



**Nano One Materials Corp.**  
**Management's Discussion & Analysis**  
**March 31, 2021**

## MANAGEMENT'S DISCUSSION & ANALYSIS

The following Management's Discussion & Analysis ("MD&A") of Nano One Materials Corp. ("Nano One" or the "Company") for the three months ended March 31, 2021, should be read in conjunction with the Company's in condensed interim financial statements for the three months ended March 31, 2021, and the annual audited financial statements for the year ended December 31, 2020. The financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"). All monetary amounts in this MD&A are expressed in Canadian dollars, unless otherwise indicated.

The information contained herein is presented as at **May 7, 2021** (the "MD&A Date"), unless otherwise indicated.

For the purposes of preparing this MD&A, Management, in conjunction with the Board of Directors, considers the materiality of information. Information is considered material if: (i) such information results in, or would reasonably be expected to result in, a significant change in the market price or value of Nano One's common shares; or (ii) there is a substantial likelihood that a reasonable investor would consider it important in making an investment decision; or (iii) it would significantly alter the total mix of information available to investors. Management, in conjunction with the Board of Directors, evaluates materiality with reference to all relevant circumstances, including potential market sensitivity.

## ADDITIONAL INFORMATION

Additional information relevant to the Company's activities can be found on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Company's website at [www.nanoone.ca](http://www.nanoone.ca). Moreover, the Company has filed on SEDAR an Annual Information Form ("AIF") dated March 15, 2021, and a Short Form Prospectus dated April 1, 2021.

## FORWARD-LOOKING STATEMENTS

This MD&A contains certain "forward-looking information" and "forward-looking statements" (collectively, "forward-looking statements"), within the meaning of applicable Canadian securities laws, which are based upon the Company's current internal expectations, estimates, projections, assumptions, and beliefs. All information, other than statements of historical facts, included in this MD&A that addresses activities, events or developments that the Company expects or anticipates will or may occur in the future is forward-looking information. Such statements can be identified by the use of forward-looking terminology such as "expect", "likely", "may", "will", "should", "intend", or "anticipate", "potential", "proposed", "estimate" and other similar words, including negative and grammatical variations thereof, or statements that certain events or conditions "may" or "will" happen, or by discussions of strategy. Forward-looking statements include estimates, plans, expectations, opinions, forecasts, projections, targets, guidance, or other statements that are not statements of fact. Such forward-looking statements are made as of the date of this MD&A and, except as required by law, the Company is under no obligation to update or alter any forward-looking information.

Forward-looking statements in this MD&A may include, but are not limited to, statements with respect to: the use of the net proceeds from previous financings; the performance of the Company's business and operations; the intention to grow the business, operations and potential activities of the Company; regulatory changes; the competitive conditions of the industry and the Company's competitive position in the industry; the Company's business plans and strategies; the anticipated benefits of the Company's partnerships; the Company's licensing, supply chain and joint venture opportunities; the applicable laws, regulations and any amendments thereof; and any anticipated future gross revenues and profit margins of the Company's operations.

With respect to the forward-looking statements contained in this MD&A, the Company has made assumptions regarding, among other things: the use of the net proceeds of previous financings; operating and capital costs; anticipated partnerships; the Company's ability to access future financing opportunities; and the Company's ability to attract and retain qualified personnel or management.

Although the Company believes that the expectations reflected in the forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct. The Company cannot guarantee future results, levels of activity, performance, or achievements. There are risks, uncertainties, and other factors, some of which are beyond the Company's control, which could cause actual results, performance or achievements of the Company, as applicable, to differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements contained in this MD&A. Refer to "Risks and Uncertainties" below for details of certain risks.

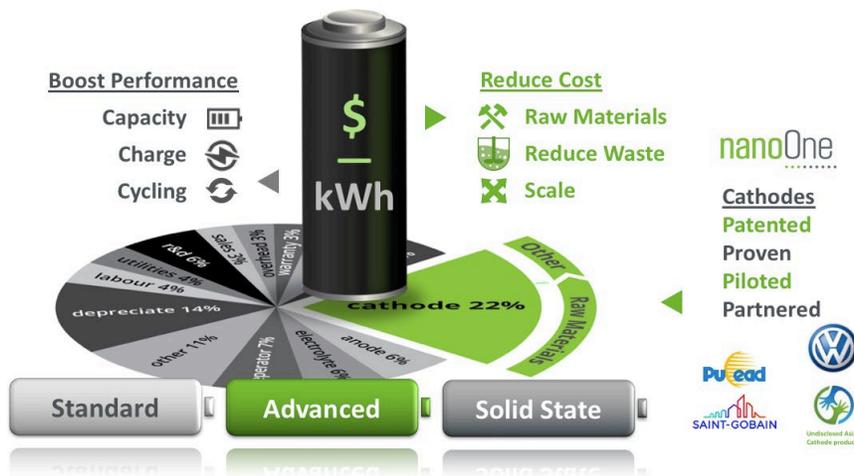
## COMPANY OVERVIEW

### Corporate Structure

The Company was incorporated under the laws of the Province of Alberta on November 5, 1987 and continued under the laws of the Province of British Columbia on September 8, 2004. On March 5, 2015, the Company completed a combination with Perfect Lithium Corp. ("PLC"), a private company incorporated in February 2011 under the laws of the Province of British Columbia, whereby it acquired all the issued and outstanding common shares of PLC in exchange for issuing common shares to the former shareholders of PLC. On July 1, 2015, the Company amalgamated with PLC and continued as one company under the name, Nano One Materials Corp. Nano One trades on the TSXV under the symbol "NNO". The Company's head office is located at Unit 101B, 8575 Government Street, Burnaby, British Columbia V3N 4V1 and its registered and records office is located at 2900 - 550 Burrard Street, Vancouver, British Columbia V6C 0A3.

### Business of the Company

## Lithium Ion Batteries



The Company has developed, patented and scaled-up an innovative One-Pot Process (the "One-Pot Process") for the production of cathode active materials ("CAM") for lithium-ion battery applications in electric vehicles, energy storage systems, and consumer electronics. Nano One has demonstrated its technology in the laboratory, built a demonstration pilot plant, and is partnering with key automotive original equipment manufacturers ("OEMs") and cathode manufacturers, with the business intent of licensing its technology through joint venture and royalty arrangements.

Nano One's technology is intended to improve the performance and cost of cathode materials, reduce complexity and excess waste in the supply chain, minimize carbon footprint, and to simplify production using environmentally sustainable processes. It is a manufacturing platform suited to many types of lithium-ion cathode materials, and applies to automotive, grid storage and consumer electronic batteries, including standard, advanced, and next generation solid state batteries.

## One Pot Process Technology

Nano One's patented One-Pot Process is engineered to use non-sulfate forms of metal feedstock, with the intention of reducing total cost and carbon footprint of feedstock needs per kilogram of CAM, eliminating the need to convert metal to metal sulphate, lithium to lithium hydroxide, sulphate waste, excess water consumption, excess greenhouse gas emissions ("GHG") and added process costs. Furthermore, the process uses lithium feedstock in the form of carbonate rather than hydroxide which is costly, corrosive and harder-to-handle. The process is feedstock flexible which enables improved optionality of sourcing of raw materials. The process also forms innovative coated nanocrystal cathode powders that are designed to be more durable than conventional cathode powders.

The One-Pot Process is an aqueous process, using carbon neutral chemistry, that operates at room-temperature and atmospheric pressures, and it combines feedstock conversion, precursor formation, lithiation and coating steps into one reaction. This creates added value for metals and aligns Nano One with the environmental, sustainability and cost objectives of automotive companies, miners, investment communities and governmental infrastructure initiatives.

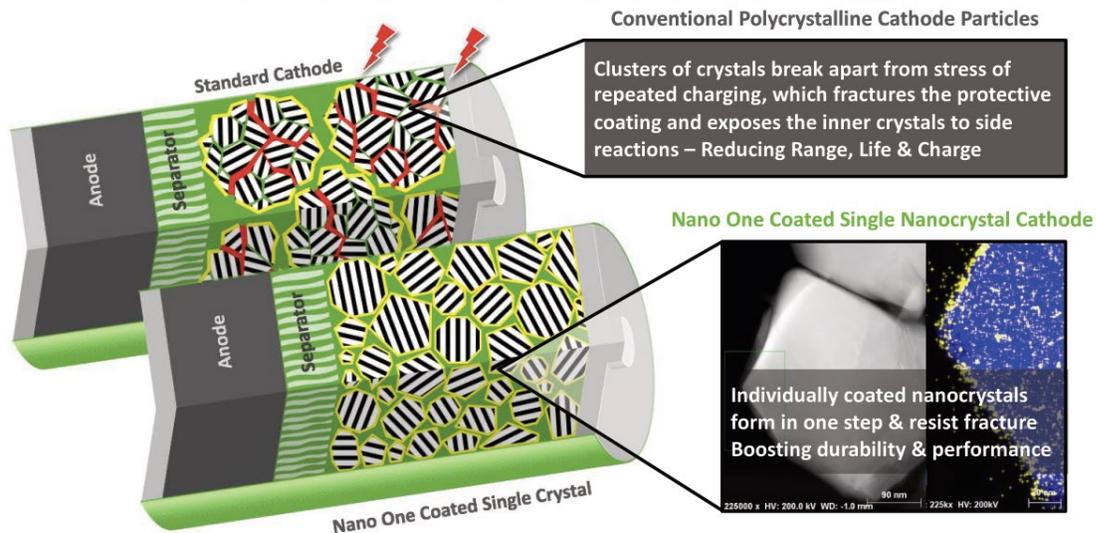
Nano One's process consists of three stages, and the major innovations lie in the first stage where a special mode of combining reactants controls crystal nucleation and growth of particles, while converting the input materials into a composite powder that readily fires in a downstream kiln to form coated nanocrystal cathode powders. 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 incumbent industrial processes.

The desired crystal structure, morphology and performance enhancing coatings of the materials are formed readily and simultaneously in the final thermal processing steps, eliminating extra coating steps and the need for long and repeated kiln firings. The process produces crystalline material powders that are configurable to meet a variety of energy density requirements.

## Coated Nanocrystal Technology

The coated nanocrystal innovation addresses a key battery trade-off between energy density and durability. Increased durability would provide electric vehicle manufacturers greater flexibility in optimizing range, charging rates, safety, and cost. The One-Pot Process combines all input components: lithium, metals, additives, and coatings in a single reaction to produce a precursor that, when dried and fired, forms quickly into a single crystal cathode material simultaneously with its protective coating. Additional information on the Company's coated nanocrystal technology can be found in the Company's AIF, including technical updates, published results and patents granted.

## Nano One Performance Advantage



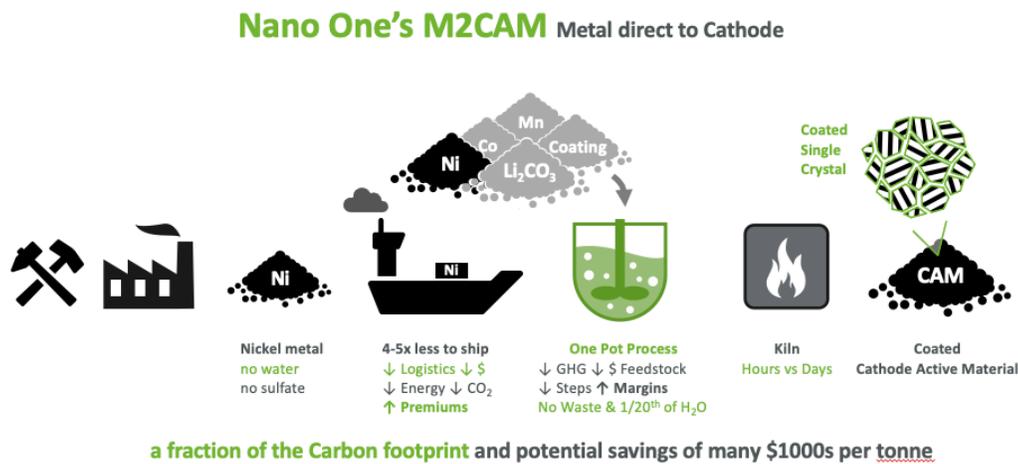
Furthermore, by increasing the ratio of nickel to cobalt in cathode materials, cobalt supply chain risks can be reduced; however, the shift to nickel-rich materials compromises cycle life and safety in the battery. Coated monocrystalline cathode powders can address these problems and the Company's coated nanocrystals provide similar improvements to durability as evidenced through the Company's published results and portfolio of intellectual property.

The coated nanocrystal technology applies to all of the cathode materials and compositions under development by the Company, including:

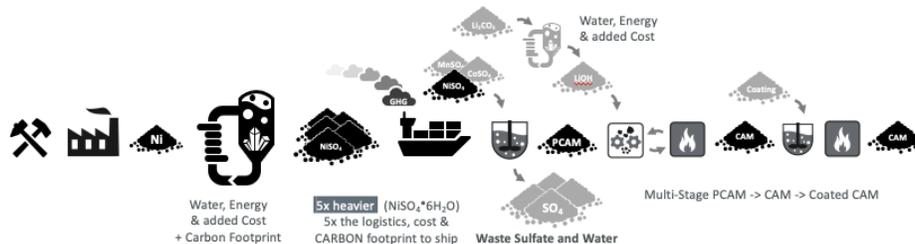
- **(LFP):** Lithium Iron Phosphate;
- **(LNMO or HVS):** Lithium Nickel Manganese Oxide, also referred to as “High Voltage Spinel”; and
- **(NMC):** Lithium nickel manganese cobaltate.

## M2CAM Technology

In February 2021, Nano One announced the launch of its M2CAM technology (metals to cathode active materials) which seeks to reduce cost, waste, and the carbon footprint in the lithium-ion battery supply chain. The Company is in discussions with large integrated miners to reduce environmental footprints and maximize upstream value in the global battery supply chain. Nano One’s other collaborators include automotive OEMs with similar motivations to meet environmental targets by reducing waste, carbon emissions, logistics and costs. Patents are pending for M2CAM and preliminary test results are showing battery capacity up to 5% higher than cathode materials currently made from metal salts.



## The Incumbent Cathode Supply Chain is LONG and COMPLEX



Nano One’s patented One-Pot Process forms durable single crystal cathode powders and protective coatings simultaneously and the process has been adapted for M2CAM, enabling these materials to be made directly from nickel, manganese, and cobalt metal powder feedstocks rather than metal sulfates or other salt powders. Metal powders are one-fifth of the weight of metal sulfates, avoiding the added costs, energy, and environmental impact of converting to sulfate and shipping and handling of waste.

Nano One’s technology also offers the flexibility to use either lithium carbonate or hydroxide as feedstocks. This is enabled by mixing lithium with all other metal inputs in Nano One’s patented One-Pot Process reaction to produce a fully-lithiated mixed-metal intermediate powder that is neither carbonate nor hydroxide, allowing it to react and form finished cathode powder when thermally processed in a furnace.

In contrast, conventional cathodes are made by first converting metals into metal sulfates and lithium into lithium hydroxide. The metal sulfates are then mixed in a chemical reaction to produce a mixed metal nickel manganese cobalt precursor powder ("PCAM"), with the sulfate and water going to waste. This PCAM is then milled with lithium hydroxide powders after a prolonged firing, form dense clusters of crystalline particles (polycrystalline). Protective coatings can then be formed by adding additional materials and firing again. However, crystals, within each grain of powder, contract and break apart from repeated charging, and this fractures the protective coatings and leaves individual crystals within the grains of powder exposed to side reactions. Extra time in the kiln can alleviate some of these issues, but also damages the crystal structures and adds cost.

Nano One's technology aligns it with the sustainability objectives of automotive companies, investment communities and governmental infrastructure initiatives. It also offers an opportunity for metals refiners to provide environmentally, and sustainability mined sources of nickel ore to integrate and manufacture cost-reduced value-added cathode powders for direct supply to battery manufacturers.

## **Corporate Development**

In addition to information discussed throughout this MD&A, the Company has also announced the following recent corporate development:

### *Progress Update on Joint Development Agreement with Asian Manufacturer*

In April 2021, the Company announced a progress update on the Joint Development Agreement signed in August 2020 (see "Strategic Partnerships" below). The first two phases of the program have been focused on LNMO cathode materials and have been successfully completed with validation by both parties. Work is now shifting to scale-up considerations, detailed economic analysis, third-party evaluation, and preliminary planning for commercialization. The work under this agreement is on schedule and on budget, and the LNMO materials have met phase one and two metrics for performance and economics.

The JDA provides a framework to develop a business plan for the commercialization of cathode materials, through a joint venture, licensing of Nano One's technology and/or through further development work.

The companies are co-developing high-performance LNMO cathode materials using Nano One's patented One-Pot Process. LNMO is of increasing global interest and has great potential in next-generation lithium-ion batteries for electric vehicles, renewable energy storage and consumer electronic devices. It delivers energy and power on par with other high-performance cathodes and is more cost effective because it is cobalt free, low in nickel and does not require excess lithium.

LNMO's three dimensional spinel structure enables lithium ions to flow more quickly than other types of cathode for fast charging and discharge and keeps it from expanding, contracting and straining the battery. LNMO also has an operating voltage that is 25% higher than commercial high nickel cathodes, enabling fewer cells in applications such as power tools and electric vehicles while providing improved productivity, efficiency, thermal management and power.

## PARTNERSHIPS, MILESTONES, OBJECTIVES AND INTELLECTUAL PROPERTY

### Strategic Partnerships

The Company is actively collaborating, jointly developing and/or partnered with several in the lithium battery materials supply chain and is actively seeking to expand its industry partnerships and commercialization opportunities.

#### *Automotive partnerships:*

Volkswagen. With Volkswagen, Nano One is focused on improving the durability of cathode materials using Nano One's One-Pot Process and coated single crystal materials. Improved durability gives automotive OEMs like Volkswagen the ability to charge faster, drive further, extend warranties and lower the cost of long range and mass market electric vehicles. Nano One's strategy with Volkswagen is to define and create demand for a new generation of cathode materials, requiring royalty bearing rights to Nano One's intellectual property and licensing agreements with Volkswagen and/or its supply chain.

Global Automotive Company. In December 2020, Nano One entered into a Cathode Evaluation Agreement with an American-based multinational auto manufacturer to jointly evaluate Nano One's cathode materials for automotive lithium-ion batteries. The goal of this project is to evaluate the performance and commercial benefit of Nano One's patented One-Pot process for nickel-rich and cobalt-free cathode materials in electric vehicle applications.

#### *Cathode manufacturers:*

Pulead Technology. In January 2019, the Company entered into a Joint Development Agreement with Pulead Technology Industry ("Pulead"). Pulead is a highly respected Chinese cathode producer with a track record of partnering with international providers of intellectual property. Under the agreement, Nano One's initial focus is on manufacturing innovations and plant design to improve the cost, margins, and competitiveness of LFP. LFP is the safest, longest lasting, and cheapest cathode material for use in lithium-ion batteries, used in electric buses, fleet vehicles, and renewable energy storage. As the cost of lithium-ion batteries decreases, they are anticipated to replace lead acid batteries and potentially fuel a new generation of long range, long lasting electric vehicles.

Asian Manufacturer. In August 2020, Nano One signed a Joint Development Agreement with a large multinational materials producer that supplies the Asian automotive industry. Work under this agreement is focused on jointly developing the combined technologies of both companies to pursue a manufacturing opportunity, through licensing or joint venture, to supply materials for a new generation of lithium-ion batteries. See "Corporate Development" above for a progress update announced in April 2021.

Saint-Gobain. Under the 2018 Joint Development Agreement with Saint-Gobain, Nano One and Saint-Gobain are jointly developing technology to improve efficiencies in the final stage of cathode production, where cathode powders are conveyed through long expensive furnaces to transform them into active battery materials. A successful program could lead to Nano One and Saint-Gobain co-marketing their technologies and products for improved thermal processing of CAM.

## Business Objectives

The Company's short-term objectives (1-3 years) include:

- Developing, advancing, and promoting the M2CAM adaption of its One-Pot process through collaborative partnerships with OEMs, miners and cathode producers. The Company is aiming to disrupt the supply chain and make cathode materials direct from metal powders and lithium carbonate. This eliminates the conversion of metals to sulfates, lithium to hydroxide and the associated energy, GHG emissions, cost, waste and the needless transport of water and sulfate.
- Prototyping and scaling up by expanding its demonstration pilot plant and laboratory facilities to serve technology development, partnership, and licensing objectives.
- Developing and building its first internationally located demonstration pilot plants and commercial plant(s), and establishing joint ventures and licensing agreements, by advancing partnerships (Pulead, Volkswagen, Asian Cathode Manufacturer, and others, including undisclosed US automotive partners, global metals miners and the Chilean Clean Technology Institute) with the goal of initial revenues by the end of 2022.
- Third-party validation and partner identification with its joint development partners are already in place with additional automotive, cathode and mining partners in the queue and targeted throughout the supply chain.

The Company's long-term objectives (3-5 years), include:

- Generating royalty and joint venture revenues from the production of NMC, LFP and HVS in collaboration and partnership with US, European and Asian companies. The Company anticipates license revenues from NMC will follow, as coated single crystal and the Company's M2CAM technology is advanced. Markets for HVS and other advanced CAM formulations will be nurtured through the development of advanced high voltage batteries and solid-state batteries with OEMs and anode/electrolyte developer consortiums.
- Commercial expansion via manufacturing adoption of the One-Pot Process, accelerated with differentiation and market growth. Revenue expansion is anticipated to flow from scale of clients.

## Intellectual Property

As at the MD&A Date, the Company has been issued seventeen (17) patents and has more than 30 related patent applications pending throughout the world. The Company's intellectual property was developed and is wholly-owned by the Company. The Company 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. Additional information on the Company's intellectual property can be found in the Company's AIF.

The Company's seventeenth (17<sup>th</sup>) was issued in China on April 9, 2021. This extends the patent estate to provide protection for lithium-ion cathode powders formed by the proprietary One-Pot Process developed by Nano One.

## OVERALL PERFORMANCE

### Cash flows

During the three months ended March 31, 2021, the Company generated a net increase in cash and cash equivalents of approximately \$2,433,000. Subsequently on April 1, 2021, the Company completed a short-form prospectus financing for gross proceeds of approximately \$28,900,000 (approximately \$27,100,000 net proceeds after cash commissions and expenses).

Key contributors to the increase in cash and cash equivalents were:

- Exercise of stock options and warrants for total proceeds of approximately \$4,500,000; and
- Proceeds from Government assistance programs mainly comprising \$262,500 from Sustainable Development Technology Canada (“SDTC”).

See “Cash flows during the three months ended March 31, 2021” below within Discussion of Operations for further details on cash flows for the period.

### Facilities expansion

In 2020, the Company began the expansion of facilities at its head office location in Burnaby, BC. Two new units were leased to grow its facilities from 5,000 sq. ft. to 15,000 sq. ft. The purpose of the expansion is to facilitate infrastructure growth by adding a new dry room (in construction), laboratory space (completed), expanding the battery test room (completed), adding new furnaces, and facilitating the increase in staffing to support these efforts.

## DISCUSSION OF OPERATIONS

### For the three months ended March 31, 2021 and March 31, 2020

The following table summarizes the Company’s results of operations and cash flows for the three months ended March 31, 2021 and March 31, 2020 (rounded):

	March 31, 2021 \$	March 31, 2020 \$	Change \$
Revenue	-	-	-
Loss from operating expenses	<b>(4,452,000)</b>	(1,070,000)	<b>(3,382,000)</b>
Loss and comprehensive loss	<b>(4,544,000)</b>	(1,063,000)	<b>(3,481,000)</b>
Cash used in operating activities	<b>(1,663,000)</b>	(1,435,000)	<b>(228,000)</b>
Cash (used in) provided by investing activities	<b>(351,000)</b>	93,000	<b>(444,000)</b>
Cash provided by financing activities	<b>4,447,000</b>	10,911,000	<b>(6,464,000)</b>

Certain components of operating expenses for three months ended March 31, 2021 and March 31, 2020, were as follows (rounded):

	March 31, 2021 \$	March 31, 2020 \$	Increase (decrease) \$
Consulting fees	<b>155,000</b>	216,000	<b>(61,000)</b>
Investor relations and shareholder information	<b>129,000</b>	113,000	<b>16,000</b>
Management and directors' fees	<b>84,000</b>	42,000	<b>42,000</b>
Salaries and benefits, net	<b>695,000</b>	447,000	<b>248,000</b>
Share-based payments	<b>3,070,000</b>	-	<b>3,070,000</b>

Explanations for the changes illustrated in the table above are as follows:

- Consulting fees: decreased on a net basis due the payment of a capital market advisory fee made in the comparative period exceeding the capital market advisory fee paid during the current period which more than offset the engagement of additional research and market consultants during the current period.
- Investor relations and shareholder information: increased on a net basis as the increase in additional investor relations programs and activities which ramped up during the latter portion of the current period as well as additional investor relations service engagements exceeded the decrease in marketing communication and conference attendance activities.
- Management and directors' fees: increased due to increased CFO fees and a compensation adjustment for the Company's Executive Chairman (see Salaries and benefits below).
- Salaries and benefits: increased as a result of increased staffing during the current period as well as compensation adjustments for the Company's Officers which was effective from January 1, 2021. Salaries and benefits are presented net of allocations of SDTC government grants.
- Share-based payments: was incurred as a result of the grant and vesting of stock options during February 2021 to key management personnel, employees, and consultants. There were no stock options granted or vesting during the comparative period.

Research expenses, net for the three months ended March 31, 2021 and March 31, 2020, were as follows (rounded):

	March 31, 2021 \$	March 31, 2020 \$	Change \$
Contractors	66,000	77,000	(11,000)
Labour	577,000	364,000	213,000
Safety and training	12,000	9,000	3,000
Supplies	135,000	52,000	83,000
Utilities	10,000	6,000	4,000
	<b>800,000</b>	<b>508,000</b>	<b>292,000</b>
Depreciation	64,000	38,000	26,000
Cost recoveries	(79,000)	-	(79,000)
Government assistance received	(263,000)	(315,000)	52,000
Government assistance repaid	8,000	-	8,000
Government assistance amortized	(486,000)	(216,000)	(270,000)
<b>Research expenses, net</b>	<b>44,000</b>	<b>15,000</b>	<b>29,000</b>

During the three months ended March 31, 2021, the Company increased cash-based spending on research activities by approximately \$292,000 before adjustments for non-cash items and government assistance received or repaid, relative to the comparative period.

Over and above, the research expenses, net amount presented above, the Company incurred approximately \$46,000 within professional fees for charges relating to patent filings and applications (2020 - \$49,000), and increased capital expenditures by approximately \$272,000 relative to the comparative period which was characterized primarily by purchases/deposits on research and development equipment as well as leasehold improvements.

The Company's facilities and research workforce expansion is a direct result of the increasing global interest in the Company's technologies and processes, progress through government programs, technological breakthroughs, and new strategic partnerships (see "Strategic Partnerships" above). Market dynamics coupled with the increased capital resources contribute to an overall increase in research activities and related expenditures in all or most categories, which works to expedite the achievement of the Company's strategic goals.

#### Cash flows during the three months ended March 31, 2021

Cash used in operating activities was approximately \$1,663,000, largely driven by \$1,405,000 incurred on cash-based operating expenses and partially offset by approximately \$257,000 in changes in working capital items.

Cash used in investing activities was approximately \$350,000, driven by leasehold improvements on facilities expansion and purchases or deposits of/on research and development equipment.

Cash provided by financing activities was approximately \$4,447,000 substantially comprising the exercise of stock options and warrants generated proceeds of approximately \$4,500,000. Cash flows from financing activities are partially reduced by facility lease payments of approximately \$43,000 in aggregate.

As described further herein, on April 1, 2021, the Company received net proceeds of approximately \$27,100,000 pursuant to completion of a short-form prospectus financing.

### Government Assistance

The Company receives funding from the Government of Canada for its research activities through various programs. During the three months ended March 31, 2021 and March 31, 2020 the following amounts were received (repaid):

	March 31, 2021 \$	March 31, 2020 \$
Grant cash proceeds received (repaid):		
Sustainable Development Technology Canada (SDTC) - COVID-19 relief	262,500	250,000
Industrial Research Assistance Program (NRC-IRAP)	(8,394)	62,733
Other Grants	-	2,700
	<b>254,106</b>	<b>315,433</b>

The cumulative amount of program funding received since January 1, 2014 from the Government of Canada are as follows:

	March 31, 2021 \$	December 31, 2020 \$
Sustainable Development Technology Canada (SDTC)	6,372,813	6,110,313
Automotive Supplier's Innovation Program (ASIP)	1,950,952	1,950,952
Industrial Research Assistance Program (NRC-IRAP)	786,572	794,966
Innovation Assistance Program (IAP) (from NRC-IRAP)	241,225	241,225
Scientific Research & Experimental Development (SR&ED)	98,661	98,661
Other Grants	80,059	80,059
	<b>9,530,282</b>	<b>9,276,176</b>

The Company's primary active government assistance program is that with SDTC, as follows:

#### Sustainable Development Technology Canada ("SDTC"):

In 2019, the Company executed a contribution agreement with SDTC for a non-repayable grant in respect of the Company's "Scaling Advanced Battery Materials" project. The SDTC Program #2 grant is for up to \$8,545,500 (December 31, 2020 - \$8,283,000) (\$4,291,516 received as of the date of these financial statements). SDTC Program #2 is estimated conclude in June 2024.

Initially, the non-repayable grant was for up to \$5,000,000 and was increased to \$5,512,500 upon receiving two additional one-time non-repayable grants of \$250,000 and \$262,500 from SDTC in relation to COVID-19 pandemic relief during the year ended December 31, 2020 and the three months ended March 31, 2021, respectively.

In May 2020, the Company announced that the Innovative Clean Energy ("ICE") Fund of the Province of British Columbia's Ministry of Energy, Mines and Petroleum Resources will be contributing \$3,033,000 to the SDTC Program #2. The funds are non-repayable, and the Company will receive the funds in alignment with the SDTC grant.

The funds from SDTC Program #2 are payable to the Company in five (5) instalments including the release of a final 10% hold-back to the Company upon satisfactory review and approval of the project by SDTC. The instalments from SDTC are to be paid to the Company at the beginning of each of the four (4) Milestones. Each instalment payment is subject to the Company meeting the specific project Milestones and having available cash resources to match each instalment from SDTC. During the three months ended March 31, 2021, the Company received \$262,500 in relation to COVID-19 pandemic relief as described above.

## SUMMARY OF QUARTERLY RESULTS

The following table shows the results for the last eight fiscal quarters:

Period Ending	Revenue \$	Loss and comprehensive loss \$	Basic and Diluted Loss Per Share \$
March 31, 2021	-	(4,544,172)	(0.05)
December 31, 2020	-	(2,103,524)	(0.02)
September 30, 2020	-	(1,504,365)	(0.02)
June 30, 2020	-	(541,673)	(0.01)
March 31, 2020	-	(1,062,846)	(0.01)
December 31, 2020	-	(2,103,524)	(0.01)
September 30, 2020	-	(1,504,365)	(0.01)
June 30, 2020	-	(541,673)	(0.02)

## TRANSACTIONS BETWEEN RELATED PARTIES

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 (gross before applicable government assistance recoveries):

Nature of transaction or balance	Transactions three months ended March 31, 2021	Transactions three months ended March 31, 2020	Balances outstanding March 31, 2021	Balances outstanding December 31, 2020
	\$	\$	\$	\$
(1) Professional fees	43,678	39,850	412	38,753
(2) Management and directors' fees	84,000	42,000	13,500	7,875
(3) Salaries and benefits / Research expenses	561,715	81,250	376,715	-
(3) Expense reimbursements	-	-	-	2,696
(4) Share-based payments	2,933,297	-	-	-
	<b>3,622,690</b>	<b>163,100</b>	<b>390,627</b>	<b>49,324</b>

- (1) Legal fees are incurred with Patent Filing Specialists Inc., a company controlled by an independent Director of the Company (Joseph Guy). Transactions incurred during the three months ended March 31, 2021 are included within both intangible assets and professional fees (2020 – professional fees only).
- (2) Management fees are paid to Bedrock Capital Corp. a company controlled by the Chairman/Director of the Company (Paul Matysek); and to Donaldson Brohman Martin, CPA Inc. (“DBM CPA”), a firm in which the CFO is a principal (Dan Martino). Directors' fees are accrued to the Company's two independent Directors (Joseph Guy and Lyle Brown).
- (3) Salaries and benefits, net include amounts paid or accrued to the Company's CEO (Dan Blondal), CTO (Stephen Campbell), and President (John Lando). Research expenses includes a portion of salaries and benefits paid to Dan Blondal. Expense reimbursements outstanding as at December 31, 2020 related to Dan Blondal.
- (4) Share-based payments includes amounts recognized on vesting of stock options granted to Directors and Officers. During the three months ended March 31, 2021, 1,540,000 stock options (2020 – none) were granted to Directors and Officers which are exercisable at \$5.10. 1,140,000 stock options are exercisable for three years until February 1, 2024 and vested immediately, and 400,000 stock options are exercisable for five years until February 1, 2026 and vest over 24 months.

## LIQUIDITY AND CAPITAL RESOURCES

As at March 31, 2021, the Company had working capital of approximately \$30,482,000.

As noted in “Overall Performance” above, the Company’s primary sources of liquidity during the three months ended March 31, 2021, were generated from:

- Exercise of stock options and warrants for total proceeds of approximately \$4,500,000; and
- Proceeds from Government assistance programs mainly comprising \$262,500 from Sustainable Development Technology Canada (“SDTC”).

In order to facilitate the management of its capital requirements, the Company prepares expenditure budgets that are updated as necessary depending on various factors, including successful capital deployment and general industry conditions. The Board of Directors relies on the expertise of the Company’s management to sustain future development of the business.

When managing capital, the Company’s objective is to ensure that it continues as a going concern, to ensure it has sufficient capital to deploy on new and existing projects (including the requirement for matching funds relating to the SDTC program, as well as to generate optimal returns to shareholders and benefits for other stakeholders. Management reviews and adjusts its capital structure on an ongoing basis.

The Company currently has no source of revenues, though it receives funding from government assistance programs, and certain research cost recoveries from strategic partners. In addition, the Company is dependent on equity financing to fund its activities. In order to fund ongoing research activities and pay for operating expenses, the Company will spend its existing working capital and may complete additional equity financings to facilitate the management of its capital requirements. The Company is not subject to any externally imposed capital requirements. There were no changes to the Company’s approach to capital management during the three months ended March 31, 2021.

Additionally, the Company completed a short-form prospectus offering on April 1, 2021 for gross proceeds of approximately \$28,900,000.

### Use of Proceeds from Financings

On February 21, 2020 (the “First Financing”), the Company completed a non-brokered private placement for gross proceeds of \$10,999,750. The net proceeds of the placement after deducting finders’ fees, legal, filing and other fees of \$618,358 were \$10,381,392.

On October 29, 2020, the Company completed a Short Form Prospectus financing for gross proceeds of \$14,369,488. The net proceeds of the financing after deducting finders’ fees, legal, filing and other fees of \$1,250,497 were \$13,118,991.

For the period from closing of the First Financing to March 31, 2021, the Company has used the net proceeds of the financings as shown below. These amounts are presented on a gross basis and do not include government grant proceeds.

Principal Purposes	Use of Proceeds \$
Research activities	2,930,756
Capital equipment purchases and leasehold improvements on laboratory facilities	1,715,807
Pilot plant expansion	356,322
Intellectual property acquisition	246,455
Business development and strategic alternatives	482,202
Working capital	4,243,867
Subtotal	9,975,409
Unallocated	13,524,974
<b>Net proceeds of the financings</b>	<b>23,500,383</b>

On April 1, 2021, the Company completed a Short Form Prospectus financing for gross proceeds of \$28,916,750. The net proceeds of the financing after deducting underwriters’ commissions and fees were \$27,086,545.

## SHARE CAPITAL INFORMATION

### Transactions for the issue of share capital during the three months ended March 31, 2021:

- The Company issued 283,250 common shares on the exercise of stock options at prices between \$0.38 and \$2.81 per share, for proceeds of \$337,590.
- The Company issued 1,356,740 common shares on the exercise of warrants at prices of between \$1.60 and \$3.55 per share, for proceeds of \$4,152,422.

### Transactions for the issue of share capital subsequent to March 31, 2021 and to the MD&A Date:

- The Company has issued 28,125 common shares and received proceeds of \$50,405 in aggregate, upon the exercise of options and warrants as follows:
  - The Company issued 5,875 common shares on the exercise of stock options at \$2.52 per share, for gross proceeds of \$14,805.
  - The Company issued 22,250 common shares on the exercise of warrants at \$1.60 per share, for gross proceeds of \$35,600.
- On April 1, 2021, the Company completed a short-form prospectus financing consisting of the issuance of 5,405,000 common shares at a price of \$5.35 per share for gross proceeds of \$28,916,750 (\$27,086,545 net proceeds after deducting cash underwriters' commission and expenses).

An underwriters' cash commission totalling \$1,735,005 was paid upon closing of the offering, plus underwriters' legal fees of \$95,200. Additionally, the Company issued 324,999 finders' (brokers') warrants exercisable at \$5.35 until April 1, 2022.

## OUTSTANDING SHARE DATA

The authorized share capital of the Company consists of unlimited common shares without par value. All issued common shares are fully paid. As at the MD&A Date, the Company's common share data was as follows:

	<b>As at the MD&amp;A Date</b>	
	#	Weighted average exercise price \$
Common shares issued and outstanding	95,310,653	
Stock options outstanding	6,097,050	2.71
Warrants outstanding, end of period/year	4,506,637	2.57
<b>Fully diluted</b>	<b>105,914,340</b>	

## CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements in conformity with IFRS requires management to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and reported amounts of income and expenses during each reporting period. Estimates and assumptions are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual outcomes can differ from these estimates.

The information about significant areas of estimation uncertainty and judgment considered by management in preparing the financial statements are described in Note 2 of the Company's audited financial statements for the year ended December 31, 2020.

## FINANCIAL INSTRUMENTS

### Financial instruments - fair value

Financial instruments measured at fair value are classified into one of three levels in the fair value hierarchy according to the relative reliability of the inputs used to estimate the fair values. The three levels of the fair value hierarchy are:

- 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 assets or liability either directly or indirectly; and
- Level 3 - Inputs that are not based on observable market data.

### Classification of financial instruments

<b>Financial assets:</b>	<b>Classification:</b>	<b>Subsequent measurement:</b>
Cash and cash equivalents	FVTPL	Fair value
Short-term investment	Amortized cost	Amortized cost
Receivables	Amortized cost	Amortized cost
Deposits	Amortized cost	Amortized cost
<b>Financial liabilities:</b>	<b>Classification:</b>	<b>Subsequent measurement:</b>
Accounts payable and accrued liabilities	Amortized cost	Amortized cost
Accounts payable to related parties	Amortized cost	Amortized cost
Lease liabilities	Amortized cost	Amortized cost

The Company's financial instruments can be exposed to certain financial risks including liquidity risk, credit risk, interest rate risk, price risk, and currency risk. Details of these risks and related assessments as well as the fair value measurements of the Company's financial instruments are included in the Company's financial statements for the three months ended March 31, 2021, within Note 11.

## OFF-BALANCE SHEET ARRANGEMENTS

Nano One does not utilize off-balance sheet arrangements.

## PROPOSED TRANSACTIONS

There are no proposed transactions as the MD&A Date.

## CHANGES IN ACCOUNTING POLICIES INCLUDING INITIAL ADOPTION

During the three months ended March 31, 2021, there were no changes to the Company's significant accounting policies, nor any new accounting policies adopted.

## **RISKS AND UNCERTAINTIES**

Risk is inherent in all business activities and cannot be entirely eliminated. The Company discloses a comprehensive list of risks and uncertainties under “Risk Factors” in its AIF dated March 15, 2021 as filed on SEDAR. The risks and uncertainties described in this MD&A are considered by management to be the most important in the context of the Company’s business as of the MD&A Date. These risks and uncertainties are not inclusive of all the risks and uncertainties the Company may be subject to, and other risks may apply.

### **Global Pandemic (COVID-19)**

In March 2020, the World Health Organization declared coronavirus COVID-19 a global pandemic. This contagious disease outbreak, which has continued to spread, and any related adverse public health developments, has adversely affected workforces, economies, and financial markets globally, potentially leading to an economic downturn. It is not possible for the Company to predict the duration or magnitude of the adverse results of the outbreak and its effects on the Company’s business or results of operations or on the Company’s industry partners who provide in-kind and/or financial contributions to the Company’s government programs. There are travel restrictions and health and safety concerns that may delay the Company’s research activities. Operations depend on safeguarding all personnel during the outbreak, which may be prohibitive in certain aspects. Nonetheless, the Company has implemented prevention measures at its office and laboratory facilities including the facilitation of remote work programs. Various Government wage and loan subsidies are available to qualified companies to assist them with operating costs during the pandemic, and the various programs are constantly being expanded and relaxed, which may qualify the Company for additional assistance.

### **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. 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. Litigation may be necessary in the future to enforce the Company’s intellectual property rights, to protect the Company’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 the Company’s business, operating results, and financial condition. There can be no assurance that the Company’s means of protecting its proprietary rights will be adequate or that competitors will not independently develop similar services or products. Any failure by the Company to adequately protect its intellectual property could have a material adverse effect on its business, operating results and financial condition.

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.

## **Performance and Scalability**

To be successful, Nano One will have to successfully scale its internally developed technology while maintaining high product quality and reliability. If Nano One cannot maintain high product quality on a large scale, the Company will be adversely affected. Nano One may encounter difficulties in scaling up cathode materials that are typically required to prototype full size battery cells. Even if Nano One is successful in developing its technologies, Nano One does not know whether the Company will do so in time to satisfy the requirements of the electric vehicle industry or other industries. The Company's current facility hosts a pilot plant and laboratory with limited production capacity.

## **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.

## **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.

## **Execution of 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. Currently, the Company has no history of profitable operations or material revenue. As such, the Company is subject to many risks including under-capitalization, cash shortages, and limitations with respect to personnel, financial, and other resources.

## **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 jurisdictions where laws or law enforcement practices may not protect proprietary rights as fully as in Canada or the United States.

## **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. Additionally, applicable regulations may change, and additional government regulations may be enacted that could impact the Company. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action. If we are not able to maintain regulatory compliance, are slow or unable to adopt new requirements or policies, or effect changes to existing requirements, the Company may be adversely affected.

## **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. See "Global Pandemic (COVID-19)" above.

## **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 MD&A Date.

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, as required. 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, which is not a cost-effective course of action at this time. Accordingly, management has chosen to disclose the potential risk in its filings and proceed with increased staffing only when the budgets and workload 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 statements, 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 MD&A and the financial statements is the responsibility of management. In the preparation of the financial statements, estimates are sometimes necessary to make a determination of the carrying value for certain assets or liabilities. Management believes such estimates have been based on careful judgments and have been properly reflected in the 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.