of samples.
- The metallurgical test work focused on achieving product purity and optimization of the process. The target product purity (>99.95% Cg) was achieved in one of the tests, but the same purity was not achieved during later optimization test work. This indicates that further improvements in optimization, process design, performance, and cost estimation are to be expected with advanced levels of study.



• The metallurgical response of the deposit has been evaluated using two composite samples (East Pipe and West Pipe) for flotation testing and using a homogenized mixture of flotation concentrates produced from East and West pipe samples for purification testing.

1.3 Recommendations

The SLR QPs offer the following recommendations by area:

1.3.1 Geology and Mineral Resources

- 1. Review the expected values for the Certified Resource Materials used for the quality control and quality assurance program.
- 2. For drill core duplicates, submit two half core samples instead of quarter core.

1.3.2 Metallurgical Testing and Mineral Processing

- 1. Conduct additional metallurgical testing with the following objectives:
 - Further optimize the purification process and demonstrate that the target purity of >99.95% can be consistently achieved.
 - Confirm laboratory results, specifically related to regrinding, liquid-solid separation, reagent consumption, and thickening of products (concentrate and tails) for six stages of cleaner flotation.
 - Complete analysis and characterization of process wastes.
 - Assess corrosion risks related to the purification process.
 - Review deposit variability.

1.3.3 Proposed Budget

SLR recommends a two phase budget of C\$5.83 million to advance the Albany graphite deposit (Table 1-2). Phase 2 is not contingent on Phase 1. The proposed work program includes the following items:

Phase 1 (2023):

• Perimeter Survey for Lease Blocks

Phase 2

- A marketing study
- Continued battery and metallurgical test work
- Various social and environmental baseline studies

Table 1-2:Proposed BudgetAlbany Graphite Corp. - Albany Graphite Project

C\$ 000
375

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Item	C\$ 000
Phase 2	
Market Development Work	500
Metallurgical and Battery Test Work	1,375
Community Engagement	200
Environmental Baseline Studies (second year of baseline study) and Permitting	1,400
Hydrogeology/Water Balance Study (pump test)	500
Geotechnical Drilling and Analysis	950
Contingency 10%	530
Total	5,830

1.4 Technical Summary

1.4.1 Property Description and Location

Zentek, now AGC, originally held a group of claim blocks (the Property) located in a large area of twenty townships north of Lake Superior and west of James Bay, Canada, within the Porcupine Mining District of northern Ontario, Canada. The claim blocks 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 (PGM) mineralization. The claim blocks were all located north of the Trans-Canada Highway (Highway 11).

This Technical Report covers a group of claims known as the Albany Claims, which contains the Albany graphite deposit and is 100% owned by AGC. The Property has a total of 521 claim units, for a total area of 9,760 ha, and is subject to two NSR royalties as described in the following subsection. Most claims making up the Property are located in the Pitopiko River Area (G-1706), with the westernmost claims located in the Feagan Lake Area (G-1691). The Town of Hearst is situated approximately 65 km to the southeast of Albany claim block.

All claims are in good standing until 2026, including the claims that host the Albany graphite deposit.

1.4.2 Royalties, History of Ownership, and Agreement with Cliffs

In November 2012, Zentek reached an agreement with Cliffs and acquired 100% ownership of Claim Block 4F. Pursuant to the terms of the transaction, Zentek and Cliffs agreed to the following with respect to Claim Block 4F:

- Zentek issued to Cliffs (or its designated affiliate) a total of 1,250,000 Zentek shares as follows: (i) 500,000 shares upon signing the agreement (completed); (ii) 250,000 shares to be issued upon completion of a Pre-Feasibility Study; and (iii) 500,000 shares to be issued upon completion of a Feasibility Study; and
- Zentek granted to Cliffs an NSR royalty of 0.75% on Claim Block 4F, of which 0.5% can be purchased at any time for C\$500,000.

There is an additional 2% NSR royalty on the Property that was granted to EGC, of which 1.0% can be purchased at any time for C\$1,000,000. This royalty was part of the original 2009 Project Agreement



between CNRECI and EGC, which subsequently became a part of the 2010 Amended Albany Option and Joint Venture Agreement between Albany, Cliffs, CNRECI, and EGC. AGC is currently reviewing all historic agreements related to the Albany Graphite Property (Claim Block 4F), especially with respect to potential future royalty payments.

1.4.3 First Nation Agreement

The Project claim block is located in Constance Lake First Nations' (CLFN) Traditional Territory. On July 18, 2012, Zentek (now AGC) and CLFN announced that they had signed an Exploration Agreement for a mutually beneficial and co-operative relationship regarding exploration and pre-feasibility activities on the Project. Among other things, CLFN will participate in an implementation committee and receive, along with certain other First Nation communities, preferential opportunities for employment and contracting. Zentek also agreed to contribute to a social fund for the benefit of CLFN children, youth, and elders, which was completed in 2012 and 2013.

Zentek and CLFN signed an Implementation Agreement (IA) in March 2021. The IA sets out the governance, roles, responsibilities, and activities for establishing the Project Partnership Structure (PPS) to advance the Albany Graphite development (Development) and the relationship between Zentek and CLFN. The IA will create a working committee drawn from members of CLFN and Zentek (now AGC) to engage around matters related to project development, including considerations such as environmental assessment, provincial and federal government liaison, community benefits, traditional knowledge, informed consent, economic development, jobs, human capital, and ultimately, the impact of the Development.

1.4.4 Existing Infrastructure

There is currently no permanent infrastructure on the Property. An all-weather logging road runs within approximately five kilometres of the graphite deposit – access from that point is via winter road. The Project is near the communities of Constance Lake First Nation and Hearst. For private charter flights, the nearest airport is in Hearst, approximately one hour away by road. For regularly scheduled commercial flights, the Timmins airport is approximately four hours away by road.

A power transmission line and a natural gas pipeline run along the Trans-Canada Highway, 30 km south of the Project. An active rail line is located 70 km away via road, while the abandoned Ontario Northland Railway passes to the south within 26 km.

1.4.5 History

The Project claims were staked by CNRECI during the late summer and fall of 2009, followed by additional staking in the winter and spring of 2010. The Project claims cover sections of ground that are reported to have been explored by eight exploration companies, exploring for commodities other than graphite: Nagagami River Prospecting Syndicate, Algoma Ore Properties Ltd. (Algoma), Satellite Metal Mines Limited, Keevil Mining, Cedam Limited, Shell Canada Explorations Limited (Shell Canada), East-West Resource Corporation, and Gowest Amalgamated Resources Limited.

The majority of the Project claim blocks have not been previously explored.

Limited historical exploration within the Property included mostly geophysical surveys and drilling. Airborne magnetic and electromagnetic (EM) surveys identified a number of magnetic anomalies and electromagnetic conductors, verified by ground surveys and drilling. A total of three drill holes were completed at the Property by previous owners Algoma and Shell Canada, which confirmed the results of



the geophysical surveys, however, did not intersect any mineralization. Algoma concluded that mineralization could possibly be associated with other parts of the structure and recommended that the Property be referred to other companies interested in intrusive structures.

There are no historical mineral resource estimates known for the Property.

1.4.6 Geology and Mineralization

The Property area is covered by a layer of overburden averaging 44 m, and there are no surface exposures of bedrock. Consequently, no surface geological mapping has been reported for the area and interpretation of the 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.

The Albany graphite deposit Is hosted within gneissic to unfoliated syenite, granite, diorite, and monzonite of the Albany Alkalic Complex. The rocks of the complex are crosscut by younger dykes, ranging from felsic to mafic in composition. The Precambrian basement rocks are overlain with Paleozoic limestone and are overprinted by graphite near the margins of the graphite breccia pipes.

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.

1.4.7 Exploration Status

Zentek, now AGC, commenced exploration on the claim blocks in 2010. Geotech airborne electromagnetic (EM) surveys identified 22 targets for follow-up modelling and drill testing, two (Victor and Uniform) situated on Claim Block 4F. Drilling at the Uniform target led to the discovery of the Albany graphite deposit.

In 2013, a Crone surface time-domain EM (TDEM) survey was conducted on the Property targeting the drill-confirmed East and West graphitic breccia pipes that were initially identified in the 2010 airborne survey. The TDEM ground survey appears to have outlined the lateral extent of the two graphite breccia pipes, although the boundary of the model is considered roughly approximate.

As of April 30, 2023, the effective date of the current Mineral Resource estimate, AGC had drilled 65 holes totalling 26,284 m on the deposit, all of which were used to estimate resources.

1.4.8 Mineral Resources

SLR estimated Mineral Resources for the Albany graphite deposit with an effective date of April 30, 2023 (Table 1-3). The Mineral Resource estimate is based on a potential combined open pit and underground mining scenario.

	Cut-off Grade	Tonnage	Grade	Contained Graphitic Carbon
	(% Cg)	(Mt)	(% Cg)	(t Cg)
OP				
Indicated	1.22	22.9	4.07	933,000
Inferred	1.22	3.4	2.55	87,000
UG				
Indicated				
Inferred	1.76	9.7	2.98	288,000
Total Indicated	1.22	22.9	4.07	933,000
Total Inferred	Variable	13.1	2.87	375,000

Table 1-3:Mineral Resource Estimate – April 30, 2023Albany Graphite Corp. – Albany Graphite Project

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

- 2. Cg graphitic carbon
- 3. Mineral Resources are estimated using a long-term price of US\$8,000 per tonne Cg, and an exchange rate of US\$0.75= C\$1.00.
- 4. Bulk density is 2.62 t/m³ and 2.61 t/m³ for West pipe domains 20 and 21 and 2.59 t/m³ and 2.63 t/m³ for East pipe domains 10 and 14.
- 5. Open pit Mineral Resources are constrained by a pit-shell generated in Whittle software above a cut-off grade of 1.22% Cg.
- 6. Underground Mineral Resources are constrained within underground reporting shapes to demonstrate Reasonable Prospects for Eventual Economic Extraction and reported above a cut-off grade of 1.76% Cg.
- 7. Numbers may not add due to rounding.

Mineral Reserves have not yet been estimated for the Albany graphite deposit.

1.4.9 Mineral Processing and Metallurgical Testing

Development test work that forms the basis of the conceptual flowsheet was carried out at SGS in Lakefield, Ontario. The test work programs used representative mineralized samples from the Albany graphite deposit. The test work was completed in three different campaigns during the 2013 to 2019 period.

The conceptual beneficiation flowsheet tested included flotation to produce a concentrate, followed by purification to produce a graphite product containing a minimum of 99.95% Cg.

The primary steps in beneficiation include crushing, grinding, and concentration by flotation. The primary steps in purification include alkaline treatment (a caustic soda (NaOH) leaching stage before and after a low temperature (350°C) baking stage, followed by a mild hydrochloric acid (HCl) leach to produce a purified graphite product. The graphite product will be filtered, washed, dried, and bagged for sale and transportation to market.

The average graphite purity and recovery achieved in various stages of metallurgical testing during the 2013 to 2015 test work are presented in Table 1-4.

	Flotation Overall	Stage 1 Leach	Stage 2 Leach	Stage 3 Leach	Purification Overall	Process Overall
Purity, % Cg	88.60	97.96	99.27	99.94	99.94	99.94
% Recovery	84.54	91.43	90.18	99.90	89.13	75.40

Table 1-4:Graphite Purity and Recovery (2013 to 2015)Albany Graphite Corp. – Albany Graphite Project

A test work program focused on graphite concentrate purification was undertaken in 2018, with the objective of investigating the alternatives to the alkaline baking process developed under the baseline purification test work program. This program looked at caustic pressure leach (ZPL) and acid pressure leach (ZHL). The results indicated that a purity of 97.6% was achieved via the ZPL method and 99.8% for the ZHL method.

In 2019, another test work program was conducted to further examine the process developed during the 2018 program. This program included a series of six locked cycles of caustic pressure leaching (ZPL) and acid leaching with caustic regeneration and acid neutralisation followed by acidic fluoride leaching (ZHL) with acid neutralisation. The results indicated that a purity of 97.8% for ZPL and 99.6% for ZHL method could be achieved.

During 2013 to 2015 test work, a product purity of 99.9% Cg, which was the target at the time, was achieved. The same purity was not achieved with the 2018 and 2019 test work campaigns. The 2018 and 2019 test work demonstrated that 99.6% purity can be achieved under locked cycle environment, but further test work is required to reach the current target (>99.95%) purity levels.

2.0 INTRODUCTION

SLR Consulting (Canada) Ltd. (SLR) was retained by Albany Graphite Corp. (AGC), a wholly owned subsidiary of Zentek Ltd. (Zentek), to prepare an independent Technical Report on the Albany Graphite Project (the Project or the Property), located in northern Ontario, Canada. The purpose of this report is to support the execution of a property purchase agreement (the Agreement) and the listing of AGC on a Canadian stock exchange, and to update the Mineral Resource estimate on the Property. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). SLR visited the Project in 2013 and most recently on March 15, 2023.

Roscoe Postle Associates Inc. (RPA), a predecessor company to SLR, has previously completed a Preliminary Economic Assessment (PEA) on the Project in 2015 (RPA, 2015).

The Company was incorporated in Ontario, Canada, as 1774119 Ontario Limited on July 29, 2008. Pursuant to Articles of Amendment dated November 24, 2009, the Company changed its name to Zenyatta Ventures Ltd. On January 16, 2019, the Company filed Articles of Amendment changing its name from "Zenyatta Ventures Ltd." To "ZEN Graphene Solutions Ltd." On October 27, 2021 (effective October 28, 2021), the Company filed Articles of Amendment changing its name from "Zentek Ltd."

The Project is located west of the communities of Constance Lake First Nation and Hearst, Ontario, within 30 km of the Trans-Canada Highway, close to established infrastructure including roads, rail, power transmission lines, and a natural gas pipeline. This Technical Report covers the Albany claim block, which includes the Albany graphite deposit.

2.1 Sources of Information

A site visit was carried out Marie-Christine Gosselin, P.Geo., SLR Project Geologist on March 15, 2023.

Discussions were held with Mr. Peter Wood, P.Eng., P.Geo., Vice President, Development, Albany Graphite Corp, and Vice President, Special Projects, Zentek Ltd.

The Qualified Persons (QP) for this Technical Report are Ms. Gosselin, Katharine Masun, P.Geo., SLR Principal Geologist, and Arun Vathavooran, CEng FIMMM, SLR Consultant Metallurgist. All authors of this Technical Report are independent QPs as defined in NI 43-101. Table 2-1 lists the QPs and their responsibilities for this Technical Report.

QP, Designation, Title	Responsibility by Section		
Marie-Christine Gosselin, P.Geo., Project Geologist	1.2.1, 1.3.1, 2 to 12, 14, 25.1, and 26.1		
Katharine Masun, P.Geo., Principal Geologist	1.1, 1.2.1, 1.3.1, 1.3.3, 2 to 12, 14, 25.1, and 26.1		
Arun Vathavooran, CEng FIMMM, Consultant Metallurgist	1.2.2, 1.3.2, 13, 25.2, and 26.2		

Table 2-1:Qualified Persons and ResponsibilitiesAlbany Graphite Corp. – Albany Graphite Project

The documentation reviewed, and other sources of information, are listed at the end of this report in Section 27 References.

SLR, formerly RPA, previously completed a site visit to the Project in 2013.



2.2 List of Abbreviations

Units of measurement used in this report conform to the metric system. All currency in this report are expressed in US dollars (US\$) unless otherwise noted.

μ	micron	km ²	square kilometre
μg	microgram	km/h	kilometre per hour
а	annum	kPa	kilopascal
А	ampere	kW	kilowatt
°C	degree Celsius	kWh	kilowatt-hour
C\$	Canadian dollars	L	litre
Cg	graphitic carbon	lb	pound
Ct	total carbon	L/s	litres per second
cm	centimetre	m	metre
cm ²	square centimetre	М	mega (million); molar
d	day	m²	square metre
dia	diameter	m ³	cubic metre
dmt	dry metric tonne	MASL	metres above sea level
dwt	dead-weight ton	Ma	million years (ago)
°F	degree Fahrenheit	m³/h	cubic metres per hour
ft	foot	mi	mile
ft ²	square foot	min	minute
ft ³	cubic foot	μm	micrometre
ft/s	foot per second	mm	millimetre
g	gram	OZ	Troy ounce (31.1035g)
G	giga (billion)	ppb	part per billion
g/L	gram per litre	ppm	part per million
g/t	gram per tonne	RL	relative elevation
gr/ft ³	grain per cubic foot	S	second
gr/m³	grain per cubic metre	t	metric tonne
ha	hectare	tpa	metric tonne per year
hr	hour	tpd	metric tonne per day
Hz	hertz	US\$	United States dollar
in.	inch	W	watt
in ²	square inch	wmt	wet metric tonne
J	joule	wt%	weight percent
k	kilo (thousand)	yd ³	cubic yard
kg	kilogram	yr	year
km	kilometre		

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2.3 List of Acronyms

abrasion index
acid pressure leach
Acoustic Televiewer
Albany Alkalic Complex
azimuth pointing system
ball mill work index
caustic pressure leach
Certified Reference Material
coated spherical purified graphite
crushing work index
East Pipe
electromagnetic
hydrofluoric acid
Implementation Agreement
infra-red
Memorandum of Understanding
Mining Lands Administration System
National Instrument 43-101 Standards of Disclosure for Mineral Projects
open pit
quality assurance
quality control
platinum group metals
Preliminary Economic Assessment
Project Partnership Structure
Reasonable Prospects of Eventual Economic Extraction
Relative Percent Difference
reverse circulation drill
rock quality designation
rod mill work index
semi-autogenous grinding
standard deviation
time-domain electromagnetic
underground
versatile time domain electromagnetic
West Pipe



3.0 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by SLR for AGC. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to SLR at the time of preparation of this Technical Report.
- Assumptions, conditions, and qualifications as set forth in this Technical Report.

For the purpose of this Technical Report, SLR has relied on ownership information provided by Zentek (now AGC). The QPs have not researched property title or mineral rights for the Project and expresses no opinion as to the ownership status of the property. The QP checked the status of the mining claims of the Project, available online through the Mining Lands Administration System (MLAS) Map Viewer and found the claims to be in good standing. The data was retrieved on June 9, 2023.

Except for the purposes legislated under provincial securities laws, any use of this Technical Report by any third party is at that party's sole risk.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 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 4-1). Figure 4-2 shows a detailed location map, with the Project shown west of the communities of Constance Lake First Nation and Hearst, Ontario, and within 30 km of the Trans-Canada Highway (Highway 11). The Town of Hearst is situated approximately 65 km to the southeast of Albany claim block.

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4.2 Land Tenure

Zentek, now AGC, originally held a group of claim blocks located in a large area of twenty townships north of Lake Superior and west of James Bay, Canada, within the Porcupine Mining District of northern Ontario, Canada. The claim blocks 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, and platinum group metals (Cu-Ni-PGM) mineralization. At the time of Zentek's Initial Public Offering in December 2010, the Albany Project claims were 25% owned by and 75% owned by CNRECI, as defined by the 2010 Amended Albany Option and Joint Venture Agreement. The majority of the claims were staked during the summer and fall of 2009, followed by additional staking in the winter and spring of 2010.

This Technical Report covers the Albany Graphite Project (the Project), which contains the Albany graphite deposit and is 100% owned by AGC. The Albany Graphite Project was previously known as Block 4F. It is the only remaining claim block that made up the Albany Project, and includes a total of 521 claim units, for a total area of 9,760 ha. In April 2023, Zentek executed a property purchase agreement with its wholly owned subsidiary AGC to transfer the Albany Graphite Project (the Project or the Property) (Zentek, 2023).

The Project consists of 521 claims (461 Single Cell Mining Claims and 60 Boundary Cell Mining Claims) as summarized in Table 30-1 of Appendix 1. The claim block on which the Project is located is referred to as the Albany claims. The claims were staked between March to June 2010. All claims are in good standing until 2026 and there are sufficient reserves to meet assessment work requirements for an additional 36 years. The land tenure position is illustrated in Figure 4-3.

SLR is not aware of any environmental liabilities on the Property. AGC has advised that all required access agreements, consents, and permits to conduct the work completed to date on the Property are in hand. SLR is not aware of any significant factors and risks outside of normal approvals processes that may affect continued access, title, or the right or ability to perform the proposed pre-feasibility stage work program on the Property.



4-5

4.3 Royalties, History of Ownership, and Agreement with Cliffs

In November 2012, Zentek (now AGC) reached an agreement with CNRECI and acquired 100% ownership of the Albany Graphite Project claim block. Before this date and according to the agreement, Zentek had already exercised its right to acquire an 80% interest in the Property by spending a total of \$10 million on exploration on the larger group of Albany Project claims. After acquiring Cliffs' remaining 20% interest in the Project, Albany then held a 100% interest. According to the terms of the transaction, Zentek and Cliffs agreed to the following concerning the Albany Graphite Project claims:

- Zentek agreed to issue Cliffs (or its designated affiliate) a total of 1,250,000 Zentek shares as follows: (i) 500,000 shares upon signing the agreement (completed); (ii) 250,000 shares issued upon completion of a pre-feasibility study; and (iii) 500,000 shares issued upon completion of a feasibility study; and
- Zentek also granted Cliffs a 0.75% NSR royalty on the Project, of which 0.5% could be purchased at any time for C\$500,000.

There is an additional underlying 2% NSR royalty on the Albany Graphite Project granted to EGC, of which 1.0% could be purchased at any time for C\$1,000,000. This royalty was part of the original 2009 Project Agreement between CNRECI and EGC, which subsequently became a part of the 2010 Amended Albany Option and Joint Venture Agreement between Zentek, Cliffs, CNRECI, and EGC.

AGC is currently reviewing all historic agreements related to the Albany Graphite Property (Claim Block 4F) especially with respect to potential future royalty payments.

4.4 Agreements with Constance Lake First Nation

The Albany Graphite Project is located in Constance Lake First Nation's (CLFN) Traditional Territory. On July 18, 2012, Zentek (now AGC) and CLFN signed an Exploration Agreement for a mutually beneficial and co-operative relationship regarding the exploration and pre-feasibility activities on the Project.

Subsequently, in September 2018, Zentek and CLFN signed a Memorandum of Understanding (MOU) to create a project partnership structure supporting the development of the Albany Graphite Project. The MOU reflects the transition of the Project from the exploration to the development stage. The original 2011 Exploration Agreement has continued to be in effect until a formal agreement on a new project partnership structure is in place. The new agreement provides for more flexibility to accommodate alternative business models for the Project as it progresses. Under this agreement, both parties committed to creating a project partnership that will provide for the following:

- Shared governance, decision-making, and support for community engagement for the Project
- Shared objectives and expectations for the Project
- Shared economic expectations and benefits for the Project

Pursuant to the July 13, 2011, Exploration Agreement, the July 19, 2018, Memorandum of Understanding and subsequent September 24, 2018, amendment, both parties signed an Implementation Agreement (IA) in March 2021. The IA sets out the governance, roles, responsibilities, and activities for establishing the Project Partnership Structure (PPS) to advance the Albany Graphite development (Development) and the relationship between AGC and CLFN. The IA will create a working committee drawn from members of CLFN and AGC to engage around matters related to project development, including considerations such as environmental assessment, provincial and federal government liaison, community benefits, traditional

knowledge, informed consent, economic development, jobs, human capital, and ultimately, the impact of the Development.

AGC and CLFN will continue working towards completing a formal agreement defining the future PPS and accelerating the project development.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The following section has been slightly modified from Carey (2012).

5.1 Accessibility

The Property is approximately 30 km to the north of the Trans-Canada Highway (Highway 11), however, current access to most of the Property is best achieved via helicopter in the summer and forestry access roads/winter road during the winter. Access via helicopter minimizes damage to the forest and/or vegetation. Boat or canoe access can also be used along the Nagagami River in the central area of the Property. Old forestry logging roads reach the southeast boundary of the Property, leading to several old ATV (all-terrain vehicle) trails through previously harvested forests just east of the Nagagami River. The winter access trail joins the end of the all-weather forestry road to the drill site, and it can be reached by travelling northwards up the Pitopiko Road from the Trans-Canada Highway.

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5.2 Climate

Most of the region has a continental climate with warm to hot summers (June to August; 25°_{L} to 35°_{L}) and cold winters (December to March, -10°C to -30°C with lows down to -45°C). Annual precipitation ranges from 600 mm to 900 mm.

Lakes and swamps are typically frozen and suitable for diamond drilling from December to April. Exploration can take place year-round with minor breaks during the spring thaw and winter freeze-up. Mining operations can take place all year round.

5.3 Local Resources

The town of Hearst (population approximately 5,000), located approximately 50 km to the southeast of the Project, has many facilities to keep an exploration camp well supplied. These include hotels, restaurants, a hospital, hardware stores, gas stations, a mining supply store, and an airport. Float plane and helicopter services are also available in Hearst. Mining personnel, equipment, and supplies can also be accessed from Timmins, a major mining and exploration centre located approximately 260 km by road southeast of Hearst.

5.4 Infrastructure

There is currently no permanent infrastructure on the Property. Logging roads run to within approximately five kilometres of the graphite deposit; access from the closest logging road to the exploration area is via winter road. The Project is near the communities of Constance Lake First Nation and Hearst. The nearest airport is in Hearst, approximately one hour by car. The Timmins airport with scheduled flights is approximately four hours away by road.

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 within the Hudson Bay-James Bay Lowlands, a vast wetland where the topography is essentially flat, low-lying, and swampy. Overburden is thick, averaging 44 m in the project area with little or no outcrop exposure. Paleozoic limestone cover rocks are exposed along the banks of the Nagagami River. The Nagagami River flows north to the east of the project area with several meandering tributaries flowing in from the east and west. Vegetation is dominated by wetlands with some areas of spruce and alder trees, and cedar swamps. Spruce and alder trees are also abundant along the banks of the Nagagami River and other smaller rivers.

6.0 HISTORY

6.1 **Prior Ownership**

The Albany Graphite Project is located within the larger Albany Project, which originally consisted of 28 claim blocks and covered large amounts of ground, a majority of which were staked by 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, and platinum group metals (Cu-Ni-PGM) mineralization during the late summer and fall of 2009, followed by additional staking in the winter and spring of 2010. The claims covered sections of ground that are reported to have been previously explored by eight exploration companies: 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 areas were initially selected by EGC for their potential to host Cu-Ni-PGM mineralization based on geophysical information from Ontario Geological Survey (OGS) airborne magnetic maps, the geological interpretation (Stott, 2008) of these maps, and additional geological and geophysical data from historical exploration reports provided by Ontario Ministry of Northern Development and Mining (MNDM). Historical exploration work has been limited in this area of the James Bay Lowlands and mostly consists of geophysical surveys and diamond drill projects.

At the time of Zentek's Initial Public Offering in December 2010, the Albany Project claims were 25% owned by Zentek and 75% owned by CNRECI, as defined by the 2010 Amended Albany Option and Joint Venture Agreement. In November 2012, Zentek reached an agreement with CNRECI and acquired 100% ownership of the Albany Graphite Project claim block, also known as Claim Block 4F, which comprises a total of 521 claims.

On April 24, 2023, Zentek announced an agreement to transfer the Albany Graphite Project to subsidiary Albany Graphite Corp.

The following section presents information related to prior ownership, exploration, development, and past production of Claim Block 4F, and is summarized from Geotech (2010) and Carey (2012).

6.2 **Exploration and Development History**

Most of the claim blocks had not been previously explored. Historical exploration on a very small number of the claims was minor as the Archean basement terrane is covered with thick glacial till that blankets Paleozoic limestone cover rocks. There is no outcrop exposure on the claim blocks and any targeted mineralization can only be observed from drill core. Table 6-1 summarizes exploration conducted on the Property and Table 6-2 includes detailed location information on historical drilling.

Table 6-1:Summary of ExplorationAlbany Graphite Corp. - Albany Graphite Project

Year	Company	Type of Work	Summary Result		
1959	Nagagami River	A ground magnetic and electromagnetic (EM) survey initiated in the Feagan	Results showed three magnetic anomalies defining basement geology contacts and several lenticular- shaped electromagnetic conductors.		

Year	Company	Type of Work	Summary Result
	Prospecting Syndicate	Lake/Pitopiko River Township area by Koulomzine and Brossard Ltd. The survey was not fully completed because of an early spring breakup.	It was concluded that the shape of the conductors and their occurrence in the vicinity of a diabase dyke may be indicative of sulphide lenses that could contain base metals. One coincident magnetic and EM anomaly could be caused by disseminated mineralization (Koulomzine, 1959). Four drill holes were recommended to follow up EM anomalies: no record of follow-up drilling has been found.
1961	Algoma Ore Properties Ltd.	Aeromagnetic survey flown in the Nagagami River and Pitopiko Township area.	The survey outlined a horseshoe-shaped anomaly which was ground confirmed in the same year. Led to further exploration in 1963.
1963	Algoma Ore Properties Ltd.	Airborne magnetometer survey flown in the Nagagami River area by Hunting Survey Corp.	The survey results indicated two large low intensity circular shaped anomalies (Anomalies #1 and #2), underlying the Paleozoic limestone. Interpretation suggested that the anomalies were caused by a complex syenitic to gabbroic intrusion. Anomaly #2 was reportedly near the northern boundary of the Property and thought to potentially be associated with an alkaline and carbonatite complex, hosting columbium (Cb ₂ O ₅) and other rare earth elements (REEs). Algoma recommended follow-up work to include a ground magnetometer survey over the anomalies and a diamond drill program (Venn, 1964).
1964- 1967	Algoma Ore Properties Ltd.	Exploration in the Nagagami River area. Ground magnetometer survey completed, and claims staked. Nine drill holes completed, two in Claim Block 4F. Core was sporadically sampled, and petrographic studies were undertaken. The core was tested with scintillometer, and samples were taken where radioactive responses occurred.	Assay results on the radioactive core samples indicated Cb ₂ O ₅ content of 0.02% to 0.04%. Drilling intersected coarse syenite rock with 3-5% magnetite. Algoma concluded that the ground magnetometer survey and the diamond drilling verified the airborne survey, and although drilling did not intersect any ore minerals, mineralization could possibly be associated with other parts of the structure. Algoma recommended that the property be referred to other companies interested in intrusive structures (Venn, 1964).
1978	Shell Canada Explorations Ltd.	Initiated a diamond drill program in the area based on airborne survey results.	A single hole, DDH 7609-78-1, was drilled within the Project and intersected "graphitic syenite breccia". Drill log is available from MNDM, but an accompanying report was not submitted.
1999	Ontario Geological Survey	Aeromagnetic geophysical maps released for the Hudson Bay and James Bay Lowlands areas, Geophysical Data Set 1036	Regional aeromagnetic survey data available for Claim Block 4F.



Year	Company	Type of Work	Summary Result
2008	Ontario Geological Survey	Precambrian Geology Map P.3599 published: Hudson Bay and James Bay Lowlands Region Interpreted from Aeromagnetic Data, G.M. Stott, 2007-2008.	Interpretation of regional aeromagnetic survey data available for Claim Block 4F.

Table 6-2:Historical DrillingAlbany Graphite Corp. - Albany Graphite Project

Year	Company	Drill Hole ID	NTS ²	Datum	UTM-East	UTM-North
1964	Algoma Ore Properties Ltd. ¹	DDH-8-64	42K01	NAD 83	685,792	5,551,132
1964	Algoma Ore Properties Ltd. ¹	DDH-9-64	42K01	NAD 83	685,237	5,550,906
1978	Shell Canada Explorations Ltd. ¹	7609-78-1	42K01	NAD 83	682,954	5,545,616

Note:

1. Approximate location of drill hole collar

2. National Topographic System

6.3 Historical Resource Estimates

There have been no resource estimates prepared by previous owners.

6.4 Past Production

There has been no known production from the Property up to the effective date of this report.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

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.

The following is a summary of the major rock units in the area, as cited in Geotech (2010):

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). The Quetico Subprovince 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 km²) 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 platinum group elements (Vaillancourt et al., 2003).

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7.1.1.1 The English River Subprovince

The English River Subprovince 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 and 2.70 Ga (Vaillancourt et al., 2003).

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7.1.1.2 Marmion Terrane/Subprovince

This terrane consists predominately of metamorphosed felsic intrusive rocks. The 3.0 to 2.7 billion year old 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.

7.1.1.3 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.

7.1.1.4 Albany Alkalic Rock Complex

The Albany Alkalic Complex (AAC), which hosts the graphitic breccia pipes, occurs to the south of the two Nagagami Alkalic sub-complexes (Conly, 2014b). This intrusion appears to be crosscut 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 (now AGC) focused on the immediate area which hosts the graphite deposit. The limits of the intrusion are based on geophysical interpretation.
The Albany graphite deposit is centred on the Property (Figure 7-2). The area is covered by a layer of overburden (ranging from 28 m to 55 m thick, averaging 44 m) and there are no surface exposures of bedrock. Consequently, no surface geological mapping projects are reported for the area.

Precambrian rocks in the southern section of the Property primarily comprise paragneissic and migmatitic metasedimentary rocks, and mafic rocks together with related intrusive rocks of the Quetico Subprovince (Stott, 2007). The northern section of the Property is underlain by metamorphosed tonalite to granodiorite, foliated to gneissic with minor supracrustal inclusions of the Marmion Terrane/Subprovince. Both subprovinces 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 Zentek (now AGC) suggests that thicknesses can range from zero metres to greater than 15 m. The Albany graphite deposit is hosted within gneissic to unfoliated syenite, granite, diorite, and monzonite (Albany Alkalic Complex) that are crosscut 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 dominant rock type that was intersected in many drill holes is a late, massive, crosscutting, barren sill which, based on petrography, has been classified as an olivine-aegirine alkali syenite (James, 2013). Based on current drill information, the sill dips shallowly to the southeast at 10° to 15° and likely emanates from a northwest-trending dyke that is located on the southwest side of the West Pipe and was intersected at the top of hole Z12-4F02. The sill ranges in thickness from approximately 55 m in the vicinity of the West Pipe and then appears to narrow and bifurcate towards the East Pipe with thicknesses of 12 m and 28 m. James (2013) suggests that the peralkaline nature of the samples is consistent with the apparent rift-type magmatic environment from which they originated. An association with silica-undersaturated silicate rocks, such as nepheline syenites and carbonatite, is to be expected as these types of associations are recognized in a continental rift setting.

Interestingly, Conly and Moore (2015) have identified an unmineralized porphyritic, hypabyssal subvolcanic monzodiorite/foid (nepheline) monzodiorite, which appears to have intruded along the margins of the West Pipe and postulate that it may have played a critical role in the formation of the graphite deposit. This unit was logged as a porphyritic intermediate dyke.

7.1.2 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 have presented challenges to mining, as encountered at Agrium Inc.'s Kapuskasing Phosphate Mine to the southeast of the Project, however, Zentek (now AGC) did not observe any clay while drilling through the overburden during the 2013 drill program.

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7.2 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 subcentimetre to approximately one metre, most being between three and thirty centimetres. Dyke and graphite fragments range from one centimetre to five centimetres.

Representative core photographs of key features of the Albany graphite mineralization are provided in Figure 7-3.



Description of the photographs (Conly, 2014a):

- A. Weathering-related alteration of brecciated and carbonate-veined syenite just below the unconformity with the overlying Paleozoic carbonate rocks (Z12-4F2, West Pipe).
- B. Carbonate veining in weakly to moderately brecciated syenite with weak graphite overprint (Z13-4F10, East Pipe). Sample is taken just below the highly weathered zone.
- C. Graphite veining in barren syenite (Z12-4F6, West Pipe).
- D. Aplite dyke cross-cutting moderately brecciated syenite with weak to moderate graphite overprint of syenite fragments (Z12-4F9, East Pipe).
- E. Typical angular breccia texture of graphite mineralization (Z12-4F10, East Pipe).
- F. Rounded syenite breccia fragments indicating more extensive mechanic erosion due to turbulent flow within the vent complex (Z12-4F3, West Pipe).
- G. Laminated graphite intercalated with finely milled fragments (Z13-4F51, West Pipe). The laminated texture is interpreted to be the result of flow banding.
- H. Highly altered syenite breccia with weak to no graphite mineralization (Z13-4F26, West Pipe). This style of alteration occurs at depth and is not associated with weathering-related alteration observed at the top of the breccia pipes.
- I. Graphite mineralized breccia fragment partially rimmed by pyrite-pyrrhotite in a graphite and milled silicate matrix (Z13-4F26, West Pipe).

Figure 7-3: Core Photographs of Albany Graphite Mineralization

8.0 **DEPOSIT TYPES**

The Midcontinent Rift is a known deep seated structural environment that hosts a number of significant mineral deposits around Lake Superior that are related to multi-phased mafic-ultramafic-alkaline complexes. One of these complexes, called the Nagagami River Alkaline Ring Complex, shows similarities to the Midcontinent Rift-related Coldwell Complex on the north shore of Lake Superior and hosts copper-platinum group element mineralization. Rifting environments around the world are host to many large mineral deposits due to a tapping of the copper-nickel rich mantle by way of the structural conduits and traps for metal transport and deposit. Whilst exploring for Cu-Ni-PGM mineralization in the region of the Nagagami River Alkaline Ring Complex, Zentek (now AGC) discovered a large graphite deposit when it tested a very large conductive body on one of its claim blocks.

Most economic geologists and geophysicists are familiar with graphite as a nuisance in geophysical exploration due to its excellent electric conductivity that produces an identical geophysical response to that of targeted massive sulphide mineralization. Syngenetic graphite (flake or amorphous) commonly occurs in metasedimentary rocks as a result of the conversion of organic matter through regional or contact metamorphism. Graphitization of organic matter is well understood, however, the heating and compression of organic matter *in situ* is only one of the ways in which graphite is produced in nature. The epigenetic (hydrothermal) graphite type forms as a result of the precipitation of solid carbon (i.e., graphite) from natural carbon-fluids such as those containing carbon dioxide (CO_2), carbon monoxide (CO_2), and/or methane (CH_4).

There are three different processes leading to the formation of economic graphite deposits (Harben and Kuzvart, 1996), which are simplified and summarized below:

- 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 CO₂-rich fluids that evolved due to pressure-related degassing of syenites of the Albany Alkalic Complex and is described in the following subsections (Conly, 2014a; Conly, 2014b; Conly and Moore, 2015).

8.1 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 Subprovince (to the south).

8.2 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 upflow of the CO_2 -fluid.

8.3 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 Paleozoic 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 μ m to 300 μ m 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.

8.4 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 Paleozoic carbonate rocks and Quaternary glacial sediments

The Albany graphite deposit model is shown in Figure 8-1.

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9.0 EXPLORATION

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.

9.1 2010

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 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 airborne electromagnetic (EM) 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 km² 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.

9.2 2011 and 2012

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

9.3 2013

Crone Geophysics & Exploration Ltd. (Crone) was contracted by Zentek to perform surface time-domain EM (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).

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 north-northwest–south-southeast sense.

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10.0 DRILLING

10.1 2012-2013 Diamond Drill Hole Programs

From 2011 to 2013 Zentek (now AGC) drilled 63 diamond drill holes totalling 25,991 m in the deposit area (Table 10-1). Three metallurgical holes that were drilled on the West Pipe and were excluded from the previous Mineral Resource estimate have been incorporated into the current update. The drill hole collar locations and hole traces are shown in Figure 10-1.

Pipe	Year	Number 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

Table 10-1:Summary of Drill Core DrillingAlbany Graphite Corp. - Albany Graphite Project

Drilling was contracted to Chibougamau Diamond Drilling Ltd. (Chibougamau) of Chibougamau, Quebec. At the time of SLR's site visit in July 2013, Chibougamau was operating one drill on the Project, however, later added a second rig in August 2013 to drill holes required for metallurgical testwork.

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 six metallurgical drill holes. 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 multishot instrument with most readings taken at three metre intervals.

A Zentek 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%.



The QPs have not identified any drilling, sampling, or core recovery issues that could materially affect the accuracy or reliability of the core samples.

10.1.1 Drill Hole Targeting and Results

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 resource modelling method used by SLR manages the relationship between core length and true thickness. A detailed description of the grade, thickness, depth, and general geometry of the pipes is provided in Section 14 under Geological Interpretation.

The initial phase (Phase I) of drilling began in February 2011 and was completed on December 17, 2011. Twenty-six drill holes were completed, totalling approximately 10,000 m, and tested 21 targets identified by Geotech's VTEM survey. In September, drill hole Z11-4F1 (543 m) tested a strong, large airborne EM conductor measuring 1,400 m by 800 m on the Project located in what is now referred to as the West Pipe. The hole intersected eight separate and extensive breccia zones consisting of variably sized granitic clasts set in a black matrix containing graphite.

In 2012, Zentek drilled between March and June. Eight holes were completed, Z12-4F2 through Z12-4F9, for a total of 2,985 m of drilling. The Phase II drill holes were designed to test EM conductors/graphite mineralization within the brecciated graphitic zone, and to determine the extent of the graphite mineralization. The drill holes delineated two discrete bodies associated with the EM anomalies: the West Pipe and the East Pipe. Four drill holes targeted the West Pipe, and four drill holes targeted the East Pipe.

Based on the results of metallurgical testing, Zentek commenced a third drilling program in March 2013. Drilling was focused on defining the size and grade of the graphite deposit, expanding on the 2012 drilling campaign. Drilling helped define and constrain both pipes. The drill program ran between March and November, with 54 drill holes completed, Z13-4F10 through Z13-4F57, and six metallurgical drill holes, Z13-4FM01 through Z13-4FM06, for a total of 22,463 m of drilling.

Pipe	Hole ID	From (m)	To (m)	Length (m)	Grade (Cg%)
West	Z13-4F39	63.22	294.00	230.78	3.63
West	Z13-4F41	64.05	304.90	240.85	3.15
West	Z13-4F50	80.36	239.71	159.35	3.59
West	Z13-4F55	67.87	264.15	196.28	2.81
West	Z13-4F46	72.01	296.00	223.99	2.35
West	Z13-4F32	115.00	302.97	187.97	2.76
West	Z13-4F57	106.80	345.00	238.20	2.11
West	Z13-4F30	62.77	198.85	136.08	3.33
West	Z13-4F40	82.00	234.00	152.00	2.97
West	Z13-4F49	64.00	203.64	139.64	3.11
West	Z13-4F26	100.57	226.07	125.50	3.32
West	Z13-4F54	64.82	281.00	216.18	1.80

Table 10-2:Select Drill Hole IntersectionsAlbany Graphite Corp. - Albany Graphite Project

Pipe	Hole ID	From (m)	To (m)	Length (m)	Grade (Cg%)
West	Z13-4F34	166.00	306.15	140.15	2.54
West	Z13-4F29	59.90	186.85	126.95	2.69
West	Z13-4F33	155.62	320.23	164.61	1.93
West	Z11-4F1	329.90	542.92	213.02	1.47
West	Z13-4FM03	48.96	490.57	441.61	3.82
West	Z13-4FM04	46.78	465.00	418.22	4.05
West	Z13-4FM05	49.19	448.50	399.31	2.02
West	Z13-4FM06	50.23	489.32	439.10	2.28
East	Z13-4F45	55.48	330.25	274.77	5.85
East	Z13-4F10	48.34	341.56	293.22	5.37
East	Z13-4FM03	46.78	307.00	260.22	5.36
East	Z13-4FM01	45.59	304.33	258.74	5.40
East	Z13-4FM02	48.97	301.64	252.67	5.27
East	Z13-4F43	62.06	231.00	168.94	6.98
East	Z12-4F5	47.82	214.30	166.48	6.44
East	Z13-4F13	147.53	315.00	167.47	5.57
East	Z13-4F14	185.85	374.75	188.90	4.64
East	Z12-4F9	168.60	326.49	157.89	5.14
East	Z13-4F28	94.59	209.80	115.21	6.93
East	Z13-4F12	123.89	240.20	116.31	6.39
East	Z13-4F22	90.10	187.30	97.20	6.49
East	Z13-4F11	395.09	596.04	200.95	3.00
East	Z13-4F25	61.76	164.36	102.60	5.48
East	Z13-4F15	172.00	256.74	84.74	6.48
East	Z13-4FM01	45.59	512.22	466.63	4.45
East	Z13-4FM02	512.22	525.34	13.12	0.04
East	Z19-4FM07	47.64	447.00	399.36	2.05
East	Z19-4FM08	46.88	157.90	111.02	6.49

10.1.2 Downhole Probing

In late 2013, Zentek contracted DGI Geoscience Inc. (DGI) to survey seven boreholes (Z13-4F14, -4F16, -4F17, -4F18, -4F26, -4F27, and -4F34) with three probes: an Acoustic Televiewer (ATV), a Focused Density probe, and a Full Waveform Sonic probe. Two of the seven holes (Z13-4F18 and Z13-4F34) were also surveyed for magnetic susceptibility, inductive conductivity, apparent resistivity, natural



gamma, and fluid temperature. A total of 3,192 m was logged. Results were provided as strip logs and Wulff stereoplots. Density and rock quality designation (RQD) data correlated well with Zentek's drill logs.

10.1.3 Reconnaissance Drilling

In 2013, Zentek also drilled two reconnaissance drill holes on Block 4F to test two weaker conductive zones which were defined by the 2010 VTEM survey. No graphite was intersected, and the EM conductors were most likely explained by zones of disseminated pyrrhotite and/or by zones of massive pyrrhotite mineralization (Carey, 2014).

10.2 2019 Bulk Sample Program

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 drilling and drill hole intercepts are listed in Table 10-3 and Table 10-4, respectively.

Table 10-3: Summary of Bulk Sample Drilling Albany Graphite Corp. - Albany Graphite Project Pipe Year Number of Holes Total Length (m) No. of Assay Samples¹

2

Notes:

1. Includes resource assays, blanks, duplicates, and CRMs.

2019

East

Table 10-4:Select Bulk Sample Drill Hole IntersectionsAlbany Graphite Corp. - Albany Graphite Project

292.1

123

Pipe	Hole ID	From (m)	To (m)	Length (m)	Grade (Cg%)
East	Z19-4FM07	44.81	157.89	113.08	6.46
East	Z19-4FM08	44.81	134.11	89.31	5.92



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11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

AGC uses industry standard sample preparation, analysis, data management, and security procedures. A total of 22,448 samples, including quality control (QC) samples from drill holes Z11-4F1 to Z13-4F57 and metallurgical holes Z13-4FM01 to Z13-4FM06, were submitted to ALS Group (ALS), an independent laboratory. ALS has ISO 9001:2008 and ISO 17025 Accreditation as per the Standards Council of Canada at all its global laboratories. In addition, 27 QC samples were submitted as part of the 2019 bulk sampling program to ALS.

In summary, the QPs concur with the suitability of the samples taken, the security of the storage and shipping procedures, the sample preparation, analytical procedures used, and data management practices.

11.1 Diamond Drill Hole Programs

11.1.1 Sampling Method and Approach

Drill core was delivered twice daily via helicopter to AGC's core logging facility located at the Eagle's Earth camp on Highway 11. Prior to sampling, the drill core was logged into an Xlogger software database. Lithological names were standardized, and drop-down menus used to reduce data input errors. Core boxes were labelled with aluminum tags showing the drill hole number, box number, and from-to metres and photos of the core are taken with a digital camera. A Zentek geologist marked the sample intervals in the core box.

Most drill core was sampled using one metre intervals. Less than 10% was sampled at greater than 1.5 m. A four-part sample book was used. All core samples were identified with a unique sample identification (ID) number tag: two sample tags were inserted in the plastic bag with the split core, one sample tag was affixed within the core box at the start of the sample run, and one remained in the sample book. The sample ID number was also written on the outside of each sealed sample bag with a permanent marker. The sample bags were zip tied and placed in groups of ten in larger rice bags. The rice bags were also sealed before being transported to the ALS facility in Thunder Bay, Ontario, by Zentek company employees. Shipping information was recorded and stored digitally.

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 Density Sampling

In order to determine density values for typical lithologies and mineralization styles, specific gravity measurements were carried out by ALS (Thunder Bay) on pre-selected assay samples in 2013. Following specialty assay procedure OA-GRA08, ALS removed a representative piece of drill core from the sample prior to crushing. The method is based on Archimedes Principle. DGI's in situ density measurements which were collected by the Focused Density downhole probe (see section 10.1.2) are in close agreement with the ALS density measurements and no bias was observed.

11.1.3 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 μ m 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.

11.1.4 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.

11.1.5 Quality Assurance and Quality Control

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.

AGC's QA/QC program exceeds industry standards. From an early stage, Zentek (now AGC) implemented a comprehensive QC program that includes blanks, certified reference materials (CRMs), duplicates, and check samples. Moreover, a QA monitoring system is used to detect failed batches and identify samples and/or sample batches for follow-up and reanalysis.

11.1.5.1 Certified Reference Material

Results of the regular submission of Certified Reference Materials (CRMs) are used to identify problems with specific sample batches and long-term biases associated with the regular assay laboratory. 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.

Table 11-1 lists the mean and standard deviation for each CRM. A total of 1,177 CRMs were inserted with the 20,728 regular drill core assay samples submitted by Zentek (now AGC) to ALS, for a rate of approximately 1 in 18 samples.

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	

Table 11-1:Expected Values for Custom CRMsAlbany Graphite Corp. - Albany Graphite Project

A QC failure for a CRM was defined as an assay that fell outside three standard deviations (\pm 3SD) or \pm 10% of the expected value. The CRM assay results are illustrated in Figure 11-1 and data are summarized in Table 11-2.





Table 11-2:	Summary of CRM Re	esults for Drill Hole Programs	5
Albany	y Graphite Corp Albar	ny Graphite Project	

CDM	No	Expected Cg (%)		ted Cg (%) Observed Cg (%)		% of	Mislabols
	NO.	Average	SD	Average	SD	Expected	WISIADEIS
ZEN-1	503	0.91	0.045	0.96	0.04	105.2	4



CDM	No	Expected	ed Cg (%) Observed		l Cg (%)	% of	Micloholo	
CRIVI	INO.	Average	SD	Average	SD	Expected	INIISIDDEIS	
ZEN-2	277	3.13	0.125	3.18	0.10	101.5	7	
ZEN-3	256	7.42	0.415	7.72	0.21	104.0	1	
ZEN-4	141	14.12	0.99	15.08	0.38	106.8	2	
Total	1,177					104.2 ¹	14	

Notes:

1. Weighted average

Fourteen cases were identified where either the CRM code was recorded incorrectly or there was a sample mix-up with an adjacent sample. Two CRM samples (representing <1% of the submitted CRMs) were identified as QC failures based on sulphur (S) results. As S is of secondary interest and has not been estimated into the block model, Zentek chose not to re-assay results based on these failures.

Figure 11-1 and Table 11-2 suggest that results may be biased high for three of the four CRMs. Additional discussion on this potential bias is provided below in the subsection titled Assay Check Samples. Overall, the average results are generally within ±10% or ±3SD and the QPs consider the CRM results acceptable but strongly recommends that the expected values for the in-house CRMs be re-evaluated prior to the next drilling campaign. A review of the round robin of the project specific CRM samples by the QPs suggest that numerous outliers/failures were included in the calculation of the "accepted mean" and standard deviation. The outliers had a low bias that was most evident in higher grade CRMs (i.e., ZEN-3 and ZEN-4) resulting in a lower "accepted mean". In the QPs' opinion, this contributes to the apparent high bias observed in the CRM results.

11.1.5.2 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. 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%, or approximately 1 in 18 samples. Blank assay results are plotted in Figure 11-2, and statistics are listed in Table 11-3. Based on these results, there is no evidence of systematic sample contamination.





Table 11-3:Summary of Blank Results for Drill Hole ProgramsAlbany Graphite Corp. - Albany Graphite Project

Criteria	Cg (%)	S (%)
No. of Cases	1,147	1,147
Minimum	0.010	0.030
Maximum	0.200	0.170
Arithmetic Mean	0.031	0.110
Standard Deviation	0.026	0.020
No. of Mislabelled Samples	1	1
No. of Failures	2	1

11.1.5.3 Duplicates

Field duplicates assess the variability introduced by sampling the same drill core interval. The duplicate splits are bagged separately with separate sample numbers so as to be blind to the sample preparation laboratory. The duplicates contain all levels of sampling and analytical error and are used to calculate field, sample preparation, and analytical precision. They are also a check on possible sample over selection, that is, the sampler has either purposely or inadvertently sampled the drill core so as to preferentially place visible mineralization in the sample bag sent for analysis.

Coarse duplicates (or coarse reject duplicates) are duplicate samples taken immediately after the first crushing and splitting step. At Zentek's request, the coarse duplicates pairs were created by splitting the crushed sample in two equal parts. The coarse duplicates will inform about the subsampling precision, that is, they report the errors due to sample size reduction after crushing, and the errors associated with weighing and analysis of the pulp. In order to ensure repeatability conditions, both the original and the coarse duplicate samples should be submitted to the primary laboratory, in the same sample batch and under a different sample number, so that pulverization and assaying follow the same procedure.

Pulp duplicates consist of second splits of final prepared pulverized samples, analyzed by the same laboratory as the original samples under different sample numbers. The pulp duplicates are indicators of the analytical precision, which may also be affected by the quality of pulverization and homogenization. In order to ensure repeatability conditions, both the original and the pulp duplicate samples should be submitted to the primary laboratory, in the same sample batch, and under a different sample number, so that assaying follows a similar procedure.

Zentek incorporated core, reject, and pulp duplicates into the sample stream. Results are summarized below.

11.1.5.3.1 Drill Core Duplicates

Drill core duplicates consist of two quarter core samples; the other half of the drill core is left in the box. The QPs recommend that AGC instead submit two half core samples instead of quarter core, to maintain a consistent sample size.

Ninety-four pairs of drill core duplicate samples were submitted for analysis. The original and duplicate sample assay results are plotted in Figure 11-3 and statistics are summarized in Table 11-4. Results confirm that there has been no bias introduced by preferentially submitting the more mineralized half of the core for assay.



Element (units)	Criteria	No.	Original > Duplicate	Original < Duplicate	Original = Duplicate
	- 11 1	04	46	47	1
6- (9/)	all samples	94	49%	50%	1%
Cg (%)	> 5 x DL*	01	44	47	0
		91	48%	52%	0%

Table 11-4:Drill Core Graphitic Carbon Duplicate ResultsAlbany Graphite Corp. - Albany Graphite Project

Note: *Detection Limit

11.1.5.3.2 Coarse Reject Duplicates

A total of 1,041 pairs of coarse reject duplicate samples were submitted for analysis. The original and duplicate sample assay results are plotted in Figure 11-4 and statistics are summarized in Table 11-5.





Element (units)	Criteria	No.	Original > Duplicate	Original < Duplicate	Original = Duplicate
	all camples	1 0 1 1	434	454	153
C ~ (9/)	all samples	1,041	42%	44%	15%
Cg (%)		712	338	325	49
	> 5 X DL'		47%	46%	7%

Table 11-5:Summary of Graphitic Carbon Reject Duplicate Results for Drill Hole ProgramsAlbany Graphite Corp. - Albany Graphite Project

Note: *Detection Limit

One case was identified where the difference between reject duplicates was greater than ±100% and average assays were greater than 0.1% Cg.

In the QPs' opinion there is no bias evident between original and duplicate halves of the drill core. That is, there has been no selection bias introduced.

11.1.5.3.3 Laboratory Pulp Duplicates

A total of 1,245 pairs of laboratory pulp duplicate samples were assayed for graphitic carbon and 809 for sulphur. The original and duplicate sample assay results for graphitic carbon are plotted in Figure 11-5 and statistics are summarized in Table 11-6.



Figure 11-5: Scatterplot of Graphitic Carbon Pulp Duplicates for Drill Hole Programs



It is the QPs' opinion that 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 very good. Most duplicates are well within $\pm 10\%$ to $\pm 20\%$.

11.1.5.4 Assay Check Samples

Check samples consist of second splits of the final prepared pulverized samples routinely analyzed by the primary laboratory and re-submitted to a secondary laboratory under a different sample number. These samples are used to assess the assay accuracy of the primary laboratory relative to the secondary laboratory.

AGC's QA/QC protocol calls for check samples to be taken at a rate of approximately 2.7% (1 in every 35 to 40 samples) and submitted to a secondary laboratory. SLR received the results for 555 check samples, which covered the entire Albany drilling campaign to date. AGC used ISO/IEC 17025 accredited SGS Canada Inc. (SGS) in Lakefield, Ontario, as the secondary laboratory.

SGS employed the following methods:

- Carbon: graphitic carbon by LECO furnace/IR (GE CSA05V), with a 0.01% detection limit, and
- Sulphur: total sulphur by LECO furnace/IR (GE CSA06V), with a 0.005% detection limit.

Along with the 555 check samples submitted to SGS, AGC inserted 22 blanks and 22 CRMs. No blank failures were identified, although a mislabelled sample was noted. Four QC failures and a mislabelled sample were identified from the submitted CRMs. All four failed for graphitic carbon and one failed for both graphitic carbon and sulphur. AGC requested re-assaying for the failures, including four samples that preceded and five samples that followed these failures. The four CRM repeat assays reported within ±20% of the expected value but were biased low for both graphitic carbon (-12.26%) and sulphur (-2.86%).

Graphitic carbon check assays results are plotted on a scatterplot in Figure 11-6.





Table 11-6 summarizes the check assay pair results for graphitic carbon, highlighting the relative differences between the primary and secondary laboratories. There should be a near equal number of cases where one laboratory reports higher than the other, and vice versa. For the 391 samples with graphitic carbon concentrations greater than five times detection limit, there are 329 cases where ALS assays are higher than SGS assays and 53 cases where SGS assays are higher than ALS assays. Sulphur is equally distributed between the two laboratories.

Element	Criteria	No.	ALS > SGS	ALS < SGS	ALS = SGS	Average Difference (%)
		414	120	21	C 1 C 1	
	all samples	222	74%	22%	4%	-0.10%
Cg (%)			329	53	9	
	> 5 x DL*	391	84%	14%	2%	9.73%

Table 11-6:Check Sample Assay Results for Drill Hole ProgramsAlbany Graphite Corp. - Albany Graphite Project

Note: *Detection Limit



For check assay samples greater than five times detection limit, the average Relative Percent Difference (RPD) was 9.7%, indicating that ALS assays are biased high by 9.7% when compared to the SGS assays. In Figure 11-7, graphitic carbon results from ALS are plotted with the RPD of the check assay pair as the vertical scale to illustrate precision as it relates to grade.



Figure 11-7: Grade Versus RPD of Check Samples Sent to SGS for Drill Hole Programs

It should be noted, however, that SGS, on average, reported 7.3% low on CRM samples, implying that the two sets of assays are, in fact, comparable.

Three check samples returned assays that differed by more than 100%: one sample for graphitic carbon only, one sample for sulphur only, and one sample for both graphitic carbon and sulphur. A clerical error is the likely source of the graphitic carbon only assay error.

Results of the check sampling for the drilling program to date has highlighted a potential high bias in the primary laboratory (ALS) assays of graphitic carbon. AGC's check assay QC program, however, also suggests a low bias in the secondary laboratory (SGS) assays of graphitic carbon. It is the QPs' opinion that AGC's program of check sampling is rigorous, however, the QPs suggest that AGC further investigate the potential of a high bias in the analytical method employed by the primary laboratory, ALS.

11.1.6 Sample Security

Drill core is delivered directly to AGC's core handling facility. After logging, sawing, and bagging, core samples for analysis are stored in a secure building at the same facility. The warehouse is either locked or under direct supervision of the geological staff. Prior to shipping, drill core samples are placed in large rice bags and sealed. A sample transmittal form is prepared that identifies each batch of samples. The samples are transported directly to the ALS facility in Thunder Bay, Ontario, for sample preparation. ALS



forwards sample pulps to its laboratory facility in North Vancouver, British Columbia, Canada, for analysis. Analytical results are emailed to AGC staff for review and importation into the resource database.

11.2 Bulk Sample Program

11.2.1 Sampling Method and Approach

Bulk sample holes were spotted using a handheld GPS and a wooden picket was used to mark the location of the drill hole. The collar locations were initially surveyed with a Garmin hand-held GPS to determine the collar coordinates.

After the bulk sample drill hole had been completed and the drill rig had moved off the hole the drill site was inspected, and casings were capped with a welded plate. Each drill hole was assigned an official well number.

Bulk samples ranged from approximately one metres to five metres in length, with an average weight of approximately 1,150 kg. Samples were collected in large sample totes, sampled for assay at the drill and then transported to AGC's secure core shack located in Hearst.

Assay samples ranged from approximately 6.0 kg to 10 kg in weight. During the day shift at the drill, assays were collected as the sample was dewatered on the shaker table and fed into the totes. Sample material tended to concentrate based on material size and care was taken to collect a representative sample. During the night shift, assay samples were collected by chipping off frozen material from various locations within the sample tote using a trowel and this could contribute to sample variability.

All sample bags contain individual sample tickets, and the sample number scribed on the outside of the sample bag in black marker; each sample bag was then stapled closed. All sample tickets were taken to a secure location and all sample data were then transferred to a password protected computer at base camp. The rice bags were also sealed by Zentek (now AGC) personnel before being transported to the ALS facilities in Thunder Bay and Sudbury, Ontario.

11.2.2 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 (see section 11.1.3). The sample pulps were then shipped to the ALS laboratory in Vancouver, British Columbia, for assay.

11.2.3 Sample Analysis

Samples collected during the bulk sample drilling program were analyzed for graphitic carbon using ALS protocol C-IR18 (see section 11.1.4).

A total of 123 samples, which included 96 drill hole assay samples and 27 QC samples were submitted to ALS on March 22, April 4, and May 7, 2019.

11.2.4 Quality Assurance and Quality Control

Zentek (now AGC) implemented a QA/QC program for the 2019 bulk sample drilling program that included blanks, CRMs, and duplicates. Assay check samples were not included as part of the QA/QC program.

QA/QC results were monitored by Zentek to detect failed batches and/or identify samples or batches for follow-up and reanalysis.

11.2.4.1 Certified Reference Material

Thirteen CRMs were inserted with the regular 96 sample chips submitted by Zentek (now AGC) to ALS, for a rate of approximately 1 in 8 samples. As with the drill hole programs, a QC failure for a CRM was defined as an assay that fell outside three standard deviations (±3SD) of the expected value. The CRM assay results are illustrated in Figure 11-8 and data are summarized in Table 11-7.

Overall, no failures were detected and the QPs consider the CRM results acceptable. The continued positive bias in the CRM results for graphitic carbon over the entire drilling program that spans seven years suggests that bias is not in the laboratory results, but with the values used for the in-house CRMs. The QP strongly recommends that the expected values for the in-house CRMs be re-evaluated prior to the next drilling campaign.



Figure 11-8: Certified Reference Material Results Certified Reference Material Results for the Bulk Sample Program

Table 11-7:Summary of CRM Results for Bulks Sample ProgramAlbany Graphite Corp. - Albany Graphite Project

	N -	Expected Cg (%)		Observed Cg (%)		% of
CRIVI	NO.	Average	SD	Average	SD	Expected
ZEN-1	3	0.91	0.045	0.90	0.05	99.3
ZEN-2	4	3.13	0.125	3.11	0.15	99.4

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CRM	No.	Expected Cg (%)		Observed Cg (%)		% of
		Average	SD	Average	SD	Expected
ZEN-3	5	7.42	0.415	7.65	0.09	103.1
ZEN-4	1	14.12	0.99	15.20	N/A	107.6
Total	13					101.7*

Notes: *Weighted Average

The average results for the CRMs are consistently biased slightly high for the two higher grade CRMs, ZEN-3 and ZEN-4 (between 3% and 7%). These are similar to the results observed for the drill hole program in 2013. However, the results for CRMS ZEN-1 and ZEN-2, which represent grades near the cut-off grade and average grade of the deposit, respectively, show good correlation with expected grades. The average results are generally within ±10% and the performance is considered acceptable.

A review of the round robin of the project specific CRM samples by the QPs suggest that numerous outliers/failures were included in the calculation of the "accepted mean" and standard deviation. The outliers had a low bias that was most evident in higher grade CRMs (i.e., ZEN-3 and ZEN-4) resulting in a lower "accepted mean". In the QPs' opinion, this contributes to the apparent high bias observed in the CRM results.

11.2.4.2 Blanks

A blank consisting of coarse-grained granite (BL) was purchased from Analytical Solutions Ltd., Toronto, Ontario, and a second blank (CDN-BL-10) was sourced from CDN Laboratories (CDN) in Langley, British Columbia. A total of eight blanks were submitted with the 96 bulk samples for an insertion rate of approximately 8%, or approximately 1 in 12 samples. Blank assay results are plotted in Figure 11-9, and statistics are listed in Table 11-8. Based on these results, there is no evidence of systematic sample contamination.



Figure 11-9: Blank Results for Bulk Sampling Program

Table 11-8:Summary of Blank Results for Bulk Sampling ProgramAlbany Graphite Corp. - Albany Graphite Project

Criteria	BL	CDN-BL-10	
No. of Cases	5	3	
Minimum (Cg%)	0.01	0.05	
Maximum (Cg%)	0.08	0.07	
Arithmetic Mean (Cg%)	0.036	0.047	
Standard Deviation (Cg%)	0.036	0.025	
No. of Failures	-	-	

11.2.4.3 Duplicates

Zentek (now AGC) incorporated bulk sample field duplicates and pulp duplicates into the sample stream. Results are summarized below.

11.2.4.3.1 Field Duplicates

The samples recovered from the RCD were composed of rock chips and fine powdered rock and duplicate samples were taken simultaneously with the assay sample. Each sample tote holds between 1.0 t to 1.5 t of material.

A total of six field duplicate assays reported and the original and duplicate assays are plotted in Figure 11-10. The reproducibility of these assays is scattered and do not reproduce well. In the QPs' opinion,



there is no systematic bias in sampling, but the results indicate a large degree of selection and/or sampling variability in the duplicate sampling procedure. This could be due to the much larger sample volumes and variability in the size and number of the crosscutting unmineralized dikelets.



Figure 11-10: Scatterplot of Bulk Sample Field Duplicates

11.2.4.3.2 Laboratory Pulp Duplicates

A total of five pairs of laboratory pulp duplicate samples were assayed for graphitic carbon. The original and duplicate sample assay results are plotted in Figure 11-11.



Figure 11-11: Scatterplot of Bulk Sample Pulp Duplicates

It is the QPs' opinion that laboratory reproducibility of assays on the same pulp and at the same laboratory fall within the expected ranges. Overall, the precision of pulp duplicates is very good, but field duplicates show high variability. The QPs note, however, that the sample size is small.

11.2.5 Sample Security

As part of AGC's bulk sample drill program, the sample chain of custody was maintained from the sample collection point at the drill rig until delivery to a representative from the analytical laboratory.

Following sample collection, samples were packed into large rice sacks and tightly sealed using nylon tie wraps. The sacks were stored at AGC's core handling facility in Hearst, Ontario, until they were transported directly to the sample preparation laboratory.

All samples were submitted to the ALS facilities in Thunder Bay and Sudbury, Ontario, for sample preparation where they were verified against the shipping documents and entered into their tracing system. ALS forwards sample pulps to its laboratory facility in North Vancouver, British Columbia, Canada, for analysis. Analytical results are emailed to AGC staff for review and importation into the resource database.

12.0 DATA VERIFICATION

SLR reviewed and verified the resource database used to estimate the Mineral Resources for the Albany graphite deposit. The verification works included a review of the QA/QC methods and results, checking assay certificates against the database assay table, a site visit and review of drill core, standard database validation tests, and independent sampling of drill core. The review of the QA/QC program and results is presented in Section 11, Sample Preparation, Analyses, and Security.

The QPs consider the resource database reliable and appropriate to prepare a Mineral Resource estimate.

12.1 Manual Database Verification

For data available prior to June 1, 2015, the review of the resource database included header, survey, lithology, assay, and specific gravity tables. Database verification was performed using tools provided within the Dassault Systèmes GEOVIA GEMS Version 6.6 software package (GEMS). Also, the assay and density tables were reviewed for outliers. A visual check on the drill hole GEMS collar elevations and drill hole traces was completed. Minor inconsistencies were noted and promptly corrected by Zentek (now AGC). Bulk sample data collected in 2019, which included header and assay tables, was verified using tools provided in Leapfrog Geo.

SLR verified thousands of assay records. This included comparison of 18,540 assays and 782 specific gravity results in the resource database to the digital laboratory certificates of analysis, which were received directly from ALS. No discrepancies were found. This includes 96 additional assays collected in 2019 as part of the bulk sampling program. SLR notes that no collar elevation data has been provided by AGC for bulk sample drill holes and the collar location was determined by handheld GPS. SLR assigned an elevation equivalent to the topography at that point. In the QPs' opinion, the possible error associated with the collar elevation is negligible as the topographic relief in the project area is very low.

12.2 SLR Site Visits

David Ross, P.Geo., RPA Director of Resource Estimation, Principal Geologist and an independent Qualified Person (QP), visited the Property on July 12 and 13, 2013. During the visit, Mr. Ross verified the collar locations of drill holes Z12-4F-3, Z12-4F-4, Z12-4F-9, Z13-4F-11, Z13-4F-19, and Z13-4F-30. Core from the following drill holes were reviewed:

- East Pipe: Z13-4F-11, Z13-4F-20, and Z13-4F-13.
- West Pipe: Z11-4F-1, Z12-4F-6, Z13-4F-26, Z13-4F-27, and Z13-4F-30.

Marie-Christine Gosselin, P.Geo., SLR Project Geologist and an independent QP, visited the Property on March 15, 2023. During the visit, Ms. Gosselin verified the collar locations of bulk sample drill holes Z19-4FM08 and Z19-4FM07 and delineation diamond drill holes Z12-4F-4, Z13-4F-9, Z13-4F-10, and Z13-4F-11. Core from the following drill holes were reviewed:

- East Pipe: Z13-4F-11, Z13-4F-12, Z13-4F-13, Z13-4F-18, Z13-4F-20, and Z13-4F-22.
- West Pipe: Z13-4F-26, Z1FINAL3-4F-27, Z13-4F-30, Z13-4F-3`, and Z13-4F-2.

12.3 Independent Drill Core Sampling

In 2013, four samples of split core were marked, and quarter core duplicate samples were cut under the supervision of Mr. Ross. Duplicate samples were selected on the basis of graphitic carbon assays in Zentek's drill logs. In addition, Mr. Ross obtained a sample of Zentek's blank material and certified reference material (CRM) ZEN-2 for confirmation analyses.

The selected samples were bagged, tagged, sealed, and submitted to ALS's Thunder Bay laboratory for preparation. Each bagged core sample was dried, crushed, and pulverized to better than 85% passing 75 μ m following ALS protocol PREP-31B (see Section 11). The sample pulps were forwarded to ALS's Vancouver, British Columbia facility for assay. Graphite assays were obtained using the graphitic carbon by LECO method (ALS protocol C-IR18, see Section 11).

Table 12-1 lists those samples taken for duplicate analysis. Four duplicate samples are insufficient to make statistical comparisons; however, SLR's sampling confirms that significant graphitic carbon mineralization exists on the Albany graphite deposit.

Drill Hole Fr (1	From To	Pipe	Zentek (now AGC) Sampling		SLR Sampling		
	(m)	(m)		Sample ID	Cg (%)	Sample ID	Cg (%)
Z13-4F20	80	81	East	N471445	6.63	215601	6.99
Z13-4F20	81	82	East	N471446	4.69	215602	5.58
Z13-4F13	263	264	East	N468507	7.26	215603	9.96
Z13-4F11	470	471	East	N473130	8.67	215604	8.23
Blank	-	-	-	BLANK	0.00	215605	0.02
Standard	-	-	-	ZEN-2	3.13	215606	3.26

Table 12-1:Check Sample SummaryAlbany Graphite Corp. - Albany Graphite Project

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

The flowsheet tested is based on concentration (which consists of crushing, grinding, and flotation) and purification (which consists of caustic (NaOH) leaching, baking (350°C), mild HCl leaching, and impurity precipitation) to recover a high-purity graphite product. Test work was conducted to support a PEA in 2015 (RPA, 2015) and was carried out primarily at SGS in Lakefield, Ontario. In 2017, Zentek conducted a second flotation pilot plant campaign at SGS; this was followed up by additional hydrometallurgical test work in 2018 and 2019 which focused on alternative purification processes to the PEA alkaline baking process.

The objectives of the work at SGS were to generate data regarding the concentration process for engineering design, to produce concentrates and tailings for down-stream characterization and testing, to further the purification process, and to generate bulk samples of the high-purity products.

13.1 Metallurgical Samples and Testing

In September 2013, Zentek shipped a composite sample from the East Pipe (EP) weighing approximately 5.5 t to SGS for metallurgical testing (RPA, 2014). The EP Composite was comprised of material from drill holes Z13-4FM01 to Z13-4FM03. In November 2013, a composite sample from the West Pipe (WP) weighing approximately 4.6 t was shipped to SGS for testing; the WP Composite sample was prepared from drill holes Z13-4FM04 to Z13-4FM06. Figure 13-1 illustrates the location of the drill holes for the samples used in metallurgical testing. For each composite, comminution and bench scale flotation test work was conducted, while test work for the purification steps was conducted primarily on EP samples.

Table 13-1 shows the key head assay results for the two metallurgical composites.

Element		EP Composite	WP Composite	
Ct	%	4.64	2.79	
S	%	0.24	0.23	

Table 13-1:Composite Head Assay ResultsAlbany Graphite Corp. - Albany Graphite Project

Notes:

1. C_t – total carbon


13.1.1 Comminution Testing

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 (JKTech, 2014).

Sample Name	Relative	JK Para	meters	Work	Indices (kV	Vh/t)	Ai
	Density	Axb	DWI	CWi	RWi	BWi	(g)
EP Composite	2.63	35.6	7.42	11.4	15.4	18.0	0.682
WP Composite	2.65	40.4	6.56	11.3	15.4	17.0	0.606

Table 13-2:Comminution Test ResultsAlbany Graphite Corp. - Albany Graphite Project

The EP Composite was characterized as hard based on impact breakage and moderately hard with respect to abrasion breakage. The WP Composite was characterized as moderately hard in terms of impact breakage and medium in terms of abrasion breakage. Both composites were categorized as moderate in hardness for CWi and RWi and hard to moderately hard for BWi. Al values were greater than 0.60 g for both composites, which indicates that the material is highly abrasive.

13.1.2 Flotation Test Program

To confirm parameters for larger scale pilot plant testing, eight batch flotation tests were conducted on the EP Composite and two rougher/cleaner flotation tests were conducted on the WP Composite. The following parameters were analysed during batch flotation: primary grind size, regrind size, and the number of cleaner flotation and regrinding steps. Flotation testing and flotation pilot plant testing were documented in several reports (SGS, 2014a and 2014e).

Key results from optimized flotation tests are shown in Table 13-3. The optimized rougher/cleaner flowsheet included a primary grind size P_{80} of between 175 µm to 200 µm, rougher flotation of eight minutes, and three stages of regrinding spaced between nine cleaner flotation stages. A carbon grade of greater than 92% was achieved at carbon recoveries of more than 80% for each composite. The size of the final concentrate was P_{80} of 12 µm.

Table 13-3:Optimized Flotation ResultsAlbany Graphite Corp. - Albany Graphite Project

		Rough	Rougher Flotation Concentrate			ner Flotation	Concentrate
Test Composite No. Sample	0/ N A		arbon	9/ 14000	Carbon		
	oumpie	~ % IVIdSS	% Grade	% Recovery	% WI855	% Grade	% Recovery
F8	EP	26.2	17.0	92.2	4.32	92.0	82.2
F10	WP	22.1	12.7	92.6	2.61	93.5	80.5

Locked cycle tests (six cycles per test) on each composite were performed following optimization of batch flotation. The results of the locked cycle tests are shown in Table 13-4. Carbon recoveries achieved were higher than the recoveries from optimized batch flotation tests, but the grades of the final concentrates were lower.

Table 13-4:Locked Cycle Flotation ResultsAlbany Graphite Corp. - Albany Graphite Project

Product	Composite	% Mass	Grade % C _t	% Distribution C _t
9 th Cleaner Concentrate	EP	5.57	76.6	92.3
9 th Cleaner Concentrate	WP	3.44	69.5	89.5

Note:

1. C_t – total carbon.

Information from batch and locked cycle flotation test work was used to construct a mini-pilot plant with a throughput of 60 kg/h. Results from surveys completed during the mini-pilot plant campaign for the EP and WP Composites are shown in Table 13-5 and Table 13-6, respectively. Flotation pilot plant testing demonstrated that high recoveries could be achieved with final concentrate grades of over 80% C_t and 70% C_t for EP and WP Composites, respectively.

Table 13-5:EP Pilot Plant ResultsAlbany Graphite Corp. - Albany Graphite Project

Survey	Product	Wt. %	Grade % Ct	% Distribution C _t								
	Day-long commissioning tests											
	9 th Cleaner Concentrate	5.29	80.5	84.3								
PP-02	Combined Tails	94.7	0.84	15.7								
	Feed	100.0	5.05	100.0								
	9 th Cleaner Concentrate	5.23	78.7	83.4								
PP-03	Combined Tails	94.8	0.87	16.6								
	Feed	100.0	4.94	100.0								
	9 th Cleaner Concentrate	4.30	85.0	76.4								
PP-04	Combined Tails	95.7	1.17	23.6								
	Feed	100.0	4.78	100.0								
	Cor	ntinuous tests										
	9 th Cleaner Concentrate	5.11	81.5	87.3								
PP-05A	Combined Tails	94.9	0.65	12.7								
	Feed	100.0	4.78	100.0								
	9 th Cleaner Concentrate	4.77	82.4	81.3								
PP-05B	Combined Tails	95.2	0.94	18.7								
	Feed	100.0	4.82	100.0								



Survey	Product	Wt. %	Grade % C _t	% Distribution C _t
	9 th Cleaner Concentrate	4.96	78.4	88.6
PP-06A	Combined Tails	95.0	0.53	11.4
	Feed	100.0	4.39	100.0
	9 th Cleaner Concentrate	6.18	78.0	92.8
PP-06B	Combined Tails	93.8	0.39	7.23
	Feed	100.0	5.18	100.0
	9 th Cleaner Concentrate	6.41	77.2	92.8
PP-07A	Combined Tails	93.6	0.39	7.22
	Feed	100.0	5.31	100.0

Table 13-6:WP Pilot Plant ResultsAlbany Graphite Corp. - Albany Graphite Project

Survey	Product	Wt. %	Grade % C _t	% Distribution C _t
	Day-long	commissioning te	sts	
	9 th Cleaner Concentrate	3.48	71.2	88.5
PP-08	Combined Tails	96.5	0.33	11.5
	Feed	100.0	2.80	100.0
	9 th Cleaner Concentrate	3.55	62.3	84.8
PP-09	Combined Tails	96.4	0.41	15.2
	Feed	100.0	2.61	100.0
	9 th Cleaner Concentrate	3.11	67.6	79.2
PP-10	Combined Tails	96.9	0.57	20.8
	Feed	100.0	2.65	100.0
	Сог	ntinuous tests		
	9 th Cleaner Concentrate	1.77	80.8	52.7
PP-11A	Combined Tails	98.2	1.31	47.3
	Feed	100.0	2.72	100.0
	9 th Cleaner Concentrate	3.05	78.0	81.4
PP-11B	Combined Tails	97.0	0.53	18.6
	Feed	100.0	2.89	100.0
	9 th Cleaner Concentrate	3.31	75.9	85.0
PP-12A	Combined Tails	96.7	0.496	15.0
	Feed	100.0	2.96	100.0
	9 th Cleaner Concentrate	3.03	79.6	85.6
PP-12B	Combined Tails	97.0	0.40	14.4
	Feed	100.0	2.80	100.0

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Survey	Product	Wt. %	Grade % C _t	% Distribution C _t
	9 th Cleaner Concentrate	3.05	78.5	79.8
PP-13A	Combined Tails	97.0	0.63	20.2
	Feed	100.0	3.00	100.0

In 2014, additional flotation test work was carried out by SGS to investigate the following (SGS, 2014e):

- Batch flotation test program on EP Composite to produce a final flotation concentrate grading higher than 90% Ct at a grind size coarser than P₈₀ of 40 μm. The effectiveness of a flash flotation step before the rougher flotation stage was also studied to potentially coarsen the final grind size, however, the concentrate generated in flash flotation appeared to be graphite not fully liberated from silicate gangue.
- Bulk concentrate production (2 kg) based on the results of Test F8 (SGS, 2014a) and the use of a M4 model IsaMill for the three stages of regrind. The final Ct grade achieved was 90.2%, but the recovery was lower than planned due to mass loss taking IsaMill samples and higher mass loss through the 1st cleaner tailings.
- Upgrading of the carbon content of WP Composite pilot plant final concentrate (test PP-12-B) from 75% Ct to 90% Ct. Test work showed that the final concentrate could only be upgraded to approximately 80% Ct and the graphite particles were smeared across the majority of the gangue material and could not be effectively separated via flotation.

Following this series of tests, it was concluded by SGS that the optimized flotation flowsheet was the original flowsheet with rougher concentration followed by three stages of regrind spaced between nine stages of cleaner flotation (SGS, 2014b and 2014c).

In 2015, SGS recommended the following changes to the flotation circuit:

- IsaMill (for regrinding) be replaced by conventional grinding.
- Third stage of regrind and the last three cleaner flotation stages be omitted.

These changes would result in a slightly lower grade concentrate (88.6% C_t) for purification. The results from the 6th cleaner flotation concentrate generated in Test F8 were compared to the target feed to purification, which was used as the basis for the current design of the flotation process. The figures shown in Table 13-7 are in close agreement. It should be noted that the regrinding test work was originally conducted to support IsaMill selection. Additional regrind testing should consider conventional grinding for Regrind Mill #1 and #2 to confirm the particle size distribution of the feed to cleaner flotation Stage 1 and Stage 4.

Table 13-7:Optimized Flotation Results for PurificationAlbany Graphite Corp. - Albany Graphite Project

	Rough	Rougher Flotation Concentrate			ner Flotation	Concentrate
Composite		C	arbon		Ca	arbon
Sample	% Mass	% Grade	% Recovery	% Mass	% Grade	% Overall Recovery
EP	26.2	17.0	92.2	3.9	87.14	84.61
	Composite Sample EP	Rough Composite Sample % Mass EP 26.2	EP 26.2 17.0	Rougher Flotation ConcentrateComposite SampleCarbon % Mass% Grade% RecoveryEP26.217.092.2	Rougher Flotation Concentrate 6 th Clea Composite Sample Carbon % Mass % Mass % Grade % Recovery EP 26.2 17.0 92.2	Rougher Flotation Concentrate 6 th Cleaner Flotation Composite Sample Carbon Carbon Carbon % Mass % Grade % Recovery % Mass % Grade EP 26.2 17.0 92.2 3.9 87.14

		Rough	ner Flotation C	Concentrate	6 th Clea	ner Flotation	Concentrate
Test	Composite		C	arbon		Carbon	
No.	Sample	% Mass	% Grade	% Recovery	% Mass	% Grade	% Overall Recovery
Target						88.6	84.54

In 2017, additional flotation pilot plant test work was completed on East Pipe and West Pipe composite samples. The summary of the results from the 2017 pilot plant flotation test work are shown in Table 13-8.

Composite	Concentrate Grade (%-C)	Recovery (%)
East Pipe	83.4	90.6
West Pipe	84.7	86.2

Table 13-8: Flotation Pilot Plant Results (2017)Albany Graphite Corp. - Albany Graphite Project

The results indicate that up to 90% carbon could be potentially recovered to a concentrate grade of 83.4% carbon from the East Pipe composite. Similarly, up to 86% carbon could be potentially recovered from the West Pipe composite with a corresponding concentrate grade of 84.7%.

13.1.3 Baseline Purification Test Program

From 2013 to 2015, an extensive test program to purify the graphite concentrate was undertaken at SGS and included the following investigations:

- Base-line purification test work (2013 2014) confirmed the possibility of producing high-purity graphite containing 99% C in a single step and 99.8% C after two purification steps from a feed concentrate containing approximately 78% C (SGS, 2013). No engineering data was generated from testing, but samples were produced for marketing purposes.
- A two-stage caustic baking conceptual flowsheet in 2014 demonstrated that the graphite concentrate could be purified to 99.4% Cg (graphitic carbon) and the recovery in purification was 83.5%. The overall recovery from ore to purified graphite was approximately 69%. The process flowsheet considered agglomeration with caustic, evaporation, baking (350°C), and extensive solid/liquid separation and washing stages (SGS, 2014d).
- Direct leaching-baking conceptual flowsheet in 2015 demonstrated that the graphite concentrate could be purified to 99.94% Cg and the recovery achieved in purification was 89.13% using an alkaline (NaOH) treatment (two caustic leaching stages bracketing a 350°C baking stage) followed by mild HCl leach (SGS, 2015a and 2015b). This flowsheet required fewer process steps and achieved the highest-purity product.

The results from bench scale testing of direct leaching-baking were then used as the basis of the current design for the purification process (SGS, 2015c).

Flotation concentrate samples generated from Test F8 on EP Composite were used to conduct bench scale testing of direct leaching-baking. The target feed quality of graphite concentrate for purification consisted of material containing approximately 88.6% C and was produced at 84.54% overall recovery with a particle

size slightly above 20 μ m. These specifications closely represent the concentrate produced after six stages of cleaner flotation.

The direct leaching-baking steps in graphite purification were tested at the bench-scale and include the following stages:

- 1. Stage 1 Alkaline Leach with NaOH at ambient and elevated temperature (140°C), followed by solid/liquid separation without washing.
- 2. Low Temperature Baking at 350°C.
- 3. Stage 2 Alkaline Leach with NaOH at 140°C, followed by solid/liquid separation with countercurrent washing.
- 4. Aluminum (AI)/Silicon (Si) Removal or AlSiRe, followed by solid/liquid separation.
- 5. Stage 3 Mild HCl Leach at ambient temperature, followed by solid/liquid separation with countercurrent washing.
- 6. Drying.

Other than the impurity removal steps above, to the QP's knowledge there are no other processing factors that could have a significant effect on potential economic extraction. Table 13-9 summarizes the purity and recovery achieved from purification test work (SGS, 2015b). The target product purity of greater than 99.95% Cg was achieved following the Stage 3 Leach. At a conceptual level, the overall beneficiation process for graphite production was successfully demonstrated through laboratory testing.

Table 13-9:Overall Test ResultsAlbany Graphite Corp. - Albany Graphite Project

	Flotation Overall	Stage 1 Leach	Stage 2 Leach	Stage 3 Leach	Purification Overall	Process Overall
Purity, % Cg	88.60	97.96	99.27	99.94	99.94	99.94
% Recovery	84.54	91.43	90.18	99.90	89.13	75.40

13.1.4 Additional Purification Programs

13.1.4.1 2018 Test Work Program

In 2018, an additional test work program to purify the graphite concentrate was undertaken with the objective of investigating the alternatives to the alkaline baking process developed under the baseline purification test work program. This program was completed at SGS and included the following investigations:

- High pressure alkaline leach followed by mild acid leach (base case)
- Multistage high pressure alkaline leach and acid leach
- Acidic fluoride leach
- Caustic baking with water / caustic leach with further acid leach

The feed for this purification program consisted of a blend of flotation concentrates at a ratio that would replicate the composition of anticipated production concentrate. The assays of the concentrate blend are shown in Table 13-10.

Table	e 13- 2	10:	Concentra	ate Bl	end A	ssay	S
Albany	y Gra	phite Co	r <mark>p Alban</mark>	y Gra	phite	Proje	ect

	Elemental constituent, g/t							
AI	Ва	Ca	Cr	Cu	Fe	к	Mg	Mn
11,400	144	1,890	18	48	7,710	7,090	1,220	89.8
Мо	Na	Ni	Р	Si	Ti	v	Zn	Zr
<30	2,220	<30	72	40,800	399	<8	115	75

13.1.4.1.1 High Pressure Alkaline Leach Followed by Mild Acid Leach

The high-pressure alkaline leach and the mild acid leach were done with the objective of optimising the parameters and producing bulk concentrate for further testing under optimised conditions. The optimised conditions for this test work are shown in Table 13-11.

Parameters	Unit	High-Pressure Alkaline Leach	Mild Acid Leach
Temperature	°C	225	30
Time	minutes	15	30
Solids density	% (wt/wt)	20	20
NaOH concentration	g/l	150	n/a
Nitrogen overpressure	kPa	345	n/a
NaOH addition	kg/t	522	n/a
NaOH Consumption	kg/t	23	n/a
H_2SO_4 addition	kg/t	n/a	165
H ₂ SO ₄ consumption	kg/t	n/a	105

Table 13-11:Optimised Test Work ConditionsAlbany Graphite Corp. - Albany Graphite Project

n/a – Not applicable

The test work under optimised conditions resulted in a final graphite purity of 97.61%. The impurities contained in the final leach residue included 0.6% Si, 0.3% Fe, 0.15% Al and 0.1% Mg. This is well below the target purity level of greater than 99.95%. This indicates that additional processing is required to reach the target purity.

The alkaline filtrate from the high-pressure alkaline leach was subjected to caustic regeneration with hydrated lime at 95°C. It was demonstrated that silicon, iron, and aluminium were gradually eliminated from the solution while the sodium hydroxide solution remained at previous levels.

The acid solution from the mild acid leach was neutralized, and the main impurities (silicon, aluminum, magnesium, and iron) were removed from the solution at 75°C. It was demonstrated that silicon, aluminium, and most of iron were precipitated at pH 4. The remaining iron and 70% of the magnesium were precipitated at pH 6. All the impurities were removed at pH 10.

13.1.4.1.2 Second Stage Purification

A sample from the high-pressure alkaline leach and mild acid leach product was taken for the second stage purification test work. The second stage purification was done in two series, in the sequence of sodium hydroxide leach, followed by sulphuric acid leach and finally pressurized ammonia leach. A summary of the test conditions for each series are shown in Table 13-12.

Parameters	Unit	First Series	Second Series
	Sodium Hydroxide Lea	ch	
Temperature	°C	250	250
Time	minutes	15	120
Solids density	% - wt/wt	20	20
NaOH concentration	g/l	200	200
	Sulphuric Acid Leach		
Temperature	°C	30	30
Time	minutes	30	30
Solids density	% - wt/wt	20	20
рН	-	2	1
	Ammonia (NH₃) Leacł	ı	
Temperature	°C	250	250
Time	minutes	15	15
Solids density	% (wt/wt)	17.5	20
NH ₃ concentration	g/l	49	n/a
рН	-	n/a	10

Table 13-12:Test Work Conditions for Second Stage PurificationAlbany Graphite Corp. - Albany Graphite Project

The graphite purity increased to 98.9% in the first series and 99.3% in the second series. The results also showed that the silica content was reduced to 0.16% for the first series and to 0.11% for the second series.

13.1.4.1.3 Acidic Fluoride Test Work

Acidic fluoride (hydrofluoric acid and other fluoride sources) leaching was conducted in an effort to increase the graphite purity beyond the 99.3% achieved with the caustic process route. The tests were done with washed residue from the second stage purification as feed.

The first test in this series was conducted at 20% (wt/wt) solids in concentrated hydrofluoric acid (48% HF) at ambient temperature for 6 hours. The final slurry was filtered, and the residue was well washed, with all liquids collected as a single sample. The results indicated that final residue graphite purity had increased to 99.73%. The main residual impurity was aluminum, assaying 0.08%.

The second series was conducted with ammonium fluoride in addition to hydrofluoric acid (HF) additions. The results indicated that very similar graphite purity (99.70% to 99.77%) and similar residual silicon content (0.01% to 0.04%) were achieved in this series. A follow-up series was done with similar conditions, but extended leach reaction time of 24 hours and the results indicated that a graphite purity of up to 99.81% was achieved.

In summary, the acidic fluoride tests showed there is a need to separate the graphite from the siliconcontaining mild acid leach liquor prior to conducting an acidic fluoride step to exceed 99% purity.

13.1.4.1.4 Flowable and Non-Flowable Alkaline Bakes

Alkaline bake tests were conducted on the acid leach and acid fluoride leach residue samples. The sequence of tests and the test samples are shown in Table 13-13:

Test Series	Test Sequence	Sample
B 1	Caustic bake with water leach followed by mild acid leach	acid leach residue
B 2	Caustic bake with caustic leach followed by mild acid leach	acid leach residue
CL3 ¹	Caustic leach followed by mild acid leach	acid leach residue
B 4	Caustic bake with caustic leach followed by mild acid leach	acid fluoride leach residue
В 5	Extended caustic bake with caustic leach followed by mild acid leach	acid fluoride leach residue

Table 13-13:Alkaline Bake Test Sequence and Sample DetailsAlbany Graphite Corp. - Albany Graphite Project

Notes:

1. CL3 was done as a baseline without the alkaline bake to compare the bake results with caustic leach.

The objectives of these tests were to confirm the performance of the previously developed caustic bake / leach process and to optimize the caustic bake parameters to obtain the highest purity graphite product. The summary of the results of the alkaline bake tests are shown in Table 13-14. The results also indicated that the caustic bake resulted in increased product purity compared to the baseline (caustic leach) test.

Table 13-14:Alkaline Bake ResultsAlbany Graphite Corp. - Albany Graphite Project

Test series	Purity (% Cg)	Si (%)	Al (%)
B1	99.84	0.03	0.002
B2	99.89	0.004	0.001
CL3	99.64	0.03	0.04
B4	99.71	0.008	0.003
B5	99.80	0.004	0.003

The results indicate that the caustic bake with caustic leach followed by mild acid leach resulted in the highest purity of (99.89%) out of all the five sequences tested. It is evident from the 2018 test work program that none of the tested conditions achieved the target purity of 99.95% Cg. Based on these



results, it can be concluded that the chemical purification of graphite using these methods appears to have a functional limit that is slightly below the target. It is important to note that the target purity was achieved during the 2015 test work. Thus, further test work is required to reconfirm those findings and to further optimize purification parameters.

13.1.4.2 2019 Test Work Program

In 2019, another test work program was conducted to further examine the process developed during the 2018 program. This program was completed in SGS and included a series of six locked cycles of caustic pressure leaching (ZPL) and acid leaching with caustic regeneration and acid neutralisation followed by acidic fluoride leaching (ZHL) with acid neutralisation. The flowsheet of the locked cycle test is shown in Figure 13-2. The objective of this program was to investigate graphite purity and the behaviour of impurities during a series of locked cycle tests.

The feed for this purification program was identical to the feed for the 2018 program and consisted of a blend of flotation concentrates at a ratio that would replicate the composition of anticipated production concentrate. The concentrate blend assays are shown in Table 13-15.

Elemental constituent, g/t								
Al	Ва	Са	Cr	Cu	Fe	к	Mg	Mn
11,713	152	2,163	<20	48	7,301	6,413	1,960	89.4
Мо	Na	Ni	Р	Si	Ti	V	Zn	Zr
<30	2,007	<30	80	39,495	377	<8	145	72.7

Table 13-15:Concentrate Blend AssaysAlbany Graphite Corp. - Albany Graphite Project



Figure 13-2: Locked Cycle Test Flowsheet

The 2019 test work results indicated that the graphite flotation concentrate was upgraded from 85.6% Cg to an average 96.6% Cg after the caustic pressure leach and further purified to an average of 99.6% Cg after the acidic fluoride leach. Summaries of the 2019 test work results showing the behavior of impurities after ZPL and ZHL testing are shown in Figure 13-3 and Figure 13-4, respectively.





Impurities in the Graphite Product After ZPL Testing



Figure 13-4:

Impurities in the Graphite Product After ZHL Testing

The results indicate that aluminium and magnesium concentrations increased in the final graphite product through the first four ZHL test but returned to lower levels in the last two series. It is understood that the reason for this trend is due to the increased reagent additions during the last two cycles. All other elements remained stable throughout of the ZHL test series. The results also indicate a similar trend of



increased impurity content after the fourth cycle for all of the elements for the ZPL tests. It is understood that the differences in reagent additions were responsible for this trend as well.

It was reported that the highest graphite purity observed during the tests (97.8% for ZPL and 99.6% for ZHL) was comparable to 2018 test work results (97.6% for ZPL and 99.8% for ZHL). In summary, the 2019 test work confirmed that the 2018 purity levels are reproducible in a locked cycle test environment, but further test work is required to reach the target 99.9% purity levels.

13.1.5 Process Flowsheet Selection

The process flowsheet selected is based on recent metallurgical development test work completed at SGS. It comprises crushing and grinding, flotation, and alkaline treatment (one caustic leaching stage before and after a low temperature baking (350°C) stage) followed by mild HCl leaching to extract a purified graphite product.

In the QP's opinion, the metallurgical test work completed to date has focused on achieving product purity and not on optimization of the process. The optimisation of the purification area of the flowsheet requires further investigation. In addition, the waste streams and water consumptions need further definition. The 2015 target product purity (99.9%) was achieved in 2015 test work but has not been reproduced in more recent (2018, 2019) test work, which achieved a purity of 99.8%. SLR notes that the goal of the subsequent 2018 and 2019 hydrometallurgical test work was to develop a flowsheet which is more cost effective than the PEA (caustic (NaOH) bake/leach process) to deliver graphite product which is suitable for the graphene and nano graphite market In this context, it is concluded that the PEA flowsheet is appropriate for the level of study but that additional test work and further improvements in process design, performance, and cost reduction are to be expected with advanced levels of study.

13.1.6 Future Test Work

In the QP's opinion, optimization of the purification process and evaluation of the metallurgical variability of the deposit requires further evaluation. Metallurgical test work on flotation has been carried out on two composite samples (EP and WP) and on purification using only EP Composite material (2015) and a homogenized mixture of flotation concentrates produced from East and West pipe samples (2018, 2019). Additional flotation testing to assess the impact of ore variability in the feed grades of EP Composite and WP Composite is recommended. Tests for regrinding, liquid-solid separation, and thickening of products (concentrate and tails) should be conducted to confirm laboratory results for six stages of cleaner flotation, instead of nine stages of cleaner flotation.

The purification flowsheet (consisting of hydrometallurgical and pyrometallurgical processes) is complex and requires investigation of potential corrosion risks, handling of material from several different process streams, and extensive solid-liquid separation. Further optimization test work in purification is recommended to validate and to confirm the robustness of the overall process design and reagent consumptions. Analysis and characterization of process wastes (potentially from off-gas handling and AlSiRe) are necessary to determine how to dispose of the materials. Stages of larger scale testing are recommended to confirm laboratory bench-scale tests:

- Mini-pilot plant test work program
- Larger scale pilot/demonstration unit at an advanced level of study

14.0 MINERAL RESOURCE ESTIMATE

14.1 Summary

SLR estimated Mineral Resources for the Albany graphite deposit using drill hole data available as of April 30, 2023 (Table 14-1). The Mineral Resource estimate is based on a potential combined open pit and underground mining scenario. SLR estimates Indicated Mineral Resources to total 22.9 million tonnes (Mt) at an average grade of 4.1% Cg, containing 933,000 tonnes of Cg. In addition, Inferred Mineral Resources are estimated to total 13.1 Mt at an average grade of 2.9% Cg, containing 375,000 tonnes of Cg. Inferred Mineral Resources include 3.4 Mt Open Pit (OP) resources at an average grade of 2.5% Cg, containing 87,000 tonnes of Cg constrained by a Whittle pit shell, and 9.7 Mt of Underground (UG) resources below the pit shell at an average grade of 3.0% Cg, containing 288,000 tonnes of Cg. In order to demonstrate Reasonable Prospects of Eventual Economic Extraction (RPEEE), OP Mineral Resources were reported within an optimized Whittle pit shell at a cut-off grade of 1.22% Cg and UG Mineral Resources were reported within underground resource reporting shapes, satisfying the minimum mining size and continuity criteria, and using a cut-off grade of 1.76% Cg.

There are no Mineral Reserves estimated on the Property.

The QPs are not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

	Cut-off Grade	Tonnage	Grade	Contained Graphitic Carbon
	(% Cg)	(Mt)	(% Cg)	(t Cg)
OP				
Indicated	1.22	22.9	4.07	933,000
Inferred	1.22	3.4	2.55	87,000
UG				
Indicated				
Inferred	1.76	9.7	2.98	288,000
Total Indicated	1.22	22.9	4.07	933,000
Total Inferred	Variable	13.1	2.87	375,000

Table 14-1:Mineral Resource Estimate – April 30, 2023Albany Graphite Corp. - Albany Graphite Project

Notes:

1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves dated May 10, 2014 (CIM (2014) definitions) were followed for Mineral Resources.

2. Cg – graphitic carbon

3. Mineral Resources are estimated using a long-term price of US\$8,000 per tonne Cg, and an exchange rate of US\$0.75= C\$1.00.



- 4. 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.
- 5. Open pit Mineral Resources are constrained by a pit-shell generated in Whittle software above a cut-off grade of 1.22% Cg.
- 6. Underground Mineral Resources are constrained within underground reporting shapes to demonstrate Reasonable Prospects for Eventual Economic Extraction and reported above a cut-off grade of 1.76% Cg.
- 7. Numbers may not add due to rounding.

RPA, now SLR, received data from Zentek, now AGC, in Microsoft Excel format. The data was amalgamated and parsed, as required, and imported into GEMS for modelling. In 2023, SLR incorporated additional drilling information from after the November 15, 2013, database cut-off date of the previous estimate as well as the previously received information into Leapfrog Geo software. Listed below is the number of records directly related to the resource estimate:

- Holes: 65
- Total meterage: 26,284 m
- Surveys: 5,062
- Assays: 20,389
- Composites 6,563 (≥0.5 m in length)
- Lithology: 1,953
- Density measurements: 1,100

Assays for metallurgical drill holes Z13-4FM04, Z13-4F05, and Z13-4FM06 and bulk sample drill holes Z19-4FM07 and Z19-4FM08 were incorporated into the current Mineral Resource estimate.

Section 12, Data Verification, describes the verification steps completed by SLR. In summary, no discrepancies were identified and the QPs are of the opinion that the drill hole database is valid and suitable to estimate Mineral Resources for the Albany graphite deposit.

14.2 Geological Interpretation and 3D Solids

Wireframe models of the mineralized zones were built to study geological and grade continuity and to constrain the block model interpretation.

The Albany graphite deposit comprises two separate pipes, West and East. 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 (Figure 14-1). The West and East graphitic breccia pipes were interpreted using geology.

SLR created northeast and northwest looking vertical sections spaced 50 m apart on the West and East Pipes, respectively, level plans spaced 10 m, 25 m, and 50 m apart, and longitudinal sections parallel to the strike of each pipe (approximate azimuth of 020° for the West Pipe and 335° for the East Pipe). Mineralized zones were interpreted on plan sections and snapped to drill holes to generate a set of three dimensional (3D) wobbly polylines on each cross-section (Figure 14-1). At model extremities, polylines were extrapolated approximately 100 m beyond the last drill section. Polylines were joined together in 3D using tie lines and the continuity was checked using the longitudinal and vertical sections. Once the mineralized wireframes were triangulated, clipping boundaries were used to constrain the solids along strike using EM geophysical survey data (Figure 14-2). The East Pipe mineralized wireframes were clipped to a depth of -500 MASL and the West Pipe to -400 MASL (Figure 14-2).

The East Pipe low-grade halo was constructed considering geology and a minimum 0.4% Cg in the overprinted zones.



Wireframes were extended through drill holes with low grade or barren intersections to preserve continuity.

A description of each modelled zone follows.



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14.2.1 Domain 20 – West Pipe

Domain 20 is a graphitic breccia pipe intersected by 29 drill holes. It occurs as a steep-sided, inverted cone, narrowing with depth. It is elliptical in plan, elongated in a north-northeast direction. Dimensions are somewhat variable, ranging from 175 m at its widest, to less than 68 m at its base (Figure 14-1). Where the pipe is capped by Paleozoic limestone, it is 160 m wide by 350 m long and the pipe is modelled to a depth of approximately 525 m below surface (-400 MASL).

The West Pipe is cut by a younger barren sill at a depth of approximately 200 m. The sill ranges from 40 m to nearly 65 m in thickness. In addition, two large blocks of un-mineralized waste material occur within the West Pipe. In the southern part of the pipe apex, a large slab of syenite (65 m in length by 40 m in thickness, illustrated in Figure 14-2) has been intersected by several drill holes. Just above the barren sill, another large block of internal waste has been modelled (approximately 110 m x 60 m x 90 m). At the margins of the pipe, some graphitic overprint has been incorporated into the wireframe model.

14.2.2 Domain 21 – West Pipe Mineralized Wedge

Within the barren sill of the West Pipe, a small (approximately 25 m x 50 m) "wedge" of mineralization has been modelled. It occurs in the western part of the pipe, at a depth of approximately 215 m. Samples within this mineralized wedge have returned assays higher than 5% Cg, and the average grade is 1.7% Cg.

14.2.3 Domain 10 – East Pipe

Domain 10 is a graphitic breccia pipe intersected by 31 drill holes. It occurs as a near-vertical tabular body, ranging from a width of 50 m at its apex to nearly 75 m, and tapers to a modelled width of approximately ten metres. The pipe is modelled to a depth of -500 MASL, or approximately 625 m below the topographic surface. In plan, the East Pipe is elongated in a north-northwest direction, extending for approximately 250 m. The pipe is cut by two younger barren sills. The thinnest and shallowest is intersected in drill holes at a depth of roughly 310 m and ranges from 10 m to 12 m in thickness. The second, thicker sill, is intersected at a depth of 340 m to 345 m, and averages 35 m thick.

14.2.4 Domain 14 – East Pipe Mineralized Halo

Domain 14 is a 0.4% Cg halo of overprinted syenite country rock surrounding the East Pipe. Grades range to over 16% Cg, but overall, the grade averages 0.7% Cg. In general, there is a significant drop in grade at the contact between the graphitic breccia of rock type 10 and the overprinted syenite. Minor intersections of higher grade graphite breccia occur within the overprinted syenite.

At the bedrock surface, the East Pipe, including the graphitic breccia and overprinted syenite, has an average width of approximately 80 m and reaches widths of up to 150 m. On its own, the low grade halo (above the barren sills) ranges in thickness from 30 m to 60 m and it is thicker on the eastern side of the pipe. Beneath the barren sills, there only remains a thin skin of overprinted syenite on the western side of the pipe, averaging five metres in thickness. The overprinted syenite halo is modelled to the same depth as the East Pipe graphitic breccia.

14.2.5 Domain 55 – Barren Sill

All barren intrusive rocks within the West and East pipes are designated as domain 55.

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 (domain 21) 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. 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 (35 m thick) sill is intersected 40 m below the upper unit and has a shallow dip to the east. The sills that cut both pipes are likely 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.

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

Table 14-2 summarizes the domains in the Albany Graphite Deposit.

Albany Graphite Corp. - Albany Graphite Project Pipe **Rock type/Domain** Description Name East 10 EAST East Graphitic Breccia Pipe 10 14 10.4 EAST Low grade graphitic overprint halo 55 WASTE1 Barren sill 55 WASTE2 Barren sill Graphitic Breccia Pipe minor graphitic overprint West 20 20 WEST along margins 21 21_WEST Graphitic Breccia "Wedge" within barren sill 55 WASTE3 Barren sill 55 WASTE4 Internal barren waste WASTE5 55 Barren syenite in the top of the pipe Other 33 Overburden Glacial till Sedimentary Rock Paleozoic Limestone unit 66 99 **Country Rock Waste** Archean country rock

Table 14-2: **Albany Resource Domains**

The QPs note that there is additional mineralization in assays outside the mineralized wireframes in the West and East pipes well above the cut-off grade of 0.6% Cg. It is the QPs' opinion that the narrower thickness and lower grade of these intercepts together with intervening material that is below cut-off grade precludes the inclusion of the intercepts as Mineral Resources at this time.

The Indicated Mineral Resources are located in the West and East Pipe graphitic breccia (domains 10 and 20), exclusively above the barren sills. All mineralization below (or within) the barren sills as well as the East Pipe low grade halo (domain 14) are classified entirely as Inferred Mineral Resources.

14.3 Statistical Analysis

Assay values located inside the wireframe models were tagged with domain identifiers (domain) and exported for statistical analysis. Results assisted in verifying the modelling process. Basic statistics are summarized in Table 14-3.

Domain	Count	Mean	CV	Minimum	Median	Maximum
10	4,790	5.21	0.74	0.02	5.25	20.80
14	1,633	0.69	1.49	0.02	0.40	16.25
20	6,182	2.63	0.91	0.02	2.16	14.65
21	83	1.70	0.86	0.02	1.20	5.23

Table 14-3:Summary Statistics of Resource Assay Graphitic Carbon ValuesAlbany Graphite Corp. - Albany Graphite Project

14.4 Cutting High Grade Values

Where the assay distribution is skewed positively or approaches lognormal, erratic high grade assay values can have a disproportionate effect on the average grade of a deposit. One method of treating these outliers in order to reduce their influence on the average grade is to cut or cap them at a specific grade level.

In the absence of production data to calibrate the cutting level, inspection of the assay distribution can be used to estimate a first pass cutting level. Figure 14-3 and Figure 14-4 show the histogram and cumulative frequency log probability plot of Cg assays within the mineralized zone wireframes. Figure 14-5 shows the percentage of Cg loss with average cut grades.





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Figure 14-5: Percent Graphite Loss and Average Cut Grades

Review of the resource assay histograms within the wireframe domains (Figure 14-3), cumulative probability plots (Figure 14-4), Cg loss with cutting (Figure 14-5) suggests that no cutting of high grades is required for the Albany graphite deposit. Additionally, the coefficients of variation (CV) of the assays (Table 14-3) are mostly less than one, another indication that cutting is unnecessary.

14.5 Compositing

Sample lengths range from five centimetres to four metres within the wireframe models. More than twothirds (71%) of samples were taken at one metre intervals (Figure 14-6). Approximately 1.35% have sample lengths greater than two metres. Given these distributions and considering the width of mineralization, resource assays were composited to two metre 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 removed from the database prior to statistical analysis and resource estimation but were used for variography. The elimination of the small composites did not affect the overall integrity of the composited database.

Table 14-4 summarizes the composite statistics. When compared to Table 14-3, the average grades are essentially the same and the CV values have been reduced.

Domain	Count	Mean	CV	Minimum	Median	Maximum
10	2,484	5.20	0.60	0.02	5.44	14.99
14	891	0.69	1.16	0.02	0.46	9.08
20	3,152	2.57	0.80	0.00	2.29	10.77
21	36	1.71	0.64	0.27	1.70	3.98
-						
-						
-						
-						
	 •					
0	1	2	l anath (m	3	4	5

Table 14-4:Summary Statistics of Graphitic Carbon Resource CompositesAlbany Graphite Corp. - Albany Graphite Project



14.6 Variography and Kriging Parameters

The GEMS 6.5 geostatistics module was used to prepare a series of variograms from Cg composite values located within the mineralized wireframes. The downhole variogram was well developed and indicates a nugget effect of 25% and 29% for the West and East pipes, respectively. Variograms were attempted in a variety of directions and indicated that the longest ranges were 100 m for the West Pipe and 76 m for the East Pipe. A single structure spherical model was used with a 25% nugget effect to model the West Pipe experimental variograms and a spherical model using two structures with a 29% nugget effect was applied to the East Pipe. Variography was reviewed in 2023 with the addition of additional resource assays; the

review validates the parameters applied in the previous estimate. The variograms for the West and East pipes are shown in Figure 14-7 and Figure 14-8, respectively.

A two-pass approach was used to interpolate block grades for both pipes, and no drill hole intercepts located outside the mineralized zone wireframes were used to interpolate block grades. The search ellipses are illustrated in Figure 14-9 and Figure 14-10, and the ranges varied by pipe (Table 14-5). For the West Pipe, the search ellipse was ovoid in the vertical (XY) plane, using an X and Y search distance of 76 m and 58 m, and 36 m in the Z direction. The second pass used search distances of 152 m, 116 m, and 72 m in the X, Y, and Z directions, respectively (Figure 14-9). For the East Pipe, the search ellipse was isotropic in the vertical (XY) plane, using an X and Y search distance of 35 m in the Z direction. The second pass used a search distance of 100 m and a search distance of 35 m in the Z direction. The second pass used an X and Y search distance of 200 m and a search distance of 70 m in the Z direction (Figure 14-10).

The wireframe mineralized zone shells were used as hard boundaries to prevent the use of composites outside of the zones. The first pass search was limited to a minimum of four and a maximum of twelve composites per block estimate with a maximum of three composites per drill hole. The second pass search allowed an estimate with a minimum of two composites per block, a maximum of 24, and no limit placed on the number of composited used per drill hole.



Figure 14-7: West Pipe 3D Variograms



Figure 14-8: East Pipe 3D Variograms





Parameter			West	West Pipe		East Pipe	
	Domain		20	21	10	14	
	Method		OK1	ОК	ОК	OK	
	Boundary Type		Hard	Hard	Hard	Hard	
		Pass 1	4	4	4	4	
	IVIIN. NO. Comps.	Pass 2	2	2	2	2	
		Pass 1	12	12	12	12	
	Max. No. Comps.	Pass 2	24	24	24	24	
		Pass 1	3	3	3	3	
	Max. Comps. Per Drill Hole	Pass 2	NA	NA	NA	NA	
	Principal Azimuth		245	245	290	290	
Search Anisotropy	Principal Dip		-90	-90	-90	-90	
	Int. Azimuth		155	155	20	20	
		Pass 1	76	76	100	100	
	Range X (m)	Pass 2	152	152	200	200	
-		Pass 1	58	58	100	100	
Search Ellipse	Range Y (m)	Pass 2	116	116	200	200	
-		Pass 1	36	36	35	35	
	Range Z (m)	Pass 2	72	72	70	70	
	Nugget (C ₀)		1.05	1.05	2.87	2.87	
Variogram Model	Relative Nugget		25%	25%	29%	29%	
Structure	C1		3.16	3.16	2.98	2.98	
	Range X (m)		76.4	76.4	10.5	10.5	
	Range Y (m)		57.8	57.8	10.5	10.5	
	Range Z (m)		36.4	36.4	3.7	3.7	
-	C ₂		-	-	4.19	4.19	
	Range X (m)		-	-	100.0	100.0	
	Range Y (m)		-	-	100.0	100.0	
	Range Z (m)		-	-	35.0	35.0	
-	Total Sill		4.21	4.21	10.04	10.04	

Table 14-5:Block Estimate Estimation ParametersAlbany Graphite Corp. - Albany Graphite Project

Notes:

1. Ordinary Kriging

14.7 Bulk Density

Density determinations were completed by Zentek in 2013 on pre-selected assay samples using specific gravity. A total of 857 density measurements are available on the Project, 616 of which are within the mineralized resource domains. SLR reviewed the descriptive statistics (Table 14-6), histograms, and box plots (Figure 14-11) for density samples taken within the mineralisation wireframes and determined that there were no high density outliers that should be removed from the data set. SLR further tested whether density weighting should be applied to grade interpolation and concluded that there was no strong correlation between Cg grade and density. The density used for tonnage calculation on the Project is based on the geological model and bulk density values assigned the median value of samples taken with a specific domain.

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/m³ was assigned to the East Pipe graphitic breccia (10), 2.63 t/m³ to the low-grade graphitic overprint (14), 2.62 t/m³ to the West Pipe graphitic breccia (20), and 2.61 t/m³ to the mineralized wedge (21). For internal waste and barren sills (55), a density of 2.68 t/m³ was assigned and a value of 2.63 t/m³ 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/m³ and 1.8 t/m³, respectively, were assigned, which the QPs consider typical and reasonable values for the lithologies.

Table 14-6 summarizes the descriptive statistics for samples taken within the mineralization wireframes, waste rock of the West and East pipes, and country rock lithologies; density box plots by domain are shown in Figure 14-11.

Domain	Count	Mean (t/m³)	CV	Minimum (t/m³)	Median ¹ (t/m³)	Maximum (t/m³)
10	218	2.59	0.02	2.42	2.59	2.78
14	65	2.68	0.05	2.51	2.63	2.97
20	328	2.62	0.04	1.95	2.62	2.92
21	5	2.62	0.00	2.61	2.61	2.63
55	90	2.69	0.03	2.50	2.68	3.09
99	151	2.65	0.03	2.44	2.63	3.00

Table 14-6:Summary Statistics of Density MeasurementsAlbany Graphite Corp. - Albany Graphite Project

Notes:

1. Median density value assigned to all blocks within a specific domain.



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Figure 14-12 plots density versus depth and Cg grade for measurements within the modelled pipes. Neither graph shows a correlation. SLR therefore applied unique tonnage factors by domain only.



Figure 14-12:

Scatterplots of Depth and Grade Versus Density

14.8 Block Model

The original GEMS block model is made up of 210 columns, 185 rows, and 80 levels for a total of 3,108,000 blocks. The model origin (lower-left corner at highest elevation) is at UTM Zone 16 NAD 83 coordinates 681,700 m E, 5,544,750 m N, and 150 m elevation. Each block is 10 m (x) by 10 m (y) by 10 m (z). A whole



block model with attributes that include domain, density, and Cg grades is used to manage blocks filled by mineralized domains. The domain model was created using majority rules with the main lithology solids (Table 14-2). The block model contains the following information:

- Domain identifiers with mineralized domain.
- Estimated grade of Cg within the wireframe models.
- Tonnage factors (density model), in tonnes per cubic metre, specific to each domain.
- Distance to the closest composite used to interpolate the block grade.
- Average composite distance used to interpolate the block grade.
- Number of drill holes used to interpolate the block grade.
- Number of composites used to interpolate the block grade.
- Interpolation pass.
- Resource classification of each block.

Prior to updating the current Mineral Resource estimate, SLR imported the block model as a CSV file into Leapfrog Geo, retaining identical properties and attributes of the GEMS model described above. The Cg block grade estimate was updated only for domains with new assay data, i.e., 10 and 20.

14.9 Open Pit and Underground Reporting and Cut-off Grade

Cut-off grades were estimated for a conceptual operating scenario including:

- Open pit and underground production at a rate of approximately 3,000 tonnes per day
- Flotation recovery of 90.6% and concentrate grade of 83.4%
- Production of a flotation concentrate on site
- Shipping of concentrate to a third-party purification facility, to produce a high-value coated spherical purified graphite (CSPG) product

A market price of US\$8,000 per tonne Cg was used, based on recent comparable projects focused on the high-purity graphite market.

To fulfill the NI 43-101 requirement of RPEEE, SLR prepared an optimized Whittle pit shell to constrain the block model for open pit resource reporting purposes and underground reporting shapes were developed using constraining wireframes built around continuous blocks above 1.76% Cg for underground resource reporting. The open pit was generated using Whittle software and an overall slope angle of 18.5° in overburden and 43.5° in all other rock types. Whittle analysis gave a discard cut-off grade of 1.22% Cg, and the pit shell was used to report open pit resources at this cut-off grade. For the underground portion of the Albany graphite deposit, the barren sill cutting the West and East pipes served as the limit between open pit resource reporting and underground reporting. Underground shapes were constructed in the mineralized blocks below the barren sill, and all blocks above 1.76% Cg within the underground reporting shapes were reported as Mineral Resources. In the QPs' opinion, RPEEE for underground resources is demonstrated by the large block size (10 m x 10 m x 10 m) and the adequate continuity of material above the 1.76% Cg cut-off grade (within the underground reporting shapes).

The open pit and underground cut-off grades and assumptions are summarized in Table 14-7.

Figure 14-13 illustrates the final wireframe constraints used to report underground resources in the West and East Pipes.

Parameter	Units	Open Pit	Underground
Cut-off Grade ¹	% Cg	1.22	1.76
Graphite Product Price ²	US\$/t	8,000	8,000
Transport & Marketing	C\$/t product	100	100
Profit Margin ³	C\$/t product	2,000	2,000
Royalties ⁴	C\$/t product	62	62
Total Selling Cost	C\$/t product	2,162	2,162
Flotation Recovery	%	90.6	90.6
Concentrate Grade	%	83.4	83.4
Payable Cg	%	100	100
Processing Costs	C\$/t milled	20	20
Operational Support (G&A)	C\$/t milled	9	9
Purification Cost ⁵	C\$/t milled	60	60
Underground Mining Costs	C\$/t mined	-	40

Table 14-7:Mineral Resource Cut-off Grade AssumptionsAlbany Graphite Corp. - Albany Graphite Project

Notes:

- 1. Pit discard cut-off and break-even cut-off considered for Open Pit and Underground mining, respectively.
- 2. Graphite product price of US\$8,000/t converts to C\$10,667/t at 0.75 exchange rate, resulting in a C\$8,107/t concentrate used in obtaining resource shells.
- 3. Profit for third party toll milling.
- 4. Includes a 1.25% NSR royalty.
- 5. The toll purification cost was estimated based on third-party data for obtaining 99.99% purity from a similar concentrate.


14.10 Block Model Validation

SLR validated the Albany block model in the following ways:

- Volumetric checks
- Inverse distance squared (ID²) interpolation as a check on ordinary kriging (OK)
- Visual comparison of block grades with composite grades
- Comparison of block grade with assay and composite statistics

Block model grades were visually examined and compared with composite and assay grades in vertical cross sections and plan sections. SLR confirmed that the block grades are reasonably consistent with local drill hole assay and composite grades.

Grade statistics, at a zero grade cut-off, for assays, composites, and blocks were examined and compared for all domains in the West and East Pipes (Table 14-8). The comparisons of average grades are reasonable in the QPs' opinion. In some cases, average block grades are slightly higher than average composite grades, for example domain 21 in the West Pipe and domain 14 in the East Pipe. This is attributed to a larger influence of some higher grade drill holes in some parts of these zones due to their relative location and spacing locally.

Statistic	Assays	Composites	Block Model			
Statistic	(Cg %)	Composites (Cg %) ain 20 2,617 0.00 10.36 2.29 2.59 2.04 0.79 2.04 0.79 3.6 0.27 3.99 1.72 1.71 1.09 0.64	(Cg %)			
v	West Pipe Domain 20					
Number of Cases	4,821	2,617	12,577			
Minimum	0.02	0.00	0.05			
Maximum	14.65	10.36	6.97			
Median	2.25	2.29	2.23			
Arithmetic Mean	2.70	2.59	2.33			
Standard Deviation	2.39	2.04	1.28			
Coefficient of Variation	0.89	0.79	0.55			
v	Vest Pipe Doma	in 21				
Number of Cases	83	36	64			
Minimum	0.02	0.27	0.42			
Maximum	5.23	3.99	3.17			
Median	1.20	1.72	1.80			
Arithmetic Mean	1.70	1.71	1.76			
Standard Deviation	1.46	1.09	0.66			
Coefficient of Variation	0.86	0.64	0.37			

Table 14-8:

Comparison of Grade Statistics for Assays, Composites, and Blocks Albany Graphite Corp. - Albany Graphite Project

Statistic	Assays	Composites	Block Model			
Statistic	(Cg %)	(Cg %)	(Cg %)			
East Pipe Domain 10						
Number of Cases	4,695	2,382	6,165			
Minimum	0.02	0.02	0.09			
Maximum	20.80	14.99	9.26			
Median	5.18	5.37	4.60			
Arithmetic Mean	5.18	5.16	4.60			
Standard Deviation	3.89	3.18	1.93			
Coefficient of Variation	0.75	0.62	0.42			
I	East Pipe Doma	in 14				
Number of Cases	1,642	891	3,098			
Minimum	0.02	0.02	0.04			
Maximum	16.25	9.08	3.92			
Median	0.40	0.46	0.63			
Arithmetic Mean	0.71	0.69	0.75			
Standard Deviation	1.08	0.79	0.42			
Coefficient of Variation	1.53	1.16	0.56			

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14.11 Classification

Exploration results from geophysical surveys and drilling suggest the presence of two discrete mineralized breccia pipes with lower grade graphite-overprinted bedrock occurring as a halo surrounding the pipes. In general, drill holes are closely spaced near the centre of each pipe, and more widely spaced at their margins. Both pipes are cut by barren, post-emplacement sills. Given that the drill hole density and pipe contact data below these sills are markedly lower, all Mineral Resources below the sills (or within, as in the case with domain 21 in the West Pipe) were classified as Inferred.

The QPs classified the Mineral Resource above the sills in the West and East Pipes based on the distance to the nearest sample and the number of samples and drill holes, while at the same time taking into account the understanding and use of the geology. On this basis, the low grade halo in the East Pipe (domain 14) was classified as Inferred, regardless of the distance to the nearest sample or the number of samples and drill holes. From the base of the limestone to the top of the barren sills, the West and East Pipe graphitic breccia domains (20 and 10) were classified as Indicated if the block grade was interpolated during the first pass and Inferred if interpolated in the second pass (Table 14-5). Areas of Indicated Mineral Resources in the West and East Pipes had an average drill hole spacing of approximately 15 m near the pipe centres to approximately 50 m near the pipe margins. Figure 14-14 shows the classified blocks for the Albany graphite deposit.



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14.12 Detailed Mineral Resource Report

The Mineral Resource estimate for the Albany graphite deposit is shown by category, mining method, pipe, and domain in Table 14-9. Figure 14-15 shows the distribution of Cg grades in the block model. Figure 14-16 and Figure 14-17 show the Cg grades for the West and East pipes, respectively, in long section.

Mining Method	Pipe	Cut-off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
OP	West Pipe	1.22	13.5	2.96	398,000
	East Pipe and Halo	1.22	9.4	5.67	535,000
	Total Indicated OP	1.22	22.9	4.07	933,000
UG	West Pipe	1.76	-	-	-
	East Pipe and Halo	1.76	-	-	-
	Total Indicated UG	1.76	-	-	-
	Total Indicated		22.9	4.07	933,000
		Infei	red		
OP	West Pipe	1.22	2.5	2.86	72,000
	East Pipe and Halo	1.22	0.9	1.67	15,000
	Total Inferred OP	1.22	3.4	2.55	87,000
UG	West Pipe	1.76	5.7	2.80	160,000
	East Pipe and Halo	1.76	4.0	3.23	128,000
	Total Inferred UG	1.76	9.7	2.98	288,000
	Total Inferred		13.1	2.87	375,000

Table 14-9:Mineral Resource Estimate by Domain – April 30, 2023Albany Graphite Corp. – Albany Graphite Project

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.

2. Cg – graphitic carbon

3. Mineral Resources are estimated using a long-term price of US\$8,000 per tonne Cg, and an exchange rate of US\$0.75= C\$1.00.

4. 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.

5. Open pit Mineral Resources are constrained by a pit-shell generated in Whittle software above a cut-off grade of 1.22% Cg.

6. Underground Mineral Resources are constrained within underground reporting shapes to demonstrate Reasonable Prospects for Eventual Economic Extraction and reported above a cut-off grade of 1.76% Cg.

7. Numbers may not add due to rounding.







14.13 Comparison with Previous Mineral Resource Estimate

Table 14-10 compares the current Mineral Resource estimate to the previous estimate reported in 2015 (RPA, 2015). The current estimate has incorporated five additional drill holes into the grade estimate and uses different reporting criteria.

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Indicated Mineral Resource tonnage decreased from 24.3 Mt to 22.9 Mt. Inferred Mineral Resource tonnage decreased from 16.9 Mt tonnes to 13.1 Mt. Contained Cg classified as Indicated decreased by 35,000 tonnes and grade increased by 2% (0.1% Cg), and contained Cg classified as Inferred decreased by 70,000 tonnes and grade increased by 9% (0.2% Cg).

The differences are due to the following:

- Updated pit inputs, particularly the increase in purification cost associated with producing a coated spherical purified graphite (CSPG) product, which is slightly offset by a higher market price of graphitic carbon. The previous estimate was based on a scenario with a dedicated purification facility (higher capital cost), and the current estimate assumes toll purification by others (higher operating cost). The result is a marginally smaller open pit shell and a higher cut-off grade.
- SLR reported underground Mineral Resources within underground reporting shapes using constraining wireframes built around continuous blocks above 1.76% Cg, reporting only blocks above cut-off. The previous estimate reported all blocks within the constraining wireframes built around continuous blocks above 1.6%. In addition to an increase to the cut-off grade, the updated underground reporting shapes have been modified in the West Pipe with the incorporation of additional drilling that was lower grade in some areas.

	Mining Method and Classification	Cut-off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
2023ª	OP				
	Indicated	1.22	22.9	4.07	933,000
	Inferred	1.22	3.4	2.55	87,000
	UG				
	Indicated				
	Inferred	1.76	9.7	2.98	288,000
	Total Indicated	1.22	22.9	4.07	933,000
	Total Inferred	Variable	13.1	2.87	375,000
2015 ^b	OP				
	Indicated	0.9	24.3	3.98	968,000
	Inferred	0.9	5.4	2.58	138,000
	UG				

Table 14-10:Comparison of Current Resource Estimate with 2015Albany Graphite Corp. - Albany Graphite Project

Mining Method and Classification	Cut-off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
Indicated	1.5	-	-	-
Inferred	1.5	11.5	2.67	307,000
Total Indicated	0.9	24.3	3.98	968,000
Total Inferred	Variable	16.9	2.64	445,000

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Notes for 2023 Estimate^a:

- 1. CIM (2014) definitions were followed for Mineral Resources.
- 2. Cg graphitic carbon
- Mineral Resources are estimated using a long-term price of US\$8,000 per tonne Cg, and an exchange rate of US\$0.75= C\$1.00.
- 4. Bulk density is 2.62 t/m³ and 2.61 t/m³ for West pipe domains 20 and 21 and 2.59 t/m³ and 2.63 t/m³ for East pipe domains 10 and 14.
- Open pit Mineral Resources are constrained by a pit-shell generated in Whittle software above a cut-off grade of 1.22% Cg.
 Underground Mineral Resources are constrained within underground reporting shapes to demonstrate Reasonable
- Prospects for Eventual Economic Extraction and reported above a cut-off grade of 1.76% Cg.
- 7. Numbers may not add due to rounding.

Notes for 2015 Estimate^b:

- 1. CIM definitions were followed for Mineral Resources.
- 1. Cg graphitic carbon
- 2. Mineral Resources are estimated using a long-term price of US\$7,500 per tonne Cg, and an exchange rate of US\$0.82 = C\$1.00.
- 3. Bulk density is 2.6 t/m^3 in the pipes and 2.65 t/m^3 in the halo of the East Pipe.
- 4. OP Mineral Resources are constrained by a pit-shell generated in Whittle software.
- 5. Numbers may not add due to rounding.

15.0 MINERAL RESERVE ESTIMATE

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The are no Mineral Reserves estimated at the property.

16.0 MINING METHODS

SLR^O

17.0 RECOVERY METHODS

SLR^O

SLR^O

18.0 PROJECT INFRASTRUCTURE

19.0 MARKET STUDIES AND CONTRACTS

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

SLR

21.0 CAPITAL AND OPERATING COSTS

22.0 ECONOMIC ANALYSIS

SLR^O

23.0 ADJACENT PROPERTIES

There are no significant properties adjacent to the Property.

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Albany Graphite Corp. | Albany Graphite Project, SLR Project No: 233.03783.R0000NI 43-101 Technical Report - July 31, 202323-1

24.0 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

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25.0 INTERPRETATION AND CONCLUSIONS

SLR offers the following conclusions on the Albany Graphite Project by area:

25.1 Geology and Mineral Resources

- Zentek, now AGC, discovered a unique graphite deposit of hydrothermal origin on the Property. The Albany graphite deposit is located in the Superior Province of the Canadian Shield, at the terrane boundary between the Quetico Subprovince to the north and the Marmion Subprovince to the south.
- The epigenetic deposit contains a large volume of highly crystalline, fluid-deposited graphite within an igneous host. 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. The deposit is interpreted as a vent pipe breccia that formed from CO₂-rich fluids that evolved due to pressure-related degassing of syenites of the Albany Alkalic Complex.
- Diamond drilling has outlined two graphite mineralized breccia pipes with three-dimensional continuity, and size and grades that can potentially be exploited economically.
- AGC's protocols for drilling, sampling, analysis, security, and database management meet industry accepted practices. The drill hole database was verified by the QPs and is suitable for Mineral Resource estimation work.
- SLR estimated Mineral Resources for the Albany graphite deposit using drill hole data available as
 of April 30, 2023. The Mineral Resource estimate is based on a potential combined open pit and
 underground mining scenario. SLR estimates Indicated Mineral Resources to total 22.9 million
 tonnes (Mt) at an average grade of 4.1% Cg, containing 933,000 tonnes of Cg. In addition, Inferred
 Mineral Resources are estimated to total 13.1 Mt at an average grade of 2.9% Cg, containing
 375,000 tonnes of Cg.
 - In order to demonstrate Reasonable Prospects of Eventual Economic Extraction (RPEEE), open pit Mineral Resources were reported within an optimized Whittle pit shell at a cut-off grade of 1.22% Cg and UG Mineral Resources were reported within underground resource reporting shapes, satisfying the minimum mining size and continuity criteria, and using a cut-off grade of 1.76% Cg.
 - All of the Indicated Mineral Resources are estimated as open pit resources constrained by the Whittle pit shell.
 - Inferred Mineral Resources include 3.4 Mt Open Pit (OP) resources at an average grade of 2.5% Cg, containing 87,000 tonnes of Cg constrained by a Whittle pit shell, and 9.7 Mt of Underground (UG) resources below the pit shell at an average grade of 3.0% Cg, containing 288,000 tonnes of Cg.
- There are no Mineral Reserves estimated on the Property.
- The QPs are not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.



25.2 Metallurgical Testing and Mineral Processing

- Test work was conducted to support a PEA that was completed in 2015; the test work was carried out primarily at SGS Canada Inc. (SGS) in Lakefield, Ontario.
- Metallurgical test results at a bench scale level have demonstrated the following:
 - Graphite concentrate can be produced via flotation targeting 88.6% graphitic carbon (Cg) and 84.54% recovery.
 - Graphite concentrate was purified to yield a final graphite product grading 99.94% Cg and 89.13% recovery, for an overall recovery from flotation and purification of 75.40%. However, it is important to note that the test work conducted was limited, i.e., these results are only indicative and based on a limited number of samples.
- The metallurgical test work focused on achieving product purity and optimization of the process. The target product purity (>99.95% Cg) was achieved in one of the tests, but the same purity was not achieved during later optimization test work. This indicates that further improvements in optimization, process design, performance, and cost estimation are to be expected with advanced levels of study.
- The metallurgical response of the deposit has been evaluated using two composite samples (East Pipe and West Pipe) for flotation testing and using a homogenized mixture of flotation concentrates produced from East and West pipe samples for purification testing.

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26.0 RECOMMENDATIONS

The SLR QPs offer the following recommendations by area:

26.1 Geology and Mineral Resources

- 1. Review the expected values for the Certified Resource Materials used for the quality control and quality assurance program.
- 2. For drill core duplicates, submit two half core samples instead of quarter core.

26.2 Metallurgical Testing and Mineral Processing

- 1. Conduct additional metallurgical testing with the following objectives:
 - Further optimize the purification process and demonstrate that the target purity of >99.95% can be consistently achieved.
 - Confirm laboratory results, specifically related to regrinding, liquid-solid separation, reagent consumption, and thickening of products (concentrate and tails) for six stages of cleaner flotation.
 - Complete analysis and characterization of process wastes.
 - Assess corrosion risks related to the purification process.
 - Review deposit variability.

26.3 Proposed Budget

SLR recommends a two phase budget of C\$5.83 million to advance the Albany graphite deposit (Table 26-1). Phase 2 is not contingent on Phase 1. The proposed work program includes the following items:

Phase 1 (2023):

• Perimeter Survey for Lease Blocks

Phase 2

- A marketing study
- Continued battery and metallurgical test work
- Various social and environmental baseline studies

Table 26-1:Proposed BudgetAlbany Graphite Corp. - Albany Graphite Project

Item	C\$ 000
Phase 1	
Perimeter Survey for Lease Blocks	375
Phase 2	
Market Development Work	500



Item	C\$ 000
Metallurgical and Battery Test Work	1,375
Community Engagement	200
Environmental Baseline Studies (second year of baseline study) and Permitting	1,400
Hydrogeology/Water Balance Study (pump test)	500
Geotechnical Drilling and Analysis	950
Contingency 10%	530
Total	5,830

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28.0 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Albany Graphite Project, Ontario, Canada" with an effective date of April 30, 2023 was prepared and signed by the following authors:

(Signed & Sealed) Marie-Christine Gosselin

Dated at Toronto, ON July 31, 2023

Marie-Christine Gosselin, P.Geo Project Geologist

(Signed & Sealed) Katharine M. Masun

Dated at Toronto, ON July 31, 2023 Katharine M. Masun, M.Sc., MSA, P.Geo. Principal Geologist

(Signed & Sealed) Arunasalam Vathavooran

Dated at Bristol, UK July 31, 2023 Arunasalam Vathavooran Consultant Metallurgist and Process Engineer

29.0 CERTIFICATE OF QUALIFIED PERSON

29.1 Marie-Christine Gosselin

I, Marie-Christine Gosselin, P.Geo., as an author of this report entitled "Technical Report on the Albany Graphite Project, Ontario, Canada" with an effective date of April 30, 2023, prepared for Albany Graphite Corp., do hereby certify that:

- 1. I am a Project Geologist with SLR Consulting (Canada) Ltd, of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.
- 2. I am a graduate of Université Laval, Québec, QC in 2014 with a B.Sc. degree in geology.
- 3. I am registered as a Professional Geologist with l'Ordre des Géologues du Québec (Reg.#02060) and temporarily with the Province of Ontario (Reg. #3799). I have worked as a geologist for a total of 9 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Lithology and mineralization modelling
 - Target generation and drill hole planning
 - Data analysis
 - Experience as Production Geologist, Exploration Geologist with porphyry copper, sediment hosted copper, Canadian Archaean gold, and VMS deposits in Canada
 - Experienced user of Leapfrog Geo, Vulcan, ArcGIS, and acQuire
- I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I visited the Albany Graphite Project on March 15, 2023.
- 6. I s responsible for Sections 1.2.1, 1.3.1, 2 through 12, 14, 25.1, and 26.1, and contributions to Section 27 of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have had no prior involvement with the property that is the subject of the Technical Report.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Sections for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 31st day of July, 2023,

(Signed & Sealed) Marie-Christine Gosselin

Marie-Christine Gosselin, P.Geo.

29.2 Katharine M. Masun

I, Katharine M. Masun, M.Sc., MSA, P.Geo., as an author of this report entitled "Technical Report on the Albany Graphite Project, Ontario, Canada" with an effective date of April 30, 2023, prepared for Albany Graphite Corp., do hereby certify that:

- 1. I am a Principal Geologist with SLR Consulting (Canada) Ltd, of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.
- 2. I am a graduate of Lakehead University, Thunder Bay, Ontario, Canada, in 1997 with an Honours Bachelor of Science degree in Geology and in 1999 with a Master of Science degree in Geology. I am also a graduate of Ryerson University in Toronto, Ontario, Canada, in 2010 with a Master of Spatial Analysis.
- 3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #1583). I have worked as a geologist for a total of 26 years since my graduation. My relevant experience for the purpose of the Technical Report is:
 - Review and report as a professional geologist on many mining and exploration projects around the world for due diligence and regulatory requirements
 - Mineral Resource estimates on a variety of commodities including zinc, copper, nickel, silver, gold, REE, tin, graphite, and diamonds.
 - Project Geologist on numerous field and drilling programs in North America, South America, Asia, and Australia
 - Experienced user of geological and resource modelling software
- I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I have not visited the Albany Graphite Project.
- 6. I am responsible for Sections 1.1, 1.2.1, 1.3.1, 1.3.3, 2 through 12, 14, 25.1, and 26.1, and contributions to Section 27 of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have prepared NI 43-101 Technical Reports on the Property dated January 16, 2014, and July 9, 2015.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
- 10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Sections for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 31st day of July, 2023,

(Signed & Sealed) Katharine M. Masun

Katharine M. Masun, M.Sc., MSA, P.Geo.



29.3 Arunasalam Vathavooran

I, Arunasalam Vathavooran, Ph.D., CEng, FIMMM, as an author of this report entitled "Technical Report on the Albany Graphite Project, Ontario, Canada" with an effective date of April 30, 2023, prepared for Albany Graphite Corp., do hereby certify that:

- 1. I am Consulting Metallurgist and Process Engineer with SLR Consulting Ltd., of Brew House, Jacob Street, Tower Hill, Bristol BS2 OEQ, UK.
- 2. I am a graduate of the University of Moratuwa, Sri Lanka in 2001 with a BSc.Eng. in Mining and Minerals Engineering and the University of Nottingham, UK in 2006 with a Ph.D. degree in Mineral Processing.
- 3. I am registered as a Chartered Engineer in the UK with the Engineering Council (Reg. #579205) and am a Fellow Member of the Institute of Materials, Minerals and Mining (Membership #444570). I have worked as a mineral process engineer / metallurgist for a total of 21 years since my BSc Eng. graduation. My relevant experience for the purpose of the Technical Report is:
 - Numerous consulting assignments, including feasibility and pre-feasibility studies, Competent Person's reports, NI 43-101 Technical Reports, audits, and due diligence for financial institutions
 - Extensive experience in various commodities, including gold, silver, zinc, copper, tungsten, coal, iron, phosphate, potassium, niobium, manganese, tantalum, titanium, and vanadium
 - Design, supervision, and management of mineral processing and hydrometallurgical testwork programmes
 - Conceptual process plant designs for gold, silver, and base metal projects
 - Simulation, analysis, and debottlenecking of mineral processing flowsheets, mass balance-based steady state simulations
 - Equipment sizing, selection, and plant cost estimation
 - Senior Metallurgist with a large multinational consulting and engineering firm
 - Senior Metallurgist with a renowned company specializing in the development and application of advanced technologies for mineral processing and environmental industries
 - Research engineer with various universities and centres in Sri Lanka, the UK, and the USA
- I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 5. I have not visited the Albany Graphite Project
- 6. I am responsible for Section 1.2.2, 1.3.2, 13, 25.2, and 26.2, and contributions to Section 27 of the Technical Report.
- 7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
- 8. I have had no prior involvement with the property that is the subject of the Technical Report.
- 9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.



10. At the effective date of the Technical Report, to the best of my knowledge, information, and belief, the Sections for which I am responsible contain all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 31st day of July, 2023,

(Signed & Sealed) Arunasalam Vathavooran

Arunasalam Vathavooran, Ph.D., CEng, FIMMM



30.0 APPENDIX 1

30.1 Mineral Claims

Claim Number	Owner	Status	Issue Date	Due Date
102303	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
103472	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
103563	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
103564	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
103565	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
104157	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
104158	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
104159	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
104160	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
104161	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
104742	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
105055	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
105056	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
105812	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
106112	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
106169	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
106223	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
106790	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
107152	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
108700	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
108845	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
110195	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
110196	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
110347	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
111356	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
111367	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
112818	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
113467	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
117604	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
118832	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
118833	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Table 30-1:List of ClaimsAlbany Graphite Corp. – Albany Graphite Project

Claim Number	Owner	Status	Issue Date	Due Date
119106	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
119975	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
119985	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
120173	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
121309	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
121438	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122203	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122204	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122205	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122574	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122586	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122680	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122778	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122779	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122925	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122954	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122955	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
122956	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
123556	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
123557	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
123938	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
124238	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
124239	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
124324	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
125878	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
126166	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
126167	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
127240	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
127241	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
127835	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
127871	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
127872	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
127876	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Albany Graphite Corp. | Albany Graphite Project, SLR Project No: 233.03783.R0000NI 43-101 Technical Report - July 31, 202330-3

Claim Number	Owner	Status	Issue Date	Due Date
130190	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
130530	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
131000	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
131441	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
131442	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
131451	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
133702	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
133703	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
133717	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
134162	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
134181	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
134220	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
134221	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
134298	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
134799	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
134995	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
137349	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
137802	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
138171	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
138172	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
138173	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
138174	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
138699	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
139339	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
139691	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
139692	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
140891	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
141721	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
141722	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
141723	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
141724	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
141725	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
141726	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
143264	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
143897	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
144164	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
147679	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
148213	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
149413	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
149448	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
149449	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
149841	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150127	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150189	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150334	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150371	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150384	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
150554	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150555	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150924	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150925	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150968	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150969	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150970	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
150971	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
153765	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
154042	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
154086	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
155267	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
155268	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
155269	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
155881	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
156278	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
156279	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
158418	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
158419	Albany Graphite Corp.	Active	2018-04-10	2026-03-21

Albany Graphite Corp. | Albany Graphite Project, SLR Project No: 233.03783.R0000NI 43-101 Technical Report - July 31, 202330-5
Claim Number	Owner	Status	Issue Date	Due Date
158436	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
159776	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
159777	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
160288	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
160564	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
161073	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
161074	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
161081	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
161209	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
162363	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
163872	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
163873	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
165046	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
165047	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
165048	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
165175	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
166507	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
166654	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
167975	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
169229	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
169879	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
171863	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
171864	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
171991	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
172750	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
174023	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
174242	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
175214	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
176787	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
176822	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
176823	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
178725	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
178726	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
178868	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
178916	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
178917	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
179402	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
179454	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
179466	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
179499	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
179797	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
179798	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
179799	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
180009	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
180533	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
180544	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
182623	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
183456	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
183637	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
183638	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
183687	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
185319	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
185320	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
185321	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186165	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186177	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186302	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186303	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186599	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186600	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186601	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186734	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186784	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186785	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
186786	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
187083	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
187949	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
188348	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
188349	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
189376	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
189377	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
190171	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
190726	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
190727	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
192179	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
193439	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
195244	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
195245	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
195782	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
195783	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
196324	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
196325	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
198459	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
198512	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
198513	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
198865	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
198866	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
198988	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
199032	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
199064	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
199237	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
200454	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
200455	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
200456	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
202595	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
204276	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
204496	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
204497	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
205796	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
205797	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
205833	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
205834	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
206437	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
207136	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
207237	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
207778	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
207779	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
210922	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
210939	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
211780	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
213002	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
213003	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
213049	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
215382	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
215383	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
215396	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
215873	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
215884	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
215885	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
218065	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
218066	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
220520	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
221137	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
223282	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
223283	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
223818	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
223819	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
225159	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
225160	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
225252	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
225941	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
225942	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
226859	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
227989	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
230662	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
230663	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
231295	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
231296	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
231314	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
231751	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
231787	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
233144	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
233263	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
233264	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
233265	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
233295	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
233970	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
234000	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
234431	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
234432	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
236919	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
236969	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
236970	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
237002	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
237003	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
237339	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
238815	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
239797	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
240637	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
240755	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
240834	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
241274	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
241534	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
243440	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
245327	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
245558	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
245559	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
245599	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
246188	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
246189	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
246588	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
246689	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
248612	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
249822	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
250146	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
250454	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
250766	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
250767	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
250782	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
250904	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
250953	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
251960	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
251961	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
252746	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
252750	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
253482	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
253581	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
253630	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
253668	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
253760	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
253915	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
254091	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
254092	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
254093	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
255653	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
256026	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
257254	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
262445	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
262446	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
262992	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
265162	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
265163	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
265209	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
265685	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
265936	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
267101	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
268010	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
269202	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
271800	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
273227	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
273728	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
273763	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
273764	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
275963	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
275964	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
278677	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
279311	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
279474	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
279803	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
281115	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
281986	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
282041	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
282396	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
282403	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
282798	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
282846	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
282857	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
282890	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
283235	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
285988	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
286549	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
286550	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
286551	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
287169	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
287170	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
287180	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
288392	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290037	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290038	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290072	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290073	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290136	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290171	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290172	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290475	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
290940	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
292553	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
292554	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
293480	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
293481	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
294014	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
294015	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
294016	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
294655	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
294656	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
295300	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
295301	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
295302	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
295472	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
295482	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
295706	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
297997	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
297998	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
297999	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
298062	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
298421	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
298422	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
298444	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
298445	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
301507	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
301508	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
301509	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
302199	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
302210	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
302219	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
302307	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
302308	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
302309	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
302733	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
303007	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
303638	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
303639	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
303720	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
304334	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
305409	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
306151	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
306182	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
307266	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
307267	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
307412	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
309071	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
309727	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
310349	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
312913	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
312914	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
312915	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
312916	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
312917	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
313197	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
314481	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
314483	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
314892	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
315770	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
316440	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
316689	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
318707	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319383	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319384	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319389	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319413	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319605	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319606	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319653	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319671	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
319672	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
319698	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319699	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
319700	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
320242	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
320243	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
320244	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
320395	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
320434	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
324451	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
324571	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
324917	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
325073	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
325931	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
325932	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
325933	Albany Graphite Corp.	Active	2018-04-10	2026-02-28

Claim Number	Owner	Status	Issue Date	Due Date
328380	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
328381	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
329674	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
329685	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
329686	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
333447	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
333668	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
335538	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
335539	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
335757	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
335894	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
336481	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
337608	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
338352	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
338395	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
338396	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
339440	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
340286	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
340921	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
340922	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
340945	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
340990	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
341040	Albany Graphite Corp.	Active	2018-04-10	2026-03-21
341103	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
341543	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
341797	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
342432	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
342514	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
342868	Albany Graphite Corp.	Active	2018-04-10	2026-02-28
541602	Albany Graphite Corp.	Active	2019-02-09	2026-02-28
541603	Albany Graphite Corp.	Active	2019-02-09	2026-02-28
541604	Albany Graphite Corp.	Active	2019-02-09	2026-02-28
541605	Albany Graphite Corp.	Active	2019-02-09	2026-02-28

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Claim Number	Owner	Status	Issue Date	Due Date
541719	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541720	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541721	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541722	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541723	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541724	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541725	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541726	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541727	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541728	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541729	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541730	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541731	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541732	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541733	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541734	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541735	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541736	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541737	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541738	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541739	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541740	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541741	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541742	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541743	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541744	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541745	Albany Graphite Corp.	Active	2019-02-11	2026-02-28
541747	Albany Graphite Corp.	Active	2019-02-11	2026-02-28

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