NORTHSTAR
CLEAN TECHNOLOGIES

Management's Discussion and Analysis

For the six-month period ended June 30, 2022

DESCRIPTION OF BUSINESS AND OVERVIEW OF OPERATIONS AND FINANCIAL CONDITION

The following is management's interim discussion and analysis ("MD&A"), prepared as of August 25, 2022. This MD&A should be read in conjunction with the unaudited Interim Consolidated Financial Statements for the six months ended June 30, 2022 and the accompanying notes, the Company's audited Consolidated Financial Statements and the accompanying notes for the year ended December 31, 2021, all as prepared in accordance with International Financial Reporting Standards ("IFRS"). All amounts are stated in Canadian dollars unless otherwise indicated.

Forward Looking Statements

This report includes certain statements that may be deemed "forward-looking statements" within the meaning of applicable securities legislation. All statements, other than statements of historical facts that address such matters as future events or developments that the Company expects, are forward-looking statements and, as such, are subject to risks, uncertainties, assumptions and other factors of which are beyond the reasonable control of the Company. You can identify these statements by forward-looking words such as "expects", "does not expect", "plans", "anticipates", "does not anticipate", "believes", "intends", "estimated", "projects", "potential", "scheduled", forecast", "budget", and similar expressions, or that events or conditions "will", "would", "may", "could", "should" or "might" occur and similar words. Such statements give the Company's current expectations or forecasts of future events and are not guarantees of future performance and actual results or developments may differ materially from those expressed in, or implied by, this forward-looking information. With respect to forward-looking statements and information contained herein, we have made numerous assumptions including among other things anticipated costs and expenditures and the Company's ability to achieve its goals. Although management believes that the assumptions made and the expectations represented by such statements or information are reasonable, there can be no assurance that a forward-looking statement or information herein will prove to be accurate. Forward-looking statements and information by their nature are based on assumptions and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. Factors that could cause actual results to differ materially from those in forward-looking statements include, for example, such matters as continued availability of capital and financing and general economic, market or business conditions. Although we have attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in the forward-looking statements or information, there may be other factors that cause actual results, performances, achievements or events not to be anticipated, estimated or intended. Accordingly, readers should not place undue reliance on forward-looking statements or information. Any forward-looking statements are expressly qualified in their entirety by this cautionary statement. The information contained herein is stated as of the current date and subject to change after that date and the Company does not undertake any obligation to update publicly or to revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable securities laws.

Description of Business

Northstar Clean Technologies Inc. ("Northstar" or the "Company") was incorporated on August 21, 2017 as Blocktech Ventures Inc. under the laws of the British Columbia Business Corporations Act. On August 4, 2020, the Company entered into an amalgamation agreement and on December 23, 2020, the Company completed an amalgamation with its subsidiary 1257848 BC Ltd. and Empower Environmental Solutions Ltd ("Empower") (the "Amalgamation"). Upon Amalgamation, the Company acquired all the shares of Empower (41,248,577 shares) by issuing 44,331,147 Company shares in exchange. Pursuant to the agreement, following completion of the transaction, Empower shareholders owned approximately 64.92% of the combined company resulting in the shareholders of Empower controlling the Company. Accordingly, the transaction was considered a reverse takeover transaction ("RTO").

The Company filed a preliminary prospectus dated April 15, 2021, an amended and restated preliminary prospectus dated May 7, 2021, and a final prospectus dated June 18, 2021. The Company raised $12,241,312.30 on the issue of 34,975,178 Units at a price of $0.35 per Unit. Each Unit is comprised of one common share in the capital of the Company (each, a "Share") and one-half of one transferable common share purchase warrant (each whole warrant, a "Warrant"). Each Warrant will entitle the holder thereof to acquire one Share (each, a "Warrant Share") at a price of $0.50 per Warrant Share for a period of two years.

The Company listed its common shares on the TSX Venture Exchange (the "TSX-V") and began publicly trading on the TSX-V under the symbol 'ROOF' on July 13, 2021. On January 11, 2022, the Company's common shares commenced trading on the OTCQB Venture Market (the "OTCQB") under the ticker symbol 'ROOOF'. In addition, on January 11, 2022, the Company's common shares became eligible for book-entry and depository services at the Depository Trust Company ("DTC"), which facilitates electronic clearing and settlement of transfers in the United States. The head office and principal address of the Company is located at 1110-396 11th Ave SW, Calgary, Alberta, T2R 0C5 and its current facility is are located at 7046 Brown Street, Delta, British Columbia, Canada, V4G 1G8 (the "Empower Pilot Facility"). The Company's registered and records office is 6204 – 125th Street, Surrey, British Columbia, Canada V3X 2E1.

On January 18, 2022, the Company incorporated Empower Environmental Solutions Calgary Ltd ("Calgary") under the laws of the Alberta Business Corporations Act, and on January 20, 2022, the Company incorporated Empower Environmental Solutions Toronto West Ltd. ("Toronto West") under the laws of the Ontario Business Corporations Act to facilitate possible expansion into those markets.

The Company, through its wholly-owned subsidiary Empower, has developed a proprietary design process technology, the Bitumen Extraction & Separation Technology ("BEST"), at its Empower Pilot Facility for taking discarded or defective single-use asphalt shingles, otherwise destined for already over-crowded landfills, and extracting the liquid asphalt, aggregate and fiber for use in new asphalt, shingles, construction products and other industrial applications. The Company's proprietary design process was developed over the last decade with technical and scientific assistance from the United Kingdom and Alberta.

Outlook and growth strategy

As an emerging innovator in sustainable processing, Northstar's mission is to be the leader in the recovery and reprocessing of asphalt shingles in North America, extracting the recovered components from asphalt shingles that would otherwise be sent to landfill.

Empower Pilot Facility

In February 2022, the Company announced that it has initiated steady state production at the Empower Pilot Facility, which is expected to deliver throughput of asphalt shingles in the range of 10-20 tonnes per day ("tpd") up to 4-5 days per week. Steady state operation will continue at these levels with the objective of demonstrating repeatable production in terms of production safety, quality, and duration (hours per day and days per week). Most importantly, the two primary output products (liquid asphalt and aggregate) are being produced exactly as designed, meeting the Company's end product specifications. The production of specification products has enabled the Company to deliver samples of its "green asphalt" and aggregate to multiple major road construction companies, shingle manufacturers, and other industry stakeholders. for detailed technical analysis. . Internal testing capability has also been implemented at the Empower Pilot Facility, enabling the development of a quality assurance program for the Company's reprocessed products.

Since October 2021, the Company has been implementing the changes identified through the unit-by-unit commissioning of the Company's proprietary BEST process. This commissioning process, combined with the ramp up to steady state production, has provided a clear roadmap for commercial production levels targeted at 50-75 tpd. The Company believes that the operation of its Empower Pilot Facility validates the use of Northstar's proprietary Bitumen Extraction & Separation Technology ("BEST") in the foundational design of the Company's future "scale up" facilities.

On March 3, 2022, the Company announced that it received positive testing results from an independent third-party testing facility for two of its outputs, liquid asphalt and aggregate. After initiating steady state production, liquid asphalt and aggregate were produced through the reprocessing of single-use asphalt shingles currently stockpiled on-site at the Empower Pilot Facility. These independent third-party test results for liquid asphalt and aggregate confirm that these products meet the Company's end product specification objectives.

Calgary Scale Up Facility

On March 3, 2022, the Company announced that the Board of Directors of the Company approved the selection of the City of Calgary, Alberta, Canada as the planned site location for the Company's first asphalt shingle reprocessing scale up facility ("Calgary Empower Facility"). Based on the independent engineering design study, the Calgary Empower Facility is expected to be the Company's first modular scale up facility and will be designed and engineered with an estimated capacity of 150–200 tpd. The scale up facility's build and design are part of the Company's national roll out and expansion strategy to operate asphalt shingle reprocessing facilities across North America. The Company's front-end engineering design ("FEED") for the scale up facility was completed at the end of Q1 2022.

Expected Sequence of Events

- Enter into long-term lease at the target site selection
- Complete detailed plant engineering and construction drawings
- Complete life cycle assessment ("LCA") for Calgary Empower Facility
- Commence procurement of equipment
- Complete operational personnel and contractor hiring
- Commence Calgary Empower Facility pre-construction
- Commercial production at Calgary Empower Facility

The Company previously commenced an exploratory site selection process for its first expansion facility. The Company then commenced a detailed geographic target market analysis to evaluate potential site locations. After identifying several potential geographic markets for Northstar's flagship facility, the Company determined that the City of Calgary was the most attractive location for the Company's first expansion facility for the following reasons:

- Strategic center of Canada's "Energy Transition" economy
- Strong provincial, municipal, and community support for emissions reduction projects
- Sophisticated government programs for energy transition projects
- Favorable long-term leasing rates for industrial land
- Abundance of suitable industrial land options located close to landfill(s)
- Significant asphalt shingle supply of an estimated 30,000 to 50,000 tonnes per year
- Close proximity to major industry partners, including shingle manufacturers and off-take partners
- Abundance of highly skilled labour for engineering, materials handling and hydrocarbon processing
- A clear road map for non-dilutive project financing and government grants

Final site selection and other construction terms are subject to several factors, including local support and final approval by the Company's Board of Directors. Upon securing financing and receiving required environmental and operating permits, the Company plans to begin construction on the Calgary Empower Facility. The Calgary Empower Facility will operate under "Empower Environmental Solutions Calgary Ltd.", a wholly owned subsidiary of the Company.

KEY DEVELOPMENTS – 2022

Q1 2022

- On January 11, 2022, the Common Shares commenced trading on the OTCQB in the United States under the ticker symbol "ROOOF" and, in addition, the Common Shares became eligible for book-entry and depository services with DTC, a subsidiary of The Depository Trust & Clearing Corp.

- On February 7, 2022, the Company announced the appointment of Ms. Kellie Johnston as Chief Sustainability Officer and General Counsel.

- On February 17, 2022, the Company announced that it had initiated steady state production at the Empower Pilot Facility with the expectation that the facility will deliver throughput of asphalt shingles in the range of 10-20 tpd up to 4-5 days per week. It was also announced that the two primary output products (liquid asphalt and aggregate) were being produced exactly as designed, meeting the Company's end product specifications. The production of specification products enabled the Company to deliver samples of its reprocessed asphalt and aggregate to multiple road construction companies, shingle manufacturers, and other industry stakeholders. The samples enable detailed technical analysis to be carried out by a wide range of the Company's potential customers. Internal testing capability was also implemented at the Empower Pilot Facility, enabling the development of a quality assurance program for the Company's reprocessed products.

- On March 3, 2022, the Company announced that as part of its commitment to quality, it received positive testing results from an independent third-party testing facility for two of its outputs, liquid asphalt and aggregate. These independent third-party test results for liquid asphalt and aggregate confirmed that these products meet the Company's end product specification objectives.

- On March 17, 2022, the Company announced that the Board approved the selection of the City of Calgary, Alberta, Canada as the planned site location for the Calgary Empower Facility. The Calgary Empower Facility is intended to be the Company's first asphalt shingle reprocessing facility to be built based on the Company's front-end engineering design (the "FEED"). Accordingly, it will be the Company's first modular facility designed and engineered with an estimated capacity of 150–200 tpd. The Calgary Empower Facility's build and design are part of the Company's national roll out and expansion strategy to operate asphalt shingle reprocessing facilities across North America. The FEED for the Calgary Empower Facility was completed in Q1 of 2022.

- On March 29, 2022, Northstar announced that it executed an investment agreement dated March 3, 2022, with Alberta Innovates, a provincial Crown corporation and Alberta's largest research and innovation corporation. Alberta Innovates reviewed Northstar's application and approved a total of $200,000 in funding towards the estimated $675,000 of direct engineering costs for its proposed Calgary Empower Facility.

- On March 31, 2022, Northstar announced that it had received a FEED design from BBA for its proposed Calgary Empower Facility to be constructed in Calgary, Alberta. The FEED design, which provided a pre-feasibility level capital estimate, outlined direct costs of $8.6 million, including equipment costs of $7.1 million and labour and materials of $1.5 million, and indirect costs of $1.2 million, totalling direct and indirect costs of $9.8 million. With a 20% contingency, the total capital cost estimate was approximately $11.75 million.

Q2 2022

- On April 1, 2022, Northstar announced the project economics results from its internal management-prepared economic analysis for its planned Calgary Empower Facility based on the FEED design.

- On May 26, 2022, Northstar announced the positive results of a second independent carbon dioxide equivalent ("CO2e") life cycle assessment ("LCA") completed by Burgess Environmental Ltd. ("Burgess") for selected performance indicators for Northstar's planned Calgary Empower Facility. The LCA is based on sophisticated modelling from the FEED. The LCA assessed the impacts and benefits of reprocessing asphalt shingles and compared them to the impacts and benefits related to the disposal of discarded or defective asphalt shingles in landfills and virgin production of asphalt shingles.

- On May 31, 2022, Northstar announced the details of its refocused expansion plans following the review of its Phase 1 Expansion Program. The Company recently completed a wide engagement of potential financing partners for its proposed Phase 1 Expansion Program in Calgary, Toronto, and the Pacific Northwest, anticipated to be strategically implemented over the next two years. Indicative term sheets were sought for provision of both debt and equity. The expected funding was for $50M, less anticipated government non-dilutive funding support, capable of supporting construction of the three facilities, plus operation of the Northstar business until the end of 2023, supporting ongoing organization capability and facility development. The level of indicative support was substantial and included: (i) Debt proposals from two Canadian commercial banks; (ii) Equity proposals from five Canadian investment banks; (iii) Project and full funding proposals from two Canadian infrastructure funds; and (iv) Full funding indicative proposals from two US infrastructure funds. Although non-binding, these proposals, combined with anticipated government non-dilutive funding, highlight the potential for the full funding of the Company's proposed Phase 1 Expansion Program. However, given the current market condition, Northstar's senior management, the board of directors of the Company (the "Board") as well as the Board's special finance committee have decided that financing the whole proposed Phase 1 Expansion Program would be unnecessarily dilutive and not in the best interests of the Company and its shareholders at this time. The Company decided to focused on delivering shareholder value through the following three steps: (1) bringing the Empower Pilot Facility into commercial production, (2) execute construction of the Empower Calgary Facility and (3) reduce corporate costs. Outside necessary expenditures, the Company anticipates focusing any additional funding on the Empower Calgary Facility. In addition to the anticipated non-dilutive government funding, discussions are ongoing regarding the refocused finance plan with the potential funding providers identified above. Considerable detailed commercial, legal, and technical due diligence has already been performed by all parties involved and execution with our preferred finance partners is expected to be timed to best benefit our expansion plans going forward. The Company continues to target a range of 50% to 60% of the capital required from non-equity sources, excluding anticipated government grants, with the overall objective of minimizing the need for equity capital to finance the Empower Calgary Facility.

PERFORMANCE SUMMARY

The following is a summary of the significant events and transactions that occurred during the three months ended June 30, 2022 and for the subsequent period to the report date hereof:

(a) During the three months ended June 30, 2022
- the Company spent $247,280 on acquisitions of plant equipment.
- the Company spent $290,048 in research and development expenses.
- Empower repaid $15,000 in loan repayments.

(b) During the three months ended March 31, 2022
- On January 18, 2022, the Company incorporated Empower Environmental Solutions Calgary Ltd.
- On January 20, 2022, the Company incorporated Empower Environmental Solutions Toronto West Ltd.
- the Company spent $248,872 on acquisitions of plant equipment.
- the Company spent $272,863 in research and development expenses.
- Empower repaid $15,000 in loan repayments.

Selected Annual Information

	Year Ended December 31, 2021	Year Ended December 31, 2020	Year Ended December 31, 2019
Loss and comprehensive loss	$ 7,207,912	$ 6,596,793	$ 901,168
Basic and diluted loss per share	0.08	0.16	0.02
Total assets	12,374,613	4,859,762	2,365,966
Total liabilities	3,102,023	2,503,071	2,117,806

SUMMARY OF QUARTERLY RESULTS

	June 30, 2022	March 31, 2022	December 31, 2021	September 30, 2021
Total assets	$ 8,532,713	$ 10,180,750	$ 12,374,613	$ 14,279,089
Property, plant and equipment	3,329,674	3,235,492	3,205,404	2,903,864
Working capital (deficit)	1,739,915	3,661,725	5,492,200	7,822,655
Shareholders' equity (deficit)	5,697,220	7,510,032	9,272,590	11,465,690
General and administrative expenses	1,664,057	1,769,094	1,715,220	1,793,040
Loss and comprehensive loss	(1,940,007)	(2,032,940)	(2,320,211)	(1,904,360)
Basic and diluted loss per share	(0.02)	(0.02)	(0.02)	(0.02)

	June 30, 2021	March 31, 2021	December 31, 2020	September 30, 2020
Total assets	$ 16,094,979	$ 12,816,534	$ 4,859,762	$ 2,602,964
Property, plant and equipment	2,712,702	2,573,141	2,370,872	2,232,882
Working capital (deficit)	9,331,991	(1,358,439)	(62,755)	(1,907,428)
Shareholders' equity	12,801,486	1,991,514	2,356,691	(131,710)
General and administrative expenses	1,759,089	1,107,245	5,898,105	119,300
Loss and comprehensive loss	(1,853,482)	(1,129,859)	(5,894,744)	(142,372)
Basic and diluted loss per share	(0.02)	(0.02)	(0.14)	(0.01)

Results of Operations

The following discussion addresses the operating results and financial condition of the Company for the three months ended June 30, 2022, compared with the three ended June 30, 2021.

For the three-month period ended June 30, 2022:

Loss and comprehensive loss for the period

The Company had a loss and comprehensive loss for the three-month period ended June 30, 2022, of $1,940,007 (2021 - $1,853,482). The net increase of $86,525 in the loss and comprehensive loss for the three-month period ended June 30, 2022 compared to the three-month period ended June 30, 2021 was mainly due an decrease of $95,032 in General and administrative expenses, with an increase in Research and development expenses of $189,989 and an increase in other items of $8,432 mainly consisting of foreign exchange gains, interest income and other income. The changes in General and administrative, Research and development expenses and other income are noted below.

Other income

During the three-month period ended June 30, 2022, the Company reported interest income of $4,306 (2021 - $5,666), a foreign exchange gain of $491 (2021 - $Nil), and other income of $9,301 (2021 - $Nil) compared to the three-month period ended June 30, 2021. The interest income is due from a net investment in sublease and reported separately from the interest expense of $4,306 on the lease liability and interest received on GST refunds, and the exchange gain is on US currency purchases. Other Income was from a rebate from BC Hydro.

Research and development expenses ("R&D")

During the three-month period ended June 30, 2022, the Company reported R&D of $290,048 compared to $100,059 for the three-month period ended June 30, 2021. The items that caused the $290,048 increase is noted in the following:

In comparison to the three-month period ended June 30, 2021:

- Contract consulting fees of $127,263 (2021 - $45,380) increased by $81,883 due to the Company pushing to complete its final phase of testing of the asphalt shingle processing equipment and the use of consultants for its R&D.
- Repairs and maintenance of $1,366 (2021 - $15,149) decreased by $13,783 on repairs and small modifications to the processing equipment as the Company has streamlined the current equipment and has focused most of its attention to new capital equipment.
- Site materials of $161,419 (2021 - $39,530) increased by $121,889 as the Company has started producing product and has continued to refine and do numerous tests which consumed materials and equipment, as well as increased costs for health & safety supplies. Equipment rentals also increased to allow testing of different equipment models

General and administrative expenses

General and administrative expenses of $1,664,057 (2021 - $1,759,089) are primarily comprised of advertising and promotion, bank charges & interest, consulting fees, depreciation, insurance, IT & communications, office expenses, professional fees, rent and utilities, share-based compensation, transfer agent and regulatory fees, travel, and wages & benefits. The net decrease was $95,032 compared to the three-month period ended June 30, 2021. Items that caused the net decrease are noted in the following:

In comparison to the three-month period ended June 30, 2021:

- Advertising and promotion of $134,288 (2021 - $3,540) increased by $130,748 as the Company listed its shares in a public market on July 13, 2021 and begun to promote the Company and report to shareholders.
- Bank charges and interest of $57,353 (2021 - $81,943) decreased by $24,590. Accretion interest on new leases on the premises and acquisition of the Northstar lease account for a decrease of $10,355, a decrease of Loan interest of $12,314 due to a principal reduction in the Company's bank loan and a reduction of bank charge and finance charges of $1,921.
- Consulting of $57,550 (2021 - $82,886) decreased by $25,336 due to some of the consultants being hired as employees after the Company listed in the public market, causing an increase in wages and benefits.
- Depreciation of $278,989 (2021 - $115,491) increased by $163,498 mainly due to the Company beginning to depreciate its processing equipment.
- Insurance of $35,015 (2021 - $Nil) increased by $35,015 due to acquiring D&O and property and plant liability insurance.
- IT and Communications of $70,568 (2021 - $1,857) increased by $68,711 due to money spent on software licenses and external IT services that were needed to support the business
- Office and miscellaneous of $8,050 (2021 - $2,472) increased by $5,578 was due to an increase in subscription, licences, and general office supplies.
- Professional fees of $234,236 (2021 - $185,001) increased by $49,235. Legal fees decreased by $40,166 as the Company required such services to complete its listing in the prior period, offset by increases in Accounting fees of $38,430 due to extra audit and tax services required, and an increase in other professional fees of $50,971 due to the hiring of a Health & Safety Officer $9,202 and hiring of a firm to prepare the Company's SRED claims $41,769.
- Rent and utilities of $85,824 (2021 - $39,008) increased by $46,816 due to the new lease renegotiated and beginning January 1, 2021 which accounted for $13,137, utilities increased by 18,229 and the remaining amount of the $15,450 increase was due to additional office space required.
- Share-based compensation of $129,323 (2021 - $1,127,240) decreased by $997,917 due to timing of options granted in the current period and the vesting of the stock options on historical issuances.
- Transfer agent and regulatory fees of $11,288 (2021 - $58,328) decreased by $47,040 as the Company listed its shares in a public market on July 13, 2021 whereas the comparative cost were due to prelisting costs.
- Travel of $62,211 (2021 - $12,970) increased by $49,241 as the Company brought in certain consultants to assist in refining and promoting the Company's and its processing equipment as well as travel by the executives to the Delta pilot facility and certain marketing events
- Wages and benefits of $499,362 (2021 - $48,353) increased by $451,009 as the Company hired the Empower management as employees on the RTO and the costs reported in Wages and benefits were previously reported as Management fees. In addition, the Company hired additional executive staff in 2021 Q4 and 2022 Q1

For the six-month period ended June 30, 2022:

Loss and comprehensive loss for the period

The Company had a loss and comprehensive loss for the six-month period ended June 30, 2022, of $3,972,763 (2021 - $2,983,341). The net increase of $989,422 in the loss and comprehensive loss for the six-month period ended June 30, 2022 compared to the six-month period ended June 30, 2021 was mainly due to an increase of $611,633 in General and administrative expenses, with an increase in research and development expenses of $389,261 and an increase in other income of $11,472 mainly consisting of foreign exchange gains, interest income and other income. The changes in General and administrative, Research and development expenses and other income are noted below.

Other income

During the six-month period ended June 30, 2022, the Company reported interest income of $11,245 (2021 - $11,643) and foreign exchange gain of $2,569 (2021 - $Nil) compared to the six-month period ended June 30, 2021. The interest income is due from a net investment in sublease and reported separately from the interest expense of $8,972 on the lease liability and interest received on GST refunds, the exchange gain is on US currency purchases, and other income is from a BC Hydro rebate.

Research and development expenses ("R&D")

During the six-month period ended June 30, 2022, the Company reported R&D of $562,911 compared to $173,650 for the six-month period ended June 30, 2021. The items that caused the $389,261 increase is noted in the following:

In comparison to the six-month period ended June 30, 2021:

- Contract consulting fees of $262,460 (2021 - $97,748) increased by $164,712 due to the Company pushing to complete its final phase of testing of the asphalt shingle processing equipment and the use of consultants for its R&D.
- Repairs and maintenance of $4,838 (2021 - $15,149) decreased by $10,311 on repairs and small modifications to the processing equipment as the Company has streamlined the current equipment and has focused most of its attention to new capital equipment.
- Site materials of $295,613 (2021 - $60,753) increased by $234,860 as the Company has started producing product and has continued to refine and do numerous tests which consumed materials and equipment, as well as increased costs for health & safety supplies. Equipment rentals also increased to allow testing of different equipment models

General and administrative expenses

General and administrative expenses of $3,432,967 (2021 - $2,821,334) are primarily comprised of advertising and promotion, bank charges & interest, consulting fees, depreciation, insurance, IT & communications, office expenses, professional fees, rent and utilities, share-based compensation, transfer agent and regulatory fees, travel, and wages & benefits. The net increase was $611,633 compared to the six-month period ended June 30, 2021. Items that caused the net decrease are noted in the following:

In comparison to the six-month period ended June 30, 2021:

- Advertising and promotion of $415,672 (2021 - $4,283) increased by $411,389 as the Company listed its shares in a public market on July 13, 2021 and begun to promote the Company and report to shareholders.
- Bank charges and interest of $116,291 (2021 - $167,517) decreased by $51,226. Accretion interest on new leases on the premises and acquisition of the Northstar lease account for a decrease of $20,441, a decrease of Loan interest of $27,000 due to a principal reduction in the Company's bank loan and a reduction of bank charge and finance charges of $3,784.
- Consulting of $174,350 (2021 - $168,461) increased by $5,889 due to some of the consultants being hired as employees after the Company listed in the public market, causing an increase in wages and benefits.
- Depreciation of $501,727 (2021 - $230,983) increased by $270,743 mainly due to the Company beginning to depreciate its processing equipment.
- Insurance of $71,275 (2021 - $Nil) increased by $71,275 due to acquiring D&O and property and plant liability insurance.
- IT and Communications of $105,563 (2021 - $1,857) increased by $103,706 due to money spent on software licenses and external IT services that were needed to support the business
- Office and miscellaneous of $31,269 (2021 - $2,472) increased by $28,797 was due to an increase in subscription, licences, and general office supplies, and employee health & safety training.
- Professional fees of $343,488 (2021 - $334,089) increased by $9,399. Legal fees decreased by $120,142 as the Company required such services to complete its listing in the prior period, offset by increases in Accounting fees of $70,930 due to extra audit and tax services required, and an increase in other professional fees of $58,611 due to the hiring of a Health & Safety Officer $12,842, lab testing of $4,000 and hiring of a firm to prepare the Company's SRED claims $41,769.
- Rent and utilities of $161,879 (2021 - $75,767) increased by $86,112 due to the new lease renegotiated and beginning January 1, 2021 which accounted for $26,275, utilities increased by 26,537, ground maintenance increased by $3,050 and the remaining amount of the $30,250 increase was due to additional office space required.
- Share-based compensation of $399,519 (2021 - $1,645,964) decreased by $1,246,445 due to timing of options granted in the current period and the vesting of the stock options on historical issuances.

- Transfer agent and regulatory fees of $40,821 (2021 - $76,298) decreased by $35,477 as the Company listed its shares in a public market on July 13, 2021 whereas the comparative cost were due to prelisting costs.
- Travel of $126,394 (2021 - $16,938) increased by $109,456 as the Company brought in certain consultants to assist in refining and promoting the Company's and its processing equipment as well as travel by the executives to the Delta pilot facility and certain marketing events
- Wages and benefits of $944,719 (2021 - $96,705) increased by $848,014 as the Company hired the Empower management as employees on the RTO and the costs reported in Wages and benefits were previously reported as Management fees. In addition, the Company hired additional executive staff in 2021 Q4 and 2022 Q1

LIQUIDITY AND CAPITAL RESOURCES

The Company's development of asphalt processing activities has been funded to date primarily through the issuance of common shares and loan financings, and the Company expects that it will continue to be able to utilize this source of financing until it develops cash flow from its processing operations. Other than as discussed herein, the Company is not aware of any trends, demands, commitments, events or uncertainties that may result in its liquidity either materially increasing or decreasing at present or in the foreseeable future. Material increases or decreases in the Company's liquidity will be substantially determined by the success or failure of its commercialization of a proprietary process technology for the processing of asphalt shingles and the extraction and recovery of asphalt cement, fiberglass/felt and mineral aggregates to be sold and used in asphalt pavement, shingle manufacturing, construction products, and other industrial applications, as well as its continued ability to raise capital.

The Company anticipates spending approximately $5,000,000 in capital resources on its processing equipment and R&D in the next twelve months.

Currently, the Company's overhead expenses are averaging approximately $500,000 per month (excluding share-based payments on issuance of stock options) during the development and setting up of the asphalt processing plant. The Company assesses its financing requirements and its ability to access equity or debt markets on an ongoing basis. The assessment considers: the stage and success of the Company's evaluation activities to date; the continued participation of the Company's partners in evaluation activities; and financial market conditions. It is possible that future economic events and global conditions may result in further volatility in the financial markets which could negatively impact the Company's ability to access equity or debt markets in the future.

In March 2021, the Company issued 702,736 shares in settlement of $245,958 in Debt. On March 25, 2021 and March 26, 2021, the Company raised $12,241,312 on 34, 975,178 Subscription Receipts at a price of $0.35 per Subscription Receipt. The Subscription Receipts incurred $705,098 in finders fees payable in cash of which $352,649 was withheld from the Subscription Receipts and the balance of $352,449 in finders fees were paid on Escrow Release. Each Subscription Receipt converted into one unit upon the receipt of the final prospectus by the British Columbia Securities Commission on June 22, 2021. In May 2021, the Company received an aggregate of $480,000 in loans from each of the directors, being Neil Currie, James Currie, Gordon Johnson, James Borkowski and Gregg Sedun, as bridge loans as the Company completed its public listing and repaid the bridge loans in full in June 2021 from proceeds of the share issuances.

As at June 30, 2022, the Company had working capital of $1,739,915 compared to working capital of $5,492,200 as at December 31, 2021. As at June 30, 2022, the Company had cash of $2,303,579 compared to $5,948,876 as at December 31, 2021.

Net cash used in operating activities for the six months ended June 30, 2022, was $2,817,222 compared to $1,354,826 for the six months ended June 30, 2021, consisting primarily of the operating loss for the period and the change in non-cash items.

Net cash used in investing activities for the six months ended June 30, 2022, was $518,858compared to $745,468 used in investing activities during the six months ended June 30, 2021 was consisting of cash used for the acquisition of property, plant and equipment of $503,815 (2021 - $342,968), refundable deposits paid $15,043 (2021 - $402,500).

Net cash used in financing activities for the six months ended June 30, 2022 was $309,217 compared to $10,400,040 provided during the six months ended June, 2021 which consisted of $30,000 (2021 - $856,958) in loan payments, $Nil (2021 - $12,241,312) in proceeds from share subscriptions less $Nil ($2021 - $705,098) in share issue costs, $317,183 (2021 - $316,032) in lease liability repayment on IFRS-16 leased premises, and proceeds on sublease payments of $37,966 (2021 - $36,816).

OFF-BALANCE SHEET ARRANGEMENTS

The Company has not entered into any off-balance sheet transactions.

PROPOSED TRANSACTIONS

The Company currently has not entered into any binding transactions; however, it is seeking to expand its business in other jurisdictions.

CHANGES IN ACCOUNTING POLICIES

Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)

The IASB has published Classification of Liabilities as Current or Non-Current (Amendments to IAS 1) which clarifies the guidance on whether a liability should be classified as either current or non-current. The amendments:

- clarify that the classification of liabilities as current or non-current should only be based on rights that are in place "at the end of the reporting period"
- clarify that classification is unaffected by expectations about whether an entity will exercise the right to defer settlement of a liability
- make clear that settlement includes transfers to the counterparty of cash, equity instruments, other assets or services that result in extinguishment of the liability.

The amendment is effective for annual periods beginning on or after January 1, 2023. Earlier application is permitted. The Company does not expect the adoption of this amendment to have a significant impact.

RELATED PARTY TRANSACTIONS

As at June 30, 2022, accounts payable and accrued liabilities include $297,831 (December 31, 2021 - $178,759) owing to companies with certain directors in common or companies controlled by directors or former directors as follows:

Name of Company, Directors and/or Officers	Directors/Officers	June 30, 2022	December 31, 2021
Aidan G. Mills	President & CEO, Director, namely, Aidan G. Mills	$ 150,521	$ 112,607
Anacortes Management Ltd	A director, namely, James Currie	$ 18,000	$ -
Gord Johnson	A director, namely, Gord Johnson	$ 47,988	$ 27,500
Terry Charles	A former director and COO, namely, Terry Charles	$ 47,988	$ 30,319
Kellie Johnston	CSO, Namely, Kellie Johnston	$ 16,667	$ -
Rosemary Pritchard	CFO, namely, Rosemary Pritchard	$ 16,667	$ 8,333
		$ 297,831	$ 178,759

During the period ended June 30, 2022 and 2021, the Company paid or accrued the following amounts to companies controlled by directors and former directors or companies having certain directors and former directors in common:

Name of Company, Directors and/or Officers	Directors/Officers	June 30, 2022	June 30, 2021
Expenses:			
Aidan Mills	President & CEO, Director		
(Wages and benefits)		$ 125,000	$ -
(Share-based payments)		$ 81,710	$ -
Currie Capital Corp.	A director and former CEO,		
(Consulting fees)	namely, Neil Currie	$ -	$ 30,000
(Share-based payments)		$ 23,677	$ 203,060
Gord Johnson	A director,		
(Wages and benefits)	namely, Gord Johnson	$ 82,500	$ 45,000
(Share-based payments)		$ 11,922	$ 67,686
Gregg Sedun	A director,		
(Share-based payments)	namely, Gregg Sedun	$ 18,307	$ 67,686
James Borkowski	A director,		
(Share-based payments)	namely, James Borkowski	$ 10,496	$ 67,686
Anacortes Management Ltd	A director,		
(Consulting fees)	namely, James Currie	$ 24,000	$ -
(Share-based payments)		$ 20,992	$ 135,373
Sead Hamzagic, Inc.	A former Director of Finance,		
(Consulting Fees)	namely, Sead Hamzagic	$ 80,000	$ 35,000
(Share-based payments)		$ 62,462	$ 135,373
Rosemary Pritchard	A CFO,		
(Wages and benefits)	namely, Rosemary Pritchard	$ 100,000	$ -
(Share-based payments)		$ 27,356	$ -
Terry Charles	A former director and COO,		
(Wages and benefits)	namely, Terry Charles	$ 41,250	$ 45,000
(Share-based payments)		$ 4,111	$ 67,686
Kellie Johnston	A CSO,		
(Wages and benefits)	namely, Kellie Johnston	$ 80,385	$ -
(Share-based payments)		$ 14,739	$ -

COMMITMENTS

The Company renegotiated a new lease effective January 1, 2021 for an initial term of 5 years with an option to extend for an additional 5 year. The basic annual rents are as follows:

- from January 1, 2021 to December 31, 2022 - $558,435 per annum
- from January 1, 2023 to December 31, 2024 - $583,563 per annum, and
- from January 1, 2025 to December 31, 2025 - $609,837 per annum

Estimated additional rents are approximately $126,000 per annum.

As of the date of this MD&A, the Company is currently in negotiations to potentially execute a long-term lease for its planned Calgary Empower Facility and the Company expects to enter into this lease in the third quarter of 2022.

LOANS PAYABLE

	Credit Facility	Shareholder Loans	Directors' Loans	Equipment Loan	Total
Loans payable:					
Balance – December 31, 2020	**1,365,557**	**551,710**	**-**	**-**	**1,917,267**
Advances	-	-	480,000	-	480,000
Accrued interest	35,252	16,744	2,495	-	54,491
Repayment of loan and interest	(1,400,809)	(322,496)	(482,495)	-	(2,205,800)
Shares for debt	-	(245,958)	-	-	(245,958)
Equipment received for loan	-	-	-	270,000	270,000
Interest accretion on low interest loan	-	-	-	(30,985)	(30,985)
Balance – December 31, 2021	**-**	**-**	**-**	**239,015**	**239,015**
Less current portion	-	-	-	(90,000)	(90,000)
Long term portion	**$ -**	**$ -**	**$ -**	**$ 149,015**	**$ 149,015**
Balance – December 31, 2021	**-**	**-**	**-**	**239,015**	**239,015**
Accrued interest	-	-	-	1,488	1,488
Repayment of loan	-	-	-	(30,000)	(30000)
Interest accretion on low interest loan	-	-	-	9,987	9,987
Balance – June 30, 2022	**-**	**-**	**-**	**220,490**	**220,490**
Less current portion	-	-	-	(120,000)	(120,000)
Long term portion	**$ -**	**$ -**	**$ -**	**$ 100,490**	**$ 100,490**

Credit Facility:

The Company had a variable rate term loan with a maximum authorized limit of $1,500,000 with Vancity Savings Credit Union. The credit facility carried an annual interest rate of Vancity Prime + 1.75%, was calculated and payable monthly and secured by a general security agreement and personal guarantees of certain Directors and Shareholders. All amounts due under the credit facility are due on demand and the remaining balance was repaid in December 2021. The amount outstanding as at June 30, 2022 was $Nil (December 31, 2021 - $Nil).

Shareholder loans:

The Company had a loan payable to a non-related party shareholders in the amount of $523,520. The loans carried an annual interest rate of 10%, were unsecured and were paid in full in June 2021 of which $245,958 was settled with the issuance of 702,736 shares (Note 9). The amount outstanding as at June 30, 2022 was $Nil (December 31, 2021 - $Nil).

The Company had a loan payable to a non-related party shareholder in the amount of $28,190. The amount was non-interest bearing, is unsecured and was repaid in full in June 2021. The amount outstanding as at June 30, 2022 was $Nil (December 31, 2021 - $Nil).

Directors' loans:

During the year ended December 31, 2021, the Company had borrowed $480,000 from directors of the Company. The loans carried an annual interest rate of 6%, were unsecured and were paid in full in June 2021 with interest totaling $2,495.

Equipment loan:

The Company acquired $270,000 of equipment from a company controlled by a former officer and current employee of the Company during the year ended December 31, 2021. The loan carries an annual interest rate of 1% per annum, secured by the equipment and repayable in monthly instalments of $5,000 plus interest for the first 6 months and $10,000 per month plus interest until fully paid. Interest payments begin in July 2022. The equipment loan was recognized as the present value using a 10% market rate of interest. The difference was recognized as a shareholder contribution in reserves on low interest loan. The amount outstanding as at June 30, 2022 was $220,490 (December 31, 2021 - $239,015).

CAPITAL MANAGEMENT

The Company's capital comprises its shareholders equity under management. The Company's objectives when managing capital are to safeguard the Company's ability to continue as a going concern in order to pursue the development of its processing technology and to maintain a flexible capital structure which optimizes the costs of capital at an acceptable risk.

The Company manages the capital structure and makes adjustments to it in light of changes in economic conditions and the risk characteristics of the underlying assets. To maintain or adjust the capital structure, the Company may attempt to issue new shares, issue new debt, acquire or dispose of assets.

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 does not establish quantitative return on capital criteria for management, but rather relies on the expertise of the Company's management to sustain future development of the business.

In order to maximize ongoing development efforts, the Company does not pay dividends. The Company's investment policy is to invest its short-term excess cash in highly liquid short-term interest-bearing investments with maturities of 365 days or less from the original date of acquisition, selected with regards to the expected timing of expenditures from continuing operations.

To fund future operations, the Company will need to raise funds through future share issuances, issue new debt or dispose of assets.

There have been no changes to the Company's approach to capital management during the six months ended June 30, 2022. The Company is not subject to externally imposed capital requirements.

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FAIR VALUE OF FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

Financial Risk Management Objectives

The Company examines the various financial instrument risks to which it is exposed and assesses the impact and likelihood of those risks. These risks may include credit risk, liquidity risk, currency risk and interest rate risk. Where material, these risks are reviewed and monitored.

Liquidity and Capital Management

The Company manages its capital to ensure that it will be able to continue as going-concern while maximizing the return to shareholders through the optimization of debt and equity balances.

The capital of the Company consists of items included in Shareholders' Equity of $5,698,903.

The Company manages its capital structure and makes adjustments in light of changes in economic conditions. To maintain or adjust the capital structure, the Company may issue equity or return capital to shareholders. There were no changes to the Company's approach to capital management during the period ended June 30, 2022. The Company is not subject to externally imposed capital requirements.

Credit risk

Credit risk is the risk that a counterparty to a financial instrument will fail to discharge an obligation or commitment that it has entered into with the Company. The carrying amounts of financial assets best represent the maximum credit risk exposure at the reporting date.

Cash is held with reputable banks in Canada. The long-term credit rating of these banks, as determined by Standard and Poor's, was A+.

Liquidity risk

Liquidity risk is the risk that the Company will not meet its financial obligations as they become due.

Accounts payables and accrued liabilities are paid in the normal course of business generally according to their terms. In the normal course of business, the Company enters into contracts that give rise to commitments for future minimum payments. As at June 30, 2022, the Company had $2,303,579 in cash to settle current liabilities of $1,326,494 and as such, management believes the Company's exposure to liquidity risk is insignificant.

Interest Rate Risk

Interest rate risk is the risk that the fair value or future cash flows of financial instruments will fluctuate because of changes in market interest rates. The Company is not subject to interest rate risk.

Foreign currency risk

The Company is exposed to foreign currency risk to the extent that monetary financial instruments are denominated in United States dollars. The Company has not entered any foreign currency contracts to mitigate this risk. The Company's sensitivity analysis suggests that a 10% change in the rate of exchange between the Canadian and United States dollar would have an insignificant impact on its results of operations as it held nominal financial assets and liabilities denominated in United States dollars.

Fair Value Measurements Recognized in the Statement of Financial Position

The following table summarizes the carrying values of the Company's financial instruments.

	June 30, 2022	December 31, 2021
Financial assets at FVTPL (i)	$ 2,303,579	$ 5,948,876
Financial liabilities at amortized cost (ii)	$ 948,504	$ 998,558

(i) Cash
(ii) Accounts payable and accrued liabilities and equity-based compensation payable and loans payable

The Company categorizes its financial assets and liabilities measured at the fair value into one of three different levels depending on the observability of the inputs used in the measurement.

The three levels are defined as follows:

- Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.
- Level 2 – inputs to valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.
- Level 3 – inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Cash is measured at fair value using Level 1 inputs.

The fair values of other financial liabilities approximate their carrying value, due to their short-term nature or market rate of interest.

OUTSTANDING SHARE DATA AS AT JUNE 30, 2022:

a) Authorized Share Capital:
Unlimited number of common shares without par value

b) Issued Share Capital:
106,125,903 common shares with a stated value of $24,698,274

c) Outstanding stock options:

	Expiry Date	Exercise Price	Number of Options
	February 16, 2026	$ 0.35	3,300,000
	July 12, 2026	$ 0.35	2,100,000
	December 15, 2024	$ 0.35	875,000
	December 15, 2026	$ 0.35	400,000
	February 7, 2027	$ 0.35	200,000
	May 31, 2023	$ 0.35	100,000
	April 19, 2027	$ 0.35	260,854
Outstanding			**7,235,854**
Exercisable			**5,481,250**

d) Outstanding share purchase warrants:

	Expiry Date	Exercise Price	Number of Warrants
	July 13, 2026 (1)	$ 0.279	4,596,268
Finders warrants	July 13, 2026 (1)	$ 0.279	406,249
	July 13, 2026 (1)	$ 0.465	490,615
Finders warrants	July 13, 2026 (1)	$ 0.465	204,457
	June 22, 2023	$ 0.500	17,472,584
Broker warrants	June 22, 2023	$ 0.500	2,014,565
Outstanding and exercisable			**25,184,738**

e) Issued Restricted Stock Units and Performance Stock Units:

	Vesting Date	Issued	Cash Settled	Stock settled
Restricted Stock Units	June 23, 2023	130,424	11,785	118,639
Restricted Stock Units	March 31, 2024	130,424	11,785	118,639
Restricted Stock Units	March 31, 2025	130,424	11,785	118,639
Maximum Performance Stock Units	June 23, 2023	1,956,421	769,996	1,186,425
Maximum Performance Stock Units	July 13, 2024	1,956,421	769,996	1,186,425
Maximum Performance Stock Units	July 13, 2025	1,956,421	769,996	1,186,425
Total Restricted Stock Units and Performance Stock Units		**6,260,535**	**2,345,343**	**3,915,192**

f) Shares held in escrow or pooling agreements: As of the date of this MD&A, there are currently 18,114,139 common shares, and 56,250 warrants held in escrow. In connection with the listing of the Common Shares for trading on the TSXV in July 2021, an aggregate of 24,152,187 Common Shares, and 806,048 Warrants were deposited in escrow with Computershare on June 18, 2021, of which 10% of such Common Shares were released from escrow on the date the Common Shares were listed on the TSXV, and 15% are to be release from escrow every six months thereafter, subject to the provisions provided for in NP 46-201.