Annual Information Form

ZEN GRAPHENE SOLUTIONS LTD.

For the year ended March 31, 2020

Dated as of April 30, 2021

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PRELIMINARY NOTES

This Annual Information Form ("**AIF**") is prepared in the form prescribed by National Instrument 51-102 - *Continuous Disclosure Obligations* of the Canadian Securities Administrators. All dollar amounts in this AIF are expressed in Canadian dollars unless otherwise indicated. All information in this AIF is as of March 31, 2020, unless otherwise indicated.

FORWARD-LOOKING INFORMATION

This AIF and the documents incorporated into this AIF contain "forward-looking statements" and "forward-looking information" within the meaning of applicable securities laws (forward-looking information and forward-looking statements being collectively hereinafter referred to as "forward-looking statements"). Such forward-looking statements are based on expectations, estimates and projections as at the date of this AIF or the dates of the documents incorporated herein, as applicable. Any statements that involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance (often but not always using phrases such as "expects" or "does not expect", "is expected", "anticipates" or "does not anticipate", "plans", "budget", "scheduled", "forecasts", "estimates", "believes" or "intends", or variations of such words and phrases, or stating that certain actions, events or results "may" or "could", "would", "should", "might" or "will" be taken, occur or be achieved) are not statements of historical fact and may be forward-looking statements and are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements and information concerning: the intentions, plans and future actions of ZEN Graphene Solutions Ltd. (the "**Company**"); statements relating to the business and future activities of the Company after the date of this AIF; market position, ability to compete and future financial or operating performance of the Company after the date of this AIF; statements based on the audited and unaudited financial statements of the Company; anticipated developments in operations; the timing and amount of funding required to execute the Company's development and business plans; intellectual property expenditures; capital and exploration and development expenditures; the effect on the Company of any changes to existing legislation or policy; government regulation of patent law or mining operations; the length of time required to obtain permits, certifications and approvals; markets for the Company's graphene related products and the ability to supply those markets; the success of exploration, development and mining activities; the geology of the Company's properties; environmental risks; the availability of labour; demand and market outlook for precious metals and the prices thereof; progress in development of mineral properties; estimated budgets; currency fluctuations; requirements for additional capital; government regulation; limitations on insurance coverage; the timing and possible outcome of litigation in future periods; the timing and possible outcome of regulatory and permitting matters; goals; strategies; future growth; planned business activities and planned future acquisitions; the adequacy of financial resources; and other events or conditions that may occur in the future.

Forward-looking statements are based on the beliefs of the Company's management, as well as on assumptions, which such management believes to be reasonable based on information currently available at the time such statements were made. However, by their nature, forward-looking statements are based on assumptions and involve known and unknown risks, uncertainties, and other factors that may cause the actual results, performance, or achievements to be materially different from any future results, performance, or achievements expressed or implied by the forward-looking statements. Forward-looking statements are subject to a variety of risks, uncertainties, and other factors that could cause actual events or results to differ from those expressed or implied by the forward-looking statements, including, without limitation those risks outlined under the heading *Risk Factors* in this AIF.

The list of risk factors set out in this AIF is not exhaustive of the factors that may affect any forward-looking statements of the Company. Forward-looking statements are statements about the future and are inherently uncertain. Actual results could differ materially from those projected in the forward-looking statements as a result of the matters set out or incorporated by reference in this AIF generally and certain economic and business factors, some of which may be beyond the control of the Company, including, among other things, potential director or indirect operational impacts

resulting from infectious diseases or pandemics, such as the COVID-19 outbreak, and other factors not currently viewed as material that could cause actual results to differ materially from those described in the forward-looking statements. In addition, recent unprecedented events in the world economy and global financial and credit markets as a consequence of the COVID-19 outbreak have resulted in high market and commodity volatility and a contraction in debt and equity markets, which could have a particularly significant, detrimental, and unpredictable effect on forward-looking statements. The Company does not intend and does not assume any obligation, to update any forward-looking statements, other than as required by applicable law. For all of these reasons, the Company's securityholders should not place undue reliance on forward-looking statements.

CORPORATE STRUCTURE

Name, Address and Incorporation

ZEN Graphene Solutions Ltd. (the "**Company**") was incorporated under the *Business Corporations Act* (Ontario) as a numbered company on July 29, 2008. Pursuant to Articles of Amendment dated November 24, 2009, the Company changed its name to Zenyatta Ventures Ltd. Pursuant to Articles of Amendment dated January 1, 2019, the Company changed its name to ZEN Graphene Solutions Ltd. The Company's registered office is located at 210-1205 Amber Drive, Thunder Bay, Ontario P7B 6M4 and its head office is located at 210-1205 Amber Drive, Thunder Bay, Ontario P7B 6M4. The Company does not have any subsidiaries.

GENERAL DEVELOPMENT OF THE BUSINESS

The Company commenced operations as a junior mineral exploration company focused primarily on mineral deposits in Northern Ontario, Canada, and was actively engaged in exploring mining projects and held an interest in exploration licences on properties in the "Arc of Fire" area in Northern Ontario, Canada. The properties, located north of Lake Superior and west of James Bay in north-western Ontario, Canada, were unpatented, non-contiguous, and consisted of nine claim blocks, including 234 claims comprised of 3,549 claim units over a total of 56,784 ha.

Within such claim blocks, the Company still holds a 100% undivided interest in Claim Block 4F, which hosts the igneous-hosted, fluid-derived graphite deposit (the "**Albany Graphite Project**"), and is currently subject to two royalties (one of which is the subject of an ongoing dispute, see "*Legal Proceedings and Regulatory Actions*"). Presently, the claim block is comprised of 488 claim units (458 single cell and 63 boundary cell mining claims) for a total area of 9816 hectares, and all claims are in good standing until 2024, with the earliest due date occurring on February 28, 2024. In addition, the property has a combined total of over $7.5 million in exploration expenditures (assessment work credits) in reserve on key claims near the deposit. The Company completed its acquisition of Claim Block 4F pursuant to an option and joint venture agreement between the Company, Cliffs Natural Resources Exploration Canada Inc., Cliffs Natural Resources Inc., and Eveleigh Geological Consulting Inc. dated November 2, 2010, as amended December 15, 2010, and November 21, 2012, which amendment excluded those claims from the Joint Venture Arrangement. The Company's rights to all other claim blocks originally comprising the Company's exploration properties have expired.

The Company's primary objective in recent years has been to focus on the development of its unique, igneous-hosted, fluid-derived graphite deposit (the "**Albany Graphite Project**") discovered on Claim Block 4F in 2011.

The Company filed an independent preliminary economic assessment technical report (the "**PEA**") in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("**NI 43-101**") on the Albany Graphite Project. The PEA, titled "*Technical Report on the Preliminary Economic Assessment of the Albany Graphite Project, Northern Ontario, Canada"* dated July 9, 2015 has been filed on SEDAR under the Company's issuer profile.

The Company has more recently been focused on the development of nanomaterials and graphene-based technology, using materials from the Albany Graphite Project. The Company is

currently focused on commercializing a patent-pending graphene-based coating with 99% antimicrobial activity, including against COVID-19, and the potential to use this graphene-based compound as a pharmaceutical product against infectious disease.

The Company cautions that its operations and activities may be impacted by the unprecedented business and social disruption caused by the spread of COVID-19. While there have been no material disruptions to the Company's operations as a whole to date, there can be no certainty that COVID-19 and the restrictive measures implemented to slow the spread of the virus will not impact the Company's operations in the coming weeks and months. See "*Forward-Looking Information*" and "*Risk Factors" – Public Health Crises such as the COVID-19 Pandemic*".

Three Year History

2018

On January 29, 2018, the Company announced a strategic focus on the graphene nanomaterial, which is converted from the graphite from the Company's Albany Graphite Project. During 2017 independent labs in Japan, United Kingdom, Israel, USA and Canada demonstrated that the Company's rare form of graphite easily converts (exfoliates) to graphene using a variety of simple mechanical methods. The Company also noted that the graphene produced by its partners is a consistent and high-quality nanomaterial, including the most desirable, mono-layer to tri-layer forms, and that it also has excellent dispersion properties and therefore is highly suitable for enhancing present day composite materials like rubber and concrete, as confirmed by the University of Sussex and Ben-Gurion University respectively.

On February 14, 2018, the Company announced that it had received a requisition to hold a meeting of shareholders to replace certain directors.

On May 11, 2018, the Company's shareholders elected a new slate of directors, including Dr. Francis Dubé, Brian Bosse, Eric Wallman, Brian Davey and Brett Richards. On May 16, 2018 the Company announced the appointment of Brett Richards as chairman of the Company's board of directors (the "**Board**"). Brian Bosse was appointed as the Company's Chief Restructuring Officer and Dr. Francis Dubé as Interim Head of Business Development and Technology, both reporting to the Board.

On June 22, 2018, the Company announced the closing of a non-brokered private placement through the issuance of 1,311,693 units in the capital of the Company, at a price of $0.55 per unit for gross proceeds of $721,431.20. Each unit was comprised of one Common Share and one-half of one whole non-transferrable Common Share purchase warrant. Each whole warrant entitled the holder thereof to acquire on Common Share at an exercise price of $0.80 per Common Share for a period of twenty-four months from the date of issuance. The Company also announced the resignation of Brett Richards and the appointment of Donald Bubar as a director. The Company also announced the appointment of Peter Wood as the Company's Vice President.

On July 12, 2018, the Company announced the appointment of Greg Fenton and Frank Klees to the Board, and the resignation of Brian Davey.

On August 14, 2018, the Company announced the appointment of Dr. Francis Dubé and Donald Bubar as co interim Chief Executive Officers of the Company.

On September 14, 2018, the Company announced the appointment of Brian Bosse as the Chief Financial Officer of the Company and Peter Wood as the President and Chief Operating Officer.

On September 27, 2018, the Company announced that it signed a memorandum of understanding (the "**CLFN MOU**") with Constance Lake First Nation ("**CLFN**"), relating to a project partnership structure in support of the development of the Albany Graphite Project. The agreement provided for more flexibility to accommodate alternative business models for the Albany Graphite Project as

it progresses toward becoming a graphene nano-materials technology business built on the globally unique properties of the Albany Graphite Project graphite product.

On November 16, 2018, the Company announced the closing of a non-brokered private placement through the issuance of 1,295,553 units in the capital of the Company, at a price of $0.45 per unit for gross proceeds of $582,995.95. Each unit was comprised of one Common Share and one-half of one whole non-transferrable Common Share purchase warrant. Each whole warrant entitled the holder thereof to acquire one Common Share at an exercise price of $0.60 per Common Share for a period of twenty-four months from the date of issuance. Each whole warrant was subject to an acceleration clause. In addition, the company announced that it entered into agreements to issue Common Shares to settle an aggregate amount of $214,989.53 owed to certain trade creditors. The Company issued 477,755 Common Shares at a deemed price of $0.45 per Common Share.

On December 21, 2018, the Company announced the closing of a non-brokered private placement through the issuance of 7,500,000 flow-through common shares of the Company at a price of $0.40 per flow-through common shares for gross proceeds of $3,000,000.

2019

On April 4, 2019, the Company announced that it had signed a memorandum of understanding with The University of Manchester in the United Kingdom to explore opportunities of collaboration in the areas of development and commercialization of graphene and other 2D materials and accelerate the adoption of these materials into commercially viable markets.

At the end of April 2019, the Company, ERM Canada Ltd. and CLFN commenced the environmental baseline study fieldwork, with a surface water sampling and flow measurement program.

On May 30, 2019, the Company announced that it had signed an initial agreement to in-license certain intellectual properties from a Canadian University that, when combined with the graphite from the Albany Graphite Project, produced low cost, environmentally friendly graphene.

On June 10, 2019, the Company entered into a memorandum of understanding with the University of British Columbia, Okanagan Campus, School of Engineering, pursuant to which the Company agreed to contribute a minimum of $300,000 over three years in support of graphene research and application development. Pursuant to the agreement, the parties agreed to collaborate on graphene-focused research projects relevant to applications of interest to potential end-user partners.

On September 12, 2019, the Company announced that it closed a non-brokered private placement financing through the issuance of 3,000,000 units at a price of $0.35 units, for gross proceeds for $1,050,000. Each unit was comprised of one Common Share and one-half of one whole Common Share purchase warrant. Each whole warrant will entitled the holder thereof to acquire one Common Share at an exercise price of $0.50 per whole warrant for a period of 24 months from the date of issuance.

In November 2019, the Company entered into an 18-month exclusive initial option agreement with the University of Guelph for intellectual property regarding an electrochemical exfoliation ("**ECE**") process to product Graphene Oxide. Early results from this process are very encouraging with graphite sourced from the Albany Graphite Project significantly outperforming both flake/sedimentary graphite and synthetic graphite, demonstrating again the uniqueness of the Albany Graphite Project's graphite and its superior performance to exfoliate into graphene products. The Company currently believes the ECE process enables lowest cost industrial graphene production. ECE as a process appears to be superior to all other methods of graphene production thus far with respect to environmental impact, considering the lower requirement for acid consumption and effluent.

The Company also reported that in late November 2019, the first full open water field season for the environmental baseline program for the Albany Graphite Project had come to a successful close. All the program objectives had been met with a wide range of data collected over a period of eight months. The collected data initiated the physical and biological characterization of the site needed for project development planning and regulatory permitting. The Company worked closely with ERM Canada Ltd.'s team of scientists, biologists, and engineers. Members from CLFN were also important members of the field teams providing local knowledge and supported the process of data collection.

On December 20, 2019, the Company closed a non-brokered private placement of flow-through Common Shares, through the issuance of 3,025,000 flow-through Common Shares at a price of $0.40 per flow-through Common Share for gross proceeds of $1,210,000.

2020 and Recent Events

On February 4, 2020, the Company issued an aggregate of 137,100 broker warrants to certain eligible finders in connection with a previously closed non-brokered private placement of flow-through common shares. Each broker warrant entitles the holder thereof to acquire on Common Share at a price of $0.50 per Common Share until December 19, 2021.

On June 8, 2020, the Company reported that it will be providing Albany Pure™ Graphene Oxide produced by its Guelph facility for development of a rapid, ultrasensitive and low-cost biosensor to detect the presence of the SARS-CoV-2 antigen and/or antibodies in COVID-19 suspected patients. This research was funded by an initial grant of approximatively $400,000 from the National Sciences and Engineering Council ("**NSERC**"). Additionally, the Company announced that it continues development of a potential virucidal graphene oxide-based ink that could be applied to fabrics including N95 face masks and other personal protective equipment ("**PPE**") for significantly increased protection.

On June 29, 2020, the Company announced that it closed the first tranche of a non-brokered private placement through the issuance of 1,795,491 units at a price of $0.60 per unit, for gross proceeds of $1,077,294.80. Each Unit consisted of one Common Share of the Company and one half of one non-transferable share purchase warrant. Each whole warrant entitles the holder thereof to acquire one additional Common Share at an exercise price of $0.80 per warrant, exercisable for a period of twenty-four months from the date of issuance.

On July 6, 2020, the Company announced that it closed the second tranche of a non-brokered private placement through the issuance of 1,621,175 units at a price of $0.60 per unit, for gross proceeds of $972,705. Each Unit consisted of one Common Share of the Company and one half of one non-transferable share purchase warrant. Each whole warrant entitles the holder thereof to acquire one additional Common Share at an exercise price of $0.80 per warrant, exercisable for a period of twenty-four months from the date of issuance. The aggregate gross proceeds raised pursuant to the first and second tranche of the non-brokered private placement is $2,049,999.80 through the issuance of 3,416,666 Units.

On July 9, 2020, the Company announced that Evercloak Inc. ("**Evercloak**") and the Company had been awarded $125,000 each as part of a Next Generation Manufacturing Canada Project. The project entitled "Advancing Large-Scale Graphene and Thin-Film Membrane Manufacturing" will support the scale up of graphene oxide ("**GO**") production by the Company to supply GO to Evercloak for their scale up and optimizing activities.

On September 3, 2020, the Company announced that it received two NSERC Alliance COVID-19 project grants, a Mitacs Elevate Postdoctoral Fellowship grant, and two Mitacs Accelerate grants for a total of $355,000 to its university collaborators.

Additionally, the Company reported that, after a necessary break in travel and field activities due to the COVID-19 pandemic, it had re-engaged ERM Canada Ltd. and CSA Global to continue with an

abbreviated environmental baseline program for the Albany Graphite Project. The program focused on project definition and planning, and on a laboratory-based geochemical baseline study.

On September 22, 2020, the Company reported that after 5 months of optimization, it had developed a novel graphene-based virucidal ink with 99% effectiveness against the COVID-19 virus, and had filed its first provisional patent relating to certain medical uses for this graphene-based virucidal product. The Company reported, among other things, that: its Virucidal ink is 99% effective against the COVID-19 virus; the Company's Virucidal ink was still 99% effective a minimum of thirty-five days after application to N95 mask material; and the Company was developing plans to expedite commercialization of this product, pending regulatory approval. The Company further reported that it received results from the latest round of testing of its proprietary, virucidal graphene based ink formulation at a Western University laboratory. Two graphene-based ink samples at different concentrations were applied to N95 mask filtration media and then exposed to the SARS-CoV-2 virus that causes COVID-19 and tested for antiviral properties in accordance with ISO 18184:2019. Very significant virucidal activity was recorded and reported, achieving 99% inactivation of the virus for both samples in three separate tests each, and verified through a second round of testing. Of significance, the antiviral effect of the second round of testing was on material that was prepared thirty-five days earlier demonstrating the ongoing virucidal activity of the Company's proprietary ink.

On September 28, 2020, the Company announced that the University of Guelph filed a patent application for its ECE process to produce graphene oxide from Albany Pure™ Graphite. This process was designed to be scalable, low cost, low energy, and environmentally friendly to produce high-quality, few-layer graphene oxide at the Company's Guelph facility. The Company holds an exclusive worldwide license from the University of Guelph in respect of this patent application.

On September 30, 2020, the Company announced that the Naval Material Technology Management section of the Royal Canadian Navy has partnered with the Company and Evercloak as a testing organization, and has agreed to provide in-kind donations of test services from the Naval Engineering Test Establishment. The tests will compare the efficiency of a heating, ventilation and air conditioning ("**HVAC**") unit produced with the Evercloak dehumidification membrane technology to the incumbent HVAC system that is currently in use on the Royal Canadian Navy's Halifax-class frigates.

On October 9, 2020, the Company announced that it signed a two-year extension with Chemisar Laboratories Inc. to provide various consulting services which will include the use of 4,300 square feet of office and laboratory space in Guelph, Ontario commencing on January 1, 2021. The additional 2000 sq ft will be utilized to manufacture the Company's patent-pending virucidal coating. The Company was granted a right of first refusal for the purchase of the facility.

On October 15, 2020, the Company announced that it signed a new research collaboration agreement with the Deutsches Zentrum für Luft- und Raumfahrt ("**DLR**"), the German Aerospace Center, to investigate the use of Albany Pure™ graphene-based nanomaterials in the fabrication of novel carbon aerogel composites. The goal of this collaborative research project titled, "Development of Innovative Composites based on Carbon Aerogels", is to develop electrode materials for new generation batteries and will build on the collaboration between the Company, DLR, and Dr. Lukas Bichler at the University of British Columbia-Okanagan Campus.

On November 9, 2020, the Company announced that it had entered into a letter of intent dated November 6, 2020 (the "**First Trebor LOI**") with Trebor Rx Corp. ("**Trebor**"), a Canadian PPE mask manufacturer with an initial production facility located in Collingwood, Ontario. The First Trebor LOI sets out the framework for an agreement between the parties, including the initial purchase of the Company's patent-pending graphene-based virucidal coating for a minimum of 100 million masks/filters, with pricing of these mask/filters being variable based on a number of factors. This initial minimum order is contemplated to be for the first year, and is subject to approvals from Health Canada.

On November 12, 2020, the Company announced that it has signed a three-year lease with an option for another three years on 25,680 square feet of newly built B.1 industrial zoning space in Guelph, Ontario, which is now the Company's manufacturing facility and which is intended to be the Company's future corporate headquarters.

On November 30, 2020, the Company announced that it had purchased, for immediate delivery, approximately 200 kg of GO, a key ingredient in the manufacturing of the Company's patent-pending graphene based virucidal coating. In addition, the Company has negotiated terms to purchase additional GO by the tonne commencing in January 2021. The contemplated purchase is intended to be used by the Company in order to fulfill the deliverables contemplated under the First Trebor LOI and to provide additional supply capacity for the Company's virucidal coating in the PPE and HVAC filtration markets.

On December 7, 2020, the Company announced that in partnership with Professor Arjmand, the Company was awarded a $780,000 alliance grant ($480,000 from NSERC and $300,000 from a combination of cash and in-kind contributions from the Company). Alliance Grants are awarded through a competitive peer review process, and this proposal, titled "Synthesis of Graphene Nanomaterials and Development of Their Multifunctional Polymer Nanocomposites", is the Company's highest single monetary grant award from NSERC to date and supports NSERC's growing interest in nanomaterials.

On December 8, 2020, the Company announced the appointment of Mr. Gregory Fenton as the Chief Executive Officer of the Company, Dr. Francis Dubé as the Executive Chairman of the board of directors, and Dr. Colin van der Kuur as VP Science and Research. The Company also announced the creation of the Office of the CEO which will comprise both Mr. Fenton and Dr. Dubé. Together, they will craft the strategic direction of the Company, including market development of the Company's patent-pending, graphene-based virucidal coating, new product launches, strategic partnerships along with mergers and acquisitions.

On December 22, 2020, the Company announced that it had developed a potential graphene-based antibiotic, antiviral and antifungal compound. Recently received testing results from the University Health Network/Mount Sinai Hospital Department of Microbiology in Toronto indicated that this patent-pending formulation could be a medical breakthrough in the treatment of numerous human contracted pathogens including, upper and lower respiratory tract infections, where COVID-19 is a major contributor, as well as drug resistant organisms. Significantly, the Company also reported that it had further filed for patent protection for these graphene-based compounds and uses.

On December 29, 2020, the Company provided an update with respect to its cytotoxicity testing of the Company's graphene-based antimicrobial compound. The Company successfully completed Phase 1 of the range finding study where animals were first dosed at 1000 mg/kg of graphene compound with no apparent negative impacts. Based on the initial results, a second set of animals was given a dose of 2000 mg/kg. All animals at both dose levels survived and appeared normal during the post observation period. Additionally, there were no gross findings at necropsy for these animals. For reference, the Minimum Inhibitory Concentration of the Company's graphene compound that proved to be 99.9% effective against both gram-positive and gram-negative bacteria was many thousand times lower than the doses in this Phase 1 study. In addition, the Company announced that it had received results from the latest round of testing of its proprietary, graphene-based coating formulation at Western University's ImPaKT facility Biosafety Level 3 laboratory in London, Ontario. Testing per the same protocol as earlier testing in accordance with ISO 18184:2019 (Textiles - Determination of Antiviral Activity of Textile Products) demonstrated that polypropylene mask material, treated with the Company's coating remains 98% effective against COVID-19 at 108 days. The Company also received test results for its proprietary, graphene-based coating formulation at McMaster University's Centre for Microbial Chemical Biology in Hamilton, Ontario. Testing was performed in accordance with ISO 20743:2013 (Textiles - Determination of Antibacterial Activity of Textile Products) with typical polypropylene mask material coated with the Company's virucidal coating and exposed to 20 ml of both *Escherichia coli* and *Staphylococcus aureus* (a gram-negative and gram-positive strain of bacteria). Each test had three repeats and

three controls to ensure accurate baselines. The Company's novel coating achieved greater than 99% efficacy against both gram-positive and gram-negative bacteria, confirming its antibacterial properties in addition to previous proven viricudal properties.

On January 13, 2021 the Company provided an update in respect of its proprietary, graphene-based coating that is 99.9% effective against aerobic bacteria (gram-positive and gram-negative), fungal and viral activity, including COVID-19: Updates included receipt of confirmation from a major Canadian certification company that filter material flow rates and pressure drop were not affected by the application of the coating; and confirmation from The BIG-nano Corporation that treated mask material achieved excellent dispersion and coverage, and the coating did not block fiber pores. Both of such confirmations help to validate that the Company's coating does not inhibit breathability in polypropylene mask material or flow rates in air filtration media.

On January 18, 2021, the Company announced that it had reached a second agreement in principle (together with the First Trebor LOI, the "**Trebor Agreements in Principle**") with Trebor for the application of its antimicrobial coating on nitrile gloves sourced or produced by Trebor.

On January 20, 2021 the Company announced additional personnel, including Ryan Shacklock - Director, Market Development & Investor Relations, John Cornish - Senior Project Manager, Deepak Sridhar – Science and Research-MITACS, and Malik Hay – Lab Technician.

On February 4, 2021 the Company announced initial phase 2 results of seven day repeated dose safety testing for potential human pharmaceutical use of its graphene-based compound. The Company reported that groups of three males and three females were dosed with either 50 mg/kg, 250 mg/kg, or 1,000 mg/kg of the Company's patent-pending antimicrobial compound once per day for seven days. The compound was administered orally close to the throat area of the rats daily for seven days at dose levels of 50 mg/kg, 250 mg/kg, or 1,000 mg/kg. Based on the clinical observations, food consumption, body weights, blood clinical pathology and post-mortem examination, there were no test article related findings of concern in any of the dose levels evaluated in the study. Tissues from the main organs were then prepared for histopathology examination and these results will be included with the final report.

On March 2, 2021 the Company announced successful phase 2 results from cytotoxicity testing of its graphene-based compound. No adverse effects were recorded after seven days of repeated dosing with concentrations many thousands of times higher than those found to be 99.9% effective against viruses, bacteria, and fungi. The Company reported that testing was conducted by a fully accredited Pharmaceutical Contract Research Organization that is inspected by and in compliance with each of the US Food and Drug Administration and Health Canada. Results included: no significant abnormal clinical observations noted during the seven day repeated dose study; no findings in blood clinical pathology attributed to the dosing; no significant or clinically relevant alterations in absolute organ weights, organ/body weight, or organ/brain weight ratios; no abnormal findings from histopathology attributed to the dosing; analysis of all generated data indicated that the Company's compound was well tolerated following a seven-day repeated oral dose administration.

On March 3, 2021 the Company announced that it has been advised by Trebor that their surgical masks treated with the Company's antimicrobial coating have passed Health Canada testing requirements as a level 2 medical device. The coated masks were tested at a Health Canada approved facility in line with American Society for Testing and Materials standards. The Company announced that Trebor intends to begin marketing the coated masks immediately with products available in April as both companies ramp up their production.

On March 4, 2021 the Company announced that it had signed an implementation agreement (the "**IA**") with CLFN. The IA sets out the governance, roles, responsibilities, and activities for establishing the partnership structure to advance the development of the Albany Graphite Project and the relationship between the Company and CLFN, including establishing a shared governance committee structure for identified areas of mutual interest relating to the development of the Albany Graphite Project. The IA also creates a working committee drawn from members of CLFN and the

Company 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 of the Albany Graphite Project. The working committee will hold regularly scheduled meetings conducted in person or remotely and provides the forum for raising issues and respectfully discussing resolutions to mutually satisfactory outcomes.

On March 17, 2021, the Company announced that it had received successful testing results on its patent-pending graphene-based compound against four gram-positive and nine-gram negative bacteria with antimicrobial-resistance, including multidrug-resistant variants like methicillin-resistant staphylococcus aureus. Testing was completed under the direction of Dr. Tony Mazzulli, MD, FRCPC, FACP, Microbiologist-in-Chief and Infectious Disease Specialist at University Health Network/Mount Sinai Hospital, following initial breakthrough results demonstrating that the compound is 99.9% effective against viruses, bacteria, and fungi.

On March 24, 2021, the Company announced its preliminary antimicrobial coating production plan to meet demand in the personal protective equipment and air filtration markets. The Company successfully transitioned from bench scale to pilot scale and began investing in additional pilot-scale capacity to help meet immediate demands.

On April 9, 2021 the Company announced that it closed a non-brokered private placement of 1,735,199 units at a price of $2.50 per unit for gross proceeds of $4,337,998. Each unit is comprised of one Common Share and one-half of one whole Common Share purchase warrant. Each whole warrant entitles the holder thereof to acquire one Common Share at a price of $3.00 per Common Share until April 8, 2023, provided however that if, at any time after August 9, 2021, the closing price of the Company's Common Shares on the TSX Venture Exchange (or such other stock exchange on which the Common Shares may be traded from time to time) is at or above CDN$4.00 per share for a period of ten consecutive trading days (the "**Triggering Event**"), then the Company may, within one hundred days of the Triggering Event, accelerate the expiry date of the warrants by giving notice thereof to the holders of the warrants, by way of news release, and in such case the warrants will expire on the first day that is thirty calendar days after the date on which such notice is given by the Company announcing the Triggering Event. The warrants are subject to the terms and conditions of a warrant indenture (the "**Warrant Indenture**") dated April 8, 2021 between the Company and Capital Transfer Agency, ULC ("**Capital Transfer**") as agent for the warrants.

DESCRIPTION OF THE BUSINESS

General

Summary

In 2018, the Company began to focus resources on the research and development of graphene and related applications, which was supported by shareholders of the Company who voted in favour of significant Board changes and accordingly the assembly of an interdisciplinary team to augment key management personnel with expertise in business, marketing, and government relations.

Since May 2018, the Company has successfully raised over $8.6 million and the Company has received $3 million in government grants to accelerate its research and collaborations to build momentum towards commercial graphene production and mine development. In January 2020, the Company changed its name and began focusing its research on three priorities: (i) advanced materials, (ii) clean technology, and (iii) green energy. The name change reflects the Company's decision to focus its development plans for the Albany Graphite Project on graphene nanomaterial intellectual property and product opportunities that may benefit from vertical integration. In February of 2020, the Company opened a research facility in Guelph, Ontario, to support its university and industrial partners' ongoing research and to scale-up production of graphene product. Subsequently, the COVID-19 pandemic halted research at the Company's collaborators' laboratories. The Company rapidly pivoted to focus its resources to develop graphene-based solutions for the fight against COVID-19 and developed a patent-pending graphene oxide/silver

coating that has shown to effectively inactivate over 99% of the SARS-CoV-2 virus. Additional testing and research has indicated that the Company's compound is also effective against bacteria and fungi. This research and development has resulted in the filing of three patent applications (see "*Intangible Properties*" below) and the Trebor Agreements in Principle.

To meet rapidly growing immediate demand for its proprietary antimicrobial compound, the Company began sourcing graphene oxide from third parties and is also testing third party graphite as a potential precursor material to produce graphene-based nanomaterials. Consequently, the Company's continued existence is no longer dependent upon the discovery of economically recoverable ore reserves, the ability of the Company to obtain the necessary financing to explore and develop potential ore reserves, or by way of entering into joint venture arrangements, future profitable production, or alternatively, upon the Company's ability to dispose of its interests on an advantageous basis.

Currently the principal markets targeted by the Company are PPE equipment manufacturers (for the use of antimicrobial coatings on surgical masks, filters, cartridges for reusable masks, nitrile gloves, gowns, shoe covers, etc.) and HVAC system manufacturers and suppliers (for the use of antimicrobial coated filters, pre and post-filters, high-efficiency particulate air (HEPA), etc.). The Company is continuing to identify new markets and uses for its graphene-based antimicrobial coating.

The Company is working directly with PPE equipment and HVAC filter manufacturers and intends to ultimately supply the antimicrobial coating product directly to the manufacturers for use in their respective production lines, or as pre-coated materials/products that will be supplied to manufacturers (e.g., coated polypropylene (PP) or polyethylene terathalate (PET) meltblown nonwoven media to be used in the construction of a surgical mask, coated nitrile gloves or pre-coated HVAC filtration media). The Company is also currently discussing with other parties interested in representing the Company and/or distributing its products in other global markets (Europe, India, Australasia, etc.). To date, most of the business opportunities that have been developed have been pursuant to inbound inquiries; however, once the production lines to produce GO and the antimicrobial coatings are operational, the Company intends to initiate an outbound marketing program.

The Company is currently in the process of optimizing the concentration and loading of its antimicrobial graphene oxide-based nanomaterial and on PPE equipment (surgical masks, gloves and filters). It is also exploring the best coating process to apply its antimicrobial product to the various media/materials to ensure that the coating adheres sufficiently to the fibers and surfaces, achieving a consistent particle dispersion and distribution. The Company conducts its own research and development, including product development and optimization, at its Guelph laboratory, and additionally subcontracts product characterization, efficacy testing (viral, bacterial and fungal), coating performance and imaging, etc. The Company is collaborating closely with a number of meltbown polypropylene nonwoven fabric manufacturers and intends to work towards incorporating coating equipment (spray, pad-dry-cure etc.) into their production lines. The Company has engaged the services of an engineering firm to carry out detailed engineering for a plant to produce GO and silver graphene oxide. This will include process design, mechanical and piping layout, electrical layout, civil/structural/architectural design, control systems and engineering. The engineering firm will also assist on budget pricing and bid evaluation. The intention is for the plant to be designed to be modular (sea can-sized modules) that can be transported to the Company's Guelph manufacturing facility, installed and connected.

Specialized Skill and Knowledge

The Company's research and development, and application/product development work involves Highly Qualified Personnel (PhD researchers, scientists and engineers) and the Company has a highly skilled management team in place. The Company intends to add to its team and to hire and train additional staff as the Company's business transitions from research and product development to production, to work in the anticipated GO and antimicrobial coating production facilities, as may be required (See "*Risk Factors – Reliance of Key Personnel*").

Competitive Conditions

The Company seeks to compete with other graphene and manufacturing companies, in highly competitive markets. The Company plans to provide functionalized graphene products to businesses, institutions and governments within North America and potentially internationally. This is a rapidly growing industry which has been accelerated during the COVID-19 pandemic. The Company's competitive position is based on its increasing scientific knowledge and know-how, its intellectual property, possession of in-house laboratories, extension of in-house science via university partners, the growing productive capacity to serve large customers, and the optionality of future vertical integration represented by the Albany Graphite Project. The Company's management is not aware of any companies similarly positioned to serve like markets as the Company, although given the rapid progression of the graphene industry, the Company may face significant competition in the future (See "*Risk Factors – Industry Competition*").

New Products

The Company has publicly announced the introduction of its new graphene oxide-silver nanocomposite which has shown to be effective against bacterial, viral, and fungal pathogens and which can be sprayed or coated onto a variety of materials. Test results of this graphene oxide-silver nanocomposite show that it deactivates or kills at very low concentrations, is shelf stable for months when applied to personal protective equipment without losing effectiveness, and acts upon a virus through multiple mechanical mechanisms at the atomic scale.

The graphene oxide-silver nanocomposite is patent pending and has yet to receive an operating tradename which is currently under consideration. The Company has multiple corporate customers awaiting application of the product onto their raw material prior to manufacture of PPE, HVAC filters, nitrile gloves, gowns and masks. In some but not all cases the Company's customer requires approval from government regulators prior to offering initial sales, and management of the Company has been advised that such approval applications have been commenced. The Company supports its customers in the regulatory approval process by funding and supplying third party scientific reports in support of obtaining regulatory approvals.

Components

The main components to produce the Company's antimicrobial compound are readily available and the Company has taken steps to secure GO from a third party in order to meet demand while the Company sets up its GO production facility, with the intention of using materials from the Albany Graphite Deposit.

Intangible Properties

The Company holds intangible property in various forms such as trademarks, pending patent applications, trade secrets and know-how, mining claims, laboratory reports, licensing agreements, scientific agreements, and customer lists. Specifically, the Company holds two actively pending United States provisional patent applications in the Company's name, for (i) graphene-silver nanocomposite uses as an antiviral coating agent, and (ii) graphene-silver nanocomposite compositions and uses for treatment of respiratory tract infections. Additionally, the Company has an exclusive license to make, have made, use, lease, sell, have sold, export, import, or otherwise distribute the subject matter of another provisional patent application relating to the processes for the preparation of expanded graphite and exfoliated GO. Management anticipates that amongst the existing intangible properties the pending patent applications will be critical to the Company's future success (See "*Risk Factors – Intellectual Property*").

Cycles

Graphene was first created in 2004 and its creators received the Nobel Prize for this work in 2010. Markets for functionalized graphene products have been growing quickly from 2016. Prior to the

pandemic several estimators suggested compound annual growth for these markets to annually exceed 25% into the foreseeable future. The Company's management foresees a rapidly growing market which shall carry little cyclicality to the calendar or business cycles and will not be seasonal wherein any calendar quarter holds outsized profits or sales volumes.

Economic Dependence

The Company has the Trebor Agreements in Principle to supply Trebor with its antimicrobial coating for PPE masks and nitrile gloves. The Company and Trebor signed the First Trebor LOI dated November 6, 2020, which included terms to be set out in a definitive agreement including the initial purchase of the Company's patent-pending graphene-based viricidal coating for a minimum of 100 million masks/filters with pricing of these mask/filters being variable based on a number of factors. Subsequently, the Company agreed in principle with Trebor relating to the application of its coating on a minimum of 100 million nitrile gloves sourced or produced by Trebor. The Company expects the terms of the Trebor Agreements in Principle to be set out in binding definitive agreements in the near future, and expects such agreements to generate revenue. The Company intends to use a portion of revenue generated from such agreements to fund the Company's planned antimicrobial-coated HVAC filter project, in addition to other projects that are in development.

The Company also has an interest in three provisional patent applications directed related to its proprietary graphene oxide-silver nanocomposite and its use as an antiviral coating; compositions comprising the graphene oxide-silver nanocomposite for use as a treatment of pathogenic infections including, upper and lower respiratory tract infections; and, the ECE process to produce graphene oxide from the Company's Albany Pure™ graphite sourced from the Albany Graphite Project) (see "*Intangible Properties*" above).

Environmental Protection

The Company is seeking to develop environmentally friendly processes and products and is currently working with its partners to create biodegradable/recyclable/reusable products that have a low carbon footprint. In addition, the Company is currently working with Prof. Aicheng Chen and his team at the University of Guelph to develop a scalable, low cost, low energy, and environmentally friendly process (chemically and electrochemically) to produce high quality, few-layer GO at the Company's Guelph facility. On September 28, 2020, the University of Guelph filed a provisional patent application directed to an electrochemical exfoliation process to produce GO from Albany Pure™ graphite, to which the Company holds an exclusive license.

The Company's current and future operations with respect to the Albany Graphite Project, including development activities on its properties or areas in which it has an interest, are subject to laws and regulations governing exploration, development, tenure, productions, taxes, labour standards, occupational health, waste disposal, protection and remediation of the environment, mine safety, toxic substances and other matters. Environmental protection requirements did not have a material effect on the capital expenditures, earnings or competitive position of the Company during its financial year ended March 31, 2020 and are not expected to have a material effect during the Company's financial year ending March 31, 2022.

Employees

As of the date of this AIF, the Company has twelve staff consisting of nine employees and three consultants. As of April 1 2020 the corresponding figure was eight staff. Management expects headcount to grow as production volumes, scientific capacity and sales staff grow during the current and upcoming fiscal years.

Albany Graphite Project

All scientific and technical data contained in this AIF have been reviewed and approved by Jason J. Cox, P. Eng. of SLR Consulting (Canada) Ltd. (formerly, Roscoe Postle Associates Inc.) ("**RPA**"),

a “Qualified Person”, as defined by National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* (“**NI 43-101**”), and independent of the Company.

As of the date hereof, the only property material to the Company is the Albany Graphite Project and the Albany Graphite Deposit therein. The summary, included as Schedule A to this AIF, is extracted directly from, and qualified in its entirety with reference to the full text of, the PEA entitled “*Technical Report on the Preliminary Economic Assessment of the Albany Graphite Project, Northern Ontario, Canada*” dated July 9, 2015, prepared by Jason J. Cox (P.Eng.), David Ross (P.Geo.), Katharine M. Masun (P.Geo.), Marc Lavigne (ing.), and Brenna J.Y. Scholey (P.Eng.), each of RPA as of the date of the PEA, and Derek Chubb (P.Eng.), of ERM Consultants Canada Inc. (“**ERM**”), which is incorporated by reference herein. Readers are encouraged to review the full text of the Technical Report, available for review under the Company’s profile on SEDAR at www.sedar.com.

RISK FACTORS

The operations of the Company are speculative due to the high-risk nature of its business, which includes the development of certain intellectual property and the manufacturing of graphene related products, and which may include the future acquisition, financing, exploration, and development of additional mineral properties. These risk factors could materially affect the Company’s future operating results and could cause actual events to differ materially from those described in forward–looking information relating to the Company. Accordingly, any investment in securities of the Company is speculative and investors should not invest in securities of the Company unless they can afford to lose their entire investment.

The Company assesses and attempts to minimize the effects of these risks through careful management and planning of its operations and hiring qualified personnel, but is subject to a number of limitations in managing risk resulting from its early stage of development. Below is a non-exhaustive summary of the principal risks and related uncertainties that may impact the Company. Such risk factors, as well as additional risks and uncertainties not presently known to Company or that the Company currently deems immaterial, could have a material adverse effect on the Company’s business, financial condition and results of operations or the trading price of the Common Shares.

No Operating Revenues and History of Losses

The Company has no history of earnings, has earned no revenue since commencing operations, and has no source of operating cash flow, and there is no assurance that additional funding will be available to it for exploration and development. Although the Company has been successful to date in financing its activities through the sale of equity securities, there can be no assurance that it will be able to obtain sufficient financing in the future to progress the exploration and development of its properties, particularly the Albany Graphite Project. Furthermore, additional financing will be required to continue the development of the properties even if the Company’s exploration programs are successful. There can be no assurance that the Company will be able to obtain adequate financing in the future or that the commercial terms of such financing will be favorable. Failure to obtain such additional financing could result in delay or indefinite postponement of further exploration and development of the Company’s mineral properties with the possible loss of such properties.

No Guarantee of Success

Since 2018 the Company’s focus has been to create new products to serve growing graphene-related markets, which has not existed prior. There is no guarantee of success. Although management expects to serve rapidly growing global markets from a vertically integrated advanced materials platform protected by patents, proprietary knowledge, and the lowest cost of production the Company is not assured of profitability in any given year.

Serving the Company's prospective customers will require the Company possessing sufficient volumes of graphene precursor material and other chemical inputs. There is no guarantee that all needed material will be available to the Company in adequate volume, at acceptable cost or at times and locations required to produce graphene related products for sale. The Company is free to source material internally or externally and intends to do so when management satisfies itself that physical and chemical distinctions between sources of graphene precursor material do not reduce characteristics of the end product.

Intellectual Property

The Company relies on the patent, trade secret and other intellectual property laws of Canada, and potentially foreign jurisdictions. The Company may be unable to prevent third parties from using its intellectual property without its authorization. The unauthorized use of the Company's intellectual property could reduce any competitive advantage that it has developed, reduce its market share or otherwise harm its business. In the event of unauthorized use of the Company's intellectual property, litigation to protect and enforce the Company's rights could be costly, and the Company may not prevail.

Some of the Company's current or future technologies and trade secrets may not be covered by any patent or patent application, and the Company's issued and pending patents may not provide the Company with any competitive advantage and could be challenged by third parties. The Company's inability to secure issuance of pending patent applications may limit its ability to protect the intellectual property rights these pending patent applications were intended to cover. The Company's competitors may attempt to design around its patents to avoid liability for infringement and, if successful, could adversely affect the Company's market share. Furthermore, the expiration of the Company's patents may lead to increased competition.

In addition, effective patent, trade secret and other intellectual property protection may be unavailable or limited in some foreign countries. In some countries, the Company may not apply for patent or other intellectual property protection. The Company also relies on unpatented technological innovation and other trade secrets to develop and maintain its competitive position. Although the Company generally enters into confidentiality agreements with its employees and third parties to protect its intellectual property, these confidentiality agreements are limited in duration, could be breached and may not provide meaningful protection of its trade secrets. Adequate remedies may not be available if there is an unauthorized use or disclosure of the Company's trade secrets and manufacturing expertise. In addition, others may obtain knowledge about the Company's trade secrets through independent development or by legal means. The failure to protect the Company's processes, technology, trade secrets and proprietary manufacturing expertise, methods and compounds could have a material adverse effect on its business by jeopardizing critical intellectual property.

Where a product formulation or process is kept as a trade secret, third parties may independently develop or invent and patent products or processes identical to such trade secret products or processes. This could have a material adverse effect on the Company's ability to make and sell products or use such processes and could potentially result in costly litigation in which the Company might not prevail. The Company could face intellectual property infringement claims that could result in significant legal costs and damages and impede its ability to produce key products, which could have a material adverse effect on its business, financial condition, and results of operations.

Lack of Revenue from Graphene Sales

To date, the Company has recorded no revenue from the sales of its graphene products. There can be no assurance that significant losses will not occur in the near future or that the Company will be profitable in the future. The Company's operating expenses and capital expenditures may increase in subsequent years. The Company expects to continue to incur losses unless and until such time as it enters into long term and large volume graphene supply agreements and generates sufficient revenues to fund its continuing operations.

Product Development and Technological Change

As there is no history of successful use of the Company's graphene products in commercial applications, there is no assurance that broad successful commercial applications may be technically feasible. Most, if not all, of the scientific and engineering data related to the Company's products has been generated by the Company's own laboratories or laboratory environments of the Company's partners, such as universities. It is well known that laboratory data is not always representative in commercial applications.

Additionally, the industries in which the Company seeks to operate are characterized by rapid technological change and frequent new product introductions. Part of the Company's business strategy is to monitor such change and take steps to remain technologically current, but there is no assurance that such strategy will be successful. If the Company is not able to adapt to new advances in materials sciences, or if unforeseen technologies or materials emerge that are not compatible with the Company's or that could replace its products, the Company's revenues and business would likely be adversely affected.

Market Development and Growth

Failure to further develop the Company's key markets and existing geographic markets or to successfully expand its business in the future into new markets could have an adverse impact on sales growth and operating results. The Company's ability to further penetrate its key markets and the existing geographic markets in which it competes and/or aims to compete, and to successfully expand its business into other countries, is subject to numerous factors, many of which are beyond its control. There can be no assurance that efforts to increase market penetration in the Company's key markets and existing geographic markets will be successful. Failure to achieve these goals may have a material adverse effect on the Company's operating results.

Unpredictable Sales Cycles

The sales cycle for graphene products may range considerably from one to multiple years from the time a customer begins testing the Company's product until the time that they could be used in a commercial product. Timing of product introduction could vary significantly based on the target market. Additionally, any demand for the Company's products based in whole or in part on the current coronavirus (COVID-19) pandemic could materially change in the event the pandemic ends or decreases in severity. The Company has demonstrated little track record of success in completing customer development projects, which makes it difficult to evaluate the likelihood of future success. The sales and development cycles for the Company's products are subject to customer budgetary constraints, internal acceptance procedures, competitive product assessments, scientific and development resource allocations, and other factors beyond the Company's control. If the Company is not able to successfully accommodate these factors to achieve commercial success, the Company may be unable to achieve sufficient sales to reach profitability.

Government Regulation and Import/Export Controls

The Company's future operations, including development, and commencement and continuation of commercial production, require licenses, permits or other approvals from various federal, provincial, local and potentially foreign governmental authorities, and such operations are or will be governed by laws and regulations relating to production, exports, taxes, labor standards, occupational health and safety, waste disposal, toxic substances, prospecting, development, mining, land use, water use, environmental protection, land claims of indigenous people and other matters. Furthermore, in certain foreign jurisdictions, these regulatory requirements may be more stringent than those in Canada. Certain export control laws or economic sanctions laws may include restrictions or prohibitions on the sale or supply of certain products and services to embargoed or sanctioned countries, governments, persons and entities. In addition, various countries regulate the import of certain technology, including import and export permitting and licensing requirements, and have enacted or could enact laws that could limit the Company's ability to distribute its

products. Changes in the Company's products, or future changes in export and import regulations may prevent any potential international customers from utilizing the Company's products globally or, in some cases, prevent the export or import of the Company's products to certain countries, governments, or persons altogether.

Any change in export or import regulations, economic sanctions, or related legislation, or change in the countries, governments, persons, or technologies targeted by such regulations, could result in decreased use of the Company's products in the future by, or in the Company's decreased ability to export or sell its products to, potential international customers. Any limitation on the Company's ability to export or sell its products would likely adversely affect the Company's future business, results of operations, and financial results.

Large volume production of graphene requires permits and approvals from various government authorities, and is subject to extensive federal, provincial, state, and local laws and regulations governing development, production, exports, taxes, labour standards, occupational health and safety, environment and other matters. As graphene is a new chemical substance, production and sale of graphene may be subject to specific occupational health and safety and environment regulatory approvals in different jurisdictions including, without limitations, under the *Canadian Environmental Protection Act* (Canada), the *Food and Drug Act* (Canada), the *Toxic Substances Control Act* (USA), the *Food Drug and Cosmetic Act* (USA) and the *Registration, Evaluation, Authorization and Restriction of Chemicals* (Europe).

Health Canada also regulates certain markets into which the Company intends to supply products or license its intellectual property. There is no assurance that Health Canada or any other body will grant license for sales into markets it regulates. Each foreign jurisdiction for the Company's products is regulated and no assurance exists that sales of graphene related products will be permitted. Any inability by the Company to obtain approval from Health Canada and/or international bodies could have a material adverse impact of the business of the Company.

The Company is also subject to consumer protection laws that may impact its sales and marketing efforts. These laws, as well as any changes in these laws, could make it more difficult for the Company to sell and market its products. These laws and regulations are subject to change over time and thus the Company must continue to monitor and dedicate resources to ensure continued compliance. Non-compliance with applicable regulations or requirements could subject the Company to investigations, sanctions, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties, or injunctions. If any governmental sanctions are imposed, or if the Company does not prevail in any possible civil or criminal litigation, its business, operating results, and financial condition could be materially adversely affected.

Additionally, in order for the Company to carry out its activities, any required licences and permits must be obtained and kept current. There can be no assurance, however, that the Company will obtain on reasonable terms or at all the permits and approvals, and the renewals thereof, which it may require for the conduct of its future operations or that compliance with applicable laws, regulations, permits and approvals will not have an adverse effect on the Company's business plans. Possible future environmental and mineral tax legislation, regulations and actions could cause additional expense, capital expenditures, restrictions and delay on the Company's planned exploration and operations, the extent of which cannot be predicted.

Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

Industry Competition

The Company seeks to compete with other graphene and manufacturing companies, in highly competitive markets. Some of the Company's competitors have substantially greater financial, marketing and other resources and higher market share that the Company has in certain products or geographic areas. As the markets for the Company's products expand, additional competition may emerge and competitors may commit more resources to products which directly compete with the Company's products. There can be no assurance that the Company will be able to compete successfully with existing competitors or be able to develop any market for its products, or that its business will not be adversely affected by increased competition or by new competitors.

There is no assurance that the Company will continue to be able to compete successfully with its competitors in acquiring such properties or prospects or be able to develop any market for its share of the raw material that may be produced from the Albany Graphite Project and any such inability could have a material adverse effect on the Company's business and financial condition.

Lack of Trading Market for Graphene

Unlike commodity minerals such as copper, gold or silver, industrial minerals such as graphene precursor graphene materials and graphite do not have a metals exchange or an open market upon which to trade and therefore prices are not set in an open market or publicly traded market, and there can be no assurance that certain items can be sold or purchased at any time. As prices are set with private suppliers and private customers, it is difficult to predict what market prices may be at the time of any transaction. There can be no guarantees that the Company will be able to sell its graphene products in a profitable manner, or at all.

Shortages

The Company will be dependent on various supplies, equipment, parts and labour, and the services of contractors to carry out its business objectives. The availability and cost of such supplies, equipment, parts or labour or the services of contractors could have a material adverse effect on the Company's ability to successfully carry out its exploration and development activities.

Need for Additional Funding

The Company has limited financial resources and there is no assurance that sufficient additional funding will be available to enable it to fulfill its business objectives or obligations, or for further exploration and development of the Albany Graphite Project on acceptable terms or at all. Unanticipated expenses and other developments could cause existing funds to be depleted sooner than expected. Additional funds would be required to bring the Albany Graphite Project into production. In the event that its existing cash resources are inadequate to fund general and administrative expenses, and in order to fund the planned business objectives of the Company, in and/or exploration and feasibility studies of the Albany Graphite Project, the Company will be required to raise additional financing from external sources, such as debt financing, equity financing or joint ventures. The Company's ability to raise additional equity financing may be affected by numerous factors beyond the Company's control, including, but not limited to, adverse market conditions, commodity price changes and an economic downturn. Failure to obtain additional funding on a timely basis could result in delay or indefinite postponement of further exploration and development and could cause the Company to reduce or terminate its operations, or even a loss of property interest. Additional funds raised by the Company from treasury share issuances may result in significant dilution to existing shareholders, a depressive effect on the price of the common shares and/or a change of control.

No History of Operations on Mineral Property

The Company is has no history of mining or production from its mineral properties. As such, any future revenues and profits are uncertain. There can be no assurance that the Albany Graphite Project or any other project will be successfully placed into production, produce minerals in

commercial quantities or otherwise generate operating earnings. Advancing projects from the exploration stage into development and commercial production requires significant capital and time and will be subject to further technical studies, permitting requirements and construction of mines, processing plants, roads and related works and infrastructure. The Company will continue to incur losses on its mineral properties until mining related operations successfully reach commercial production levels and generate sufficient revenue to fund continuing operations. There is no certainty that the Company will generate revenue from any source, operate profitably or provide a return on investment in the future.

Preliminary Economic Assessments

Preliminary economic assessments are used to assess the potential economic viability of a deposit. There is no certainty that the Company's PEA will be realized. While the studies are based on the best information available to the Company, actual costs may significantly exceed estimated costs and economic returns may differ significantly from those estimated in the studies. There are many factors involved in the determination of the economic viability of a mineral deposit, including the achievement of satisfactory mineral reserve estimates, the level of estimated metallurgical recoveries, capital and operating cost estimates and estimates of future metal prices. The Albany Graphite Project has no operating history upon which to base estimates of future production and cash operating costs. Any of the following events, among others, could affect the profitability or economic feasibility of the Albany Graphite Project: unanticipated changes in grade and tonnes of ore to be mined and processed, unanticipated adverse geological conditions, unanticipated metallurgical recovery problems, incorrect data on which engineering assumptions are made, availability of labour, costs of processing and refining facilities, availability of economic sources of power, adequacy of water supply, adequate access to the site, unanticipated transportation costs, government regulations (including regulations with respect to the environment, prices, royalties, duties, taxes, permitting, restrictions on production, quotas on exportation of minerals, environmental), fluctuations in metal prices, accidents, labour actions and force majeure events.

Exploration and Development of the Albany Graphite Project

The exploration and development of mineral deposits involve a high degree of financial risk over a significant period of time that even a combination of management's careful evaluation, experience and knowledge may not eliminate. While discovery of ore-bearing structures may result in substantial rewards, few properties that are explored are ultimately developed into producing mines. Substantial expenditures are required to establish reserves that are sufficient to commercially mine some of the Company's properties and to construct, complete and install mining and processing facilities on those properties that are actually mined and developed. It is impossible to ensure that the current exploration, development and production programs of the Company will result in profitable commercial mining operations. The Albany Graphite Project is known to host indicated and inferred mineral resources. However, there are no guarantees that there will ever be profitable mining operation on the Albany Graphite Project. The proposed exploration and development program on the Albany Graphite Project is subject to a significant degree of risk. Whether a mineral deposit will be commercially viable depends on a number of factors, including the particular attributes of the deposit (i.e. size, grade, access and proximity to infrastructure), financing costs, the cyclical nature of commodity prices and government regulations (including those relating to prices, taxes, currency controls, royalties, land tenure, land use, importing and exporting of mineral products, and environmental protection). The effect of these factors or a combination thereof cannot be accurately predicted but could have an adverse impact on the Company.

The successful development of the Albany Graphite Project, if merited, will involve numerous uncertainties. Mine development projects typically require long time frames and significant expenditures before production is possible. Assuming economic reserves of minerals are found, putting the Albany Graphite Project into successful production is dependent on many factors, including but not limited to: (a) the availability of funds to finance construction and other capital expenditures and to provide working capital; (b) the timing and availability of permits and other approvals to proceed with construction and to operate the mine and processing facilities; (c) the

completion of negotiations with First Nations and other Aboriginal groups and stakeholders affected by the project; (d) building, acquiring, or otherwise securing processing facilities and the availability of infrastructure necessary for construction and operation; (e) the negotiation of sales or off-take contracts for the planned production from the project; and (f) the completion of negotiations with strategic partners for the provision of additional investment and/or the provision of technical assistance or services. Other unanticipated problems and delays may arise in the development of the Albany Graphite Project and, accordingly, the Company may not be successful in establishing mining and processing operations.

Single Primary Asset

A portion of the Company's operations involves exploring and developing the Albany Graphite Project in the hope of ultimately, at some future point, placing the Albany Graphite Project into production. The Albany Graphite Project will be for the foreseeable future the Company's primary mineral asset, and therefore the Company's financial condition and results of operations are in part dependent on the commercial development of a single project. Accordingly, the Company is exposed to a lack of property diversification. The Albany Graphite Project is known to host indicated and inferred resources. However, there are no guarantees that these indicated and inferred resources will ever be demonstrated, in whole or in part, to be profitable to mine. Development of the Albany Graphite Project will only follow upon obtaining satisfactory results from the recommended exploration and development program and any subsequent work and studies that may be required. There can be no assurance that any of the Company's planned exploration and development activities on the Albany Graphite Project will ever lead to the production of graphite or any other mineral product. Accordingly, it is not assured that the Company will realize any profits in the short to medium term, if at all. Any profitability in the future from the business of the Company will be dependent upon developing and commercially mining an economic deposit of minerals, which in itself is subject to numerous risk factors.

Estimates of Mineral Resource Risks

Mineral resource estimates are based upon estimates made by Corporation personnel and independent geologists. These estimates are inherently subject to uncertainty and are based on geological interpretations and inferences drawn from drilling results and sampling analyses and may require revisions based on further exploration or development work. The estimation of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. Inferred resources are resources for which there has been insufficient exploration to define as an indicated or measured mineral resource and it is uncertain if further exploration will result in upgrading them to an indicated or measured mineral resource category.

The grade of mineralization which may ultimately be mined may differ from that indicated by drilling results and such differences could be material. The quantity and resulting valuation of mineral reserves and mineral resources may also vary depending on, among other things, mineral prices (which may render mineral reserves and mineral resources uneconomic), cut-off grades applied and estimates of future operating costs (which may be inaccurate). Production can be affected by such factors as permitting regulations and requirements, weather, environmental factors, unforeseen technical difficulties, unusual or unexpected geological formations and work interruptions. Any material change in quantity of mineral resources, mineral reserves, grade, or stripping ratio may also affect the economic viability of any project undertaken by the Company. In addition, there can be no assurance that mineral recoveries in small scale, and/or pilot laboratory tests will be duplicated in a larger scale test under on-site conditions or during production.

There is no certainty that any of the mineral resources identified on the Albany Graphite Project will be realized, that any mineral resources will ever be upgraded to mineral reserves, that any anticipated level of recovery of minerals will in fact be realized, or that an identified mineral reserve or mineral resource will ever qualify as a commercially mineable (or viable) deposit which can be legally and economically exploited. Drilling results evaluations are ongoing, but until a deposit is

actually mined and processed, the quantity of mineral resources and mineral reserves and grades must be considered as estimates only.

Infrastructure

Mining, processing, development, and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, power sources, and water supply are important determinants affecting capital and operating costs. Unusual or infrequent weather phenomena, sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's operations, financial condition, and results of operations.

The Albany Graphite Project is located in a remote area where weather, terrain, and the lack of infrastructure make it difficult and costly to operate. Claim Block 4F is located approximately 50 km to the northwest of the town of Hearst, Ontario, and 30km north of Highway 11. Helicopters are required for local transport because of extensive wet swamp. The current lack of infrastructure increases the risk that the Company may be unable to further explore, develop or operate efficiently due to the unavailability of materials and equipment and unanticipated transportation costs. Most of the region has a continental climate with warm to hot summers (June, July, and August; 25ºC to 35ºC) and cold winters (December to March, 10ºC to -30ºC with lows down to -45ºC). Exploration and development programs can only be carried out during limited times of the year. Construction and operational risks, including, without limitation, equipment and plant performance, harsh weather conditions, terrain, environmental, cost estimation accuracy and workforce performance, and dependability will all affect the development and profitability of the Albany Graphite Project. There can be no assurance that the infrastructure will be sufficient for the purposes of carrying out the Company's objectives. In addition, there can be no assurance that any alternative infrastructure will be developed or that any alternative infrastructure, if constructed, will support the viability of the Albany Graphite Project, or any other mineral deposit on the Albany Graphite Project. In the event that the current infrastructure is not adequate, or that adequate infrastructure is not developed or is developed but does not support the viability of the Albany Graphite Project, the existing challenges in respect of transporting materials into the area in which the Albany Graphite Project is located, as well as transporting any future mined ores out, will continue, which may adversely affect the operations of the Company.

Property Titles

The principal property interests that the Company owns, controls or has the right to acquire by option or agreement under the Mining Act (Ontario) which has its own registration and management system. Although the Company has either obtained title opinions or reviewed title for the material properties that it owns, controls, or has the right to acquire by option or agreement, there is no guarantee that title to such mineral property interests will not be challenged or impugned. The Company's mineral property interests may be subject to prior unregistered agreements or transfers and title may be affected by undetected defects. There may be valid challenges to the title of the mineral property interests which, if successful, could impair development and/or operations.

First Nations

First Nations in Ontario are increasingly making land and rights claims in respect of existing and prospective resource projects on lands asserted to be First Nation traditional or treaty lands. Should a First Nation make such a claim in respect of the Company's properties and should such claim be resolved by government or the courts in favour of the First Nation, it could materially adversely affect the business of the Company.

The Company is committed to working in partnership with its local communities and First Nations in a manner which fosters active participation and mutual respect. The Company works towards minimizing negative project impacts, encouraging certain joint consultation processes, addressing certain decision making processes and towards maintaining meaningful ongoing dialogue not only for the Company but for all participants in the Arc of Fire region. To this end, on July 13, 2011, the Company entered into an exploration agreement (the "**CLFN Agreement**") with CLFN, which

provided for business and employment opportunities for the CLFN, communication, consultation and mutual support between the Company and CLFN, and contains measures to mitigate the cultural impact of the Company's activities. The CLFN Agreement is applicable during exploration work up to the completion of a pre-feasibility study. Upon completion of a pre-feasibility study on the Albany Graphite Project, an impact benefit-type agreement will be required.

On September 24, 2018 the Company signed the CLFN MOU, under which a project partnership structure would be created in support of the development of the Albany Graphite Project, and subsequently the Company signed the IA. The IA sets out the governance, roles, responsibilities, and activities for establishing the partnership structure to advance the development of the Albany Graphite Project and the relationship between the Company and CLFN, including establishing a shared governance committee structure for identified areas of mutual interest relating to the development of the Albany Graphite Project. The IA also creates a working committee drawn from members of CLFN and the Company 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 of the Albany Graphite Project. The working committee will hold regularly scheduled meetings conducted in person or remotely and provides the forum for raising issues and respectfully discussing resolutions to mutually satisfactory outcomes.

The continuing cooperation of the First Nations will be required to implement the terms of the IA and proceed with development of the Albany Graphite Project. Any failure of cooperation by these or any other potentially-impacted First Nations groups could result in a delay of work on the Albany Graphite Project. There can be no assurances that issues related to First Nation communities or interests will not arise.

Going Concern

The Company's ability to continue as a going concern is dependent upon its ability in the future to achieve profitable operations and, in the meantime, to obtain the necessary financing to meet its obligations and repay its liabilities arising from normal business operations when they become due. There can be no assurance once a decision is made with respect to future activities that the Company will be able to execute on its plans. The consolidated financial statements of the Company do not include any adjustments related to the carrying values and classification of assets and liabilities should the Company be unable to continue as a going concern.

Commodity Markets

The price of the Company's securities, its financial results, and its access to the capital required to finance its exploration activities may in the future be adversely affected by declines in the price of graphite. The price of graphite varies on a daily basis and price volatility could have a dramatic effect on the Company's results of operations and its ability to execute its business plan. Price fluctuations are affected by numerous factors beyond the Company's control such as the sale or purchase of industrial minerals by various dealers, interest rates, exchange rates, inflation or deflation, currency exchange fluctuation, global and regional supply and demand, production and consumption patterns, speculative activities, increased production due to improved mining and/or artificial production methods, new graphite mines or artificial graphite sources being placed into production, government regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting of minerals, environmental protection, the degree to which a dominant producer uses its market strength to bring supply into equilibrium with demand, and international political and economic trends, conditions and events. The prices of industrial minerals have fluctuated widely in recent years, and future price declines could cause continued exploration and development of the Albany Graphite Project to be impracticable.

Market Fluctuation and Commercial Viability

The market for minerals is influenced by many factors beyond the control of the Company such as changing production costs, the supply and demand for minerals, the rate of inflation, the inventory of mineral-producing companies, the international economic and political environment, changes in international investment patterns, global or regional consumption patterns, costs of substitutes, currency availability and exchange rates, interest rates, speculative activities in connection with minerals, and increased production due to improved mining and production methods. Commercial viability of mineral deposits may be affected by other factors that are beyond the Company's control including particular attributes of the deposit such as its size, quantity, and quality, the cost of mining and processing, proximity to infrastructure, and the availability of transportation and sources of energy, financing, government legislation and regulations including those relating to prices, taxes, royalties, land tenure, land use, import and export restrictions, exchange controls, restrictions on production, as well as environmental protection. It is impossible to assess with certainty the impact of various factors that may affect commercial viability so that any adverse combination of such factors may result in the Company not receiving an adequate return on invested capital.

Operating Hazards and Risks

Mineral exploration, development, and production are subject to many conditions that are beyond the control of the Company. These conditions include, but are not limited to, natural disasters, unexpected equipment repairs or replacements, unusual geological formations, unexpected geotechnical conditions, environmental hazards and industrial accidents. The occurrence of any of these events could result in delays, work-stoppages, damage to or destruction of property, loss of life, monetary losses, and legal liability, any of which could have a material adverse effect upon the Company or the value of its securities. While the Company maintains insurance against risks which are typical in the mining industry, insurance against certain risks to which the Company may be exposed may not be available on commercially reasonable terms, or at all. Further, in certain circumstances, the Company might elect not to insure itself against such liabilities due to high premium costs or for other reasons. Should the Company suffer a material loss or become subject to a material liability for which it was not insured, such loss or liability could have a material adverse effect upon the Company and the value of its securities.

Health, Safety and Community Relations

The Company's operations are subject to various health and safety laws and regulations that impose various duties on the Company's operations relating to, among other things, worker safety and surrounding communities. These laws and regulations also grant the authorities broad powers to, among other things, close unsafe operations and order corrective action relating to health and safety matters. The costs associated with the compliance of such health and safety laws and regulations may be substantial and any amendments to such laws and regulations, or more stringent implementation thereof, could cause additional expenditure or impose restrictions on, or suspensions of, the Company's operations. The Company expects to make significant expenditures to comply with the extensive laws and regulations governing the protection of the environment, waste disposal, worker safety, mine development and protection of endangered and other special status species, and, to the extent reasonably practicable, create social and economic benefit in the surrounding communities.

Environmental Protection

The Company's operations will be subject to environmental regulations. Environmental legislation is evolving in a manner which will require stricter standards and enforcement, increased fines and penalties for noncompliance, more stringent environmental assessments of proposed projects, and a heightened degree of responsibility for companies and their officers, directors, and employees. There is no assurance that future changes in environmental regulation will not adversely affect the Company's operations. Government approvals and permits may be required in connection with the Company's operations. To the extent such approvals are required and not obtained, the Company may be delayed or prohibited from proceeding with planned exploration or development of mineral properties. Failure to comply with applicable laws, regulations, and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial

authorities, causing operations to cease or be curtailed, and may require corrective measures be implemented, additional equipment be installed, or other remedial actions be undertaken, any of which could result in material capital expenditures. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material adverse impact on the Company and require increased capital expenditures or production costs or reductions in levels of production at producing properties or require abandonment or delays in the development of new mining properties.

Pre-Existing Environmental Liabilities

Pre-existing environmental liabilities may exist on the properties in which the Company will hold an interest or on properties that may be subsequently acquired by the Company which are unknown, and which have been caused by previous or existing owners or operators of the properties. In such event, the Company may be required to remediate these properties and the costs of remediation could be substantial. Further, in such circumstances, the Company may not be able to claim indemnification or contribution from other parties. In the event the Company was required to undertake and fund significant remediation work, such event could have a material adverse effect upon the Company and the value of its securities.

Mining Risks and Insurance

The Company's business is subject to a number of risks and hazards generally, including adverse environmental conditions, unusual or unexpected geological conditions, ground or slope failures, cave-ins, catastrophic equipment failures, industrial accidents, labour disputes, changes in the regulatory environment, and natural phenomena such as inclement weather conditions, floods, and earthquakes. Such occurrences could result in damage to mineral properties or production facilities, personal injury or death, environmental damage to the Company's properties or the properties of others, delays in mining, monetary losses, and possible legal liability.

The Company maintains insurance to protect against certain risks in such amounts as it considers reasonable. However, its insurance will not cover all the potential risks associated with a mining company's operations, and there is no assurance that such insurance will be available in the future, or if available, at economically feasible premiums or acceptable terms. Moreover, insurance against risks such as environmental pollution or other hazards as a result of exploration and production is not generally available to the Company or to other companies in the mining industry on acceptable terms. The Company might also become subject to liability for pollution or other hazards that may not be insured against or that it may elect not to insure against because of premium costs or other reasons. Losses from these events may cause the Company to incur significant costs that could have a material adverse effect upon its financial performance and results of operations.

Reliance on Key Personnel

The Company's development to date has depended, and in the future, will depend largely on the efforts of key management and other key personnel. Loss of any of these people, particularly to competitors, could have a material adverse effect on the Company's business. Further, with respect to the future development of the Company's projects, it may become necessary to attract both international and local personnel for such development. The marketplace for key skilled personnel is becoming more competitive, which means the cost of hiring, training, and retaining such personnel may increase. Factors outside the Company's control, including competition for human capital and the high-level of technical expertise and experience required to execute this development will affect the Company's ability to employ the specific personnel required. The failure to retain or attract a sufficient number of key skilled personnel could have a material adverse effect on the Company's business, results of operations, and financial condition. The Company has not taken out and does not intend to take out "key man insurance" in respect of any directors, officer or other employees.

Liquidity Risk

Liquidity risk is the risk that the Company will not meet its financial obligations as they come due. The Company has not generated revenue or cash flow from the Albany Graphite Project. As a result of the Company's negative cash flow, the Company continues to rely on the issuance of securities or other sources of financing to generate the funds required to carry out the Company's business objectives and for corporate expenditures. During the fiscal year ended March 31, 2020, the Company had negative cash flow from operating activities and may continue to have negative cash flow from operating activities into the future as the Company continues its business objectives.

Share Price Fluctuations

In recent years, the securities markets in Canada have experienced a high level of price and volume volatility. The securities of many companies, particularly those considered exploration and development stage companies such as the Company, have experienced wide fluctuations in market prices which have not necessarily been related to the operating performance, underlying asset values, or prospects of such companies. There can be no assurance that continual fluctuations in price will not occur.

Public Health Crises such as the COVID-19 Pandemic

In late December 2019, a novel coronavirus (COVID-19) originated, subsequently spread worldwide and on March 11, 2020, the World Health Organization declared it was a pandemic. The risks of public health crises such as the COVID-19 pandemic to our business include without limitation, the ability to raise funds, employee health, workforce productivity, increased insurance premiums, limitations on travel, the availability of industry experts and personnel, potential breaches of material contracts, disruption of the Company's supply chains and other factors that will depend on future developments beyond the Company's control. In particular, the continued spread of the coronavirus globally, prolonged restrictive measures put in place to control an outbreak of COVID-19 or other adverse public health developments could materially and adversely impact the Company's business and the development of the Albany Graphite Project could materially slow down or the Company could be required to suspend its operations for an indeterminate period. There can be no assurance that the Company's personnel will not ultimately see its workforce productivity reduced or that the Company will not incur increased medical costs or insurance premiums as a result of these health risks. In addition, the coronavirus pandemic or the fear thereof could adversely affect global economies and financial markets resulting in volatility or an economic downturn that could have an adverse effect on the demand for metals and our future prospects.

Climate Change

Global climate change could exacerbate certain of the threats facing the Company's business, including the frequency and severity of weather-related events, resource shortages, changes in rainfall and storm patterns and intensities, water shortages, rising water levels and changing temperatures which can disrupt the Company's operations, damage its infrastructure or properties, create a financial risk to the business of the Company or otherwise have a material adverse effect on our results of operations, financial position or liquidity. These may result in substantial costs to respond during the event, to recover from the event, and possibly to modify existing or future infrastructure requirements to prevent a recurrence. Climate changes could also disrupt the operations of the Company by impacting the availability and cost of materials needed for exploration and development activities and could increase insurance and other operating costs. Global climate change also results in regulatory risks. There continues to be a lack of consistent climate legislation, which creates economic and regulatory uncertainty. Increased public awareness and concern regarding global climate change may result in more legislative and/or regulatory requirements to reduce or mitigate the effects of greenhouse gas emissions.

Conflicts of Interest

Certain of the directors and officers of the Company engages in, and will continue to engage in, other business activities on their own behalf and on behalf of other companies (including mineral resource companies) and, as a result of these and other activities, such directors and officers of the Company may become subject to conflicts of interest.

There are no known existing or potential conflicts of interest among the Company and the directors and officers of the Company as a result of their outside business interests except that certain of the directors and officers may serve as directors, officers, promoters, and members of management of other companies and therefore it is possible that a conflict may arise between their duties as a director and officer of the Company and their duties as a director, officer, promoter or member of management of such other companies.

The directors and officers of the Company have been advised of the existence of laws governing accountability of directors and officers regarding corporate opportunity and requiring disclosures by directors of conflicts of interest. The Company will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of the directors or officers.

The directors of the Company are required by law to act honestly and in good faith with a view to the best interests of the Company and to disclose any interest, which they may have in any project opportunity of the Company. If a conflict of interest arises at a meeting of the board of directors, any director in a conflict will disclose his interest and abstain from voting on such matters. As a result, the Company may not have full access to their experience and judgment in such matters. In determining whether or not the Company will participate in any project or opportunity, the directors will primarily consider the degree of risk to which the Company may be exposed and its financial position at that time. Conflicts, if any, will be subject to the procedures and remedies as provided under the *Business Corporations Act* (Ontario).

Uninsurable Risks

Events in the financial markets have demonstrated that businesses and industries throughout the world are very tightly connected to each other. General global economic conditions seemingly unrelated to the Company or to the mining industry, including, without limitation, interest rates, general levels of economic activity, fluctuations in the market prices of securities, participation by other investors in the financial markets, economic uncertainty, national and international political circumstances, natural disasters, or other events outside of the Company's control may affect the activities of the Company directly or indirectly. In the course of exploration, development, and production of mineral properties, certain risks, and in particular, unexpected or unusual geological operating conditions including rock bursts, cave-ins, fires, flooding and, earthquakes may occur. The Company's business, operations, and financial condition could also be materially adversely affected by the outbreak of epidemics or pandemics, or other health crises.

Cybersecurity Threats

The Company relies on secure and adequate operations of information technology systems in the conduct of its operations. Access to and security of the information technology systems are critical to the Company's operations. To the Company's knowledge, it has not experienced any material losses relating to disruptions to its information technology systems. The Company has implemented ongoing policies, controls, and practices to manage and safeguard the Company and its stakeholders from internal and external cybersecurity threats and to comply with changing legal requirements and industry practice. Given that cyber risks cannot be fully mitigated and the evolving nature of these threats, the Company may not have the resources or technical sophistication to anticipate, prevent, or recover from cyber-attacks and cannot assure that its information technology systems are fully protected from cybercrime or that the systems will not be inadvertently compromised, or without failures or defects. Disruptions to the Company's information technology systems, including, without limitation, security breaches, power loss, theft, computer viruses, cyber-

attacks, natural disasters, and non-compliance by third-party service providers and inadequate levels of cybersecurity expertise and safeguards of third-party information technology service providers, may adversely affect the operations of the Company as well as present significant costs and risks including, without limitation, loss or disclosure of confidential, proprietary, personal or sensitive information and third-party data, material adverse effect on its financial performance, compliance with its contractual obligations, compliance with applicable laws, damaged reputation, remediation costs, potential litigation, regulatory enforcement proceedings, and heightened regulatory scrutiny.

Dilution

Financing the development of a mining operation through to production is capital intensive. Additional money will be required to fund continued development and exploration programs and potential acquisitions. If the Company raises additional funding by issuing additional equity securities, such financing will dilute the holdings of the Company's shareholders. The Company cannot predict the size of future issuances of common shares or the issuance of debt instruments or other securities convertible into shares or the price per common share or common share equivalent at which securities will be issued. Future sales of securities of the Company in public or private markets could adversely affect the trading price of the common shares and its ability to continue to raise funds by new offerings of securities.

No Dividends

Investors in the Company's securities cannot expect to receive a dividend on their investment in the foreseeable future, if at all. Accordingly, it is unlikely that investors will receive any return on their investment in the Company's securities other than through possible share price appreciation.

DIVIDENDS AND DISTRIBUTIONS

The Company relies primarily on equity financing to fund its working capital needs. The Company has neither declared nor paid any dividends on its Common Shares. The Company intends to retain its earnings, if any, to finance growth and expand its operation and does not anticipate paying any dividends on its Common Shares in the foreseeable future. Any decisions to pay dividends on the Common Shares will be made by the Board on the basis of its earnings, financial requirements, and other conditions.

DESCRIPTION OF CAPITAL STRUCTURE

Common Shares

The authorized share capital of the Company consists of an unlimited number of Common Shares. As at March 31, 2020, 80,405,791 Common Shares were issued and outstanding, and as of the date hereof there are 87,950,640 Common Shares issued and outstanding.

Each Common Share entitles the holder thereof to receive notice of any meetings of the shareholders of the Company, to attend, and to cast one vote per common share at all such meetings. Holders of Common Shares do not have cumulative voting rights with respect to the election of directors. Accordingly, holders of a majority of the common shares entitled to vote in any election of directors may elect all of the directors standing for election. Holders of Common Shares are entitled to receive on a pro rata basis such dividends if any, as and when declared by the board of directors at its discretion from funds legally available therefore and, upon the liquidation, dissolution, or winding up of the Company, are entitled to receive on a pro rata basis the net assets of the Company for payment of debts and liabilities. The Common Shares do not carry any pre-emptive, subscription, redemption, retraction, or conversion rights, nor do they contain any sinking or purchase fund provisions.

Warrants

The Company currently has the following warrants outstanding, each such warrant exercisable for one (1) Common Share, on the terms set out below:

Number of Warrants	Exercise Price	Expiry Date
655,848	$0.80	June 22, 2021
1,500,000	$0.50	September 12, 2021
137,100	$0.50	December 19, 2021
1,708,333	$0.80	June 26, 2022
867,599	$3.00	April 8, 2023[(1)]

Notes:

(1) The warrants are subject to the terms and conditions of the Warrant Indenture. If, at any time after August 9, 2021, the closing price of the Company's Common Shares on the TSX Venture Exchange (or such other stock exchange on which the Common Shares may be traded from time to time) is at or above $4.00 per share for a period of ten consecutive trading days (the "**Triggering Event**"), then the Company may, within one hundred days of the Triggering Event, accelerate the expiry date of the warrants by giving notice thereof to the holders of the warrants, by way of news release, and in such case the warrants will expire 30 calendar days after the date on which such notice is given by the Company.

Stock Options

The Company has an incentive stock option plan for the purchase of Common Shares for its directors, senior officers, employees, and certain consultants. The aggregate number of common shares reserved for issuance under the stock option plan is 10% of the issued and outstanding Common Shares at the time of grant. As at March 31, 2020, a total of 4,775,000 stock options were outstanding with a weighted average exercise price of $0.55.

During the financial year ended March 31, 2020, the Company granted 1,375,000 options exercisable at a price of $0.40 per Common Share over a period of five (5) years from the date of issuance to certain officers, directors, employees, and consultants of the Company.

Since April 1, 2020, the Company has granted an aggregate of 750,000 options exercisable at a price of $0.40 per Common Share for a period of five (5) years to certain officers, directors, employees, and consultants of the Company. In addition, the Company granted 400,000 stock options exercisable at a price of $0.75 per Common Share for a period of five (5) years, 1,425,000 stock options at an exercise price of $3.32 per Common Share for a period of five (5) years, 50,000 stock options at an exercise price of $1.76 per Common Share for a period of three (3) years, which shall vest as to one-third of the stock options on the date of grant, one-third of the stock options on the date which is six months from the date of grant and one-third on the date which is twelve months from the date of grant, and 50,000 stock options at an exercise price of $1.76 per Common Share for a period of two (2) years, which shall vest on the date which is four months from the date of grant.

MARKET FOR SECURITIES

Trading Price and Volume

Common Shares

The Common Shares are listed for trading on the TSX Venture Exchange ("**TSXV**") under the trading symbol "ZEN". The following table sets out the high and low closing market prices and the volume traded of the Common Shares on the TSXV for each month since the beginning of the Company's financial year ended March 31, 2020:

2019	HIGH ($)	LOW ($)	VOLUME
April	0.42	0.34	1,352,348
May	0.39	0.36	1,541,351
June	0.37	0.30	1,105,860

July	0.34	0.28	1,052,555
August	0.37	0.285	1,988,831
September	0.465	0.34	2,643,626
October	0.395	0.345	512,352
November	0.385	0.35	786,710
December	0.375	0.32	751,575
2020	**HIGH ($)**	**LOW ($)**	**VOLUME**
January	0.36	0.32	804,225
February	0.61	0.325	2,162,744
March	0.56	0.26	2,117,050
April	0.40	0.26	1,764,774
May	0.61	0.32	3,343,324
June	0.85	0.53	3,218,557
July	0.73	0.57	1,370,882
August	0.61	0.43	1,244,256
September	0.84	0.39	5,297,764
October	1.33	0.66	6,062,679
November	2.23	1.05	9,118,540
December	3.77	1.38	11,881,528
2021	**HIGH ($)**	**LOW ($)**	**VOLUME**
January	3.76	3.17	6,819,904
February	3.49	2.77	3,247,472
March	3.49	2.28	5,641,264
April 1 to 30	3.00	1.70	7,084,791

ESCROWED SECURITIES

There are no securities of the Company subject to escrow provisions.

DIRECTORS AND OFFICERS

Name, Occupation, and Security Holdings

The following table sets forth all current directors and executive officers of the Company as at the date hereof, their principal occupations or employment, the period or periods of service, and the approximate number of voting securities of the Company beneficially owned, directly or indirectly, or over which control or direction is exercised as of the date hereof. The Board currently consists of five (5) directors to be elected annually. The term of office of each director will be from the date of the meeting at which he or she is elected until the next annual meeting, or until his or her successor is elected or appointed.

Name, Province and Country of Residence, Position	Director Since	Number of Common Shares Beneficially Owned[(1)]	Principal Occupation During Past Five Years
Greg Fenton St. James, Barbados Chief Executive Officer and Director	July 11, 2018	2,024,053 Common Shares 428,072 Warrants 1,300,000 Options	Chief Strategy Officer (September 27, 2019 to December 7, 2020); Chief Executive Officer of the Company (December 8, 2020 to present), President at Fortem Partners International Limited (2016 to present), Corporate Director.
Dr. Francis Dubé Ontario, Canada Executive Chairman and Director	May 11, 2018	685,400 Common Shares 133,500 Warrants 1,300,000 Options	Co-Chief Executive Officer (August 14, 2018 to April 1, 2019), Chief Executive Officer (April 2, 2019 to December 7, 2020, Executive Chairman of the Company (December 8, 2020 to present), Corporate Director, Optometrist

Brian Bosse[(2)] Ontario, Canada Chief Financial Officer and Director	May 11, 2018	269,054 Common Shares 2,221 Warrants 850,000 Options	Chief Financial Officer of the Company (September 14, 2018 to present), Chief Executive Officer and Director at IC Capitalight Corp., Corporate Director
Eric Wallman[(2)] Manitoba, Canada Director	May 11, 2018	162,755 Common Shares 9,000 Warrants 500,000 Options	Senior Vice-President, Finance and Administration at Bothwell Cheese, Board Member of the Western Dairy Council, Corporate Director
Frank Klees[(2)] Ontario, Canada Director	July 11, 2018	190,000 Common Shares 450,000 Options	Corporate Director
Peter C. Wood Ontario, Canada President	N/A	550,000 Options	VP Exploration of the Company (2013 to June 21, 2018); Vice President of the Company (June 22 to September 13, 2018); President of the Company (September 14, 2018 to present); President and Geologist, Geodigital Mapping Systems Inc. (1991 to present)
James Jordan Ontario, Canada VP, Operations	N/A	400,000 Options	Project Manager (July 2016 to February 3, 2020); Chief Operating Officer (February 4, 2020 to December 7, 2020); VP Operations (December 8, 2020 to present)
Dr. Colin van der Kuur, British Columbia, Canada VP, Science and Research	N/A	386,192 Common Shares 18,182 Warrants 400,000 Options	Head of Research (February 4 to December 7, 2020); VP, Science and Research (December 8, 2020 to present)

Notes:

(1) The information as to voting securities beneficially owned, controlled or directed, not being within the knowledge of the Company, has been obtained from the System for Electronic Disclosure by Insiders or furnished by the respective nominees individually.

(2) Member of the Audit Committee.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

For the purposes of this section “Order” means:

(a) a cease trade order;

(b) an order similar to a cease trade order; or

(c) an order that denied the relevant company access to any exemption under securities legislation;

that was in effect for more than 30 days.

None of the directors or executive officers of the Company or any shareholder holding a sufficient number of securities of the Company to materially affect control of the Company:

(a) is, as of the date of this AIF, or has been, within 10 years before the date of this AIF, a director or executive officer of any company that:

(i) was the subject of an Order that was issued while the director or executive officer was acting in the capacity as a director, chief executive officer, or chief financial officer;

(ii) was subject to an Order that was issued after the director or executive officer ceased to be a director, chief executive officer, or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as a director, chief executive officer or chief financial officer; or

(iii) while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or was subject to or instituted any proceeding, arrangement, or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or

(b) has, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the proposed director.

None of the directors or executive officers of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company has, within the last 10 years, been subject to: (i) any penalties or sanctions imposed by a court relating to Canadian securities legislation or by a Canadian securities regulatory authority or has entered a settlement agreement with a Canadian securities regulatory authority; or (ii) any other penalties or sanctions imposed by a court or regulatory body that would be likely to be considered important to a reasonable investor making an investment decision.

PROMOTERS

No person or company has been, within the two most recently completed financial years or during the current financial year, a promoter of the Company.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Other than as set out below, the Company was not subject to any material legal proceedings during its most recently completed financial year, nor is the Company or any of its properties a party to or the subject of any such proceedings, and no such proceedings are known to be contemplated. The Company may be involved in routine, non-material litigation arising in the ordinary course of business, from time to time.

The Company is involved in legal proceedings relating to claims involving a former director and officer of the Company. The claim was commenced in the Ontario Superior Court of Justice on September 26, 2018 by Aubrey Eveleigh and Eveleigh Geological Consulting. Mr. Eveleigh seeks damages in excess of $5,000,000 in connection with an employment dispute. The Company is defending the claim and the proceedings remain ongoing, though the Company believes that the risk of significant loss in respect of the litigation is remote. The Company subsequently commenced a claim against Mr. Eveleigh and Eveleigh Geological Consulting on March 24, 2020, in the Ontario Superior Court of Justice (Commercial List), in connection with past breaches of Mr. Eveleigh's fiduciary duties. The Company is seeking, among other things, an order that Mr. Eveleigh disgorge any benefits obtained as a result of his misconduct, an order cancelling certain Company shares held by Mr. Eveleigh, and an order declaring that Mr. Eveleigh has no entitlement to any royalty payments or success fees in connection with the Albany Graphite Project. Mr. Eveleigh has defended the claim and the proceedings remain ongoing.

There were no penalties or sanctions imposed against the Company by a court relating to provincial and territorial securities legislation or by a securities regulatory authority during its most recently completed financial year, nor have there been any other penalties or sanctions imposed by a court or regulatory body against the Company, and the Company has not entered into any settlement

agreements before a court relating to provincial and territorial securities legislation or with a securities regulatory authority.

INTERESTS OF MANAGEMENT IN MATERIAL TRANSACTIONS

To the knowledge of management of the Company, no director or executive officer of the Company, person or company that beneficially owns, controls or directs, directly or indirectly, more than 10% of the Common Shares, or any associate or affiliate of any such persons, has or had any material interest, direct or indirect, in any transaction within the Company's three most recently completed financial years which has materially affected or will materially affect the Company or any of its subsidiaries other than as set out herein.

TRANSFER AGENT AND REGISTRAR

The registrar and transfer agent of the Company is Capital Transfer Agency Inc., having an address of 390 Bay Street, Suite 920, Toronto, Ontario M5H 2Y2.

MATERIAL CONTRACTS

Except for contracts entered into in the ordinary course of business, the Company has not entered into any material contracts during the most recently completed financial year or which are still in force and effect and which may reasonably be regarding as presently material.

EXPERTS AND INTERESTS OF EXPERTS

Jason J. Cox (P.Eng.), David Ross (P.Geo.), Katharine M. Masun (P.Geo.), Marc Lavigne (ing.), and Brenna J.Y. Scholey (P.Eng.), each of RPA as of the date of the PEA, and Derek Chubb (P.Eng.), of ERM Consultants Canada Inc. ("ERM"), prepared the PEA in respect of the Albany Graphite Project that is referenced and/or incorporated by reference herein, and have advised the Company that they do not hold, directly or indirectly, any beneficial interests in any securities or other property of the Company or any of its associates or affiliates.

The auditor of the Company, McGovern Hurley LLP, has informed the Company that it is independent with respect to the Company within the meaning of the Rules of Professional Conduct of Chartered Professional Accountants of Ontario.

ADDITIONAL INFORMATION

Additional information relating to the Company may be found through a database search at SEDAR at www.sedar.com. Additional information on the Company, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities, and securities authorized for issuance under equity compensation plans, is contained in the Company's management information circular dated September 28, 2020, which may be found on SEDAR.

Additional financial information regarding the Company is provided in the Company's audited annual financial statements and management's discussion and analysis for the year ended March 31, 2020, which may be found on SEDAR.

SCHEDULE A
SUMMARY OF THE TECHNICAL REPORT

All scientific and technical data contained in this AIF have been reviewed and approved by Jason J. Cox, P.Eng., of SRL Consulting (Canada) Ltf. (formerly, Roscoe Postle Associates Inc.) ("**RPA**"), a "Qualified Person", as defined by National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("**NI 43-101**"), and independent of the Company.

The summary, included in this Schedule A, is extracted directly from, and qualified in its entirety with reference to the full text of, the PEA entitled "*Technical Report on the Preliminary Economic Assessment of the Albany Graphite Project, Northern Ontario, Canada*" dated July 9, 2015, prepared by Jason J. Cox (P.Eng.), David Ross (P.Geo.), Katharine M. Masun (P.Geo.), Marc Lavigne (ing.), and Brenna J.Y. Scholey (P.Eng.), each of RPA as of the date of the PEA, and Derek Chubb (P.Eng.), of ERM Consultants Canada Inc. ("ERM"), which is incorporated by reference herein. Readers are encouraged to review the full text of the Technical Report, available for review under the Company's profile on SEDAR at www.sedar.com.

1 SUMMARY

EXECUTIVE SUMMARY

Roscoe Postle Associates Inc. (RPA) and Environmental Resources Management Consultants Canada Limited (ERM) were retained by Zenyatta Ventures Ltd. (Zenyatta) to prepare a Preliminary Economic Assessment (PEA) on the Albany Graphite Project (the Project), located in northern Ontario, Canada. The purpose of this report is to summarize the results of the PEA. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects.

Zenyatta is a Thunder Bay, Ontario based mineral development company currently developing a hydrothermal graphite deposit on the Albany Project. The Project can potentially produce 30,000 tonnes per year (tpa) of 99.94% purity graphite, for sale in the premium-priced high-purity graphite market. The PEA is based on open pit mining and processing of approximately 2,800 tonnes per day (tpd) via flotation, followed by purification. The PEA mine life is 22 years, with good potential for more via pit expansions, processing of low-grade stockpiles, or underground mining. 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 report is considered by RPA to meet the requirements of a Preliminary Economic Assessment as defined in Canadian NI 43-101 regulations. The economic analysis contained in this report is preliminary in nature and based on Mineral Resources that are not Mineral Reserves, and therefore do not have demonstrated economic viability. There is no certainty that economic forecasts on which this PEA is based will be realized.

CONCLUSIONS

In RPA's opinion, the PEA indicates that positive economic results can be obtained for the Project, in a scenario that includes open pit mining and graphite recovery by flotation followed by purification at the mine site.

The PEA consists of technical and cost assumptions outlined in this report. The economic analysis shows post-tax internal rate of return (IRR) and net present value (NPV) (10%) of

23.9% and US$438.4 million respectively at a long term price of US$7,500/t of purified final product.

The Project is most sensitive to the realized price of graphite. Since sales of graphite have been capped at 30,000 tpa based on market studies, the remaining variables have less of an impact than if sales were uncapped. In RPA's opinion, should market conditions warrant, the Mineral Resources are capable of supporting higher production rates.

RPA offers the following conclusions by area:

GEOLOGY AND MINERAL RESOURCES

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 CO_2-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. Zenyatta's protocols for drilling, sampling, analysis, security, and database management meet industry accepted practices. The drill hole database was verified by RPA and is suitable for Mineral Resource estimation work.

RPA estimated Mineral Resources for the Albany graphite deposit using drill hole data available as of November 15, 2013 and economic assumptions current to June 1, 2015. The Mineral Resource estimate is based on a potential combined open pit and underground mining scenario. Indicated Mineral Resources are estimated to total 24.3 million tonnes (Mt) at an average grade of 3.98% graphitic carbon (Cg), containing 968,000 tonnes of Cg. Inferred Mineral Resources are estimated to total 16.9 Mt at an average grade of 2.64% Cg, containing 445,000 tonnes of Cg.

MINING

RPA investigated production rates in the 2,500 tpd to 3,500 tpd range using open pit mining methods. Within 260 m of surface, strip ratios remain low enough for open pit methods to

produce favourable results. Although it is not included in the PEA, underground mining of Inferred Resources remains worth consideration for the portion of both mineralized breccia pipes beneath an unmineralized dyke dipping southeast (from approximately 250 m to 300 m depth and below), as incorporated into the resource estimate.

The PEA production rate is 982,500 tpa, or 2,807 tpd, of graphite bearing material via open pit mining. Mining of ore and waste would be carried out by the owner and by contractor to balance mining equipment requirements over the life of the operation. The overburden removal will be exclusively done by a contractor with a dedicated mining fleet (larger equipment) given the total volume to be excavated and the higher production rate to be achieved.

A PEA level mine plan has been developed using 20.9 Mt of Indicated Mineral Resources, at an average grade of 4.05% Cg. The production schedule reflects mining at an elevated cut-off grade of 1.65% Cg. Beyond the PEA Life of Mine (LOM) plan, there is potential to extend purified graphite production via:

- Larger pits.
- Underground mining.
- Processing of low-grade stockpile (material between 0.9% Cg and 1.65% Cg).

The combination of owner-operated mining and contractor mining will be carried out using a conventional open pit method consisting of the following activities:

- Drilling performed by conventional production drills.
- Blasting using ammonium-nitrate fuel oil (ANFO) and a down-hole delay initiation system.
- Loading and hauling operations performed with hydraulic shovel, front-end loader, and rigid frame haulage trucks.

Geotechnical, hydrogeological/hydrological, and pit design parameters are based either on the open pit preliminary geotechnical evaluation or on assumptions derived from comparable operations, and require site-specific investigation as the Project advances.

MINERAL PROCESSING AND METALLURGICAL TESTING

Metallurgical test results at a bench scale level have demonstrated the following:

- Graphite concentrate can be produced via flotation targeting 88.6% Cg and 84.54% recovery.
- Graphite concentrate can be purified to yield a final graphite product grading 99.94% Cg and 89.13% recovery, for an overall recovery of 75.40%.

The metallurgical testwork completed to date has focused on achieving product purity and not on optimization of the process. Further improvements in process design, performance, and cost estimation are to be expected with advanced levels of study.

Ore samples for metallurgical testwork should be representative of the ore blend for each year in the LOM plan. The metallurgical complexity of the deposit has been evaluated using two composite samples (East Pipe and West Pipe) for flotation testing, and using East Pipe composite material for purification testing.

Ore variability needs to be investigated through mineralogical analysis and flotation testing.

ENVIRONMENTAL AND SOCIOLOGICAL CONSIDERATIONS

ERM has not identified any material environmental and social risks that prevent the Project's advancement to the next stage of study.

Zenyatta has conducted some preliminary environmental studies to support its exploration program and to characterize environmental features present within its property. A comprehensive, Project-specific baseline study program will be required to further the understanding of the local and regional environmental and social context for the Project, thereby contributing to the optimization of the engineering and the identification and mitigation of potential impacts of the Project on its receiving environment.

HIGH-PURITY GRAPHITE MARKETS

Unlike metamorphic flake deposits, testwork has demonstrated that Zenyatta's hydrothermal (vein) type graphite can be processed into a high-purity substance, suitable to compete against synthetic graphite producers for market share.

The high-purity graphite market that Zenyatta is focusing on is expected to require in the order of 426 ktpa by 2017, and grow at a rate of 4% thereafter. RPA has selected US$7,500 per tonne as the base case price for this PEA, with sensitivity analysis in the range of US$5,000 per tonne to US$10,000 per tonne. Zenyatta will target marketing activities around industries

such as lithium-ion batteries, powder metallurgy, specialized lubricants, fuel cells for energy storage, and nuclear reactors that all demand high-purity graphite.

RECOMMENDATIONS

RPA recommends that Zenyatta advance the Project to the pre-feasibility stage, and offers the following recommendations by area:

GEOLOGY AND DRILLING

- Consider upgrading areas of Inferred Mineral Resources to Indicated Mineral Resources. RPA notes that this is not required to advance to the pre-feasibility stage – current Indicated Resources are adequate for the open pit production scenario described in this PEA.

MINING

- Carry out a geotechnical drill program at pit wall locations to enhance geomechanical and rock mechanics assessments to confirm appropriate pit wall slope angles and stability.

- Carry out specific hydrological/hydrogeological studies to refine dewatering needs in the open pit over the LOM.

- Improve the mining plan and develop an estimate of the mining costs based on first principles.

MINERAL PROCESSING AND METALLURGICAL TESTING

- Additional metallurgical testwork should be carried out to scale up the process flowsheet for the production of a high-purity graphite product with the specifications targeted based on research and dialogue with end-users.
    - Continued mineralogical characterization and mineral deportment analysis on a broad range of ore samples representative of the areas to be mined (across the Mineral Resources and at depth)
    - Ore variability testing
    - Confirmatory tests on regrinding, liquid-solid separation and thickening under the various stages of cleaner flotation
    - Confirm that grinding media selection does not affect the quality of the product
    - Optimization of the purification circuit, including materials handling, liquid-solid separation, and thickening
    - Off-gas handling and scrubbing requirements in low-temperature bake treatment
    - Dust collection and recycle
    - Analysis and characterization of all waste streams and determination of the appropriate methods of disposal
    - Methods for effective drying and handling of the final graphite product
    - Detailed water balance for the entire process flowsheet
    - Materials of construction requirements

ENVIRONMENTAL AND SOCIOLOGICAL CONSIDERATIONS

- Continue to engage with potentially interested parties.
- Begin the environmental baseline study program as an important input into future study and Project permitting.

HIGH-PURITY GRAPHITE MARKETS

- Continue discussions with end-users who are potential customers for the product and work towards securing off-take or strategic partnership agreements.
- Continue research into new markets for high-purity graphite by monitoring current research initiatives and support new research initiatives into potential future applications of the unique Albany high-purity graphite product.
- Participate in technical conferences on graphite and energy storage whenever possible to stay current on market developments and identify potential partners.

PROPOSED BUDGET

RPA and ERM propose the following budget for work carrying through to the end of a Pre-Feasibility Study:

TABLE 1-1 PROPOSED BUDGET
Zenyatta Ventures Ltd. – Albany Project

Item	C$'000s
Geotechnical Drilling and Analysis (including hydrogeology)	600
Market Development Work	1,000
Metallurgical Testwork	1,600
Community Engagement	200
Environmental Baseline Studies (one year of a multi-year program including geochemistry)	600
Pre-Feasibility Study	500
Total	**4,500**

ECONOMIC ANALYSIS

The overall LOM plan and resulting cash flow model were designed to generate saleable high-purity graphite in the amount of 30,000 tpa. Zenyatta is targeting a specialized market with a distinct product, not selling into an open market. Any graphite produced in excess of 30,000 tpa will be kept as finished inventory for sale in future periods.

Economic criteria that were used in the cash flow include:

- Price of saleable graphite of US$7,500 per tonne

- Exchange rate of 0.82 US$/C$
- Life of mine processing of 20,927 kt grading 4.05% Cg
- Nominal 983 kt of processed material per year during steady state operations
- Life of mine of 22 years
- Flotation recovery of 84.54%, and purification recovery of 89.13%
- Final product graphite grade of 99.94% Cg
- Sales capped at 30 ktpa, with life of mine sales totalling to 634 kt
- Transportation costs of US$82.00 per tonne
- Net Smelter Return (NSR) royalties of 1.25%
- Unit operating costs of US$62 per tonne of processed material, or US$2,046 per tonne of finished product
- Pre-production capital costs of US$411.4 million, spread over two years
- Sustaining capital costs (including reclamation) of US$291.4 million, spread over the mine life

A summary of the cash flow model is shown in Table 1-2.

TABLE 1-2 CASH FLOW SUMMARY
Zenyatta Ventures Inc. - Albany Project

	INPUTS	UNITS	TOTAL	Year -2	Year -1	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
MINING																											
Open Pit																											
Operating Days	350	days	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350
Ore Tonnes mined per day		tpd	2,736	-	-	2,055	2,101	2,727	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,807	2,378
Total Tonnes moved per day		tpd	32,231	12,000	42,479	54,438	55,659	48,328	29,100	28,822	28,535	25,405	15,247	14,647	14,250	13,432	12,426	11,266	10,088	8,972	8,103	7,322	6,476	6,099	5,670	4,566	3,269
Ore Tonnes mined per year	See Material Movement	ktpa	20,927	-	-	719	735	954	982	983	982	983	983	983	983	982	982	982	983	982	982	982	983	982	983	983	832
Cg Grade	See Material Movement	%	4.05%	0.00%	0.00%	6.12%	5.61%	4.16%	4.00%	4.02%	4.01%	3.99%	3.99%	4.01%	4.08%	4.07%	4.04%	4.03%	4.04%	4.05%	4.06%	4.10%	4.06%	3.97%	3.48%	3.00%	2.95%
Overburden	See Material Movement	kt	57,699	4,200	14,000	14,000	14,000	11,499	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Waste Rock	See Material Movement	kt	84,684	-	868	4,334	4,745	4,461	9,203	9,105	9,005	7,909	4,354	4,144	4,005	3,719	3,367	2,961	2,548	2,158	1,853	1,580	1,284	1,152	1,002	616	312
Total Moved		**kt**	**163,310**	**4,200**	**14,868**	**19,053**	**19,481**	**16,915**	**10,185**	**10,088**	**9,987**	**8,892**	**5,336**	**5,126**	**4,988**	**4,701**	**4,349**	**3,943**	**3,531**	**3,140**	**2,836**	**2,563**	**2,267**	**2,135**	**1,985**	**1,598**	**1,144**
Stripping Ratio (incl. OVB)		W:O	6.80	-	-	25.49	25.49	16.72	9.37	9.27	9.17	8.05	4.43	4.22	4.08	3.78	3.43	3.01	2.59	2.20	1.89	1.61	1.31	1.17	1.02	0.63	0.37
Stripping Ratio (w/o OVB)		W:O	4.05	-	-	6.03	6.45	4.67	9.37	9.27	9.17	8.05	4.43	4.22	4.08	3.78	3.43	3.01	2.59	2.20	1.89	1.61	1.31	1.17	1.02	0.63	0.37
PROCESSING																											
Mill Feed																											
Tonnes Processed		kt	20,927	-	-	719	735	954	982	983	982	983	983	983	983	982	982	982	983	982	982	982	983	982	983	983	832
Cg Grade		%	4.05%	0.00%	0.00%	6.12%	5.61%	4.16%	4.00%	4.02%	4.01%	3.99%	3.99%	4.01%	4.08%	4.07%	4.04%	4.03%	4.04%	4.05%	4.06%	4.10%	4.06%	3.97%	3.48%	3.00%	2.95%
Contained Cg		t	847,019	-	-	44,036	41,292	39,743	39,295	39,504	39,380	39,157	39,223	39,359	40,056	40,026	39,675	39,631	39,734	39,748	39,909	40,239	39,888	39,004	34,144	29,452	24,522
Flotation																											
Recovery	84.54%	%	85%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%	84.54%
Graphite Concentrate		t		-	-	42,018	39,400	37,922	37,495	37,694	37,575	37,362	37,425	37,556	38,220	38,192	37,857	37,815	37,913	37,927	38,081	38,395	38,060	37,217	32,579	28,103	23,398
Cg grade within con	88.60%	%		88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%	88.60%
Contained Cg		t		-	-	37,228	34,908	33,599	33,220	33,397	33,292	33,103	33,159	33,275	33,863	33,838	33,541	33,504	33,591	33,603	33,739	34,018	33,721	32,974	28,865	24,899	20,731
Carbon Purification																											
Ramp Up on Purification	100%	%				85.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Recovery	89.13%	%		89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%	89.13%
Product		t	633,636	-	-	28,221	31,133	29,965	29,627	29,785	29,691	29,522	29,572	29,675	30,200	30,178	29,913	29,880	29,958	29,968	30,090	30,339	30,074	29,407	25,743	22,206	18,488
Grade	99.94%	%		99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%	99.94%
Final Product Moisture Content	0%			0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
REVENUE																											
Metal Prices		**Input Units**																									
Cg	$ 7,500	US$ / t Cg	$ 7,500			$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500	$ 7,500
Exchange Rate	$ 0.82	US$ / C$	$ 0.82			$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82	$ 0.82
Price Ramp Up	100%	%				100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Realized Price		C$ / t Cg	$ 9,146			$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146	$ 9,146
Ramp Up of Realized Cg Price	100%	%				100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Ramp Up of Cg Sales Volume	100%	%				90%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Finished Product Stockpile																											
Opening Balance	-	t		-	-	-	1,221	2,354	2,318	1,945	1,730	1,421	943	515	191	391	569	482	362	320	289	379	717	791	199	-	-
+ Add Production		t		-	-	28,221	31,133	29,965	29,627	29,785	29,691	29,522	29,572	29,675	30,200	30,178	29,913	29,880	29,958	29,968	30,090	30,339	30,074	29,407	25,743	22,206	18,488
= Available For Sale		t		-	-	28,221	32,354	32,318	31,945	31,730	31,421	30,943	30,515	30,191	30,391	30,569	30,482	30,362	30,320	30,289	30,379	30,717	30,791	30,199	25,942	22,206	18,488
- Less Sales	30,000	**t**	**633,636**	**-**	**-**	**27,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**30,000**	**25,942**	**22,206**	**18,488**
= Closing Balance				-	-	1,221	2,354	2,318	1,945	1,730	1,421	943	515	191	391	569	482	362	320	289	379	717	791	199	-	-	-
Total Gross Revenue		**US$ '000**	**$ 4,752,271**			**$ 202,500**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 225,000**	**$ 194,564**	**$ 166,543**	**$ 138,664**
Transportation	$82.00 US$/t product	US$ '000	$ 51,958			$ 2,214	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,460	$ 2,127	$ 1,821	$ 1,516
Net Smelter Return		**US$ '000**	**$ 4,700,312**			**$ 200,286**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 222,540**	**$ 192,436**	**$ 164,723**	**$ 137,147**
Royalty																											
Cliffs Royalty (0.25%)	0.25%	US$ '000	$ 11,751			$ 501	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 556	$ 481	$ 412	$ 343
EGC Royalty (1%)	1%	US$ '000	$ 47,003			$ 2,003	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 2,225	$ 1,924	$ 1,647	$ 1,371
Total Royalties		**US$ '000**	**$ 58,754**			**$ 2,504**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,782**	**$ 2,405**	**$ 2,059**	**$ 1,714**
Net Revenue		**US$ '000**	**$ 4,641,559**			**$ 197,782**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 219,758**	**$ 190,031**	**$ 162,664**	**$ 135,433**
Unit NSR		**US$ / t proc**	$ 222			**$ 275**	**$ 299**	**$ 230**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 224**	**$ 193**	**$ 166**	**$ 163**
OPERATING COSTS (US$)																											
Mining (Ore and Waste)		US$ '000	$ 237,362	$ -	$ -	$ 13,674	$ 14,831	$ 14,655	$ 15,287	$ 15,075	$ 14,862	$ 14,649	$ 14,440	$ 13,872	$ 13,496	$ 12,722	$ 11,768	$ 10,670	$ 9,554	$ 8,498	$ 7,674	$ 6,935	$ 6,133	$ 5,776	$ 5,370	$ 4,324	$ 3,096
Beneficiation		US$ '000	$ 286,688	$ -	$ -	$ 9,853	$ 10,076	$ 13,076	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 13,460	$ 11,404
Purification		US$ '000	$ 557,577	$ -	$ -	$ 28,968	$ 27,182	$ 26,162	$ 25,867	$ 26,005	$ 25,923	$ 25,776	$ 25,820	$ 25,910	$ 26,368	$ 26,349	$ 26,117	$ 26,089	$ 26,156	$ 26,165	$ 26,272	$ 26,489	$ 26,258	$ 25,676	$ 22,476	$ 19,388	$ 16,142
G&A		US$ '000	$ 215,037	$ -	$ -	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774	$ 9,774
Total Operating Cost		**US$ '000**	**$ 1,296,664**	**$ -**	**$ -**	**$ 62,290**	**$ 61,863**	**$ 63,668**	**$ 64,389**	**$ 64,314**	**$ 64,019**	**$ 63,659**	**$ 63,494**	**$ 63,016**	**$ 63,099**	**$ 62,304**	**$ 61,120**	**$ 59,993**	**$ 58,945**	**$ 57,897**	**$ 57,180**	**$ 56,458**	**$ 55,625**	**$ 54,686**	**$ 51,081**	**$ 46,946**	**$ 40,416**
UNIT OPERATING COSTS (US$)																											
Mining (Ore and Waste)		US$ / t proc	11.34			$ 19.01	$ 20.16	$ 15.35	$ 15.56	$ 15.34	$ 15.13	$ 14.91	$ 14.70	$ 14.12	$ 13.74	$ 12.95	$ 11.98	$ 10.86	$ 9.72	$ 8.65	$ 7.81	$ 7.06	$ 6.24	$ 5.88	$ 5.47	$ 4.40	$ 3.72
Beneficiation		US$ / t proc	13.70			$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70	$ 13.70
Purification		US$ / t proc	26.64			$ 40.30	$ 36.96	$ 27.41	$ 26.33	$ 26.47	$ 26.38	$ 26.24	$ 26.28	$ 26.37	$ 26.84	$ 26.82	$ 26.58	$ 26.55	$ 26.62	$ 26.63	$ 26.74	$ 26.96	$ 26.73	$ 26.13	$ 22.88	$ 19.73	$ 19.39
G&A		US$ / t proc	10.28			$ 13.59	$ 13.29	$ 10.24	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 9.95	$ 11.74
Total Operating Cost		**US$ / t proc**	**61.96**			**$ 86.6**	**$ 84.1**	**$ 66.7**	**$ 65.5**	**$ 65.5**	**$ 65.2**	**$ 64.8**	**$ 64.6**	**$ 64.1**	**$ 64.2**	**$ 63.4**	**$ 62.2**	**$ 61.1**	**$ 60.0**	**$ 58.9**	**$ 58.2**	**$ 57.7**	**$ 56.6**	**$ 55.7**	**$ 52.0**	**$ 47.8**	**$ 48.6**
Mining (Ore and Waste)		US$ / t prod	**375**			$ 485	$ 476	$ 489	$ 516	$ 506	$ 501	$ 496	$ 488	$ 467	$ 447	$ 422	$ 393	$ 357	$ 319	$ 284	$ 255	$ 229	$ 204	$ 196	$ 209	$ 195	$ 167
Beneficiation		US$ / t prod	**452**			$ 349	$ 324	$ 436	$ 454	$ 452	$ 453	$ 466	$ 455	$ 454	$ 446	$ 446	$ 450	$ 450	$ 449	$ 447	$ 444	$ 448	$ 458	$ 523	$ 606	$ 606	$ 617
Purification		US$ / t prod	**880**			$ 1,027	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873	$ 873
G&A		US$ / t prod	**339**			$ 346	$ 314	$ 326	$ 330	$ 328	$ 329	$ 331	$ 331	$ 329	$ 324	$ 324	$ 327	$ 327	$ 326	$ 326	$ 325	$ 322	$ 325	$ 332	$ 380	$ 440	$ 529
Unit Operating Cost		**US$ / t prod**	**2,046**			**$ 2,207**	**$ 1,987**	**$ 2,125**	**$ 2,173**	**$ 2,159**	**$ 2,156**	**$ 2,156**	**$ 2,147**	**$ 2,124**	**$ 2,089**	**$ 2,065**	**$ 2,043**	**$ 2,008**	**$ 1,968**	**$ 1,932**	**$ 1,900**	**$ 1,868**	**$ 1,859**	**$ 1,860**	**$ 1,984**	**$ 2,114**	**$ 2,186**
Operating CashFlow		US$ '000	**$ 3,344,895**	**$ -**	**$ -**	**$ 135,492**	**$ 157,895**	**$ 156,090**	**$ 155,369**	**$ 155,445**	**$ 155,739**	**$ 156,099**	**$ 156,264**	**$ 156,742**	**$ 156,660**	**$ 157,454**	**$ 158,638**	**$ 159,765**	**$ 160,814**	**$ 161,861**	**$ 162,578**	**$ 163,100**	**$ 164,133**	**$ 165,072**	**$ 138,950**	**$ 115,717**	**$ 95,017**
		US$ / t proc	$ 160																								
CAPITAL COST																											
Direct Cost																											
Mining		US$ '000	$ 81,158	$ 12,743	$ 68,415	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Processing		US$ '000	$ 111,495	$ 44,598	$ 66,897	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Infrastructure		US$ '000	$ 70,255	$ 14,908	$ 55,347	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Direct Cost		**US$ '000**	**$ 262,908**	**$ 72,249**	**$ 190,659**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Indirect Costs																											
EPCM / Owners / Indirect Cost		US$ '000	$ 68,732	$ 21,902	$ 46,829	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Subtotal Costs		**US$ '000**	**$ 331,639**	**$ 94,151**	**$ 237,488**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Contingency		US$ '000	$ 79,826	$ 25,064	$ 54,762	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Initial Capital Cost		**US$ '000**	**$ 411,465**	**$ 119,215**	**$ 292,250**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Sustaining		US$ '000	$ 268,073	$ -	$ -	$ 44,600	$ 44,600	$ 39,078	$ 18,941	$ 22,298	$ 18,793	$ 20,237	$ 3,853	$ 11,266	$ 12,424	$ 6,545	$ 2,446	$ 2,446	$ 9,801	$ 3,410	$ 2,446	$ 2,446	$ 2,446	$ -	$ -	$ -	$ -
Reclamation and Closure		US$ '000	$ 22,140	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 5,535	$ -	$ -	$ 5,535	$ -	$ -	$ -	$ 11,070
Misc - Buy Out Royalties		US$ '000	$ 1,230	$ -	$ 1,230	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Capital Cost		**US$ '000**	**$ 702,908**	**$ 119,215**	**$ 293,480**	**$ 44,600**	**$ 44,600**	**$ 39,078**	**$ 18,941**	**$ 22,298**	**$ 18,793**	**$ 20,237**	**$ 3,853**	**$ 11,266**	**$ 12,424**	**$ 6,545**	**$ 2,446**	**$ 2,446**	**$ 9,801**	**$ 8,945**	**$ 2,446**	**$ 2,446**	**$ 7,981**	**$ -**	**$ -**	**$ -**	**$ 11,070**
CASH FLOW																											
Pre-Tax Cashflow		US$ '000	$ 2,641,987	$ (119,215)	$ (293,480)	$ 90,892	$ 113,295	$ 117,012	$ 136,428	$ 133,147	$ 136,946	$ 135,862	$ 152,412	$ 145,477	$ 144,236	$ 150,909	$ 156,193	$ 157,319	$ 151,013	$ 152,916	$ 160,133	$ 160,655	$ 156,152	$ 165,072	$ 138,950	$ 115,717	$ 83,947
Cumulative Pre-Tax Cashflow		US$ '000		$ (119,215)	$ (412,695)	$ (321,803)	$ (208,508)	$ (91,496)	$ 44,932	$ 178,079	$ 315,025	$ 450,886	$ 603,298	$ 748,775	$ 893,011	$ 1,043,920	$ 1,200,113	$ 1,357,432	$ 1,508,445	$ 1,661,361	$ 1,821,494	$ 1,982,148	$ 2,138,301	$ 2,303,373	$ 2,442,323	$ 2,558,040	$ 2,641,987
EBITDA		US$ '000	$ 3,344,895	$ -	$ -	$ 135,492	$ 157,895	$ 156,090	$ 155,369	$ 155,445	$ 155,739	$ 156,099	$ 156,264	$ 156,742	$ 156,660	$ 157,454	$ 158,638	$ 159,765	$ 160,814	$ 161,861	$ 162,578	$ 163,100	$ 164,133	$ 165,072	$ 138,950	$ 115,717	$ 95,017
Less Deductions		US$ '000	$ 707,953	$ -	$ -	$ 135,492	$ 157,895	$ 75,130	$ 56,384	$ 47,612	$ 40,105	$ 34,754	$ 26,115	$ 21,886	$ 19,036	$ 15,574	$ 12,054	$ 9,486	$ 9,571	$ 9,573	$ 7,625	$ 6,214	$ 6,851	$ 4,999	$ 3,651	$ 2,670	$ 5,275
Taxable Earnings		US$ '000	$ 2,636,942	$ -	$ -	$ -	$ -	$ 80,960	$ 98,985	$ 107,832	$ 115,634	$ 121,345	$ 130,150	$ 134,856	$ 137,624	$ 141,880	$ 146,584	$ 150,279	$ 151,242	$ 152,288	$ 154,953	$ 156,886	$ 157,282	$ 160,074	$ 135,299	$ 113,047	$ 89,742
Taxes	24.4%	US$ '000	$ 642,095	$ -	$ -	$ -	$ -	$ 19,714	$ 24,103	$ 26,257	$ 28,157	$ 29,547	$ 31,691	$ 32,838	$ 33,511	$ 34,548	$ 35,693	$ 36,593	$ 36,828	$ 37,082	$ 37,731	$ 38,202	$ 38,298	$ 38,978	$ 32,945	$ 27,527	$ 21,852
Net Profit		US$ '000	$ 1,994,847	$ -	$ -	$ -	$ -	$ 61,246	$ 74,882	$ 81,575	$ 87,477	$ 91,797	$ 98,458	$ 102,019	$ 104,112	$ 107,332	$ 110,891	$ 113,686	$ 114,415	$ 115,206	$ 117,222	$ 118,684	$ 118,983	$ 121,096	$ 102,354	$ 85,520	$ 67,890
After-Tax Cashflow		US$ '000	$ 1,999,891	$ (119,215)	$ (293,480)	$ 90,892	$ 113,295	$ 97,298	$ 112,325	$ 106,890	$ 108,789	$ 106,314	$ 120,720	$ 112,639	$ 110,724	$ 116,361	$ 120,499	$ 120,726	$ 114,185	$ 115,834	$ 122,402	$ 122,453	$ 117,854	$ 126,094	$ 106,005	$ 88,190	$ 62,095
Cumulative After-Tax Cashflow		US$ '000		$ (119,215)	$ (412,695)	$ (321,803)	$ (208,508)	$ (111,210)	$ 1,115	$ 108,005	$ 216,794	$ 323,108	$ 443,829	$ 556,468	$ 667,192	$ 783,554	$ 904,053	$ 1,024,780	$ 1,138,965	$ 1,254,799	$ 1,377,200	$ 1,499,653	$ 1,617,508	$ 1,743,602	$ 1,849,606	$ 1,937,796	$ 1,999,891
PROJECT ECONOMICS																											
Pre-Tax Payback Period		yrs	3.7		0	0	1.00	1.00	1.00	0.67	-	-	-	-	-												
Pre-Tax IRR		%	27.3%																								
Pre-tax NPV @ 8%	8%	US$ '000	$814,717																								
Pre-tax NPV @ 10%	10%	US$ '000	$614,676																								
Pre-tax NPV @ 12%	12%	US$ '000	$462,942																								
Post-Tax Payback Period		yrs	4.0		0	0	1.00	1.00	1.00	0.99	-	-	-	-	-												
Post-Tax IRR		%	23.9%																								
Post-Tax NPV @ 8%	8%	US$ '000	$593,115																								
Post-Tax NPV @ 10%	10%	US$ '000	$438,434																								
Post-Tax NPV @ 12%	12%	US$ '000	$320,867																								

CASH FLOW ANALYSIS

Based on the economic criteria discussed previously, a summary of cash flow is shown in Table 1-3.

TABLE 1-3 SUMMARY OF CASH FLOW
Zenyatta Ventures Ltd. – Albany Project

Description	Units	Value
Gross Revenue	US$ millions	4,752.3
Less: Transportation	US$ millions	(52.0)
Net Smelter Return	US$ millions	4,700.3
Less: Royalties	US$ millions	(58.8)
Net Revenue	US$ millions	4,641.6
Less: Total Operating Costs	US$ millions	(1,296.7)
Operating Cash Flow	US$ millions	3,344.9
Less: Total Capital Costs	US$ millions	(702.9)
Pre-Tax Cash Flow	US$ millions	2,642.0
Less: Taxes Paid	US$ millions	(642.1)
After Tax Cash Flow	US$ millions	1,999.9

ECONOMIC ANALYSIS

Based on the input parameters, a summary of the Project economics is shown in Table 1-4.

TABLE 1-4 SUMMARY OF ECONOMIC RESULTS
Zenyatta Ventures Ltd. – Albany Project

Description	Units	Value
Pre-Tax		
Net Present Value at 8%	US$ millions	814.7
Net Present Value at 10%	US$ millions	614.7
Net Present Value at 12%	US$ millions	462.9
Internal Rate of Return	%	27.3
Payback Period	years	3.7
Post-Tax		
Net Present Value at 8%	US$ millions	593.1
Net Present Value at 10%	US$ millions	438.4
Net Present Value at 12%	US$ millions	321.0
Internal Rate of Return	%	23.9
Payback Period	years	4.0

SENSITIVITY ANALYSIS

The cash flow model was tested for sensitivity to variances in the head grade, process recovery, realized sales price, Canadian to United States dollar exchange rate, overall operating costs, and overall capital costs. The resulting post-tax $NPV_{10\%}$ sensitivity is shown in Figure 1-1, and Table 1-5.

FIGURE 1-1 SENSITIVITY ANALYSIS

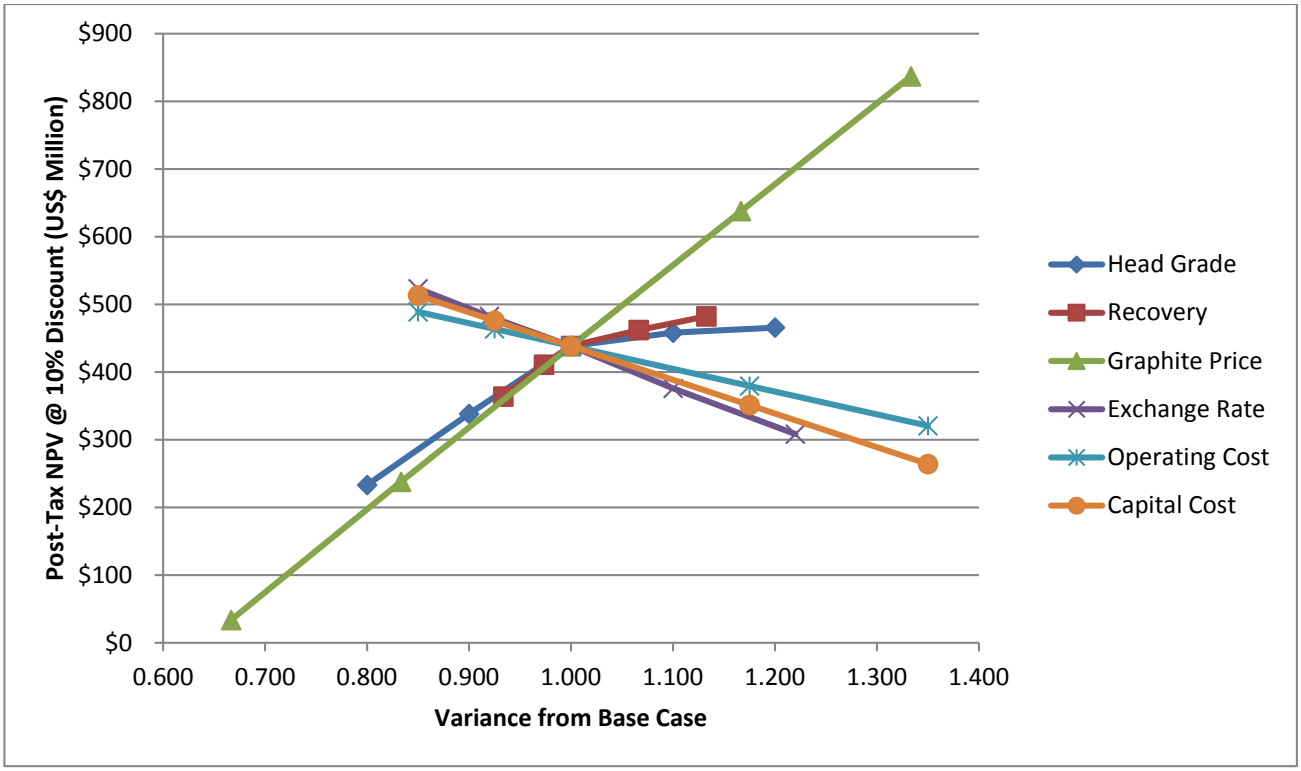

TABLE 1-5 SUMMARY OF SENSITIVITY ANALYSIS
Zenyatta Ventures Ltd. – Albany Project

Description	Units	Low Case	Mid-Low Case	Base Case	Mid-High Case	High Case
Head Grade	%	3.24	3.64	4.05	4.45	4.86
Overall Recovery	%	70.4	73.4	75.4	80.4	85.4
Graphite Price	US$ / t	5,000	6,250	7,500	8,750	10,000
Exchange Rate	US$ / C$	0.70	0.75	0.82	0.90	1.00
Operating Costs	US$ / t	52.67	57.32	61.96	72.81	83.65
Capital Cost	US$ million	597	650	703	826	949
Adjustment Factor						
Head Grade	%	-20	-10	NA	+10	+20
Overall Recovery	%	-5	-2	NA	+5	+10
Graphite Price	%	-33	-17	NA	+17	+33
Exchange Rate	%	-15	-8	NA	+10	+22
Operating Costs	%	-15	-7.5	NA	+17.5	+35
Capital Cost	%	-15	-7.5	NA	+17.5	+35
Post-Tax NPV @ 10%						
Head Grade	US$ million	233.2	338.2	438.4	458.2	465.7
Overall Recovery	US$ million	363.8	410.7	438.4	462.1	482.3
Graphite Price	US$ million	33.6	237.8	438.4	637.7	836.8
Exchange Rate	US$ million	523.2	482.2	438.4	375.9	308.4
Operating Costs	US$ million	488.9	463.7	438.4	379.5	320.6
Capital Cost	US$ million	513.2	475.8	438.4	351.2	264.1

As shown in Figure 1-1, the Project cash flow is equally and most sensitive to the realized price of graphite, the head grade, and the overall process recovery. However, head grade and overall process recovery variations above the Base Case have almost no impact on the post-tax NPV as sales of graphite were capped at 30,000 tpa. Exchange rate, capital costs, and operating costs have lesser and almost equal impacts on the Project.

TAXES AND DEPRECIATION

Taxes and depreciation were applied following the guidelines of *"A Guide to Canadian Mining Taxation*", published by KPMG Canada. Depreciation was calculated based on examining the different capital expenditures made over the life of the Project. Capital costs were assigned to one of:

- Canadian Exploration Expense (CEE)
- Canadian Development Expense (CDE)
- Capital Cost Allowance (CCA)

CEE includes exploration expenses and pre-production mine development, however, it excludes the cost of depreciable property such as equipment and machinery. Zenyatta has an opening CEE balance of US$16.4 million that is applicable to the Project. Up to 100% of the CEE balance can be applied against income in any given year.

CDE includes both the costs to acquire a mining property and the capital costs incurred after a mine has come into production. Similar to CEE, CDE excludes the costs of depreciable property such as equipment and machinery. Zenyatta has an opening CDE balance of US$1.1 million that is applicable to the Project. Up to 30% of the CDE balance can be applied against income in any given year.

CCA covers all depreciable property, including equipment, machinery, and buildings. Zenyatta does not have an opening balance of CCA credits. All capital spending allocated to CCA was counted as Class 41 assets under applicable Canadian tax codes. Class 41 assets can be depreciated at a rate of up to 25% of the balance per year.

Federal and provincial taxes were then applied to remaining operating income after the previously discussed deductions were applied. Federal and provincial taxes of 15% and 11%, respectively, were applied to the Project. Total taxes paid over the life of the Project amount to US$642 million.

TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

Zenyatta 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). The Town of Hearst is situated approximately 86 km to the east of the southernmost claim block, 4B. The claim blocks were unpatented, non-contiguous and consisted of seven groups of claims containing 279 claims and 4,273 claim units, totalling 683.68 km^2, or 68,368 ha.

This Technical Report covers a group of claims known as Claim Block 4F, which contains the Albany graphite deposit and is 100% owned by Zenyatta. Claim Block 4F has a total of 61 claims and 826 claim units, for a total area of 13,216 ha, and is subject to two NSR royalties as described in the following subsection. Most claims making up Claim Block 4F are located in the Pitopiko River Area (G-1706), with the westernmost claims located in the Feagan Lake Area (G-1691).

All claims are in good standing until 2016; claim P4255105 which hosts the graphite deposit has a 2021 due date.

ROYALTIES, HISTORY OF OWNERSHIP, AND AGREEMENT WITH CLIFFS

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

a. Zenyatta will issue to Cliffs (or its designated affiliate) a total of 1,250,000 Zenyatta 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

b. Zenyatta will grant 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 Claim Block 4F 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 Zenyatta, Cliffs, CNRECI, and EGC.

FIRST NATION AGREEMENT

The Project claim blocks and more particularly the Claim Block 4F Property are located in Constance Lake First Nations' (CLFN) Traditional Territory. On July 18, 2012, Zenyatta 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. Zenyatta also agreed to contribute to a social fund for the benefit of CLFN children, youth, and elders, which was completed in 2012 and 2013.

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 trail. 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.

HISTORY

The Project was 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. GTA Resources and Mining Inc. holds a group of claims adjacent to and south of Claim Block 4F.

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

Limited historical exploration within Claim Block 4F 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.

GEOLOGY AND MINERALIZATION

The Claim Block 4F 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 cross-cut 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.

EXPLORATION STATUS

Zenyatta 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 June 1, 2015, the effective date of the current Mineral Resource estimate, Zenyatta had drilled 63 holes totalling 26,011 m in the deposit area, of which 60 were used to estimate resources.

MINERAL RESOURCES

RPA estimated Mineral Resources for the Albany graphite deposit (Table 1-6) with an effective date of June 1, 2015. The Mineral Resource estimate is based on a potential combined open pit and underground mining scenario. Only the open pit portion was considered in the PEA.

TABLE 1-6 MINERAL RESOURCE ESTIMATE – JUNE 1, 2015
Zenyatta Ventures Ltd. – Albany Project

	Cut-off Grade (% Cg)	Tonnage (Mt)	Grade (% Cg)	Contained Graphitic Carbon (t Cg)
OP				
Indicated	0.9	24.3	3.98	968,000
Inferred	0.9	5.4	2.58	138,000
UG				
Indicated	-	-	-	-
Inferred	1.5	11.5	2.67	307,000
Total Indicated	**Variable**	**24.3**	**3.98**	**968,000**
Total Inferred	**Variable**	**16.9**	**2.64**	**445,000**

Notes:
1. CIM definitions were followed for Mineral Resources.
2. Cg – graphitic carbon.
3. 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.
4. Bulk density is 2.6 t/m^3 in the pipes and 2.65 t/m^3 in the halo of the East Pipe.
5. OP Mineral Resources are constrained by a pit-shell generated in Whittle software.
6. UG Mineral Resources are constrained by a nominal 1.5% Cg wireframe, which includes some material below cut-off to preserve continuity.
7. Numbers may not add due to rounding.

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

MINING METHOD

RPA investigated the potential for open pit mining of the Indicated and Inferred Mineral Resources, using graphite prices and saleable purified product quantities appropriate for a PEA. Open pit mining was evaluated with run-of-mine (ROM) material being processed at a rate of 982,500 tpa in flotation and purification plants on site, producing approximately 30,000 tonnes of purified graphite product at an average grade of 99.94% Cg. Infrastructure

requirements, for road access, power, natural gas, and for accommodation facilities were also considered. Environmental considerations include the impact of the pit, waste rock dump, overburden pile, and tailings storage.

The targeted production rate enables the open pit option to be evaluated with a year-round owner operated approach. The ROM material would be transported directly to the crusher or would occasionally be stockpiled and re-handled.

Mining of mineralized material and waste is proposed to be carried out by the owner, with contractor assistance to balance mining equipment requirements over the life of the operation. The overburden stripping will be exclusively done by a contractor with a dedicated mining fleet (larger equipment) given the total volume to be excavated and the higher production rate required.

The combination of owner-operated mining and contractor mining will be carried out using conventional open pit methods consisting of the following activities:

- Drilling performed by conventional production drills.
- Blasting using ANFO and a down-hole delay initiation system.
- Loading and hauling operations performed with hydraulic shovels, front-end loaders, and rigid frame haulage trucks.

The production equipment will be supported by bulldozers, a grader, and a water truck.

MINERAL PROCESSING

Development testwork that forms the basis of the PEA conceptual flowsheet and design was carried out at SGS Canada Inc. (SGS) in Lakefield, Ontario. The testwork programs used representative mineralized samples from the Albany graphite deposit.

The Mineral Resources for the Project will be mined and beneficiated to recover a flotation concentrate, which will be purified to a graphite product at an onsite processing facility.

The primary steps in beneficiation include crushing, grinding, and concentration by flotation. The primary steps in purification include alkaline (NaOH) treatment (one caustic leaching stage on each side of a low temperature baking (350^{o}C) 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 crushing, grinding, flotation, and purification processing facility is designed to operate for 350 days per year at a design throughput of 983,000 tpa for the first 22 years of the mine life. The average design throughput of the processing facility is 270 tpd of flotation concentrate.

The average graphite purity and recovery achieved in various stages of metallurgical testing are presented in Table 1-7. This information was used for PEA design and economic analysis.

TABLE 1-7 GRAPHITE PURITY AND RECOVERY
Zenyatta Ventures Ltd. – Albany Project

	Flotation Overall	Stage 1 Leach	Stage 2 Leach	Stage 3 Leach	Purification Overall	Process Overall
Purity, % Cg	88.6	97.96	99.27	99.94	99.94	99.94
% Recovery	84.54	91.43	90.18	99.90	89.13	75.40

PROJECT INFRASTRUCTURE

Project infrastructure consists of the following:

- Establishing a 37 km road access to the Trans-Canada Highway, by upgrading existing roads and building a short length of new road.
- Power supply by connection to the grid, a distance of 47 km.
- Connection to a natural gas pipeline, 37 km away.
- Multiple surface buildings will be constructed for the Project, including a maintenance shop, permanent camp, process building, dry facility, warehousing, and administration building.
- Allowances were made for miscellaneous services such as a diesel fuel storage and pumping system, a site-wide fire protection system, sanitary waste disposal system, and potable water system.
- A tailings facility will be constructed to accommodate the estimated 10 million m^3 of tailings generated over the LOM.
- Separate waste rock and overburden dumps will be built adjacent to the open pit. The waste dump and overburden dump will have estimated capacities of 85 Mt and 58 Mt, respectively.

HIGH-PURITY GRAPHITE MARKET

Graphite has diverse and unique chemical, electrical, and thermal characteristics that make it suitable for use in a wide variety of commercial applications. The application of different forms of graphite is largely dependent on the purity, type, shape, and size of the particle available. Some traditional industrial applications such as steel making and refractory applications require low quality (flake and amorphous) graphite, while other new clean-tech applications like fuel cells and lithium-ion batteries (LIBs) demand high-purity graphitic material with tight specifications. Consequently, there exists a wide price spread between various forms of graphite. Zenyatta's hydrothermal (vein) type deposit has demonstrated the ability to be processed into a high-purity substance that will be competing against synthetic graphite producers for market share in areas noted in Table 1-8, below.

High-purity graphite products attract premium prices, as they are competing with the synthetic market for customers. In 2014, Zenyatta commenced a market development program to initiate validation of Albany graphite in high-purity graphite applications. Since the start of this program, Zenyatta has had detailed conversations with more than 35 graphite end-users, academic laboratories, and third party testing facilities in Europe, North America, and Asia, under confidentiality agreements.

Zenyatta has also previously reported that preliminary testing has indicated that the performance of Albany graphite is within in the range of anode materials that are presently used for LIBs (Zenyatta News Release of February 12, 2015). Independent testing has also indicated that it is suitable for use in hydrogen fuel cells (Zenyatta News Release of March 9, 2015) and in powder metallurgy (PM) (Zenyatta News Release of May 19, 2015) applications. At this time, Zenyatta anticipates having a targeted market application segmentation which includes 25% to 30% in LIBs, 20% to 25% for Fuel Cell products, 25% to 30% for high-purity graphite in PM, and 15% to 30% from other applications in the table below. Zenyatta is in discussion with end-users on other types of high-purity applications that could possibly change the market segmentation.

TABLE 1-8 HIGH-PURITY GRAPHITE MARKET
Zenyatta Ventures Ltd. – Albany Project

Market Segment	Expected 2017 Market Demand (kt)	Price Range (US$/kg)	Average Price (US$/kg)
Batteries[1]	160	4 -> 20	12
Powder Metallurgy[2]	20	3 -> 12	7
Fuel Cells[3]	15	5 -> 10	8
Conductive Polymers	6	3 -> 5	4
Carbon Brushes	90	3 -> 5	4
Nuclear	30	10 -> 35	23
Lubricants[4]	80	3 -> 5	4
Super-Capacitors	2	5 -> 10	8
Graphite Artifacts	15	3 -> 10	7
Electronics	8	30 -> 40	35
Total	**426**		**8.7**

Sources and Notes:
1. Includes lithium-ion and additives for primary and secondary batteries. Source: Roskill and BCC Research
2. Source: Roskill and end-User data provided to Zenyatta market development personnel under a confidentiality agreement
3. Source: Roskill, BCC Research
4. Volume includes only high-purity (>99.0% Cg) graphite. Source: Roskill

The high-purity graphite market that Zenyatta is focusing on is forecast to need in the order of 426 ktpa by the year 2017, and grow at 4% thereafter. Based on the targeted market applications, RPA has selected US$7,500 per tonne as the base case price for this PEA, with sensitivity analysis between the ranges of US$5,000 per tonne to US$10,000 per tonne.

ENVIRONMENTAL, PERMITTING, AND SOCIAL CONSIDERATIONS

The Albany Project is located within the Hudson Bay-James Bay Lowlands, a vast wetland of peat lands where the topography is generally flat. There are many creeks flowing between peat bogs throughout the Property. The Nagagami River is a prominent local landscape feature that flows north through the Property with several meandering tributaries flowing in from the east and west, including the Pitopiko River. The general area in which the Property is situated hosts two Boreal Forest Region forest types, the Northern Clay Forest and the Central Plateau Forest. The terrestrial and aquatic habitats within this general area are home to healthy populations of fish and wildlife.

Zenyatta has undertaken some preliminary environmental studies to support its exploration program and to characterize environmental features present within its Property.

Comprehensive environmental and social baseline studies will be required as the Project advances to further the understanding of the local and regional environmental and social context for the Project, thereby contributing to the optimization of the engineering and the mitigation of potential impacts of the Project on its receiving environment. It is expected that a minimum of two field seasons will be required to complete the recommended scope of work.

The effective management of water and waste is a key consideration of a mining project. While the water balance for the Project is at an early stage of development, screening level evaluations have been undertaken and suggest that the Pitopiko River has the capacity to supply sufficient volumes of freshwater to the Project while being protective of the environment. With regard to the management of wastes, a tailings storage facility (TSF) will need to be constructed to accommodate an estimated 10 million m^3 of tailings generated over the life of the Project. Separate waste rock and overburden dumps will also be required and are currently assumed in the PEA to be constructed adjacent to the open mining pit. The waste dump and overburden dump will have estimated capacities of 85 Mt and 58 Mt, respectively.

Zenyatta has completed a preliminary environmental characterization of tailings generated by the metallurgical testwork that was conducted on the Albany graphite deposit mineralization. The purpose of the environmental test program was to assess the geochemical, acid rock drainage (ARD), and contaminant release potential associated with the tailings materials. The elemental composition of the tailings and related testwork on tailings supernatant indicates that the expected effluent from a tailings impoundment area would likely comply with applicable discharge standards without further treatment. Further testwork will need to be undertaken as the Project advances, however, at this stage of planning, it is ERM's opinion that tailings are not likely to pose a significant risk to the environment provided generally accepted management practices are implemented. Further characterization of the overburden and waste rock that will be generated over the life of the Project is also required.

Notwithstanding the time required to collect sufficient multi-season environmental and social baseline data, it is expected that an estimated approximately 18 months will be required to develop and submit the Class Environmental Assessment reports and permit applications and to be granted approvals to enable construction. A federal environmental assessment is not likely to be required and this has the potential to positively influence the overall regulatory permitting timeline for the Albany Project in comparison to other mining projects in Ontario.

The Town of Hearst, the District of Cochrane, and Constance Lake First Nation represent the parties that are located in closest proximity to the Project. Zenyatta has engaged with these and other potentially interested parties in the course of its exploration activities and has developed a working relationship with the Constance Lake First Nation which is documented in an executed Exploration Agreement. The Exploration Agreement provides the basis for Zenyatta and Constance Lake First Nation to have a cooperative and mutually beneficial relationship regarding exploration related activities at the Albany Project. Continued engagement with the individuals and groups with interest in, and influence over, the Project will enable Zenyatta to meet legal obligations and address potential stakeholder concerns.

CAPITAL AND OPERATING COST ESTIMATES

Capital costs have been estimated for the Project based on comparable projects, subscription-based cost services, and information within RPA's project database. Broadly, capital costs are divided among four areas: mining, processing, general infrastructure, and project indirect expenses. The breakdown of capital costs between mining, processing, and infrastructure is shown in Table 1-9.

TABLE 1-9 SUMMARY OF CAPITAL COSTS
Zenyatta Ventures Ltd. – Albany Project

Description	Units	Cost
Mining	US$ millions	81.2
Processing	US$ millions	111.5
Infrastructure	US$ millions	70.3
Subtotal Direct Costs	**US$ millions**	**262.9**
Indirect Costs	US$ millions	68.7
Subtotal Direct and Indirect	US$ millions	331.6
Contingency	US$ millions	79.8
Initial Capital Cost	**US$ millions**	**411.5**
Sustaining, Closure, and Misc.	US$ millions	291.4
Total	**US$ millions**	**702.9**

Further, capital is divided between initial expenditures incurred to bring the Project into production, and sustaining capital that is incurred over the life of mine.

Operating costs have been estimated for the Project and allocated to mining, process, and general and administration (G&A). Operating costs are summarized in Table 1-10.

TABLE 1-10 SUMMARY OF OPERATING COSTS
Zenyatta Ventures Ltd. – Albany Project

Description	LOM Cost US$ millions	Unit Cost US$/t processed	Unit Cost US$/t final product
Mining	237.4	11.34	375
Process – Beneficiation	286.7	13.70	452
Process – Purification	557.6	26.64	880
G&A	215.0	10.28	339
Total	**1,296.7**	**61.96**	**2,046**