



NANO ONE MATERIALS CORP.

**MANAGEMENT DISCUSSION AND ANALYSIS
FOR THE YEAR ENDED DECEMBER 31, 2016**

MANAGEMENT DISCUSSION AND ANALYSIS

This Management Discussion and Analysis (“MD&A”) provides a detailed analysis of the business of Nano One Materials Corp. (“Nano One” or the “Company”) and compares the Company’s 2016 financial results with those of the previous years. This MD&A should be read in conjunction with the Company’s audited financial statements and the related notes for the year ended December 31, 2016 which have been prepared under International Financial Reporting Standards (“IFRS”).

These and additional documents are for viewing on SEDAR at www.sedar.com. All financial information in this MD&A has been prepared in accordance with IFRS. All dollar amounts included therein and in the following MD&A are in Canadian dollars, the reporting and functional currency of the Company, except where noted. The MD&A contains information up to and including April 20, 2017 (the “Report Date”).

FORWARD LOOKING STATEMENTS

Certain statements contained in this MD&A may constitute “forward-looking statements”. Such term is defined in applicable securities laws. The forward-looking information includes, without limitation, the success of research and development activities and other similar statements concerning anticipated future events, conditions or results that are not historical facts. These statements reflect management’s current estimates, beliefs, intentions and expectations; they are not guarantees of future performance. The Company cautions that all forward-looking information is inherently uncertain and that actual performance may be affected by a number of material factors, many of which are beyond the Company’s control. Such factors include, among others, risks relating to research and development; the Company’s intellectual property applications being approved, the Company’s ability to protect its proprietary rights from unauthorized use or disclosure, the ability of the Company to obtain additional financing; the Company’s limited operating history; the need to comply with environmental and governmental regulations; fluctuations in currency exchange rates; operating hazards and risks; competition; and other risks and uncertainties. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. Accordingly, actual future events, conditions and results may differ materially from the estimates, beliefs, intentions and expectations expressed or implied in the forward-looking information. All statements are made as of the Report Date and, except as required by law, the Company is under no obligation to update or alter any forward-looking information.

OVERVIEW

The Company is engaged in developing novel, scalable and low-cost processing technology for the production of high performance nano-structured materials. Nano One’s mission is to establish its patent pending technology as a leading platform for the global production of a new generation of nano-structured composite materials. Nano One is building a portfolio of intellectual property and technology “know-how” for applications in markets that include energy storage, specialty ceramics, pharmaceutical, semiconductors, aerospace, dental, catalysts and communications. The technology simplifies the assembly of complex formulations of organic and inorganic ceramic powders and is suited to growth markets where the commercialization of advanced materials is inhibited by costly and entrenched industrial fabrication methods. Nano One’s first market is lithium ion cathode materials in the energy storage sector, where its advantageous technology can bring sustainable differentiation and value to early adopters. Nano One trades on the TSX Venture Exchange under the symbol “NNO”, Frankfurt Stock Exchange under the symbol “LBMB” and the OTC under the symbol “NNOMF”.

OVERALL PERFORMANCE

Corporate

During the year, the Company amended the terms of 12,396,283 outstanding warrants issued in connection with a reverse takeover and private placement announced as follows:

- 1,253,334 warrants with an original exercise price of \$0.35 per share until February 26, 2016 are now exercisable at \$0.30 per share until April 15, 2016;
- 5,142,949 warrants with an original exercise price of \$0.40 per share until March 5, 2016 and thereafter until March 5, 2017 into one-half of one (1/2) share at an exercise price of \$0.50 per whole share are now exercisable at \$0.30 per share until April 15, 2016 and thereafter until March 5, 2017 into one-half of one (1/2) share at an exercise price of \$0.50 per whole share; and
- 6,000,000 warrants with an original exercise price of \$0.40 per share until March 5, 2016 and thereafter until March 5, 2017 at \$0.50 per share are now exercisable at \$0.30 per share until April 15, 2016 and thereafter until March 5, 2017 at \$0.50 per share.

During the year, Joe Lowry joined Nano One as a strategic advisor to the Company. Mr. Lowry has worked for top lithium producers in the US, Japan and China, and has extensive worldwide market experience, a large contact base and a good pulse on the lithium market. Mr. Lowry is widely respected and known as one of the world's experts in the lithium sector. After a two-decade tenure working in senior positions in leading international lithium companies, Mr. Lowry formed Global Lithium LLC as an advisory firm in 2012. Global Lithium LLC has been successfully supporting lithium producers, users, investors, hedge funds and governments. Mr. Lowry has developed an extensive network of contacts over four continents representing the entire lithium supply chain, including cathode manufacturers, products resulting therefrom and regulatory agencies.

During the year, the Financial Industry Regulatory Authority of the United States cleared Nano One's Form 211 application for a quotation on OTC Link. As such, the common shares of Nano One now trade under the new U.S. symbol "NNOMF".

Operations

The Company has no revenues, so its ability to ensure continuing operations depends upon its ability to obtain necessary financing to complete the development of novel, scalable and low-cost processing technology for the production of high performance nano-structured materials.

Nano One's innovative processing technology can be used to produce materials used in a wide range of markets. Nano One's first addressable market is cathode materials of lithium ion rechargeable batteries for electric vehicles (EV) and energy storage systems (ESS). There is growing demand in the lithium ion battery market for more cost effective and higher performance energy storage solutions. Nano One is well positioned to address these needs with its patented and patent pending technology and sees growth potential for the technology in many other materials markets that include energy storage, dental, catalysts, specialty ceramics, pharmaceutical, semiconductors, agriculture, aerospace and communications.

The electric vehicle ("EV") market, a major driver of the requirements for lithium ion battery cathode materials, have largely settled on variations of lithium mixed metal oxides, such as lithium nickel manganese cobalt oxide ("NMC"). Lithium iron phosphate ("LFP") and similar phosphates are used in industrial vehicle applications and energy storage solutions and are also found represented in technology roadmaps of the EV industry. Nano One is currently optimizing process parameters for various cathode materials that continue to show favourable capacity and charging in test cells. Process parameters are being investigated for industrial scale operation and improvements have been made to the structural and electrochemical properties of various cathode

materials. Nano One is focusing its efforts on strategically important, cathode material chemistries as described in the table below.

A Summary of Cathode Materials		
LCO¹	Lithium Cobalt Oxide	
NMC111¹	Lithium Nickel Manganese Cobalt Oxide (NMC)	33% Ni, 33% Mn, 33% Co
NMC532¹	Nickel Rich NMC	50% Ni, 30% Mn, 20% Co
NMC811¹	Nickel Rich NMC	80% Ni, 10% Mn, 10% Co
LFP¹	Lithium Iron Phosphate	
HE-NMC¹	High Energy or Lithium Manganese Rich NMC (also called LMR-NMC, OLO-NMC, or Layered-layered NMC)	50% Mn 30% Ni 20% Co and other ratios
HV-LMNO¹	High Voltage Lithium Manganese Nickel Oxide (HV-Spinel)	75% Mn, 25% Ni
NMC442²	Nickel Rich NMC	40% Ni, 40% Mn, 20% Co
NMC622²	Nickel Rich NMC	60% Ni, 20% Mn, 20% Co
NCA¹	Lithium Nickel Cobalt Aluminate	80% Ni, 18% Co, 2% Al

¹ materials being made by Nano One

² other materials that can be made by Nano One

As summarized in the table, Nano One has produced a wide range of cathode materials that are pivotal to the evolution of EV lithium ion batteries, such as NMC111, NMC532, NMC811, HE-NMC, HV-LMNO with the flexibility to make NMC 442, NMC622, NCA and others.

LCO is popular in consumer electronic batteries while NMC, nickel rich NMC and NCA are the industry choices for electric vehicles. LFP is more common in industrial vehicle and storage applications. Nano One's NMC performs comparatively with capacities at or above 200 mAh/g (milliamp-hours per gram).

Industry is also considering nickel rich NMCs, HE-NMC and HV-LMNO cathode materials for the next generation of high energy batteries. Commercialization of these materials may require industry to adopt materials processing innovations in its efforts to optimize cost and performance. Nano One is positioning its processing technology to address these needs and has made nickel rich NMC and HE-NMC with stable capacity in the range of 240 mAh/g (milliamp-hours per gram). Furthermore, Nano One is encouraged with its preliminary work on HV-LMNO.

It is recognized that HV-LMNO has cobalt-free cost and supply chain advantages and is capable of delivering a 5V lithium ion cell with good stability from charge to charge (capacity retention) and high capacity at high rates of discharge (rate capability). Initial results of Nano One's HV-LMNO compare favourably when tested and normalized against commercial equivalents in lithium anode coin cells. Nano One's HV-LMNO has up to 12x better capacity retention than commercial equivalents. Also, the rate capability is better for Nano One's HV-LMNO when compared to commercial equivalents. For example, preliminary comparisons have shown that capacity drops by 0% versus 15-20% at 1C (1-hour discharge) and 20% versus 30-50% at 5C (12-minute discharge).

Technology

Nano One has developed a new method of producing high performance cathode materials, which uses equipment and simple methods that are known to scale in a wide range of industrial applications. The process can produce longer lasting composite materials using lower cost feedstock and simpler processing.

The process consists of three stages, and the major innovations lie in the first stage where a special mode of combining reactants controls crystal nucleation and growth of particles. Nucleation is the self-assembly of molecules into an organized structure. The desired nano-scale or superfine structure is formed in the first stage of the production cycle and eliminates many steps common to the dominant industrial processes.

In the first stage, salts or other reactants are added to an aqueous (water-based) or other solution located within a proprietary liquid phase reactor system. Nucleation occurs upon the presentation of feedstock and

takes place rapidly. The proprietary system allows for control of structural growth and reaction kinetics, with the source materials provided either from bulk or from a continuous flow preparation process. The process is suitable for operation at mild temperatures and atmospheric pressures.

This reactor stage avoids grinding, milling, classification, supercritical conditions, filtering, separation and many other steps that are used in existing industrial methods. Reactants need not be high purity, as less expensive technical grade (as opposed to battery grade) chemicals can be used to achieve a quality output. Nano One's system can accommodate, for example, carbonates, hydroxides, and acetates of lithium, cobalt, nickel and manganese graded at 98% and 99% purity. These materials are less costly and more widely available than battery grade feedstocks that are commonly used to prepare cathode materials. The reactor operates at mild temperatures and atmospheric pressures, and can be sealed for inert or other environments, allowing for a much safer and simpler laboratory and manufacturing environment. The reactor stage also avoids complexing agents, surfactants, templates, and emulsifiers that are categories of chemicals typically used to initiate nucleation and control growth of structures. Nano One avoids these chemicals and is therefore able to deliver the desired structure using simpler methods and pass them on to the second stage of drying and the third stage of firing in a furnace.

In the second stage, the reactor liquids are passed to an industrial drying system such as a spraying, freezing, evaporating, microwaving or other system.

In the third stage, dried powders are fired in a conventional furnace such as a rotary kiln, fluidized bed, plasma or other type of furnace. This final stage is known as calcination, where the dried materials are heated to 800-900°C in either an atmospheric or inert environment and are thermally decomposed into, for instance, lithium manganese oxide, steam, ammonia and/or carbon dioxide. The formation of the underlying nano-structure is completed during calcination and the resulting powder is ready for assembly into a battery cell or other application.

The underlying structure and morphology of the materials is preserved through a wide range of thermal processing steps, eliminating the need for long and repeated firings and indicative of a robust and long lasting material. The process produces materials with stable phase composition and high porosity, but which is configurable to meet a variety of density requirements.

The presence of nano-structures early in the process and prior to calcination simplifies processing and is advantageous for performance, throughput and scale-up. Characterization of the materials by electron microscope and x-ray characterizes the size, the composition and the kind of structure, providing evidence of a robust structure that withstands the rigours of drying and calcination and maintains the integrity of its advantageous structure through thousands of charge cycles.

This innovative approach can reduce the complexity and cost of materials production, through lower cost feedstock and fewer steps, while providing nanostructured materials with superior performance characteristics. The reactor, drying and calcination stages can be easily integrated to enable materials to flow from start to finish in a continuous manner and under controlled environmental conditions. In this way, Nano One's system can be configured for many different composite materials and Nano One believes the three stage process can be rapidly scaled and configured for high volume production.

With regards to performance, Nano One materials have been assessed by Nano One, by Canada's National Research Council (NRC) and by several key undisclosed materials producers. Specifically, NRC measured electrochemical performance of LNMC out to a thousand (1000) cycles and results were similar to those measured by Nano One and another undisclosed group. NRC also tested a comparable LNMC reference material prepared by a leader in battery material science and found that Nano One material performed with approximately 20% greater capacity than the reference material. Both the Nano One and NRC results show reasonable energy capacity fading to 85% after 500 1-hour charge-discharge cycles.

With regards to raw material costs, Nano One's liquid phase reaction is tolerant of impurities, particle size irregularities and non-crystalline phases in the raw material feedstocks, enabling the use of lithium carbonate

for example, instead of battery grade lithium hydroxide for an estimated ~30% reduction in terms of dollars (\$) per kilogram (kg).

With regards to processing costs, Nano One believes it can reduce the number of manufacturing steps by 75% and reduce throughput from several days to less than a day, when compared with state of the art methodologies described in patents and literature, such as solid state, hydrothermal, co-precipitation, sol-gel, spray pyrolysis and deposition methods. The overall savings in process costs is projected to be ~40% in terms of dollars (\$) per kilogram (kg). Furthermore, improvements to the nanostructure have shown 200-300% longer lasting material that can charge faster or store more energy. Nano One believes the product of these improvements can deliver a 50% reduction in the cost of storing energy in terms of dollars (\$) per kilowatt-hour (kWh).

Typically, synthesis of nano-materials at the benchscale are performed in small quantities anywhere from milligrams to grams of material. Subsequent scale-up from these small quantities often leads to detrimental changes in thermodynamics (heat, temperature, energy, work) and reaction kinetics (reaction rates and chemical change). Nano One recognizes that synthesis of materials must begin at a larger scale where the properties of the system are much closer to production conditions. For this reason, Nano One designed a 6-liter bench scale reactor that is capable of producing up to 150 grams per hour (150 g/hr) or 3 kilograms per day (3 kg/day), with drying and firing stages easily scaled to match. At this scale, there is sufficient volume to emulate the thermodynamic and reaction kinetics expected in pilot and full-scale production.

Pilot Plant Project

Nano One initiated a demonstration pilot concepts project in September 2014 that was successfully completed in December 2015. The demonstration pilot connect project was supported by a non-repayable grant of up to \$250,000 from the National Research Council of Canada Industrial Research Assistance Program (“NRC-IRAP”). This project provided critical R&D support to Nano One and enabled Nano One to develop the conceptual design of a full scale cathode materials plant, the preliminary design of a pilot production line, and detailed control parameters for the synthesis of cathode materials as necessitated for the design of the pilot plant. Nano One grew its technical team from one to five and gained valuable insights into the process control parameter space needed to demonstrate the pilot production of LMR-NMC, Nickel rich NMC and 111 NMC cathode materials. Furthermore, preliminary synthesis of HV-Spinel provided Nano One with encouraging results. The project also generated knowledge and intellectual property that will lead to new patent filings that are 100% Canadian owned.

NRC-IRAP required that the proceeds from the grant be applied towards the optimization and design of a demonstrated pilot facility. Under the terms of the agreement, NRC-IRAP agreed to reimburse the Company for 80% of salaries paid to Company employees and 50% of supported contractor fees involved in this pilot facility. A total of \$Nil (2015 - \$243,521) was claimed by the Company during the year ending December 31, 2016.

As part of 4D LABS Jumpstart II program, Nano One was provided with ‘no-charge’ access to 4D LABS facilities, equipment and training between November 2015 – March 2016. The program was supported by NRC-IRAP and had in-kind value of approximately \$9,700. The program successfully concluded and helped Nano One improve its analytical procedures and develop deeper knowledge on a range of cathode materials.

Through collaboration with 4D LABS at Simon Fraser University (“SFU”), Nano One is using a number of analytical tools to characterize the structural properties, chemical composition, porosity, surface area and mass of Nano One’s materials.

Nano One initiated the design and construction of a pilot plant to demonstrate the scaled up production of a range of cathode materials for lithium ion batteries. The design phase of its demonstration pilot plant was completed at the end of May 2016 on budget and on schedule. The study was developed and delivered to Nano One by BC Research Inc. (“BCRI”) and its parent NORAM Engineering and Constructors Ltd. (“NORAM”).

Nano One, NORAM and BCRI entered into a collaboration agreement whereby the parties will design, procure, construct, optimize and operate a pilot production plant. The procurement and construction phase of the pilot project began on June 1, 2016 and completion of construction is scheduled in April 2017. The goal of the pilot plant is to simulate full scale production of lithium ion cathode materials, showcase Nano One's patented technology and demonstrate the cost, scalability, performance and novelty of Nano One's technology to strategic industry players. The pilot plant will be capable of producing ten (10) kilogram batches of various lithium mixed metal cathode materials that are strategically important to electric vehicle, grid storage and consumer electronic batteries.

The pilot plant project is being supported by grants of up to \$2.08M from Sustainable Development Technology Canada ("SDTC") and up to \$1.9M from the Automotive Supplier Innovation Program ("ASIP"), a program of Innovation, Science and Economic Development Canada ("ISED").

SDTC funds will be payable in installments over the build, commission and demonstration phases with a 10% holdback awarded upon completion of the project in mid-2018. The funds are dispersed at the beginning of each of three (3) phases, and are subject to Nano One meeting milestones and having matching funds in place. The Company has received the initial instalment of \$488,994 for the first phase of a lithium battery materials pilot plant project. A total of \$200,341 has been allocated as deferred government grant as at December 31, 2016.

ASIP funds will be applied to the preparation, design, construction, optimization and operation of a pilot plant. A total of \$364,201 (2015 - \$Nil) was claimed by the Company during the year ending December 31, 2016.

During the year ended December 31, 2016, Nano One was awarded support from NRC-IRAP. NRC-IRAP is supporting Nano One's project to develop High Voltage Cobalt Free Cathode Materials and will contribute up to \$222,857 in non-dilutive and non-repayable funds between June 1, 2016 and November 30, 2017. Under the terms of the agreement, NRC-IRAP has agreed to reimburse the Company for 80% of salaries paid to Company employees and 50% of supported contractor fees involved in this pilot facility. The objective of the project is to develop, optimize and demonstrate Nano One's patented processing technology for the synthesis of High Voltage Cobalt Free Cathode Material, commonly known as HV-Spinel, as a cathode material in lithium ion batteries. Under this project, Nano One will be optimizing process conditions in preparation for strategic evaluation and scaled up production in the Pilot Plant. A total of \$77,100 (2015 - \$Nil) was claimed by the Company during the year ending December 31, 2016.

The Proprietary Protection

Nano One believes that monetization of its technology is best pursued by protecting its proprietary position with patents and by pursuing a licensing strategy. This is seen as a capitally efficient means to leverage the supply chain, manufacturing, distribution and legal strengths of multinational materials producers, while allowing Nano One and its collaborators to focus on core strengths in technology development.

Nano One has now been issued three patents with only minor revisions indicating an exclusive technological position. Nano One also has related patent applications pending throughout the world with filings in Canada, the United States, Europe, China, Japan and Korea. As at the Report date, the following patents have been granted and issued to Nano One:

- U.S. Patent No. 9,136,534 entitled "*Complexometric Precursor Formulation Methodology For Industrial Production Of High Performance Fine And Ultrafine Powders And Nanopowders For Specialized Applications.*" This patent is directed to an innovative method for forming powders particularly well suited for use as a lithium ion cathode material in next generation lithium ion batteries.
- U.S. Patent No. 9,159,999 entitled "*Complexometric Precursor Formulation Methodology For Industrial Production Of Fine And Ultrafine Powders And Nanopowders Of Lithium Metal Oxides For Battery Applications*" This patent is specific to the formation of lithium metal oxides using the proprietary methods described in Nano One's U.S. Patent No. 9,136,534.

- Taiwanese Patent No. 201207152 entitled “*Complexometric Precursor Formulation Methodology for Industrial Production of Fine and Ultrafine Powders and Nanopowders of Layered Lithium Mixed Metal Oxides for Battery Applications*” This patent relates to batteries utilizing the proprietary lithium mixed metal oxides discussed in U.S. Patent No. 9,159,999. This battery patent gives Nano One intellectual property protection in a commercially significant application of its proprietary technology.

The intellectual property was developed and is wholly owned by Nano One. Nano One has filed other patent applications and may file additional patents at a later date to further strengthen its intellectual property and technology going forward, although no assurances can be given that it will be successful in such endeavours. Nano One seeks to limit disclosure of its intellectual property by requiring employees, consultants and partners with access to the technology to execute confidentiality agreements and non-competition agreements and by restricting access to PLC’s intellectual property and technology.

Despite Nano One’s efforts to protect its intellectual property and technology, unauthorized parties may attempt to copy aspects of its technology or to obtain and use information that Nano One regards as proprietary. The laws of many countries do not protect proprietary rights to the same extent as the laws of the United States or Canada. Litigation may be necessary in the future to enforce Nano One’s intellectual property rights, to protect Nano One’s trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement. Any such litigation could result in substantial costs and diversion of resources and could have a material adverse effect on Nano One’s business, operating results and financial condition. There can be no assurance that Nano One’s means of protecting its proprietary rights will be adequate or that competitors will not independently develop similar services or products. Any failure by Nano One to adequately protect its intellectual property could have a material adverse effect on its business, operating results and financial condition.

FUTURE PLANS

Nano One will continue to develop, optimize and demonstrate the benefits of producing various cathode materials using it’s processing technology, for use in lithium ion batteries. Nano One will continue to develop High Voltage Cobalt Free Cathode Materials with the support of NRC-IRAP approved funding of up to \$222,857 towards further development.

Nano One will continue to collaborate with NORAM and BCRI to design, build and operate the 10-kilogram per day pilot plant to demonstrate the production of lithium ion battery cathode powders. The engineering design and specifications of equipment follow from commercial scale concepts developed by Nano One and NORAM. SDTC has approved up to \$2.08M and ASIP has approved up to \$1.9M in funding towards the procurement, building, commissioning, and operation of the pilot plant. Nano One is on budget, has completed procurement of the equipment and will have construction substantially complete in April 2017 with commissioning underway by May 2017.

As of the Report Date, all critical components of Nano One’s pilot plant are in place and in the final stages of assembly at its demonstration facility. The final stages of interconnection, plumbing and wiring are underway on the pilot plant reactors, dryer, furnace and the balance of plant equipment needed for water, utilities and recirculation. Commissioning will occur in Q2 2017 with preliminary output and optimization of cathode materials to follow.

Nano One intends to hire co-op students, chemists, engineers and project managers to support materials development and scale-up efforts. Furthermore, test cell assembly and electrochemical characterization capabilities need to be ramped up to meet internal testing requirements. Nano One will also continue the evaluation of other next generation lithium-ion battery materials as dictated by commercial interests.

Nano One has collaborated with Simon Fraser University to advance the understanding of the physical and chemical characteristics of lithium ion batteries as they charge and discharge. The two-year collaboration with SFU will be supervised by Associate Professor Dr. Byron Gates and Dr. Campbell, with financial support from the Mitacs Elevate Postdoctoral Fellowship Program.

Nano One intends to leverage progress on these plans and approach potential strategic interests and key market pull players to collaborate as partners in the demonstration pilot.

SUMMARY OF ANNUAL AND QUARTERLY RESULTS

The following table sets out selected historical financial information of Nano One. Such information is derived from the audited financial statement of Nano One. The Company's annual financial statements are prepared in accordance with IFRS and are expressed, in Canadian dollars.

	December 31, 2016 \$	December 31, 2015 \$	December 31, 2014 \$
Loss and comprehensive loss	(2,542,558)	(4,614,203)	(652,717)
Net loss per share, basic and fully diluted	(0.05)	(0.11)	(0.03)
Total assets	4,147,838	1,597,599	385,809
Total liabilities	657,726	147,465	115,128
Shareholders' equity	3,490,112	1,450,134	270,681

The following table sets out selected quarterly financial information derived from the Company's unaudited condensed interim financial statements, for each of the eight recently completed quarters, which have been prepared in accordance with IFRS. This requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

Period	Interest and other items \$	General admin \$	Share-based payment \$	Loss for the period \$	Net loss per share, basic and fully diluted \$
December 31, 2016	4,130	(42,498)	(193,495)	(231,863)	(0.004)
September 30, 2016	4,890	(421,150)	(232,095)	(648,355)	(0.01)
June 30, 2016	1,142	(997,812)	(31,347)	(1,028,017)	(0.02)
March 31, 2016	1,808	(485,482)	(150,649)	(634,323)	(0.01)
December 31, 2015	5,927	(511,788)	(107,513)	(613,374)	(0.01)
September 30, 2015	27	(299,021)	(177,549)	(476,543)	(0.01)
June 30, 2015	1,861	(300,889)	(25,295)	(324,323)	(0.01)
March 31, 2015	(2,556,452)	(268,268)	(375,243)	(3,199,963)	(0.10)

RESULTS OF OPERATIONS

Year Ended December 31, 2016 Compared To Year Ended December 31, 2015

Loss and comprehensive loss for the year ended December 31, 2016 decreased by \$2,071,645. The change was primarily due to the following:

- General and administrative costs of \$1,946,942 (2015 - \$1,379,966) increasing as follows:
 - Research and development increased by \$339,927 primarily due to the Company completing the design phase of a pilot plant and initiating the procurement and construction phase of the pilot plant during the 2016 year.
 - NRC-IRAP grant of \$77,100 (2015 - \$243,251) was claimed by the Company during the year ending December 31, 2016 and was a reduction to research and development costs;
 - SDTC grant of \$200,341 was allocated during the year ended December 31, 2016 as a reduction to research and development costs;

- ASIP grant of \$364,201 was claimed by the Company during the year ending December 31, 2016 and was a reduction to research and development costs;
- During the year ended December 31, 2016, the Company received \$98,661 (2015 – \$Nil) from the Scientific Research and Experimental Development (SR&ED) Program;
- Filing and regulatory fees, and professional fees decreased by \$53,089 and \$89,955, respectively, primarily due to the work related to the 2015 reverse takeover;
- Consulting increased by \$45,728 primarily due to consulting fee paid to the Chairman for consulting services provided to the Company in relations to corporate development, fees paid to a consultant in connection with the grant applications and consulting services provided by a strategic advisor, Mr. Joe Lowry; and
- Shareholder communication and investor relations increased by \$283,103 primarily due to an increase in updates to the shareholder community.
- The transaction costs relating to the 2015 RTO plus the aggregate of the fair value of the consideration paid and the net liabilities acquired has been recognized as listing expenses of \$2,556,808, in the statement of loss and comprehensive loss.
- The Company recorded a non-cash share-based payment of \$607,586 (2015 - \$685,600).

Three Months Ended December 31, 2016 Compared To Three Months Ended December 31, 2015

Loss and comprehensive loss for the period ended December 31, 2016 decreased by \$381,511. The change was primarily due to the following:

- General and administrative costs of \$42,498 (2014 - \$511,788) decreasing as follows:
 - NRC-IRAP grant of \$39,065 was claimed by the Company during the period ending December 31, 2016 and was a reduction to research and development costs;
 - ASIP grant of \$364,201 was claimed by the Company during the period ended December 31, 2016 and was a reduction to research and development costs;
 - SDTC grant of \$137,624 was allocated during the period ended December 31, 2016 as a reduction to research and development costs;
 - Filing and regulatory fees decreased by \$89,302 primarily due to the work related to the 2015 reverse takeover.
 - Rent decreased by \$8,535 primarily due to the corporate office relocating and receiving two months free rent;
 - Professional fees decreased by \$48,042 primarily due to the work related to the 2015 reverse takeover;
 - Research and development decreased by \$267,903 due to the receipt of the grant funds. Research and development activities have increased with the Company initiating the procurement and construction phase of the pilot plant;
 - Office and general, and salary and benefits increased by 16,793, and \$2,592, respectively, due to the move of the corporate office and lab and the increase in Company activity resulting in hiring additional staff; and
 - The Company recorded a non-cash share-based payment of \$193,495 (2015 - \$107,513).

Research and Development Expense For The Fiscal Year Ended December 31, 2016 Compared To December 31, 2015:

	Year Ended December 31, 2016	Year Ended December 31, 2015
Analytical services	\$ 357,879	\$ 44,240
Consulting	357,186	117,840
Depreciation	45,072	42,855
Government grant recovery	(828,615)	(243,521)
Lab rent	45,304	32,874
Office and lab expense	199,478	74,388
Salaries and benefits related to R&D	506,316	276,668
Travel	8,143	5,492
	<u>\$ 690,763</u>	<u>\$ 350,836</u>

LIQUIDITY

The Company started 2016 with a working capital of \$1,249,321, and as at December 31, 2016, the Company had working capital of \$2,342,719. The increase in the working capital of \$1,093,398 was primarily due to:

- completion of two non-brokered private placements of 2,649,583 common shares of the Company for gross proceeds of \$823,000;
- 450,000 stock options were exercised for gross proceeds of \$110,500;
- 10,026,352 common shares were issued from the exercise of warrants for gross proceeds of \$3,048,528;
- IRAP grants received totalling \$77,100;
- SDTC grant received totalling \$488,994, of which \$200,341 was allocated to deferred government grant;
- ASIP grants have been claimed totalling \$364,201;
- general and administrative costs of \$1,946,942;
- received \$98,661 (2015 – \$Nil) from the Scientific Research and Experimental Development (SR&ED) Program. SR&ED is a federal tax incentive program designed to encourage Canadian businesses of all sizes and in all sectors to conduct research and development in Canada; and
- purchase of equipment and pilot plant assets totalling \$1,002,738.

Recent developments in the capital markets have restricted access to debt and equity financing for many companies. As the Company has no significant income, cash balances will continue to decline as the Company utilizes these funds to conduct its operations, unless replenished by capital fundraising. Management believes the Company has sufficient working capital to maintain its operations for the upcoming year.

	December 31, 2016	December 31, 2015
Working capital	\$ 2,342,719	\$ 1,249,321
Deficit	(10,066,911)	(7,524,353)

CAPITAL RESOURCES

The Company has not yet realized profitable operations and it has relied on non-operational sources of financing to fund operations. The ability of the Company to achieve its objectives, meet its ongoing obligations and recover its investments in granted and pending patents, and other assets will depend on management's

ability to successfully execute its business plan, achieve profitable operations and obtain additional financing, if or when required. There is no assurance that these initiatives will be successful.

RELATED PARTY DISCLOSURES

Key management personnel are the persons responsible for the planning, directing and controlling the activities of the Company and includes both executive and non-executive directors, and entities controlled by such persons. The Company considers all Directors and Officers of the Company to be key management personnel.

The following transactions were carried out with related parties:

(a) Purchases of services

	December 31, 2016 \$	December 31, 2015 \$
Ellis Street Consulting, an entity controlled by John Lando, an executive director, for consulting fees	-	40,000
Bedrock Capital Corp., an entity controlled by Paul Matysek, an executive director, for consulting fees	60,000	45,000
Center Cut Capital, an entity controlled by John Lando, an executive director, for employee benefits	23,853	8,016
Sterling Pacific Capital, an entity controlled by John Lando, an executive director, for miscellaneous operating expenses	9,315	1,527
	93,168	94,543

(b) Key management compensation

Key management includes directors (executive and non-executive), and officers of the Company. The compensation paid or payable to key management for employee services is shown below:

	December 31, 2016 \$	December 31, 2015 \$
Salary and benefits to the CFO	72,000	82,056
Salary and benefits to the President and Director	75,000	42,629
Salary and benefits to the CEO and Director	125,000	137,431
Share-based payments to officers and directors	62,367	588,882
	334,367	850,998

(c) Accounts payable to related parties

As at December 31, 2016, accounts payable to related parties consisted of \$7,650 (2015 - \$Nil) owing to a director and a company controlled by an officer of the Company.

OUTSTANDING SHARE DATA

The authorized share capital of the Company is unlimited common shares, without par value. As at the Report Date, there were 59,614,314 (December 31, 2015 – 44,793,599) common shares outstanding.

As at December 31, 2016, 2,898,861 (December 31, 2015 – 4,831,436) of the Company's issued common shares were held in escrow and restricted from trading. These trading restrictions expire as follows:

March 5, 2017	966,287 (released as of the Report Date)
September 5, 2017	966,287
March 5, 2018	966,287
	<u>2,898,861</u>

Changes in issued share capital and equity reserves for the year ended December 31, 2016 were as follows:

- 350,000 stock options with an exercise price of \$0.25 were exercised for gross proceeds of \$87,500. Accordingly, \$69,294 was transferred from equity reserves to share capital.
- 100,000 stock options with an exercise price of \$0.23 were exercised for gross proceeds of \$23,000. Accordingly, \$4,831 was transferred from equity reserves to share capital.
- 2,914,902 warrants with an exercise price of \$0.30 were exercised for gross proceeds of \$874,470. Accordingly, \$653,478 was transferred from equity reserves to share capital.
- 6,908,334 warrants with an exercise price of \$0.30 were exercised for gross proceeds of \$2,072,500.
- 75,633 warrants exercisable into 37,816 common shares at an exercise price of \$0.50 per share were exercised for gross proceeds of \$18,908. Accordingly, \$16,934 was transferred from equity reserves to share capital.
- 165,300 finders' warrants with an exercise price of \$0.50 were exercised for gross proceeds of \$82,650. Accordingly, \$33,274 was transferred from equity reserves to share capital.
- The Company completed a non-brokered private placement of 1,243,333 common shares of the Company at a price of \$0.30 per share for gross proceeds of \$373,000.
- The Company completed a non-brokered private placement of 1,406,250 common shares of the Company at a price of \$0.32 per share for gross proceeds of \$450,000.

Changes in issued share capital and equity reserves for the fiscal year ended December 31, 2015 were as follows:

- On March 5, 2015, the Company consolidated the existing 34,282,051 common shares into 27,425,650 common shares as part of the Transaction.
- On March 5, 2015, the Company issued 5,142,949 common shares as part of the Transaction.
- Pursuant to the Transaction, the Company issued 225,000 common shares as consideration for the finder fee. The total \$56,250 fair value of these shares, estimated at \$0.25 per common share, was recorded as a cost of the Transaction.
- The Company completed a financing (the "Financing") of 12,000,000 units at \$0.25 per unit for gross proceeds of \$3,000,000. Each unit consists of one share and one-half of a share purchase warrant. Each whole warrant is exercisable until March 5, 2016 to acquire one share at an exercise price of \$0.40 per share and thereafter until March 5, 2017 at \$0.50 per share. The Company engaged Mackie to act as the lead agent to the Financing. As consideration, the Company paid to Mackie and several other agents a commission of \$195,000 and issued 780,000 finders' warrants with a value of \$157,000. Each finders' warrant is exercisable until March 5, 2016 to acquire one share at an exercise price of \$0.40 per share and thereafter until March 5, 2017 at \$0.50 per share.

Events after December 31, 2016:

1. The Company issued 595,096 common shares pursuant to the exercise of Finder's Warrants at \$0.50 for gross proceeds of \$297,548.
2. The Company issued 1,099,684 common shares pursuant to the exercise of warrants at \$0.50 for gross proceeds of \$549,842.
3. The Company granted 147,500 stock options at \$0.70 per share expiring March 10, 2022.

As at the Report Date, the following stock options were outstanding:

Number of Options	Exercise Price \$	Expiry Date
2,825,000	0.25	March 5, 2020
100,000	0.25	December 1, 2020
225,000	0.25	January 19, 2021
1,050,000	0.35	February 25, 2021
100,000	0.38	April 8, 2021
50,000	0.50	September 13, 2021
100,000	0.53	May 11, 2021
147,500	0.70	March 10, 2022
4,597,500		

As at the Report Date there were not warrants outstanding.

MANAGEMENT OF CAPITAL

The Company's objective when managing capital is to safeguard its ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain optimal capital structure to reduce to the cost of capital. The Company's capital is composed of equity in the statement of financial position.

The Company is not subject to externally imposed capital requirements. In managing capital structure, the company manages its capital through regular reports to the Board of Directors, as well as management review of monthly or quarterly financial information. The Company issues new equity financing as needed and available. Additional information relating to capital management is given in the nature and continuance of operations in note 1 of the financial statements.

FINANCIAL INSTRUMENTS

The Company is exposed to various financial instrument risks and assesses the impact and likelihood of this exposure. These risks include liquidity, credit, currency, interest rate, and price risks. Where material, these risks are reviewed and monitored by the Board of Directors.

Liquidity Risk

Liquidity risk is the risk that the Company will not be able to meet its obligations associated with its financial liabilities. The Company has historically relied upon equity financings to satisfy its capital requirements and will continue to depend heavily upon equity capital and possible loans to finance its activities. The Company manages liquidity risk through its capital management as outlined above. Accounts payable and accrued liabilities are due within one year.

Credit Risk

Credit risk is the risk of potential loss to the Company if the counterparty to a financial instrument fails to meet its contractual obligations. The Company's credit risk is primarily attributable to its liquid financial assets including cash and receivables. The Company limits exposure to credit risk on liquid financial assets through maintaining its cash with high-credit quality financial institutions.

The majority of the Company's cash is held with major Canadian based financial institutions.

Interest Rate Risk

Interest rate risk is the risk that the fair value of future cash flows of a financial instrument will fluctuate due to changes in market interest rates. Current cash is generally not exposed to interest rate risk because of their short-term maturity.

Price Risk

The Company is exposed to price risk with respect to equity prices. Equity price risk is defined as the potential adverse impact on the Company's earnings due to movements in individual equity prices. The Company closely monitors the individual equity movements to determine the appropriate course of action to be taken by the Company.

Based on management's knowledge and experience of the financial markets, management does not believe that the Company's current financial instruments will be affected by interest rate risk, currency risk and credit risk.

Fair Value

The Company classifies its fair value measurements in accordance with the three-level fair value hierarchy as follows:

- Level 1 – Unadjusted quoted prices in active markets for identical assets or liabilities;
- Level 2 – Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly; and
- Level 3 – Inputs that are not based on observable market data.

The fair values of cash is based on level 1 of the fair value hierarchy.

Financial Assets

The estimated fair value of financial assets is equal to their carrying values due to the short-term nature of these instruments. The Company's financial assets were held in the following currencies:

Stated in Canadian Dollars

December 31, 2016

Carrying Value	Canadian Dollar	US Dollar	Total
Cash	245,735	3,804	249,539
Cash equivalents	2,189,705	-	2,189,705
Cash and cash equivalents	2,435,440	3,804	2,439,244
Receivables	483,131	-	483,131

Stated in Canadian Dollars

December 31, 2015

Carrying Value	Canadian Dollar	US Dollar	Total
Cash	84,749	4,022	88,771
Cash equivalents	1,227,735	-	1,227,735
Cash and cash equivalents	1,312,484	4,022	1,316,506
Receivables	63,855	-	63,855

Financial Liabilities

The estimated fair value of financial liabilities is equal to their carrying values due to the short-term nature of these instruments. The Company's financial liabilities were held in the following currencies:

Stated in Canadian Dollars

December 31, 2016

Carrying Value	Canadian Dollar	US Dollar	Total
Accounts payable and accrued liabilities	442,725	7,010	449,735
Accounts payable to related parties	7,650	-	7,650
Deferred government grant	200,341	-	200,341

Stated in Canadian Dollars

December 31, 2015

Carrying Value	Canadian Dollar	US Dollar	Total
Accounts payable and accrued liabilities	95,740	51,725	147,465
Accounts payable to related parties	-	-	-
Deferred government grant	-	-	-

RISK AND UNCERTAINTIES

Risk is inherent in all business activities and cannot be entirely eliminated. Our goal is to enable the Company's business processes and opportunities by ensuring that the risks arising from our business activities, the markets and political environments in which we operate is mitigated. The risks and uncertainties described in this section are considered by management to be the most important in the context of the Company's business. The risks and uncertainties described are not inclusive of all the risks and uncertainties the Company may be subject to and other risks may apply.

Intellectual Property Protection

The Company cannot provide any assurance that any intellectual property applications will be approved. Even if they are approved, such patents, trademarks or other intellectual property registrations may be successfully challenged by others or invalidated. The success of the Company and its ability to compete are substantially dependent on its internally developed technologies and processes which the Company will need to protect through a combination of patent, copyright, trade secret and trademark law.

The trademark, copyright and trade secret positions of the Company's business are uncertain and involve complex and evolving legal and factual questions. In addition, there can be no assurance that competitors will not seek to apply for and obtain trademarks and trade names that will prevent, limit or interfere with the Company's processes. Litigation or regulatory proceedings, which could result in substantial cost and uncertainty to the Company, may also be necessary to enforce the intellectual property rights of the Company or to determine the scope and validity of other parties' proprietary rights. There can be no assurance that the Company will have the financial resources to defend its patents, trademarks and copyrights from infringement or claims of invalidity.

The patent positions of emerging companies can be highly uncertain and involve complex legal and factual questions. Thus, there can be no assurance that any patent applications made by or on behalf of the Company will result in the issuance of patents, that the Company will develop additional proprietary products that are patentable, that any patents issued or licensed to the Company will provide the Company with any competitive advantages or will not be challenged by any third parties, that the patents of others will not impede the ability of the Company to do business or that third parties will not be able to circumvent the patents assigned or licensed to the Company. Furthermore, there can be no assurance that others will not independently develop similar products, duplicate any of the Company's products or, if patents are issued and licensed to the Company, design around the patented product developed for the benefit of the Company.

Since patent applications are maintained in secrecy for a period of time after filing, and since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, the Company cannot be certain that the inventors of the patents were the first creators of inventions covered by pending applications, or that it was the first to file patent applications for such inventions. There can be no assurance that the Company's patents, if issued, would be valid or enforceable by a court or that a competitor's technology or product would be found to infringe such patents.

The Company is not currently aware of any claims asserted by third parties that the Company's intellectual property infringes on their intellectual property. However, in the future, a third party may assert a claim that the Company infringes on their intellectual property. If the Company is forced to defend against these claims, which may be with or without any merit or whether they are resolved in favour or against the Company, the Company may face costly litigation and diversion of management's attention and resources. As a result of such a dispute, the Company may have to develop costly non-infringement technology or enter into license agreements which may not be available at favourable terms.

Access to Proprietary Information

The Company generally controls access to and distribution of its technologies, documentation and other proprietary information. Despite efforts by the Company to protect its proprietary rights from unauthorized use or disclosure, parties may attempt to disclose, obtain or use its solutions or technologies. There can be no assurance that the steps the Company has taken or will be taking will prevent misappropriation of its solutions or technologies, particularly in foreign countries where laws or law enforcement practices may not protect proprietary rights as fully as in Canada or the United States.

Performance and Scalability

The Company does not currently have the inventory or the capacity to supply kilograms of cathode material that are typically required to prototype full size battery cells. To address this shortcoming, and to meet these needs prior to the prototype pilot line becoming operational, the Company intends to modify its current bench scale apparatus to produce kg sized batches which can be used in full cell battery testing.

The innovative methodology is based on scalable equipment and techniques already proven in other industrial processes, thereby de-risking scale-up uncertainties and cutting years off of the development cycle that other projects have to endure. The equipment being used is known to scale in other industries and the bench-scale synthesis operates in a thermodynamic and kinematic regime similar to what is expected in larger scale pilot and production facilities. Nonetheless, reaction kinetics, thermodynamic effects, consistency of product, capital costs and operating costs are all uncertainties in scaling from bench to pilot to production. To address

uncertainties related to the design and cost of reactors, driers and furnaces, design reviews (or feasibility studies) will be carried out as required to mitigate uncertainties. Alternative schemes will be contemplated and the results of these studies are to inform the detail design, development and scale-up plans. The success of the Company and its ability to compete are substantially dependent on its internally developed technologies.

Competition

Despite efforts by the Company to protect its proprietary rights on which the Company's business is dependent, competitive products may be developed in the future. Competition could adversely affect the Company's ability to acquire market share.

Early Stage

The Company has no history of profitable operations and its present business is at an early stage. As such, the Company is subject to many risks including under-capitalization, cash shortages, and limitations with respect to personnel, financial and other resources and the lack of revenue. There is no assurance that the Company will be successful in achieving a return on shareholders' investment and the likelihood of success must be considered in light of its early stage of operations.

The Company currently has no source of revenue and expects to obtain financing in the future primarily through further equity and/or debt financing. While it has been successful in obtaining financing in the past, there is no guarantee that the Company will be successful now, or in the future. Failure to raise additional financing on a timely basis could cause the Company to suspend its operations and eventually to forfeit or sell its interest in its assets.

Management of Growth

The Company could experience growth that could put a significant strain on each of the Company's managerial, operational and financial resources. The Company must implement and constantly improve its operational and financial systems and expand, train and manage its employee base to manage growth. In addition, the Company expects that its operational and management systems will face increased strain as a result of the expansion of the Company's technologies. The Company might not be able to effectively manage the expansion of its operations and systems, and its procedures and controls might not be adequate to support its operations. In addition, management might not be able to make and execute decisions rapidly enough to exploit market opportunities for the expansion of the Company's technologies. If the Company is unable to manage its growth effectively, its business, results of operations and financial condition will suffer. Failure to effectively manage growth could also result in difficulty in launching new processing technology or enhancing existing processing technology, declines in quality or end-user satisfaction, increases in costs or other operational difficulties, and any of these difficulties could have a material adverse effect on its business, prospects, financial condition, results of operations and cash flows.

Dependence on Management and Key Personnel

The Company's success depends largely upon the continued services of its executive officers and other key employees. From time to time, there may be changes in the Company's executive management team resulting from the hiring or departure of executives, which could disrupt its business. If the Company is unable to attract and retain top talents, its ability to compete may be harmed. The Company's success is also highly dependent on its continuing ability to identify, hire, train, retain and motivate highly qualified personnel. Competition for highly skilled technical, research and development, management, sales and other employees is high in the Company's industry, and the Company may not be successful in attracting and retaining such personnel. Failure to attract and retain qualified executive officers and other key employees could have a material adverse effect on its business, prospects, financial condition, results of operations and cash flows.

Economic Conditions

Current and future unfavourable economic conditions could negatively impact the Company's financial viability. Unfavourable economic conditions could also increase the Company's financing costs, decrease net income or increase net loss, limit access to capital markets and negatively impact any of the availability of credit facilities to the Company.

Additional Capital Requirements

The Company has incurred annual losses over a number of years and it plans on continuing to make significant expenditures to support its business growth and may require additional funds to respond to business challenges, including the need to expand sales and marketing activities, develop new processing technologies to enhance its existing technology, enhance its operating infrastructure, and acquire complementary businesses and technologies. Accordingly, the Company may need to engage in equity or debt financings to secure additional funds. If the Company raises additional funds through further issuances of equity or convertible debt securities, the Company's existing shareholders could suffer significant dilution, and any new equity securities the Company issues could have rights, preferences and privileges superior to those of holders of the Company Shares. Any debt financing secured by the Company in the future could involve restrictive covenants relating to its capital raising activities and other financial and operational matters, which might make it more difficult for it to obtain additional capital and to pursue business opportunities.

The Company can provide no assurance that sufficient debt or equity financing will be available on reasonable terms or at all to support its business growth and to respond to business challenges and failure to obtain sufficient debt or equity financing when required could have a material adverse effect on its business, prospects, financial condition, results of operations and cash flows.

The Company expects its cash reserves will be reduced due to future operating losses and working capital requirements, and it cannot provide certainty as to how long the Company's cash reserves will last or that it will be able to access additional capital when necessary.

The Company expects to incur continued losses and generate negative cash flow until it can produce sufficient revenues to cover its costs. The Company may never become profitable. Even if it does achieve profitability, the Company may be unable to sustain or increase its profitability in the future. For the reasons discussed in more detail below, there are substantial uncertainties associated with the Company achieving and sustaining profitability. the Company expects its cash reserves will be reduced due to future operating losses and working capital requirements, and it cannot provide certainty as to how long its cash reserves will last or that it will be able to access additional capital if and when necessary.

The Company may not be able to successfully execute its business plan

The execution of the Company's business plan poses many challenges and is based on a number of assumptions. the Company may not be able to successfully execute its business plan. If the Company experiences significant cost overruns on its programs, or if its business plan is more costly than it anticipates, certain research and development activities may be delayed or eliminated, resulting in changes or delays to its commercialization plans, or the Company may be compelled to secure additional funding (which may or may not be available) to execute its business plan. the Company cannot predict with certainty its future revenues or results from its operations. If the assumptions on which its revenues or expenditures forecasts are based change, the benefits of the Company's business plan may change as well. In addition, the Company may consider expanding its business beyond what is currently contemplated in its business plan. Depending on the financing requirements of a potential acquisition or new product opportunity, the Company may be required to raise additional capital through the issuance of equity or debt. If the Company is unable to raise additional capital on acceptable terms, it may be unable to pursue a potential acquisition or new product opportunity.

Information Technology Interruptions or Breaches

The Company's business operations are managed through a variety of information technology systems. These systems govern all aspects of its operations. While the Company has implemented a number of measures to keep its technology systems fully operational and to mitigate the risks associated with a failure of its systems, the Company's systems are subject to damage or interruption from power outages, computer and telecommunications failures, computer viruses, cyber-attacks, security breaches, catastrophic events such as fires, floods, earthquakes, tornadoes, hurricanes, acts of war or terrorism, and usage errors by its employees. If the Company's information technology systems are damaged or cease to function properly, the Company may have to make a significant investment to fix or replace them and the Company may suffer loss of critical data and interruptions or delays in its operations in the interim. Any material interruption in its information technology systems could have a material adverse effect on the Company's business, prospects, financial condition, results of operations and cash flows.

Environmental Regulation

The Company's business and operations are subject to environmental regulation in the areas in which it operates. There is no assurance that future changes in environmental regulation, if any, will not adversely affect the Company's business and operations.

Conflicts of Interest

Certain of the directors, officers and other members of management of the Company serve (and may in the future serve) as directors, officers and members of management of other companies and therefore, it is possible that a conflict may arise between their duties as a director, officer or member of management of the Company and their duties as a director, officer or member of management of such other companies. The directors and officers of the Company are aware of the existence of laws governing accountability of directors and officers for corporate opportunity and requiring disclosures by directors of conflicts of interest and the Company will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors or officers. All such conflicts will be disclosed by such directors or officers in accordance with the BCBCA and they will govern themselves in respect thereof to the best of their ability in accordance with the obligations imposed upon them by law.

CHANGES IN ACCOUNTING POLICIES AND CRITICAL ACCOUNTING ESTIMATES

Critical judgments and sources of estimation uncertainty

The preparation of the financial statements requires management to make certain estimates, judgments and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statement and reported amounts of expenses during the reporting period. Actual outcomes could differ from these estimates. The financial statements include estimates which, by their nature, are uncertain. The impact of such estimates are pervasive throughout the financial statement, and may require accounting adjustments based on future occurrences. Revisions to accounting estimates are recognized in the period in which the estimate is revised and future periods if the revision affects both current and future periods. These estimates are based on historical experience, current and future economic conditions and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

Critical accounting estimates

Significant assumptions about the future and other sources of estimation uncertainty that management has made at the financial position reporting date, that could result in a material adjustment to the carrying amounts of assets and liabilities, in the event that actual results differ from assumptions made, relate to, but are not limited to, the following:

1. the inputs used in the accounting for share-based payments expense in the statements of comprehensive loss; and

2. the inputs used in the accounting for finders' warrants in share capital.

Critical accounting judgments

The following are key assumptions concerning the future and other key sources of estimation uncertainty that have significant risk of resulting in a material adjustment to the carrying amounts of assets and liabilities within the next financial year:

1. going concern of operations;
2. determining whether or not development costs meet the criteria to be capitalized; and
3. determining the provisions for income taxes and the recognition of deferred income taxes.

STANDARDS AND AMENDMENTS NOT YET EFFECTIVE

The following standard has been issued but is not yet effective:

IFRS 9 Financial Instruments is part of the IASB's wider project to replace IAS 39 Financial Instruments: Recognition and Measurement. IFRS 9 retains but simplifies the mixed measurement model and establishes two primary measurement categories for financial assets: amortized cost and fair value. The basis of classification depends on the entity's business model and the contractual cash flow characteristics of the financial asset. The standard is effective for annual periods beginning on or after January 1, 2018.

IFRS 15 Revenue from Contracts with Customers is a new standard which establishes a new five-step model for revenue arising from contracts with customers. Revenue is recognized as the amount that reflects the consideration to which any entity expects to be entitled to in exchange for transferring goods or services to a customer. IFRS 15 is effective for periods beginning on or after January 1, 2018.

IFRS 16 is a new standard that sets out the principles for recognition, measurement, presentation, and disclosure of leases including guidance for both parties to a contract, the lessee and the lessor. The new standard eliminates the classification of leases as either operating or finance leases as is required by IAS 17 and instead introduces a single lessee accounting model. The standard is effective for annual periods beginning on or after January 1, 2019.

The Company has not yet completed the process of assessing the impact these standards will have on its financial statements. There are no other standards or IFRIC interpretations that are not yet effective that would be expected to have a material impact on the Company.

INTERNAL CONTROLS OVER FINANCIAL REPORTING

Management has designed internal controls over financial reporting to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. The design of the Company's internal control over financial reporting was assessed as of the date of this Management Discussion and Analysis.

Based on this assessment, it was determined that certain weaknesses existed in internal controls over financial reporting. As indicative of many small companies, the lack of segregation of duties and effective risk assessment were identified as areas where weaknesses existed. The existence of these weaknesses is to be compensated for by senior management monitoring, which exists. Management will continue to monitor very closely all financial activities of the Company and increase the level of supervision in key areas. It is important to note that this issue would also require the Company to hire additional staff in order to provide greater segregation of duties. Since there is insufficient work at this time to warrant the additional costs, management has chosen to disclose the potential risk in its filings and proceed with increased staffing only when the budgets and work load will enable the action. The Company has attempted to mitigate these weaknesses, through a combination of extensive and detailed review by management of the financial reports, the integrity and reputation of senior accounting personnel, and candid discussion of those risks with the audit committee.

MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL STATEMENTS

Information provided in this report, including the financial statements, is the responsibility of management. In the preparation of these statements, estimates are sometimes necessary to make a determination of future value for certain assets or liabilities. Management believes such estimates have been based on careful judgments and have been properly reflected in the accompanying financial statements. Management maintains a system of internal controls to provide reasonable assurances that the Company's assets are safeguarded and to facilitate the preparation of relevant and timely information.

APPROVAL

The Board of Directors of the Company has approved the disclosure contained in this MD&A. A copy of this MD&A will be provided to anyone who requests it.