Annual Information Form

ZENTEK LTD.

For the year ended March 31, 2022

Dated as of June 29, 2022
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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, 2022, 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 Zentek Ltd. (the “Company”); statements relating to the business and future activities 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 direct 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

Zentek 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. On October 27, 2021 (effective October 28, 2021), the Company filed Articles of Amendment changing the name from “Zen Graphene Solutions Ltd” to “Zentek 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 material subsidiaries.

GENERAL DEVELOPMENT OF THE BUSINESS

Originally, the Company commenced operations as a junior mineral exploration company focused primarily on mineral deposits in Northern Ontario, Canada. The Company was actively engaged in exploring mining projects and held an interest in exploration licenses 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”).

The Company did extensive work to determine potential uses for the graphite materials extracted from the Albany Graphite Project, including engaging in testing and studies on graphene materials.

In May 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 a new Board of Directors with an interdisciplinary team to augment key management personnel with expertise in business, science, marketing, and government relations.

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 pivoted to focus its resources to develop graphene-based solutions for the fight against COVID-19.

Pursuant to a License Agreement dated September 22, 2020, between the Company and the University of Guelph, the Company holds the exclusive global rights to intellectual property regarding an electrochemical exfoliation (“ECE”) process to produce graphene oxide (“GO”).

On September 22, 2020, the Company announced, based on the results from a report to the Company dated September 18, 2020, from the ImPaKT Centre at the University of Western Ontario entitled “Zen Graphene – Lab Test Report No. Z03-092020”, the development and successful testing of a patent-pending GO/silver compound that showed to be 99% effective against COVID-19 virus a minimum of 35 days after application of the coating to N95 mask material. On December
22, 2020, the Company announced the successful testing at the Department of Microbiology at Mount Sinai Hospital/University Health Network of the GO/silver compound that showed to be 99.9% effective against both gram-positive and gram-negative aerobic bacteria as well as against fungus/yeast, based on a report to the Company dated December 18, 2020 entitled “Evaluation of Graphene Oxide with Silver Cations (GO-Ag+) as an Antibacterial Agent against Respiratory Pathogens”, which stated that if the compound could be shown to be safe and effective, it could provide a breakthrough alternative therapy for the practices of family medicine, Otolaryngology, Ophthalmology and intensive care units. The Company has filed three patent applications relating to its antimicrobial coating, and on April 13, 2021, announced the brand name ZenGUARD ("ZenGUARD™") for such coating.

On November 29, 2021, the Company announced that it had been issued a Medical Device Establishment License ("MDEL") from Health Canada (license number 18823) for the manufacture and distribution of any Class I medical devices, including any such devices with or without the ZENGuard™ coating.

The Company is now an intellectual property development and commercialization company focused primarily on commercializing ZenGUARD™, as well as on the development of certain rapid detection technologies and other nanomaterials-based technologies. The Company is not currently conducting any significant work on the Albany Graphite Project and does not require materials extracted from the Albany Graphite Project for its current business plans, although such materials could hold significant value to the Company in the future. On October 18, 2021, the TSXV changed the Company’s classification from a “mining issuer” to an “industrial, technology, or life sciences issuer”, which was approved by the shareholders of the Company on September 27, 2021, in accordance with the rules and policies of the TSXV.

**Three Year History**

**Current Business**

**ZenGUARD™ Antimicrobial Compound**

At the Company’s financial year-end, it was producing the ZenGUARD™ antimicrobial coating at pilot-scale, but is now ramping up towards industrial production for application to non-woven, spunbond polypropylene material to be used in surgical mask manufacturing and potentially on other materials and products. Based on reports from GAP EnviroMicrobial Services Ltd. ("GAP Labs") dated May 3, 2021, the addition of ZenGUARD™ coating to surgical masks has shown to increase the bacterial and viral filtration efficiency of masks and acts as an antimicrobial agent providing increased protection when compared to similar uncoated masks.

The Company entered into a License and Supply Agreement dated September 24, 2021, with Trebor Rx Corp. ("Trebor"), pursuant to which the Company granted a non-exclusive non-transferable license to Trebor to use the ZenGUARD™ coating in certain specified Trebor personal protective equipment (“PPE”) products displaying the Company’s branding, including surgical masks, nitrile gloves, surgical gowns and scrubs and other healthcare and similar such products, and an additional exclusive license to sell and distribute ZenGUARD™ coated Elastomeric Respirator Mask filters i.e. Pro+ filters, whether fixed or replaceable, such exclusive license remaining in force only so long as Trebor sells a minimum of 60,000,000 filters per year with annual growth of at least 10%. Trebor agreed to use the ZenGUARD™ coating on all of its products sold unless the purchaser specifically refuses to purchase the ZenGUARD™ coated products and agreed to purchase the ZenGUARD™ coating from the Company by way of cash payments for a supply of ZenGUARD™ coating based on demand for Trebor products. The sale of ZenGUARD™ coated PPE masks received Health Canada authorization on September 22, 2021, under Interim Order No.2 - #329587 - Respecting the Importation and Sale of Medical Devices for Use in Relation to COVID-19. On September 23, 2021, The Company announced that it had delivered and generated revenue from its first shipment of ZenGUARD™ antimicrobial coating to Trebor.

Additionally, the Company has been issued a MDEL from Health Canada (license number 18823) for the manufacture and distribution of any Class I medical devices, including any such devices with or without the ZenGUARD™ coating. The MDEL allows the Company to potentially work with
other manufacturers and distributors inside and outside of Canada in addition to Trebor to bring surgical masks and, potentially, other PPE (whether or not coated with ZenGUARD™ antimicrobial compound) to the Canadian market. The MDEL also allows the Company to produce and sell its own Class I medical device PPE products.

On April 12, 2022, the Company announced that it has also entered into a Reciprocal Supply Agreement dated March 31, 2022, with EkoMed Global Inc. ("EkoMed"), a globally integrated manufacturer and distributor of PPE, pursuant to which (i) the Company will sell quantities of ZenGUARD™ coating to EkoMed for use initially on EkoMed's surgical masks and potentially other PPE in the future, including N95 and KN95 type masks, and (ii) the Company will purchase surgical masks manufactured by EkoMed, to be treated with ZenGUARD™ coating and resold by the Company.

On May 13, 2022, the Company announced that Mark's Work Wearhouse had placed an initial order for ZenGUARD™ coated-masks to be sold at select stores across Canada, and online.

Based on discussions with Trebor and management's reasonable business judgment in estimating demand for ZenGUARD™ coated masks during a global pandemic, to meet anticipated demand for its ZenGUARD™ proprietary antimicrobial compound, the Company began sourcing GO from third parties for the production of the ZenGUARD™ coating. On November 11, 2021, the Company announced that it had reached an agreement to secure the necessary supply of GO to produce enough ZenGUARD™ to meet anticipated demand, which has been estimated by the Company based on discussions with Trebor and the Company’s research, with shipments that began in December 2021 and will continue during 2022.

The Company continues to market its ZenGUARD™ product to be applied to various materials, and has targeted manufacturers including PPE manufacturers and heating, ventilation, and air conditioning ("HVAC") filter material companies.

To produce the ZenGUARD™ antimicrobial coating, quantities of GO are required. The Company currently purchases GO from third parties, and then uses the GO to produce the ZenGUARD™ coating formulation at its production facility in Guelph, Ontario. The Company then ships the ZenGUARD™ coating formulation to a third party for application onto spunbond material to be used for surgical masks (and potentially other products). The Company has installed industrial scale manufacturing equipment in its Guelph, Ontario facility to produce ZenGUARD™ coating formulation at a higher scale and capacity (see below under the heading Construction of ZenGUARD™ Industrial Scale Production and Coating Facility). A completion of construction ceremony was held June 17, 2022, at the facility.

The Company also intends to construct a facility to produce its own GO. The Company believes that the ability to produce GO itself rather than relying on third party suppliers will be economically favourable to the Company over the long term, as well as reducing supply and shipping risk (see below under the heading Proposed Construction of Graphene Oxide Production Facility).

Construction of ZenGUARD™ Industrial Scale Production and Coating Facility

The Company has installed industrial scale production equipment to produce the ZenGUARD™ coating formulation at its York Rd., Guelph, Ontario location, as such location is permitted for industrial use. The Company has also purchased coating equipment so the process of applying the ZenGUARD™ coating formulation to spunbond polypropylene for use in surgical masks, other PPE equipment, and potentially other uses, can be completed by the Company on-site.

Preliminary engineering study by Bantrel Co. commenced in January 2021 for graphite purification, GO production, and ZenGUARD™ production equipment. Engineering efforts then shifted to the exclusive development of a ZenGUARD™ production facility due to the long lead time for construction of the proposed purification plant, and the availability of sufficient low-cost GO from an external supplier negating the immediate need to use and process internally sourced graphite from the Albany Graphite Project. The preliminary engineering study was further delayed by a fundamental change in the synthesis method in March 2021, resulting in a significantly more simplified design of the proposed ZenGUARD™ production equipment.
Detailed engineering of the proposed ZenGUARD™ compound manufacturing equipment began in July 2021. The Company announced on February 28, 2022 that the production facility was fully licensed and permitted for ZenGUARD™ production, and that substantially all equipment had been received to ramp-up industrial scale capacity. At this point the Company intends to continue to use third parties to coat the ZenGUARD™ Graphene compound onto materials until the coating capabilities are operational at the Company's facility and in circumstances when external coating capacity is required. Once this industrial process is in operation, the Company’s production capacity of ZenGUARD™ coated material is expected to increase significantly. The Company hired a new director of Global Healthcare Sales, Moe Dieb on the 24th of May, 2022 to increase market opportunities for its increased manufacturing capacity.

Industrial scale spray coating line equipment was researched, selected, and ordered in October 2021. Upon delivery of the industrial scale coating equipment, installation and commissioning of such equipment can commence, after which the Company expects to be able to coat materials with ZenGUARD™ on-site. The Company notes that there are potentially many variables involved with commissioning the industrial scale coating plant, including the timing of the delivery of equipment, potential restrictions on travel due to the COVID-19 pandemic, among others, and the Company is therefore unable to provide timing estimates about commissioning completion with a high level of certainty.

James Jordan, P.Eng., the Company’s Project Engineer is primarily overseeing the construction of the proposed ZenGUARD™ production equipment. As of March 31, 2022, approximately $2,440,000 has been spent by the Company on this objective, and the Company currently estimates that approximately $400,000 in additional expenditures will be required to complete construction. The Company held a grand opening on June 17, 2022.

Pilot scale coating line equipment has been sourced by the Company, and the Company has spent approximately $811,000 as of March 31, 2022. Upon delivery of such equipment, installation and commission will be required. The Company expects additional expenditures of approximately $500,000 for such equipment purchase, installation and commissioning.

Proposed Construction of Graphene Oxide Production Facility

In addition to the construction of the ZenGUARD™ industrial scale production and coating equipment, as discussed above, the Company intends to construct a plant to produce GO. The Company believes that the ability to produce GO itself, which is the precursor for the ZenGUARD™ compound, rather than relying on third party suppliers of GO, will be economically favourable to the Company over the long term, as well as reducing supply and shipping risk. The Company believes that there are three primary reasons it would benefit from an ability to produce GO internally: (i) it should eliminate or significantly reduce supply chain risk; (ii) GO is not a homogeneous substance and by producing its own GO the Company could ensure product consistency; and (iii) the Company believes that the demand for GO is increasing and that a domestic production facility could have the potential to generate product for third-party users of the material.

In connection with the Company’s proposed production of GO, the Company has conducted research and development to produce high-quality, few-layer GO via an ECE process designed to be scalable, low cost, low energy, and environmentally friendly. In collaboration with Prof. Aicheng Chen at the University of Guelph, the prototype ECE process was designed, developed, and optimized. A PCT patent has been filed by Guelph University for the processes to produce expanded graphite and electrochemically exfoliated GO, the exclusive global rights to which has been licensed by the Company pursuant to a License Agreement dated September 22, 2020.

The Company engaged Bantrel Co. in January 2021, and engineering work was initiated. Potential sites for a proposed GO production plant have been investigated, however a site has not been secured and no permits have been obtained to date. James Jordan, P.Eng., the Company’s Project Engineer is primarily overseeing the proposed engineering and construction of such a
facility, and possible alternatives. As of March 31, 2022, the Company has spent $35,000 in preliminary investigations relating to this project and expects that approximately $7,500,000 will be required to complete construction of a GO production facility.

The Company estimates that fifteen to eighteen months will be required to complete the construction of a GO production plant, which is a management estimate only based on the expectation of securing an agreement for the purchase of technology from an existing GO producer. Inherent risks include, but are not limited to, the inability to reach an acceptable agreement for the purchase of such technology, the inability to adapt existing technology to the Canadian regulatory requirements, scaling-up from known existing production capacities could become a requirement, and delays as a result of ongoing material and equipment supply shortages.

ZenGUARD™ Research and Development

The Company continues to seek the most effective, cost-efficient, and scalable process to produce high-quality graphene. The production of graphene requires a consistent source (or precursor) material for conversion to graphene, which is then applied to various products for enhancement. The Company believes that it has a potential competitive advantage with its interest in the large and high-quality supply of source material, from the Albany Graphite Project, if and when the Company determines it cost effective to use such material.

Advanced testing on potential new processes for commercial GO production is underway. The Company continues to work with universities on different processes that could potentially lead to a more efficient and/or lower cost process for GO production.

The Company’s research and development, and project development activities during the year ended March 31, 2022 are summarized below:

On December 22, 2020, the Company announced that testing results from the University Health Network/Mount Sinai Hospital Department of Microbiology in Toronto indicated that the ZenGUARD™ compound may also be beneficial 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. The report delivered to the Company dated December 18, 2020, entitled “Evaluation of Graphene Oxide with Silver Cations (GO-Ag+) as an Antibacterial Agent against Respiratory Pathogens”, stated that if the Graphene Compound could be shown to be safe and effective, it could provide a breakthrough alternative therapy for the practices of family medicine, otolaryngology, ophthalmology, and intensive care units.

On December 29, 2020, the Company announced an update on cytotoxicity testing of the ZenGUARD™ compound and the effectiveness as a coating following testing completed at McMaster University’s Centre for Microbial Chemical Biology and Mount Sinai Hospital. The preliminary testing confirmed the ZenGUARD™ compound’s efficacy with fungi and bacteria in vitro at low concentrations.

On March 17, 2021, the Company announced that testing of the Company’s ZenGUARD™ compound against four gram-positive and nine-gram negative bacteria with antimicrobial-resistance, including multidrug-resistant variants like methicillin-resistant staphylococcus aureus, had been completed. Testing demonstrated that the compound was 99.9% effective against bacteria, and fungi at very low concentrations. Testing was conducted by Dr. Tony Mazzulli, the Microbiologist-in-chief at Mount Sinai Hospital.

In a news release on April 13, 2021, the Company confirmed that safety testing results received from Nucro Technics indicated that the ZenGUARD™ compound did not lead to skin irritation or sensitivity as required in ISO 10993-10 for its Class I medical device i.e., surgical masks.

On October 6, 2021, the Company announced the filing of an international patent application under the Patent Cooperation Treaty (“PCT”) for ZenGUARD™, which patent application was published
on March 24, 2022, and the transfer from the University of Guelph of the rights, under its PCT application, for the ECE process to produce GO. Pursuant to a License Agreement dated September 22, 2020, between the Company and the University of Guelph, the Company holds the exclusive global rights to this technology.

On February 28, 2022, the Company announced that it had purchased its research and development facility in Guelph, Ontario for $2.3 million. The facility continues to be a dedicated location to conduct ongoing research and development activities in pursuit of developing new intellectual property for graphene and other nanomaterials and refining the Company’s existing technologies.

The Company continues to conduct testing on its ZenGUARD™ compound, which includes the increased challenge viral filtration efficiency and bacterial filtration efficiency test results announced by the Company on September 27, 2021. The results of third-party testing at GAP Labs demonstrated that ZenGUARD™ coated masks removed 98.9% more bacteria and 97.8% more virus particles than a typical ASTM level 3, 3-ply uncoated mask and resulted in a bacterial and viral filtration efficiency of over 99.99%.

Business in Development

Aptamer-Based Rapid Detection Technology

On June 17, 2021, the Company announced that it had signed an exclusive agreement with McMaster University to be the global commercializing partner for a newly developed aptamer-based rapid detection technology to detect SARS-CoV-2 in patients through saliva samples. The technology was developed by a team of researchers under the guidance of Drs. Yingfu Li, John Brennan and Leyla Soleymani, who have expertise in biosensing technologies, and applications as point of care diagnostics. This patent-pending technology was validated with clinical samples from patients recruited under the supervision of two clinicians, Drs. Deborah Yamamura and Bruno Salena, who also work at McMaster University. The project was funded by the Canadian Institutes of Health Research (CIHR). This technology has shown to be accurate (similar to current PCR tests), is saliva-based, affordable and scalable, and provides results in under 10 minutes. A license fee of $100,000, comprised of $50,000 cash and $50,000 in common shares of the Company (19,157 common shares at $2.61 per share) was paid to McMaster University as consideration. Although this technology is currently being developed specifically for COVID-19, this technology platform is designed to be able to detect other diseases by changing the aptamer to match new diseases.

The Company also received $148,000 from Innovations Solutions Canada (“ISC”) to design and build a prototype for the use of this technology to help detect COVID-19 in wastewater. On November 4, 2021, the Company announced that it was selected as one of three technologies for Phase 1 of the ISC challenge to develop a portable detection device for SARS-CoV-2 in wastewater. On June 1, 2022, the Company announced that it would not proceed to Phase 2 of the ISC challenge, however the process and results produced would be useful for prioritizing future opportunities. The Company intends to reassess wastewater as a market opportunity.

The Company has contracted with NeoVentures Biotechnology Inc. (“NeoVentures”), a prominent entity in the aptamer development and applications field. NeoVentures has been engaged to validate the McMaster University results against spike proteins and develop a mathematical model to better understand the technology and results. NeoVentures has also been tasked to develop a standard operating procedure for the system, perform a pre-trial evaluation using saliva samples, and optimize buffers for sample preparation. The Company has incurred approximately $265,000 in expenditures related to the forgoing. Additionally, Dr. van der Kuur, the Company’s Vice-President – Science and Research has undertaken supply chain activities including receiving samples and pricing from suppliers of hardware for the rapid COVID test including: potentiostat suppliers, screen printed electrode manufacturers and vetting the quality of chips, aptamer producers, and sample collection vials, pipettes etc. The Company continues to work with axiVEND, McMaster University and StarFish Product Engineering Inc., on product strategy.
alignment, usability analysis, device and architecture development, proof of concept and prototyping, and program development.

The Company currently intends to continue developing this technology, including the development of software and hardware, using outsourced third party developers. The Company intends to spend funds to bring the product to market as soon as practicable, which will require having a working prototype prepared, having conducted baseline studies, and having made application to Health Canada. On May 19, 2022, the Company announced that McMaster has received two Natural Sciences and Engineering Research Council (“NSERC”) grants related to the aptamer-based rapid detection technology; the Alliance Missions Grant for the amount of $1,000,000, and an Idea to Innovation (I2I) Grant for the amount of $350,000, of which the Company will make a $140,000 contribution. The Company intends to continue working with Dr. Yingfu Li and the research team at McMaster through in-kind contributions, using these grants towards commercializing the rapid diagnostic platform. The grants will be used to further commercialization efforts by improving the performance of aptamers, optimizing chip synthesis, and initiating additional tests that can be incorporated into its pathogen detection platform. The Company currently expects the cost to reach commercialization to be approximately $2,500,000, and includes enhancements and further development of the technology.

On June 1, 2022, the Company announced that it had retained Halteres Associates (“Halteres”), a consultancy focused on global health, diagnostics, and point-of-care testing, to assist with the commercialization of the aptamer-based rapid detection technology. Market research from the Halteres group will be used to identify the most commercially important pathogens for detection which will guide the aptamer development program. Halteres will evaluate several commercialization opportunities for the aptamer technology including human diagnostics, agriculture, wastewater, veterinary, and other potential uses in healthcare.

To bring the product to market, the Company will be required to obtain authorization from Health Canada under an interim order, or to obtain a Class IV Medical Device Active License (“MDAL”). The process for obtaining an MDAL involves completing certain testing requirements and demonstrating that the product is (i) safe, (ii) effective, and (iii) fit for purpose. Assuming that process is completed, the Company would then start preparing a product technical file, seek to obtain an ISO 13485 Certificate, and then seek to complete a Health Canada Class IV application.

**Diesel Fuel Additive**

The Company is also working to develop a stable graphene-based diesel fuel additive to improve combustion, increase burn rate, reduce greenhouse gas emissions and to improve fuel economy of diesel fuels, which initial testing has shown to increase the performance of diesel fuel. The Company is working to improve on these early results through additional optimization work. The Company has filed a provisional patent for its graphene-based fuel additive technology.

Primarily overseen by Dr. van der Kuur, the Company’s Vice-President – Science and Research, the Company is developing a process to functionalize GO to produce a stable dispersion in diesel fuel. The fuel additive was tested by Conestoga College in a Gunt 159 single cylinder test engine, which reported an improvement in fuel economy of over 10% under certain rpm. The Company’s research and development team improved the synthesis of the functionalized GO additive to reduce the size of the particles and increase the functional groups, which could lead to improved combustion. An NSERC alliance proposal has been submitted for $110,500 cash contribution and a total budget of $311,500 over two years to continue doped fuel research. The project will focus on measuring the combustion of doped fuel in both droplet and spray combustion. The Company has spent approximately $75,000 on this research and development project.

The Company intends to conduct further testing in 2022 and 2023, including: testing fuel economy, brake efficiency and emissions in a diesel engine for two different GO fuel additive concentrations; conducting spray combustion tests, which will provide an initial assessment of the GO additive; and testing and optimizing the GO fuel additive for diesel generator engines and marine engines and aviation usage. The Company currently estimates that the cost for such future testing is approximately $300,000.
**Icephobic Coating**

The Company is also working to develop a new, patent-pending, carbon-based, nanotechnology-enhanced coating designed to prevent or reduce ice accretion for aviation (including drone) and wind energy applications.

James Jordan, P.Eng., the Company’s Project Engineer and Dr. van der Kuur, the Company’s Vice-President – Science and Research are the primary overseers of the project, which has involved the use of dispersion technology to homogeneously mix graphene-based materials in an elastomer. The Company has filed a provisional patent on the technology. The Company has also conducted testing at National Research Council’s Altitude Icing Wind Tunnel (AIWT) in Ottawa and prepared graphene-enhanced elastomer material and coated test coupons for testing.

The Company disclosed on February 28, 2022 that the icephobic coatings were undergoing full flight trials on a specially equipped research aircraft under real world ice-forming weather conditions. On March 14, 2022, the Company announced the results of three rounds of testing of its icephobic coating, including laboratory tests, real-world flights and applications related to drone operations in adverse weather. In real world testing the Company reported that video footage of icephobic coating on test pieces attached to a research aircraft undergoing flight trials targeting adverse weather environments has shown positive results and demonstrated that, under significant icing conditions, the coatings provide an effective deicing and anti-icing solution. Drone testing has shown that drone propellers coated with the icephobic material have demonstrated that higher thrust can be maintained when compared to a non-coated propeller due to the ability to shed ice that forms on the blades that would otherwise degrade the aerodynamic properties. Accelerated ageing testing involved the Company providing coated samples to be exposed to UV weathering for 1,000 hours, which approximates two years’ worth of sun damage in typical Canadian weather. These samples were then tested in an icing wind tunnel under dynamic conditions and demonstrated significant retention of their icephobicity. The Company now intends to test its coating for sand and rain erosion, another important measurement that will demonstrate its use as a practical application. In addition, other tests are being planned to evaluate the coating as part of a hybrid ice protection system, where the icephobic properties are combined with a heated de-icing system with the aim to improve efficiency of current ice protection methods used in general and commercial aviation.

The Company continues to consider and seek collaborators to commercialize this technology, including drone companies and companies specializing in elastomer production. The Company has completed its ASTM G-154 accelerated weathering. The Company has not spent significant funds on this project and anticipates additional testing and development to cost approximately $150,000.

**Fire-Retardant Additive**

The Company announced on March 28, 2022, that it had filed a provisional patent with the United States Patent and Trademark Office for an innovative Graphene Oxide-Metal-Organic Framework (“GO-MOF”) compound for use in fire retardant products. Management of the Company considers the manufacturing of the GO-MOF compound as relatively easily scalable and efficient, due to the patent-pending facile synthesis process. The Company believes the fire-retardant GO-MOF additive could potentially be placed in a variety of coating products, such as latex, epoxies or included in polymers. When integrated into a polymer, it could potentially create a fire-resistant plastic that could be used in electrical vehicles, providing a fire-resistant non-metal casing for the batteries. Management currently expects that GO-MOF production could be achieved on the existing ZenGUARD industrial scale production facility with minimal additional capital expense.

Dr. van der Kuur, the Company’s Vice-President of Science and Research is the primary overseer of the project. The Company has spent approximately $20,000 on this research and development project, and intends to conduct further testing, and currently estimates that the cost for such future testing is approximately $100,000.
Other Use-Cases for ZenGUARD™

The Company intends to continue exploring other applications and uses for its ZenGUARD™ compound, including, but not limited to, in HVAC filters. On September 30, 2020, the Company first announced testing on graphene use for HVAC systems. On January 13, 2021, the Company announced that testing by a major Canadian certification company had confirmed that there was very little effect on air flow and pressure drop with a ZenGUARD™ treated filter compared to an untreated filter. The Company spent approximately $60,000 on testing, including preliminary testing of ZenGUARD™-coated HVAC filter media for pressure drop, and increased challenge bacterial filtration efficiency on uncoated and coated MERV 8 and MERV 13 HVAC filters, overseen primarily by James Jordan, P.Eng., the Company’s Project Engineer and Dr. van der Kuur, the Company’s Vice-President – Science and Research and Peter Wood, P.Eng., the Company’s Vice-President, Special Projects. The Company then determined to wait for government support in order to proceed with testing, which was subsequently awarded on November 30, 2021. Further to the press release dated November 30, 2021, the Company announced that it has been awarded a research and development test contract through the ISC Testing Stream Call for Proposals to test ZenGUARD™-coated HVAC filters with interest from three different units within the National Research Council of Canada (“NRC”). The goal of the testing, conducted by CremCo Laboratories (“CCL”) with assistance by the Aerospace Research Centre (“ARC”), a department of the National Research Council of Canada (“NRC”) was to demonstrate: (i) a net reduction in the airborne viral and bacterial load with ZenGUARD™ coating applied to standard filters; (ii) no modifications required to existing HVAC systems to achieve (i) above; (iii) no reduction in air flow rates, which means air exchange rates in the space will be unchanged; and (iv) no reduction in the air quality as the ZenGUARD™ coating was tested to ensure it does not contribute particles into the air stream. Phase 1 testing commenced in December 2021 after an extensive design process, calibration and assessment of the testing rig, and involved the test rig being installed inside an aerobiology chamber to push air through HVAC filter material with test organisms to study how these live airborne organisms were reduced by the ZenGUARD™ coating. Testing used multiple samples with repeated tests so that each filter’s performance could be compared. It was determined that all Phase 1 targets were met including sufficient reduction in live airborne test organisms, no significant shedding of the ZenGUARD™ coating, and air flow rates that were not impacted by the coating. On April 11, 2022, the Company announced that, after successful completion of Phase 1 testing, it will proceed to Phase 2 testing. Phase 2 testing will commence in July 2022 and will be conducted at ARC with assistance from CCL. Airborne test organisms will again be used, and testing will be conducted in a controlled environment. The objective of Phase 2 testing is to demonstrate a reduction in live airborne surrogate contamination within a modular classroom environment, simulating a real-world environment. By testing ZenGUARD™-coated HVAC filters, NRC is also expected to gain the knowledge and equipment to evaluate how airborne infectious diseases spread within aircraft cabins and other indoor spaces. The Company has approximately $400,000 budgeted for future testing (including a $200,000 grant).

In addition, the active ingredient in ZenGUARD™ has low minimum inhibitory concentrations against several bacteria as tested by Dr. Tony Mazzulli from Mount Sinai Hospital in Toronto. The Company is exploring the potential to use this compound in therapeutic or pharmaceutical applications based on these results. On February 4, 2021, and March 2, 2021, the Company announced results of the Phase 2 cytotoxicity testing, by Nucro Technics testing laboratory, and included cytotoxicity testing that noted no adverse effects after seven days of repeated dosing. The Company has received quotes for animal studies of MRSA-related skin infections and expects to award a contract as soon as practicable. On March 10, 2022, the Company announced that it had retained Vimta Labs Limited (“Vimta”), a leading clinical research organization in India, to begin studies of ZenGUARD™ active ingredient as a potential treatment of skin disease. Vimta will be performing pre-clinical research including collecting the in vitro and in vivo data that is required for the submission of an Investigational New Drug to the United States Food and Drug Administration which is a requirement for the administration of a new drug in humans. The pre-clinical work with Vimta is scheduled to be completed by Q3 2023. The Company decided to move forward with this work following cytotoxicity studies with Nucro-Technics and positive anecdotal results of various human skin infections including acne, warts and toenail fungal infections. There were no adverse effects recorded during these anecdotal trials. These human anecdotal cases form part of the Company’s patent application filed December 21, 2021, under the Patent Cooperation Treaty entitled “Graphene-Silver Nanocomposites and Uses For Same As A Broad-Spectrum Antimicrobial” which is scheduled to be published on June 23, 2022.
Other

The Company is also working with a number of research institutions developing processes to synthesize graphene, GO and graphene quantum dots, along with other possible applications for graphene. Potential markets for graphene include composites (e.g., concrete, rubber, plastic polymers and ceramics), sensors, water purification and filtration, coatings and solid-state lubricants, silicon-graphene and graphene aerogel anode material for next generation batteries along with aerospace applications. On February 18, 2022, the Company announced the filing of a provisional patent with the United States Patent and Trademark Office relating to a graphene-wrapped silicon anode material. The Company has other research projects commenced or contemplated including for applications in aluminum alloys, corrosion protection, battery technology, conductive polymers and others. The Company will report on these when it is appropriate to do so.

Albany Graphite Project

The Company owns 100% of the Albany Graphite Project in Northern Ontario, Canada. The unusual nature of the graphite in the Albany deposit and its potential economic significance motivated additional exploration drilling from 2012 to 2014. The graphene nanomaterials market was not considered as part of the June 2015 Preliminary Economic Assessment model. The current claims require a total of $195,600 worth of assessment work per year to keep them in good standing and the Company has a total credit of approximately $5.8M in available exploration reserves. The Company has no near-term plans to continue any significant work on the Albany Graphite Project in Northern Ontario and is not dependent on materials extracted from the Albany Graphite Project for its current business plans. On October 18, 2021, the TSXV changed the Company’s classification from a “mining issuer” to an “industrial, technology, or life sciences issuer.” The change of classification was approved by the shareholders of the Company on September 27, 2021, in accordance with the rules and policies of the TSXV.

On April 18, 2022, the Company announced that it has engaged The Benchmark Company, LLC (“Benchmark”) to act as strategic financial advisor with respect to potential transactions relating to the Albany Graphite Project.

Financings

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 entitles 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.

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.

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 entitled the holder thereof to acquire one common share at a price of $0.50 until December 19, 2021.

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 entitled 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 was $2,049,999.80 through the issuance of 3,416,666 units.

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 was comprised of one common share and one-half of one whole common share purchase warrant. Each whole warrant entitled 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 share 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 dated April 8, 2021 between the Company and Capital Transfer Agency, ULC as agent for the warrants.

On January 4, 2022, the Company announced that it had closed a bought-deal prospectus offering (the “Prospectus Offering”) for gross proceeds of $23,005,060, and a concurrent non-brokered private placement (the “Concurrent Private Placement”) for aggregate gross proceeds of $10,009,022. Pursuant to the Prospectus Offering, the Company issued a total of 4,424,050 common shares at a price of $5.20 per common share (the “Issue Price”), and pursuant to the Concurrent Private Placement, the Company issued a total of 1,924,812 common shares at the Issue Price.

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 $40 million and the Company has received more than $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 have indicated that the Company’s compound is also effective against bacteria and fungi. This research and development have resulted in the filing of
three patent applications (see “Intangible Properties” below), the Trebor supply agreement and an agreement with Ekomed.

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) spunbound 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 line to produce the antimicrobial coatings is operational, the Company intends to initiate an outbound marketing program.

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 GO and antimicrobial coating production facilities, as may be required.

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 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 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.

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 active patent applications under the Patent Cooperation Treaty in the Company’s name, for (i) graphene-silver nanocomposite uses as an antimicrobial coating agent, and (ii) graphene-silver nanocomposite compositions and uses for treatment of infectious diseases. 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 have the most potential value for the Company. (See “Risk Factors – Unpredictable Sales Cycles”).

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. (See “Risk Factors – Intellectual Property”).

Economic Dependence

The Company has entered into a limited number of supply or sales agreements for the sale of its products. Until additional supply agreements are executed by the Company, the Company’s revenues will be completely dependent on such agreements. If such agreements are terminated, or if less of the Company’s product than anticipated is purchased pursuant to such agreements, this could have a material adverse impact on the Company’s business, operations and results.

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, 2022 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 27 staff consisting of 25 employees and 2 consultants. Management expects headcount to grow as production volumes, scientific capacity and sales staff grow during the current and upcoming fiscal years.

Foreign Operations

The Company has no meaningful foreign operations.

Bankruptcy

There have been no bankruptcy, receivership or similar proceedings against the Company within the three most recently completed financial years or during or proposed for the current financial year.

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 and development of the Albany Graphite Project. 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 the 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.

As at March 31, 2022, there was an increase in trade credit risk as a result of trade receivables now being generated through sales.

Negative Operating Cash Flow

During the financial year ended March 31, 2022, the Company had negative operating cash flow because its revenues did not exceed its operating expenses. In addition, as a result of the Company's business plans for the development of its products, the Company expects cash flow from operations to be negative until revenues improve to offset its operating expenditures. The Company's cash flow from operations may be affected in the future by expenditures incurred by the Company to continue to develop its products. To the extent the Company has negative cash flow in any future period, the Company may be required to allocate funds to fund such negative cash flow from operating activities. In order to stay in business, in the absence of cash flow from operations, the Company will have to raise funding through financing activities. However, there is no certainty the Company will be able to raise funds at all or on terms acceptable to the Company in the event it needs to do so. Furthermore, additional funds raised by the Company through the issuance of equity or convertible debt securities would cause the Company’s current shareholders
to experience dilution. Such securities also may grant rights, preferences or privileges senior to those of the Company’s shareholders. The Company does not have any contractual restrictions on its ability to incur debt and, accordingly, the Company could incur significant amounts of indebtedness to finance its operations. Any such indebtedness could contain restrictive covenants, which likely would restrict the Company’s operations.

Uncertainties Relating to the Company’s Business Plans

There is no assurance that broad successful commercial applications may be feasible for the Company. The Company is continuing to explore, develop, and test its current products and new products, and there can be no assurance that new uses of existing products or new products will be fully developed for commercial application, that test results will be successful, if completed at all, that any necessary permits or approvals required in order to market such products will be obtained by the Company, or that existing technology or products will become profitable. Furthermore, there is no assurance that the Company will complete any acquisitions or acquire any know-how or trade secrets to carry out certain of its future objectives. Should the Company fail to achieve any of the foregoing, this could have a material adverse impact on the business and planned business of the Company.

The Company’s business is in part dependent on patents, 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. 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.

Additionally, the Company plans to construct facilities for some of its operations and business activities. There can be no assurance that locations will be secured on terms favourable to the Company or at all, that engineering plans will be completed or will be satisfactory for the intended business activities of the Company, that any required permitting will be obtained, that construction of such facilities will be completed, or that such facilities will ever become operational. If such facilities are not constructed, or do not become operational, or do not operate at the capacity required or anticipated, there could be a material adverse effect of the Company’s planned business and operations.

Economic and Political Conditions

Worldwide financial and economic cycles or conditions are uncertain, and recovery from a business downturn or recession could be very slow and have significant impact on the Company’s business. The Company’s business is sensitive to changes in economic and political conditions, including interest rates, currency issues, energy prices, trade issues, international or domestic conflicts or political crises, and epidemics or pandemics, such as the strain of COVID-19.

As at the date hereof, the global reactions to the spread of COVID-19 have led to, among other things, significant restrictions on travel and gatherings of individuals, quarantines, temporary business closures and a general reduction in consumer activity. While these effects are expected to be temporary, the duration of the disruptions to business internationally and the related financial impact cannot be estimated with any degree of certainty at this time. In addition, the increasing number of individuals infected with COVID-19 could result in an even greater global health crisis that could adversely affect global economies and financial markets, resulting in a protracted economic downturn that could have an adverse effect on the Company’s prospects.
The responses of governmental authorities and corporate entities, including through mandated or voluntary shutdowns, may also lead to a general long-term slow-down in the economy and may lead to disruptions to the Company’s workforce and facilities, customers, sales and operations and supply chain.

Measures taken by the governments worldwide and voluntary measures undertaken by the Company with a view to the safety of the Company’s employees, may adversely impact the Company’s business.

In particular, as a result of the foregoing, COVID-19 could materially and adversely impact the Company's business, including without limitation, employee health, workforce availability and productivity, limitations on travel, supply chain disruptions, increased insurance premiums, and restrictions to the Company's ability to conduct its business. Also, the Company's revenues and cash resources may be negatively affected, it may need to assist potential customers with obtaining financing or government incentives to help customers fund their purchases of the Company’s products and demand for the Company’s products may decrease as partners and potential customers defer their projects. Any such disruptions or closures could have a material adverse effect on the Company's business. In addition, parties with whom the Company does business or on whom the Company is reliant may also be adversely impacted by the COVID-19 pandemic which may in turn cause further disruption to the Company's business. Any long-term closures or suspensions may also result in the loss of personnel or the workforce in general as employees seek employment elsewhere.

The impact of COVID-19 and government responses thereto may also continue to have a material impact on financial results and could constrain the Company's ability to obtain equity or debt financing in the future, which may have a material adverse effect on its business, financial condition and results of operations.

The Company is actively monitoring the situation and will respond as the impact of the COVID-19 pandemic evolves, which will depend on several factors set out above. The extent to which the pandemic will impact the Company's operations in the future is highly uncertain and cannot be predicted with confidence as at the date hereof, but could have a material adverse effect on the Company's business, financial condition and results of operations. These uncertainties include, but are not limited to, the duration of the outbreak, the ability of governments in countries in which the Company conducts business to curtail the spreading of the virus, the economic recovery as well as community and social stabilities. Any of these uncertainties, and others, could have further material adverse effects on the Company's business and operations.

**Revenue from Graphene Sales; Long and Complex Sales Cycle**

To date, the Company has recorded minimal revenue from its graphene enhanced products sales. 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 supply agreements and generates sufficient revenues to fund its continuing operations.

**Intellectual Property**

The Company relies on the patent, trade secret and other intellectual property laws of Canada, and 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.

**Product Development and Technological Change**

There is no assurance that broad successful commercial applications for the Company’s products may be 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. There can be no assurance that laboratory data translates to or is 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 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.

**Liquidity Concerns and Future Financing**

The Company’s approach to managing liquidity risk is to ensure that it will have sufficient liquidity to meet liabilities when due. As of March 31, 2022, the Company had a cash balance of $26,840,829 (2021 - $3,091,549) to settle current liabilities of $2,825,869 (2021 - $2,506,167). The Company is ultimately dependent on the commercial sales of its products. Any delay in the sales of such products could require additional financing. There can be no assurance that the Company will be successful in obtaining the required financing as and when needed. Volatile markets may make it difficult or impossible for the Company to obtain debt financing or equity financing on favorable terms, if at all. Failure to obtain additional financing on a timely basis may cause the Company to postpone or slow down its development plans or reduce or terminate some or all of its activities.

**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.

**Qualified Employees**

Recruiting and retaining qualified personnel is critical to the Company’s success. Especially if it relates to its graphene operations, finding skilled scientists and a sales team familiar with the subject matter is difficult. As the Company grows further, the need for skilled labour will increase. The number of persons skilled in the high-tech manufacturing business is limited and competition for this workforce is intense. This may adversely affect the business of the Company if it is unable to recruit and retain qualified personnel as and when required.

**Cybersecurity Threats**

The reliability and security of the Company’s information technology (“IT”) systems is important to the Company’s business and operations. Although the Company has established and continues to enhance security controls intended to protect the Company’s IT systems and infrastructure, there is no guarantee that such security measures will be effective in preventing unauthorized physical access or cyberattacks. A significant breach of the Company’s IT systems could, among other things, cause disruptions in the Company’s manufacturing operations (such as operational delays from production downtime, inability to manage the supply chain or produce product for customers, disruptions in inventory management), lead to the loss, destruction, corruption or inappropriate use of sensitive data, including employee information or intellectual property, result in lost revenues due to theft of funds or due to a disruption of activities, including remediation costs, or from litigation, fines and liability or higher insurance premiums, the costs of maintaining security and effective IT systems, which could negatively affect results of operations and the potential adverse impact of changing laws and regulations related to cybersecurity or result in theft of the Company’s, its customers’ or suppliers’ intellectual property or confidential information. If any of the foregoing events (or other events related to cybersecurity) occurs, the Company may be subject to a number
of consequences, including reputational damage, a diminished competitive advantage and negative impacts on future opportunities which could have a material adverse effect on the Company.

Share Price Fluctuations

The market price of securities of many companies, particularly development stage companies, experience wide fluctuations in price that are not necessarily related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance that fluctuations in the Company’s share price will not occur. In particular, the fluctuations may be exaggerated if the trading volume of the Company’s common shares is low.

Cost Absorption and Purchase Orders

Especially as it relates to its activities in the transportation industry, and given the current trends in that industry, the Company is under continuing pressure to absorb costs related to product design and development, engineering, program management, prototypes and validation. In particular, OEMs are requesting that suppliers pay for the above costs and recover these costs through the piece price of the applicable component. Contract volumes for customer programs not yet in production are based on the Company’s customers’ estimates of their own future production levels. However, actual production volumes may vary significantly from these estimates due to a reduction in consumer demand or new product launch delays, often without any compensation to the supplier by its OEM customer. Typical purchase orders issued by customers do not require that they purchase a minimum number of the Company’s products. For programs currently under production, the Company is generally unable to request price changes when volumes differ significantly from production estimates used during the quotation stage. If estimated production volumes are not achieved, the product development, design, engineering, prototype and validation costs incurred by the Company may not be fully recovered. Similarly, future pricing pressure or volume reductions by the Company’s customers may also reduce the amount of amortized costs otherwise recoverable in the piece price of the Company’s products. Either of these factors could have an adverse effect on the Company’s profitability. While it is generally the case that once the Company receives a purchase order for products of a particular vehicle program it would continue to supply those products until the end of such program, customers could cease to source their production requirements from the Company for a variety of reasons, including the Company’s refusal to accept demands for price reductions or other concessions.

Acquisitions

The Company could seek to acquire complementary businesses, assets, technologies, services or products, at competitive prices. The Company could pursue acquisitions in those product areas which were identified as key to the Company’s long-term business strategy. However, as a result of intense competition in these strategic areas, the Company may not be able to acquire the targets needed to achieve its strategic objectives. The completion of such transactions poses additional risks to the Company’s business. Acquisitions are subject to a range of inherent risks, including the assumption of incremental regulatory/compliance, pricing, supply chain, commodities, labor relations, litigation, environmental, pensions, warranty, recall, IT, tax or other risks. Although the Company seeks to conduct appropriate levels of due diligence on acquisition targets, these efforts may not always prove to be sufficient in identifying all risks and liabilities related to the acquisition, including as a result of: limited access to information; time constraints for conducting due diligence; inability to access target company facilities and/or personnel; or other limitations in the due diligence process. Additionally, the Company may identify risks and liabilities that cannot be sufficiently mitigated through appropriate contractual or other protections. The realization of any such risks could have a material adverse effect on the Company’s operations or profitability. The benefit to the Company of previous and future acquisitions is highly dependent on the Company’s ability to integrate the acquired businesses and their technologies, employees and products into the Company, and the Company may incur costs associated with integrating and rationalizing the facilities (some of which may need to be closed in the future). The Company cannot be certain that it will successfully integrate acquired businesses or that acquisitions will ultimately benefit the
Company. Any failure to successfully integrate businesses or failure of the businesses to benefit the Company could have a material adverse effect on its business and results of operations. Such transactions may also result in additional dilution to the Company’s shareholders or increased debt. Such transactions may involve partners, and the formula for determining contractual sale provisions may be subject to a variety of factors that may not be easily quantified or estimated until the time of sale (such as market conditions and determining fair market value).

Launch and Operational Costs

The launch of new business, in an existing or new facility, is a complex process, the success of which depends on a wide range of factors, including the production readiness of the Company and its suppliers, as well as factors related to tooling, equipment, employees, initial product quality and other factors. A failure to successfully launch material new or takeover business could have an adverse effect on profitability. The Company’s manufacturing processes are vulnerable to operational problems that can impair its ability to manufacture its products in a timely manner, or which may not be performing at expected levels of profitability. The Company’s facilities and proposed facilities contain complex and sophisticated equipment that is used in its manufacturing processes. The Company could experience equipment failure in the future due to wear and tear, design error or operator error, among other things, which could have an adverse effect on profitability. From time to time, the Company may have some operating divisions which are not performing at expected levels of profitability. Significant underperformance of one or more operating divisions could have a material adverse effect on the Company’s profitability and operations.

Material and Commodity Prices

Prices for key raw materials and commodities used in the production of graphene-based products, as well as energy prices, have proven to be volatile at certain times. To the extent that the Company is unable to fully mitigate its exposure to price change of key raw materials and commodities, particularly through engineering products with reduced content, by passing price increases to customers, or otherwise, such additional costs could have a material adverse effect on profitability. Increased energy prices could also have an impact on production or transportation costs which in turn could affect competitiveness.

Uninsured Risks

The Company maintains insurance to cover normal business risks. In the course of its manufacturing businesses, certain risks and, in particular, unexpected or unusual catastrophic events including explosions and fire may occur. It is not always possible to fully insure against such risks as a result of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the common shares of the Company.

Litigation

The Company has entered into legally binding agreements with various third parties, including supply, license, distribution, non-disclosure, consulting and partnership agreements. The interpretation of the rights and obligations that arise from such agreements is open to interpretation and the Company may disagree with the position taken by the various other parties resulting in a dispute that could potentially initiate litigation and cause the Company to incur legal costs in the future. Given the speculative and unpredictable nature of litigation, the outcome of any such disputes could have a material adverse effect on the Company’s business.

Credit risk

As at March 31, 2022, the Company's credit risk was primarily attributable to cash and accounts, loan receivables and other receivables. The Company issued a loan receivable during the year further increasing its exposure to credit risk. Financial instruments included in accounts and other
receivables consisted of trade receivables generated through sales as well as recoverable harmonized sales tax. The Company’s cash is held with reputable financial institutions. Management believes that the credit risk with respect to financial instruments included in accounts and other receivables is remote.

**Interest rate risk**

The Company has cash balances at federally regulated Canadian banks. The Company periodically monitors the investments it makes, the security of such investments and is satisfied with the credit ratings of its banks. The Company closely monitors interest rates to determine the appropriate course of action to be taken by the Company.

**Price risk**

The Company is exposed to price risk with respect to commodity prices. The Company closely monitors commodity prices to determine the appropriate course of action to be taken by the Company.

**Financial Capability and Additional Financing**

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, on acceptable terms or at all. Unanticipated expenses and other developments could cause existing funds to be depleted sooner than expected. 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, 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 the development of the Company’s business and could cause the Company to reduce or terminate its operations. 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.

**Permits and Government Regulation**

Although the Company believes it has all of the necessary permits to carry out the proposed business programs, the operations of the Company may require licenses and permits from time to time from various governmental authorities to carry out exploration and development at its projects or locations. Obtaining permits can be a complex, time-consuming process. There can be no assurance that the Company will be able to obtain the necessary licenses and permits on acceptable terms, in a timely manner or at all. The costs and delays associated with obtaining permits and complying with these permits and applicable laws and regulations could stop or materially delay or restrict the Company from continuing or proceeding with existing or future operations or projects. Any failure to comply with permits and applicable laws and regulations, even if inadvertent, could result in the interruption or closure of operations or material fines, penalties or other liabilities. In addition, the requirements applicable to sustain existing permits and licenses may change or become more stringent over time and there is no assurance that the Company will have the resources or expertise to meet its obligations under such licenses and permits.

**Fluctuating Prices**

The profitability of the Company’s operations will be dependent upon the market price of the ZenGUARD™ masks and other products, their global acceptance and demand along with their regulatory approvals in other jurisdictions. The level of interest rates, rate of inflation, production costs, healthcare and consumer demand, and stability of exchange rates can all cause significant fluctuations in revenue. Such external economic factors are in turn influenced by changes in
international purchasing patterns, COVID-19 pandemic situation, monetary systems and political developments.

**Environmental Regulation**

The Company’s Albany Graphite Project is subject to environmental laws and regulations which may materially and adversely affect its future operations. These laws and regulations control the exploration and development of the Albany Graphite Project and their effects on the environment, including air and water quality, waste handling and disposal, the protection of different species of plant and animal life, and the preservation of lands. These laws and regulations will require the Company to acquire permits and other authorizations for certain activities. There can be no assurance that the Company will be able to acquire such necessary permits or authorizations on a timely basis, if at all.

Further, environmental legislation is evolving in a manner which will require stricter standards and enforcement, increased fines and penalties for non-compliance, 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, if any, will not adversely affect the Company’s operations.

The Company is not currently insured against most environmental risks. Without such insurance, and if the Company becomes subject to environmental liabilities, the payment of such liabilities would reduce or eliminate its available funds or could exceed the funds the Company has to pay such liabilities and result in bankruptcy.

**Economic Dependence on Supply Agreements**

Currently, the Company has entered into a limited number of supply or sales agreements for the sale of its products. Until additional supply agreements are executed by the Company, the Company’s revenues will be completely dependent on such agreements. If such agreements are terminated, or if less of the Company’s product than anticipated is purchased pursuant to such agreements, this could have a material adverse impact on the Company’s business, operations and results.

**Nasdaq Listing in the United States**

The Company recently listed its common shares on the Nasdaq in the United States. The Company cannot provide assurances that an active trading market will develop in the United States.

**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, 2022, 99,248,058 common shares were issued and outstanding, and as of the date hereof there are 99,363,058 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.

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, 2022, a total of 8,692,334 stock options were
outstanding with a weighted average exercise price of $2.70.

During the financial year ended March 31, 2022, the Company granted an aggregate of 2,344,000
options to certain officers, directors, employees, and consultants of the Company.

On April 13, 2021, the Company granted 100,000 options exercisable at a price of $1.76 per
common share for a period of five (5) years from the date of issuance to a consultant of the
Company and 50,000 options exercisable at a price of $1.76 per common share for a period of two
(2) years from the date of issuance to a consultant of the Company.

On June 30, 2021, the Company granted 150,000 options exercisable at a price of $3.50 per
common share for a period of three (3) years from the date of issuance to an advisory board
member of the Company.

On July 23, 2021, the Company granted 25,000 options exercisable at a price of $3.10 per Common
Share for a period of three (3) years from the date of issuance to an employee of the Company.

On September 3, 2021, the Company granted 100,000 options exercisable at a price of $3.69 per
common share for a period of three (3) years from the date of issuance to a consultant and an
employee of the Company.

On September 21, 2021, the Company granted 120,000 options exercisable at a price of $4.08 per
common share for a period of three (3) years from the date of issuance to an employee of the
Company.

On October 13, 2021, the Company granted 100,000 options exercisable at a price of $4.92 per
common share for a period of three (3) years from the date of issuance to an employee of the
Company.

On October 26, 2021, the Company granted 50,000 options exercisable at a price of $4.77 per
common share for a period of three (3) years from the date of issuance to an employee of the
Company.

On November 1, 2021, the Company granted 50,000 options exercisable at a price of $5.67 per
common share for a period of five (5) years from the date of issuance to an employee of the
Company and 50,000 options exercisable at a price of $5.67 per common share for a period of
three (3) years from the date of issuance to a consultant of the Company.

On December 15, 2021, the Company granted 25,000 options exercisable at a price of $5.20 per
Common Share for a period of five (5) years from the date of issuance to a consultant of the
Company.
On December 29, 2021, the Company granted 100,000 options exercisable at a price of $5.22 per common share for a period of three (3) years from the date of issuance to an advisory board member of the Company.

On January 14, 2022, the Company granted 50,000 options exercisable at a price of $4.25 per common share for a period of three (3) years from the date of issuance to directors, officers and employees of the Company and 1,110,000 options exercisable at a price of $1.76 per common share for a period of five (5) years from the date of issuance to directors, officers and employees the Company.

On January 17, 2022, the Company granted 20,000 options exercisable at a price of $4.25 per common share for a period of three (3) years from the date of issuance to an employee of the Company.

On March 29, 2022, the Company granted 54,000 options exercisable at a price of $3.88 per common share for a period of three (3) years from the date of issuance to an employee of the Company.

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, 2021:

<table>
<thead>
<tr>
<th>2021</th>
<th>HIGH ($)</th>
<th>LOW ($)</th>
<th>VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>3.00</td>
<td>1.71</td>
<td>7,084,792</td>
</tr>
<tr>
<td>May</td>
<td>2.70</td>
<td>1.93</td>
<td>2,238,021</td>
</tr>
<tr>
<td>June</td>
<td>3.59</td>
<td>2.45</td>
<td>4,290,710</td>
</tr>
<tr>
<td>July</td>
<td>3.51</td>
<td>2.82</td>
<td>2,106,651</td>
</tr>
<tr>
<td>August</td>
<td>3.34</td>
<td>2.71</td>
<td>1,468,501</td>
</tr>
<tr>
<td>September</td>
<td>5.99</td>
<td>3.15</td>
<td>7,992,770</td>
</tr>
<tr>
<td>October</td>
<td>5.48</td>
<td>4.30</td>
<td>4,468,373</td>
</tr>
<tr>
<td>November</td>
<td>7.50</td>
<td>5.34</td>
<td>6,873,855</td>
</tr>
<tr>
<td>December</td>
<td>6.68</td>
<td>4.85</td>
<td>5,360,664</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2022</th>
<th>HIGH ($)</th>
<th>LOW ($)</th>
<th>VOLUME</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>5.19</td>
<td>3.04</td>
<td>5,821,967</td>
</tr>
<tr>
<td>February</td>
<td>4.40</td>
<td>2.90</td>
<td>2,438,953</td>
</tr>
<tr>
<td>March</td>
<td>4.16</td>
<td>2.15</td>
<td>5,983,848</td>
</tr>
<tr>
<td>April</td>
<td>3.91</td>
<td>2.93</td>
<td>1,819,037</td>
</tr>
<tr>
<td>May</td>
<td>3.35</td>
<td>2.20</td>
<td>1,465,376</td>
</tr>
<tr>
<td>June 1 to 28</td>
<td>2.87</td>
<td>2.24</td>
<td>1,065,645</td>
</tr>
</tbody>
</table>

ESCROWED SECURITIES

As of the date hereof, 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
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.

<table>
<thead>
<tr>
<th>Name, Province and Country of Residence, Position</th>
<th>Director Since</th>
<th>Number of Common Shares Beneficially Owned(^{(1)})</th>
<th>Principal Occupation During Past Five Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greg Fenton St. James, Barbados Chief Executive Officer and Director</td>
<td>July 11, 2018</td>
<td>2,566,825 common shares 1,650,000 options</td>
<td>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.</td>
</tr>
<tr>
<td>Wendy Ford Ontario, Canada Chief Financial Officer</td>
<td>N/A</td>
<td>200,000 options</td>
<td>Chief Financial Officer of AirBoss of America Corp (March 2014 to August 2016); VP Finance and Chief Financial Officer of Mancor Canada Inc. (October 2017 to May 2022).</td>
</tr>
<tr>
<td>Dr. Francis Dubé Ontario, Canada Executive Chairman and Director</td>
<td>May 11, 2018</td>
<td>736,309 common shares 1,800,000 options</td>
<td>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</td>
</tr>
<tr>
<td>Brian Bosse(^{(2)}) Ontario, Canada Chief Operations Officer and Director</td>
<td>May 11, 2018</td>
<td>290,704 common shares 1,110,000 options</td>
<td>Chief Financial Officer of the Company (September 14, 2018 to May 2018), Chief Executive Officer and Director at IC Capitalight Corp., Corporate Director</td>
</tr>
<tr>
<td>Eric Wallman(^{(2)}) Manitoba, Canada Director</td>
<td>May 11, 2018</td>
<td>171,755 common shares 600,000 options</td>
<td>Senior Vice-President, Finance and Administration at Bothwell Cheese, Board Member of the Western Dairy Council, Corporate Director</td>
</tr>
<tr>
<td>Frank Klees(^{(2)}) Ontario, Canada Director</td>
<td>July 11, 2018</td>
<td>264,000 common shares 500,000 Options</td>
<td>Corporate Director</td>
</tr>
<tr>
<td>Peter C. Wood Ontario, Canada President</td>
<td>N/A</td>
<td>56,900 common shares 450,000 options</td>
<td>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)</td>
</tr>
<tr>
<td>James Jordan Ontario, Canada VP, Operations</td>
<td>N/A</td>
<td>150,900 common shares 75,000 options</td>
<td>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)</td>
</tr>
</tbody>
</table>
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.

On January 29, 2021, the Company was served with a statement claim issued by Graphene Composites Ltd. and is in the process of defending the action, which it considers frivolous and without merit. The Company has considered the allegations as set out in the claim and, in light of the facts, the lack of clarity in the claim, and, based on discussions with the Company’s litigation counsel, the assessment of the merits of the claim and the defenses available to the Company, and the Company’s conclusion is that the risk of the Company suffering loss in respect of the claim is remote, and therefore the Company determined the claim not to be material or constituting "significant litigation" pursuant to the policies of the TSX Venture Exchange. The Company continues to view this claim as frivolous and will continue to vigorously defend itself against these allegations.

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

Effective as of November 22, 2021, the registrar and transfer agent of the Company is TSX Trust Company, having an address of 100 Adelaide Street West, Suite 301, Toronto, Ontario M5H 1S3.
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 regarded 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, BDO Canada 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.

AUDIT COMMITTEE INFORMATION

The Audit Committee’s Charter

The directors of the Company have adopted a charter (the “Charter”) for the audit committee (the “Audit Committee”), which sets out the Audit Committee’s mandate, organization, powers and responsibilities. The full text of the Charter is attached hereto as Appendix “A” to this AIF.

Composition of the Audit Committee

The members of the Audit Committee are Eric Wallman CPA, CA (Chair), Brian Bosse and Frank Klees. Messrs. Wallman and Klees are independent (as defined in National Instrument 52-110 — Audit Committees (“NI 52-110”) adopted by the Canadian Securities Administrators), and all members are financially literate (as defined in NI 52-110).

<table>
<thead>
<tr>
<th>Name of Member</th>
<th>Independent (1)</th>
<th>Financially Literate (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eric Wallman CPA, CA (Chair)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Brian Bosse</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Frank Klees</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Notes:

(1) To be considered independent, a member of the Audit Committee must not have any direct or indirect “material relationship” with the Company. A “material relationship” is a relationship which could, in the view of the board of directors of the Company, be reasonably expected to interfere with the exercise of a member’s independent judgment.

(2) To be considered financially literate, a member of the Committee must have the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company’s financial statements.

Relevant Education and Experience

Mr. Wallman is a graduate of the University of Manitoba in 1983 and obtained a full CA designation in 1986. He has held senior accounting and finance positions in industry since 1991, and has
been an active investor in the junior mining market since 1992. Currently, Mr. Wallman is the Senior Vice-President, Finance and Administration with Bothwell Cheese, which is the largest independently owned cheese manufacturer in Canada. His role includes strategic planning for Bothwell Cheese and two related companies.

Mr. Bosse graduated from Wilfrid Laurier University's School of Business and Economics and became a Chartered Financial Analyst in 2001. He entered the securities industry in 1995 as a floor trader at the Toronto Stock Exchange.

Mr. Bosse has long experience with public equity valuations, investment banking, and trading for investment houses including Dundee Corporation and Société Générale. He was Vice President and Portfolio Manager of the Goodman Bluespring Fund at Goodman & Corporation Investment Counsel from 2012-2016.

Currently, Mr. Bosse is Chief Executive Officer and a director at IC Capitalight Corp. He has 24 years of work experience as a highly skilled corporate turnaround executive, and has extensive knowledge of the mining industry through Murenbeeld & Co. subscription research.

Mr. Klees is a highly respected professional who has held senior leadership positions in both the private sector and in government. Mr. Klees served five terms as a Progressive Conservative Member of the Legislative Assembly of Ontario from 1995 to 2014. He held senior cabinet positions in the governments of Mike Harris and Ernie Eves including Minister of Transportation, Minister of Tourism, Chief Government Whip and Deputy House Leader with additional responsibilities as a Member of the Management Board of Cabinet and the Board of Internal Economy. Over the course of 19 years as an elected politician, Mr. Klees established strong and trusted working relationships at all levels of government.

Mr. Klees has extensive business experience in the energy sector, financial services and real estate development. He was a co-founder and Executive Vice President of Municipal Gas Corporation, served as Corporate Director and Member of the Audit and Governance Committees of Universal Energy Ltd. and has been a member of the Supervisory Board of Rockwool North America from 2003 to November 2020.

Mr. Klees is a Senior Advisor to a number of public and private enterprises and provides business development, government relations and strategic planning advisory services.

Audit Committee Oversight

At no time during the last financial year have any recommendations by the Audit Committee respecting the appointment and/or compensation of the external auditors of the Company not been adopted by the Board pre-approval policies and procedures

The Audit Committee has adopted specific policies and procedures for the engagement of non-audit services as described in its Charter.

External Auditor Services Fees (By Category)

The following table discloses the fees billed to the Company by its external auditor during the last two completed financial years:
<table>
<thead>
<tr>
<th>Financial Year Ending</th>
<th>Audit Fees(^{(1)})</th>
<th>Audit Related Fees(^{(2)})</th>
<th>Tax Fees(^{(3)})</th>
<th>All Other Fees(^{(4)})</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 31, 2022</td>
<td>$115,000</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>March 31, 2021</td>
<td>$33,500</td>
<td>Nil</td>
<td>Nil</td>
<td>Nil</td>
</tr>
</tbody>
</table>

**Notes:**

1. The aggregate fees billed for professional services rendered by the auditor for the audit of the Company's annual financial statements.
2. The aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's financial statements and are not disclosed in the "Audit Fees" column.
3. The aggregate fees billed for tax compliance, tax advice, and tax planning services.
4. Represents fees billed by the auditor in connection with the proofread of the Company's quarterly statements and the provision of non-audit related services during the last financial year.

**ADDITIONAL INFORMATION**

Additional information relating to the Company may be found through a database search at SEDAR at [www.sedar.com](http://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 August 25, 2021, 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, 2022, which may be found on SEDAR.
APPENDIX A

AUDIT COMMITTEE CHARTER

Mandate

The Audit Committee ("Committee") is a committee of the Board of Directors (the "Board"). Its primary function shall be to assist the Board in fulfilling its oversight responsibilities with respect to financial reporting, and disclosure requirements, the overall maintenance of the systems of internal controls that management have established and the overall responsibility for Zentek Ltd.'s (the "Corporation") external and internal audit processes.

The Committee shall have the power to conduct or authorize investigations into any matter within the scope of this Charter. It may request any officer or employee of the Corporation, its external legal counsel or external auditor to attend a meeting of the Committee or to meet with any member(s) of the Committee.

The Committee shall be accountable to the Board. In the course of fulfilling its specific responsibilities hereunder, the Committee shall maintain an open communication between the Corporation's outside auditor and the Board.

The responsibilities of a member of the Committee shall be in addition to such member's duties as a member of the Board.

The Committee has the duty to determine whether the Corporation's financial disclosures are complete, accurate, are in accordance with international financial reporting standards and fairly present the financial position and risks of the organization. The Committee should, where it deems appropriate, resolve disagreements, if any, between management and the external auditor, and review compliance with laws and regulations and the Corporation's own policies.

The Committee will provide the Board with such recommendations and reports with respect to the financial disclosures of the Corporation as it deems advisable.

Membership and Composition

The Committee shall consist of at least three Directors who shall serve on behalf of the Board of which at least two directors are independent. The members shall be appointed annually by the Board and shall meet the independence, financial literacy and experience requirements of the TSX Venture Exchange, including National Instrument 52-110, and other regulatory agencies as required.

A majority of Members will constitute a quorum for a meeting of the Committee.

The Board will appoint one Member to act as the Chairman of the Committee. In his absence, the Committee may appoint another person provided a quorum is present.

The Chairman will appoint a Secretary of the meeting, who need not be a member of the committee and who will maintain the minutes of the meeting.

Meetings

At the request of the external auditor, the Chief Executive Officer or the Chief Financial Officer of the Corporation or any member of the Committee, the Chairman will convene a meeting of the Committee. In advance of every meeting of the Committee, the Chairman, with the assistance of the Chief Financial Officer, will ensure that the agenda and meeting materials are distributed in a timely manner and no less than five (5) business days before the meeting.
The Committee shall meet no less than four times per year or more frequently if circumstances or the obligations require.

**Duties and Responsibilities**

The duties and responsibilities of the Committee shall be as follows:

A. **Financial Reporting, and Disclosure**

   i. Review and discuss with management and the external auditor at the completion of the annual examination:

      (a) the Corporation’s audited financial statements and related notes;

      (b) the external auditor’s audit of the financial statements and their report thereon;

      (c) any significant changes required in the external auditor’s audit plan;

      (d) any serious difficulties or disputes with management encountered during the course of the audit; and

      (e) other matters related to the conduct of the audit, which are to be communicated to the Committee under generally accepted auditing standards.

   ii. Review and discuss with management and the external auditor at the completion of any review engagement or other examination, the Corporation’s quarterly financial statements.

   iii. Review, discuss with management the annual reports, the quarterly reports, the Management Discussion and Analysis, Annual Information Form, prospectus and other disclosures and, if thought advisable, recommend the acceptance of such documents to the Board for approval.

   iv. Review and discuss with management any guidance being, provided to shareholders on the expected future results and financial performance of the Corporation and provide their recommendations on such documents to the Board.

   v. Inquire of the auditors the quality and acceptability of the Corporation’s accounting principles, including the clarity of financial disclosure and the degree of conservatism or aggressiveness of the accounting policies and estimates.

   vi. Meet independently with the external auditor and management in separate executive sessions, as necessary or appropriate.

   vii. Ensure that management has the proper systems in place so that the Corporation’s financial statements, financial reports and other financial information satisfy legal and regulatory requirements. Based upon discussions with the external auditor and the financial statement review, if it deems appropriate, recommend to the Board the filing of the audited annual and unaudited quarterly financial statements.

   viii. Oversee and enforce Corporation’s public disclosure practices.
External Auditor

i. Consider, in consultation with the external auditor, the audit scope and plan of the external auditor.

ii. Recommend to the Board the external auditor to be nominated and review the performance of the auditor, including the lead partner of the external auditor.

iii. Confirm with the external auditor and receive written confirmation at least once per year as to disclosure of any investigations or government enquiries, reviews or investigations of the outside auditor.

iv. Take reasonable steps to confirm the independence of the external auditor, which shall include:

   (a) ensuring receipt from the external auditor of a formal written statement delineating all relationships between the external auditor and the Corporation, consistent with generally accepting auditing practices,

   (b) considering and discussing with the external auditor any disclosed relationships or services, including non audit services, that may impact the objectivity and independence of the external auditor, and

   (c) approve in advance any non audit related services provided by the auditor to the Corporation with a view to ensuring, independence of the auditor, and

Internal Controls and Audit

i. Review and assess the adequacy and effectiveness of the Corporation’s systems of internal and management information systems through discussion with management and the external auditor to ensure that the Corporation maintains appropriate systems, is able to assess the pertinent risks of the Corporation and that the risk of a material misstatement in the financial disclosures can be detected.

ii. Assess the requirement for the appointment of an internal auditor for the Corporation.

iii. Inquire of management and the external auditor about the systems of internal controls that management and the Board have established and the effectiveness of those systems. In addition, inquire of management and the external auditor about significant financial risks or exposures and the steps management has taken to minimize such risks to the Corporation.

Oversight Function

While the Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Committee to plan or conduct audits or to determine that the Corporation’s financial statements are complete and accurate or are in accordance with IFRS and applicable rules and regulations. These are the responsibilities of management and the external auditors. The Committee, the Chairman and any Members identified as having accounting or related financial expertise are members of the Board, appointed to the Committee to provide broad oversight of the financial, risk and control related activities of the Corporation, and are specifically not accountable or responsible for the day to day operation or performance of such activities. Although the designation of a Member as having accounting, or related financial
expertise for disclosure purposes is based on that individual’s education and experience, which that individual will bring to bear in carrying out his or her duties on the Committee, such designation does not impose on such person any duties, obligations or liability that are greater than the duties, obligations and liability imposed on such person as a member of the Committee and Board in the absence of such designation. Rather, the role of a Member who is identified as having accounting or related financial expertise, like the role of all Members, is to oversee the process, not to certify or guarantee the internal or external audit of the Corporation’s financial information or public disclosure.

Charter Review

The Committee will annually review and reassess the adequacy of this policy and submit any recommended changes to the Board for approval.

Adoption

This Policy was adopted by the Board on August 1, 2010.