MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE YEAR ENDED DECEMBER 31, 2021

This Management's Discussion and Analysis ("MD&A") should be read in conjunction with CVW CleanTech Inc.'s (formerly Titanium Corporation Inc.) ("CVW CleanTech" or the "Company") audited financial statements and notes thereto for the year ended December 31, 2021. This MD&A has been prepared as of (April 25, 2022). CVW CleanTech is a development stage company whose common shares are listed on the TSX Venture Exchange under the symbol "CVW". This MD&A and the audited financial statements and comparative information have been prepared and approved by the Board of Directors (the "Board of Directors") of the Company in accordance with International Financial Reporting Standards ("IFRS"). All financial measures presented in this MD&A are expressed in Canadian dollars unless otherwise indicated.

Additional information and the above referenced material is available on CVW CleanTech's website at www.CVWCleanTech.com or on SEDAR at www.sedar.com.

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Nature of Business

CVW CleanTech is a clean technology innovator focused on providing solutions to the mining sector of Canada's oil sands industry. The Company has developed a suite of technologies called Creating Value from Waste™ ("CVW™") that recovers bitumen, solvents, heavy minerals and water from oil sands froth treatment tailings. Reducing emissions from these facilities will help oil sands producers in achieving their Net Zero goals.

The Company expects that the recovery of bitumen, associated solvents and water will result in important and timely environmental improvements for the oil sands industry. Recovering additional bitumen from the existing froth tailings stream will provide incremental revenue, helping achieve better netbacks while reducing the environmental footprint of oil sands operations.

Remediation of oil sands tailings is an industry and government priority. Our clean technology fills a gap in tailings management and delivers environmental benefits by producing a cleaner and lower volume of tailings for deposition, reduces methane emissions (greenhouse gases or "GHGs") and critical air contaminants ("CAC"). Canada's oil and gas industry has a multifaceted plan to address these issues and CVW™ technologies can help form part of that plan.

Selected Annual Information

The following table presents a summary of selected annual financial information in accordance with IFRS*:*

(Canadian dollars in thousands except per share data)	Fiscal Year Ended		
	Dec 31, 2021	Dec 31, 2020	Dec 31, 2019
Net loss	**$ 2,271**	$ 3,387	$ 3
Net loss per Share - Basic & Diluted	**$ 0.02**	$ 0.04	$ 0.00
Cash and cash equivalents	**$ 408**	$ 2,656	$ 3,055
Total Assets	**$ 617**	$ 2,699	$ 5,104

During 2020 and 2021, we have continued to develop and refine the CVW™ technology through validation and optimization engineering work undertaken with Canadian Natural Resources Ltd. ("Canadian Natural") at their Horizon Oil Sands ("Horizon") mining site (the "Project"). Canadian Natural is a senior oil and natural gas production company, with operations in in Western Canada, the U.K. portion of the North Sea and Offshore Africa.

Our resources have been focused on advancing engineering for the tailings thickener, Concentrator Plant, Minerals Separation Plant, minerals transload facility and various ancillary services. We have continued to validate the financial and environmental benefits of our CVW™ technology. Engineering and other Project work has been an ongoing joint effort by CVW CleanTech and Canadian Natural, governed under Project cost agreements stipulating the cost sharing split for costs and government grants.

Engineering and validation Project work was completed during the year ended December 31, 2021 at a cost of $1.7 million (2020- $1.0 million). The Company's share of government grant funding related to these specific Project expenditures totalled $2.1 million during 2021 (2020 – $nil). As the terms and conditions of government grant contracts and funding agreements were not finalized until late in 2020, no government grants were recognized relating to Project expenditures in 2020.

Selected Annual Information (continued)

These funds were recognized instead in 2021, once the conditions had been met for their collection. Conversely, in 2019, CVW CleanTech's share of government grants totalled $3.4 million on Project expenditures of $608,000, as certain expenditures were recognized in 2018 and the conditions to recognize the government funding were not met until 2019. As a result, the amounts reported annually for total losses and government assistance can vary from year to year.

Liquidity

At December 31, 2021, the Company had $408,000 of cash on hand (2020 - $2.7 million; 2019 - $5.1 million). Over the past three years, cash has been utilized to conduct research and development, to perform engineering and validation studies, to conduct sampling and minerals analysis, along with compensation for our management team. Cash has also been utilized to sustain the general and administrative aspects of the business. Sources of capital have included a private placement in 2019 for proceeds of $4 million, along with government grants of $5.4 million. To date, CVW CleanTech has devoted substantially all its efforts to commercialize its proprietary technologies.

The Company remains in the development stage, and to date, has not earned any revenue from the sale of products or services associated with its CVW™ technologies. Accumulated losses of $96 million have been incurred to December 31, 2021. Expenditures to continue further development activities will be required, and it is expected the Company will continue to incur losses. These expenditures will require funding from outside sources, including government grants, equity financing and possibly debt financing in the future. Working with industry partners to assist in the development process and provide evidence the technology is commercially viable is crucial.

To ensure the business remains a going concern, management and the Board of Directors regularly review funding opportunities available through various government agencies. Although the Company has previously received government grants and currently has in place or is expected to sign funding agreements for additional government grants, there is no certainty that the grants will fund future expenses, that the grant agreements will be signed or that grant funding will be received.

Throughout 2021, the Board of Directors considered the best strategy and method to arrange for a recapitalization of the business. As a result of these efforts, an equity financing was competed in January 2022. The gross proceeds of $5 million provided cash to settle obligations at December 31, 2021, such as the deferred compensation liability of $1.1 million.

Liquidity (continued)

The net amounts on hand will be used to sustain the Company's ongoing development activities for the coming 12 months and beyond. The Company has no outside capital commitments or debt to be serviced. While working capital was constrained at December 31, 2021, the injection of cash equity in January 2022 has provided sufficient liquidity to ensure financial obligations can be settled as they come due.

While we will continue to work towards a re-commencement of Project work with our industry partner Canadian Natural, we are unable to forecast a start date at this time. When those activities proceed, it will be necessary to consider whether additional sources of capital will be required. At present, we have been awarded government funding under several umbrellas. Depending upon the timing and scope of future Project work, these awarded grants may form a portion of the capital required to take further steps towards commercialization.

The Company's ability to continue as a going concern is dependent upon its ability to fund its research, development, engineering and commercialization, manage its ongoing expenses, retain its patent rights and generate positive cash flows from operations. See "Discussion of Risks" in this MD&A.

Annual results and operations update

During the year ended December 31, 2021, CVW CleanTech completed the engineering program under the 2021 project coordination agreement (“PCA”) with Canadian Natural, signed additional government contribution funding agreements and collected milestone funding payments related to the 2020 and 2021 research and development activities. The 2021 engineering program included completion of overall plant design validation and optimization; engineering redesign and updating for the minerals separation plant, associated utilities and product transload facility; and the updating of Class 3 engineering capital costs and operating expenses for all of the Project facilities. The 2021 PCA provided for cost and grant funding sharing by the Company and Canadian Natural in the ratio 30% and 70%, respectively.

In September 2021, the Company and Canadian Natural finalized the cost sharing amounts and grant receipts under the 2021 PCA, which resulted in a net payment of $1.4 million to Canadian Natural by the Company.

During the fourth quarter of 2021 and the first quarter of 2022, the Company and Canadian Natural’s joint project team continued to review, refine and assess the Project costs, and its economic, environmental and operational benefits. These activities included developing various economic modeling scenarios, reviews of engineering details on operational improvements and cost savings, and assessment of the potential value of addressing environmental mitigation opportunities. Further technical studies are being undertaken in certain of these areas to identify and quantify the additional potential benefits and value for the Project.

This work will continue in 2022 and potentially result in modifications to the project with associated engineering changes. We are continuing to advance new government funding applications for our technology and its commercialization. In parallel with these technical studies, the Company and Canadian Natural have discussed a number of options for the commercial deployment of the CVW™ technologies at Canadian Natural’s Horizon operation. While CVW CleanTech is encouraged by these discussions, no agreement has been reached and there is no certainty that CVW CleanTech and Canadian Natural will reach an agreement.

In conjunction with the equity placement completed in January 2022, changes to the Board of Directors occurred. The new Board of Directors has implemented a revised structure for its compensation, which is expected to significantly reduce cash outflows relating to Board of Director activities. During 2020 and 2021, the Board of Directors received remuneration based upon annual retainers. Compensation amounts for each director varied depending upon which Committees they served on and the number of meetings attended.

Annual results and operations update (continued)

Directors' fees in 2021 were $437,000 (2020 - $361,000; 2019 - $341,000). By comparison, the new compensation structure implemented by the Board of Directors in 2022 will provide an annual retainer to each director of $30,000 per annum, and a per diem for specific assignments and work on identifiable company business of $1,200 per day. This is expected to provide cash savings to CVW CleanTech, estimated to be in the range of $250,000 annually.

Management of the company also voluntarily reduced their base salaries in the range of 15 to 25% in 2020, (effective April 1, 2020), and during 2021 agreed to forego variable compensation programs. Travel and other discretionary expenses were reduced or eliminated altogether. CVW CleanTech is a development stage company with no revenues and as such was not eligible for any of the Federal or Provincial programs related to COVID-19 wage or rent subsidies.

As previously mentioned, the Company completed a private placement raising $5.0 million in January 2022. The balance of the net proceeds after settling the deferred compensation liability will be used to fund costs associated with the commercialization of the CVW™ process, including engineering and design costs, and for general corporate purposes. The Company issued 25 million common shares and 12.5 million warrants as a result of this transaction. The units have a holding period of four months, prior to which, they may not be traded.

In conjunction with the private placement, the Board of Directors was restructured with Messrs. David Macdonald, John Stevens and Scott Nelson retiring from the Board of Directors, and Messrs. Darren Morcombe, John Brussa John Kowal appointed in their place. Mr. Brant Sangster had retired from his position in December 2021. Mr. Morcombe has been named the Chair of the Board of Directors.

On January 18, 2022, 4.5 million stock options were granted to directors and executive officers of the Company. The options have performance based and market based criteria in order to vest. The options have an exercise price of $0.46 and expire in January 2027.

Annual results and operations update (continued)

During March 2022, the Company's Chief Executive Officer, Mr. Scott Nelson, announced his retirement. He will continue to play an important role with CVW CleanTech in the coming years, as he will consult to the business, providing expertise in government relations, funding agency contracting and the ongoing partnership and collaborations with our industry oil sands partners. His consulting agreement will continue in place until February 2025. The Company's Executive Chair, Mr. Darren Morcombe, will fulfill the CEO role on an interim basis, until the Board of Directors appoints a permanent Chief Executive Officer. In conjunction with best governance practice, the Board of Directors named Mr. John Brussa as the Lead Independent Director given Mr. Morcombe will be fulfilling a role as a named executive officer.

On March 31, 2021, the Company further announced it had recruited Ms. Jennifer Kaufield to the Board of Directors. Ms. Kaufield was CVW CleanTech's Vice President, Finance and Chief Financial Officer until May 2021 and is a CPA, CA.

Selected quarterly and annual results

The following table summarizes the financial results of the Company for most recently completed quarterly periods in accordance with IFRS:

(Canadian dollars in thousands, except per share data)	Q4 Dec 31, 2021	Q3 Sep 30, 2021	Q2 Jun 30, 2021	Q1 Mar 31, 2021
Net Loss	555	87	718	912
Basic and Diluted Loss per Share	0.01	0.01	0.01	0.01

	Q4 Dec 31, 2020	Q3 Sep 30, 2020	Q2 Jun 30, 2020	Q1 Mar 31, 2020
Net Loss	969	776	734	907
Basic and Diluted loss per share	0.01	0.01	0.01	0.01

Changes in the amount of our quarterly expenses are primarily dependent upon the level and timing of research and development ("R&D") project activity, and the ability to claim government grants and project cost recoveries from our commercial partners.

For the three and twelve-month periods ended December 31, 2021, the Company reported net losses of $555,000 and $2.3 million, respectively. The net loss for the three-month period ended December 31, 2021, consisted primarily of G&A expenses of $633,000 and net R&D recovery of $78,000. This compares to a net loss of $969,000 for the three-month period ended December 31, 2020, which consisted of G&A expenses of $344,000 and R&D expenses of $625,000.

For the year ended December 31, 2021, the net loss of $2.3 million was comprised primarily of G&A expenses of $2.0 million and R&D expenses of $315,000, compared to net loss of $3.4 million for the year ended December 31, 2020. The decrease in R&D expenses of $1.5 million is primarily due to the recognition of government grant funding and project cost recoveries of $2.0 million in 2021, whereas there were no such recoveries in 2020.

The Company had an aggregate of $408,000 in cash at December 31, 2021, consisting of cash, and interest-bearing savings accounts, as compared to $2.7 million at December 31, 2020. Cash balances declined over the year as engineering and validation studies progressed, along with day to day general and administrative costs to run the Company.

Research and Development Expenditures

Below is a summary of the R&D expenditures by category:

	Three months ended			*Twelve months ended*		
(Canadian dollars in thousands, except per share data)	Dec 31, 2021	Dec 31, 2020	Increase (decrease)	Dec 31, 2021	Dec 31, 2020	Increase (decrease)
Projects and other	75	435	(360)	1,744	1,042	702
Compensation and benefits	81	144	(63)	559	575	(16)
Equity based compensation	4	17	(13)	36	119	(83)
Deferred compensation	(12)	29	(41)	-	50	(50)
R&D costs	148	625	(477)	2,339	1,786	553
Government grants	(226)	-	226	(2,024)	-	2,024
R&D expenditures (recovery)	**(78)**	**625**	**(703)**	**315**	**1,786**	**(1,471)**

Three months ended December 31, 2021 and December 31, 2020

- During the fourth quarter of 2021, R&D expenditures were $477,000 lower than the same period of 2020. Decreases were due to the timing of engineering validation and optimization studies, which were underway during the fourth quarter of 2020. Amounts in the fourth quarter of 2021 consisted primarily of compensation for technical staff and on-going minerals testing. During the fourth quarter of 2021, CVW CleanTech recognized $226,000 of government funding from Natural Resources Canada Clean Growth Program ("NRCan"). Of this amount, $56,000 remains receivable. Cost recoveries from government grants are recognized for accounting purposes once CVW CleanTech has completed its obligations for the milestone as set out in the respective funding agreement, the amount can be readily determined and collection is reasonably assured. While milestones for engineering and project work underway at December 31, 2020 were complete, not all grant amounts could be readily determined, and as s result, no cost recoveries in the form of government grants were recognized during Q4 2020.

- For the three months ended December 31, 2021, compensation and benefits were $63,000 lower and deferred compensation was $41,000 lower, than in the comparative quarter of 2020, as the Company's management team agreed to forego cash bonuses and variable pay to help preserve cash until refinancing and a capital raise could be completed.

Research and Development Expenditures (continued)

- Equity based compensation fell by $13,000 in the quarter compared to the same period of 2020. The expense for stock options was higher in 2020, as grants that arose between 2017 and 2019 continued to vest and were expensed, whereas in Q4 2021 the amount related only to vesting of 2019 options.
- Project costs were $360,000 lower than the comparative period of 2020. The decrease is a result of the timing of Project work at Horizon, which was underway in Q4 2020, whereas these activities were paused in Q4 2021.

Twelve months ended December 31, 2021 and December 31, 2020

- During the year ended December 31, 2021, the Company recognized $2.0 million of government funding, which included milestone payments from NRCan, Emissions Reduction Alberta and Sustainable Development Technology Canada. Some funding received in the first half of 2021 related to expenditures for the Project incurred in the last half of 2020. As a result, there were no government grants recognized in the year ended December 31, 2020.
- R&D expenditures were $553,000 higher than in the corresponding period of 2020. Engineering validation and optimization studies totalled $1.8 million for the 2021 year. This represented an increase of $702,000, which was offset by a total of $149,000 in reduced amounts for salaries, equity based compensation and deferred compensation.
- Compensation and benefits were $16,000 lower than the prior year due to a reduction of $90,000 in cash based bonuses, offset by an increase of $74,000 in salaries and group insurance premiums. During 2020, management had implemented pay rollbacks 15% to 25% from April 2020 through December 2020. Salaries for the Company's R&D group were restored in January 2021. The Company was not eligible for any COVID-19 related subsidies during either 2020 or 2021.

General and Administrative Expenditures

Below is a summary of G&A expenditures by category:

	Three months ended			*Twelve months ended*		
(Canadian dollars in thousands, except per share data)	Dec 31, 2021	Dec 31, 2020	Increase (decrease)	Dec 31, 2021	Dec 31, 2020	Increase (decrease)
Compensation and benefits	107	149	(42)	636	578	58
Deferred compensation	(12)	(13)	1	-	30	(30)
Consulting and professional fees	268	43	225	602	228	374
Directors' fees	202	92	110	438	361	77
Travel	-	-	-	-	7	(7)
Rent, insurance and office	32	33	(1)	137	135	2
Investor relations and regulatory	28	8	20	128	93	35
Equity-based compensation	8	31	(23)	64	204	(140)
Amortization	-	1	(1)	5	2	3
	633	**344**	**289**	**2,010**	**1,638**	**372**

Three months ended December 31, 2021 and December 31, 2020

- During the fourth quarter of 2021, expenditures were $289,000 higher than the same period of 2020. Additional legal professional fees were incurred, which related to costs associated with arranging the January 2022 private placement and supporting the payout of deferred compensation.

- In relation to arranging the January 2022 private placement, the Board of Directors held additional meetings in Q4 2021 as compared to Q4 2020. These meetings were necessary to arrange the terms and conditions of the financing in a manner suitable to the parties, including agreement upon the best method to settle the deferred compensation liability.

General and Administrative Expenditures (continued)

- These increases were offset by reductions in compensation paid to management and the amounts recognized for equity-based compensation. Variable pay and cash bonuses in Q4 2021 were $54,000 less than the 2020 amount. This was offset by increases totalling $12,000 for group insurance premiums and government remittances due for the January 2022 deferred compensation payout.

- Investor relations and regulatory expenses were $20,000 higher than the comparative period of 2020. Additional amounts were incurred in Q4 2021 as the meeting originally scheduled in June 2021 was rescheduled to December. The December meeting date was also rescheduled, with the 2020 AGM finally occurring on March 8, 2022.

Twelve months ended December 31, 2021 and December 31, 2020

- General and administrative expenditures were $372,000 higher than in the corresponding period of 2020. The increase was primarily due an increase in consulting and professional fees, particularly legal expenses. Legal expenses for the year ended December 31, 2021 were $320,000 higher than the previous year. The main causes of the increase were the need to prepare information circular documents three times due to postponements of the 2020 AGM; consultations throughout the year regarding the structure, timing and manner to arrange to recapitalize the Company, development of a term sheet and placement agreement suitable to the major parties involved, along with advice and direction on managing the legal and regulatory aspects of the deferred compensation payout. Legal advisors were also in attendance at all Board of Directors meetings during the year. In 2020, the Board of Directors met mostly surrounding quarterly financial filing dates, whereas in 2021 additional meetings were necessary to ensure the equity financing and recapitalization of the company could be completed.

- Directors' fees increased by $76,000 compared to the twelve months ended December 31, 2020. This was comprised of $52,000 in additional meeting fees and $14,000 relating to Canada Pension Plan contributions required on payment of the deferred compensation. These fees were a component of the deferred compensation liability that was settled in January 2022 with proceeds from the $5 million private placement.

General and Administrative Expenditures (continued)

- Compensation and benefits increased approximately $58,000 for the year ended December 31, 2021 as compared to the 2020 year end. The increases were principally related to $88,000 in additional pay to the Company's officers, offset by a reduction of $80,000 in cash bonuses. During the period from April through December 2020, the management team voluntarily agreed to reductions in pay of approximately 15%, to assist in preserving working capital and to address the uncertainties that existed at the onset of the COVID. The CEO agreed to continue with a reduced salary amount throughout 2021 to assist with the Company's working capital position.

- In contrast, there were increases in several additional areas, which combined to arrive at the remaining $50,000 increase. The Company recruited a new CFO and VP Finance in the spring of 2021, and the previous CFO agreed to remain on and provide transition assistance at a reduced rate of pay from May through December 2021. This effectively added a second part time salary to compensation and benefits amounts. Other changes included increases in group insurance premiums, amounts to establish sufficient vacation provisions and a one time additional expense for the employers' share of Canada Pension Plan remittances on the January 2022 deferred compensation payouts.

- Deferred compensation decreased by $30,000 year over year, and equity based compensation decreased $140,000. As noted above, management agreed to forego variable pay in 2021. As a result, there was no allocation for deferred compensation in 2021, whereas $30,000 was allocated towards deferred compensation in the 2020 year end. Equity based compensation amounts were also reduced as some options were fully vested and expensed by December 31, 2020 year end, and there were no new option grants subsequent to this date.

- Investor relations and regulatory expenses increased by $35,000 when comparing the 2021 to the 2020 year end. The increase resulted from the need to postpone and reschedule the AGM multiple times, contributing to $32,000 of the increase. The balance of the increase was comprised of additional fees for news releases and report preparation costs, offset by a reduction in fees due to securities regulators.

Market Opportunity

The Company believes the market, political, social and regulatory forces, favouring the adoption of our technology, are intensifying, as industry and governments respond and position the country for a net zero goal by 2050. Widely accepted science-based studies describe the importance of moving to a carbon neutral society and the challenges of moving fast enough to achieve 2050 targets. As the global economy rebounds from COVID-19, the importance of doing so in an environmentally sustainable way is growing. In addition, oil sands companies have been proactively adopting more sustainable and environmentally friendly approaches, including collaborative efforts, such as their Pathways to Net Zero Alliance, as they seek to demonstrate their commitment to reducing their environmental footprint.

Based on our research, pilot programs and studies, key economic drivers that support the adoption of CVW CleanTech's technology include: the commodity value of recovered bitumen and solvents currently lost to tailings ponds; the value of recovered zircon, ilmenite and titanium products and the potential for the recovery of rare earth minerals; the value of emissions abatement under current and future regulatory regimes; potential energy cost reductions due to potential hot process water reuse; potential cost reductions related to enhanced tailings remediation; and potential cost savings related to asset rock drainage mitigation. In addition, our studies suggest that tailings dewater more effectively in subsequent tailings management operations toward meeting Government of Alberta regulations which require reductions in the volume of tailings. The removal of bitumen and solvents could also enable the direct reuse of hot froth treatment tailings water in other mineable oil sands services, reducing energy costs, river water usage and GHGs related to reheating cold pond water used in the bitumen extraction process.

Tailings management remains one of the more difficult environmental challenges for the oil sands mining sector. The Company believes that its CVW™ technology can assist the industry in meeting certain of the regulatory requirements of the Alberta Energy Regulator's (the "AER") Directive 85. This legislation has been in place since 2017 and requires oil sands operators to minimize fluid tailings accumulation through ongoing treatment and progressive reclamation. Technologies such as CVW™ can help reduce the volume of tailings and assist in reaching the ready to reclaim criteria outlined in Directive 85. In particular, the Company's technology has the potential to address a number of the aspects of the AER's Directive 85 sub-objective 2 by mitigating risks associated with treated froth fluid fine tailings.

Market Opportunity (continued)

The Government of Canada, in its announcements at the end of March 2022, provided guidelines to address climate change for various sectors of the economy, with stringent targets for the oil and gas sector. In particular, the Trudeau government has set targets for the oil and gas industry in Canada to reduce its GHG emissions by 42% of 2019 levels by 2030. The federal government has established a number of mechanisms to support the transition to cleaner energy, including up to $8 billion for the Strategic Innovation Fund's Net Zero Accelerator. This fund aims to support projects that reduce GHG emissions including through the scale-up of clean technologies which reduce the environmental footprint of current production, using new technologies.

The oil sands industry is taking the lead in transitioning its operations to greener technologies, including strategies to assist in reducing GHG emissions. In particular, the members of the Pathways to Net Zero initiative believe the most effective way to address climate change is by developing and advancing new technologies and that this unprecedented challenge can and will be solved by Canadian ingenuity, leadership and collaboration. The commitment by the consortium to achieve net zero greenhouse gas emissions aligns directly with the benefits that can be provided by our technology.

Additional government initiatives which may be favorable to the commercialization of our technology include the Canadian Minerals and Metals Plan ("CMMP"), which aims to position Canada as a global supplier for strategic and critical minerals. The Province of Alberta introduced their minerals strategy and action plan and legislation in November 2021. Alberta's Bill 82 aligns the province's mineral development policies with the CMMP. These critical minerals and rare earths, which include zircon and titanium, are seen as vital to make the transition to net zero.

There is wide acceptance that innovation and new technologies will be the principal source of solutions for reducing both environmental impacts and operating costs in Canada's oil sands industry. Through a disciplined collaborative approach, with the cooperation of industry and governments, the Company believes that it has successfully developed unique, practical technology solutions for oil sands froth treatment tailings that offer significant improvements to technologies currently used, and address environmental, operational and economic challenges. There is real optimism that CVW CleanTech, other clean technology companies, along with industry partners and government can collaborate to meaningfully address climate change.

Financial Instruments and Financial Risk Factors

The Company has, for accounting purposes, designated its cash and cash equivalents and accounts receivable as loans and receivables. Accounts payable and accrued liabilities, along with the deferred compensation liability, are classified for accounting purposes as other financial liabilities.

As of December 31, 2021 and 2020, the Company estimates that both the carrying and fair value amounts of the Company's financial instruments are approximately equivalent because of the short-term nature of the assets and liabilities.

a. Financial risk

The Company's activities expose it to a variety of financial, credit, liquidity and market risks, including interest rate and foreign exchange rate risks.

Financial risk management is carried out by the Company's management team with guidance from the Audit Committee and the Board of Directors. The Board of Directors also provides guidance for enterprise risk management.

b. Credit risk

Credit risk is the risk of loss associated with a counterparty's inability to fulfill its payment obligations. The Company's credit risk is primarily attributable to cash and cash equivalents and recovery of project costs and related holdbacks and receivables. Cash and cash equivalents are held with Schedule I Canadian Chartered banks which are reviewed by management. Management believes that the credit risk concentration with respect to cash is minimal. The recovery of project costs is dependent on the Company meeting milestone obligations under contribution agreements. Management believes that credit risk associated with funding commitments from ERA and NRCan is low due to the project governance, credit quality of participants, reporting requirements to achieve milestones and the fact that all associated contributions were collected during the prior years.

c. Liquidity risk

Liquidity risk is the risk that the Company will not have sufficient cash resources to meet its financial obligations as they come due. The Company's approach to managing liquidity risk is to ensure that it will have sufficient liquidity to meet liabilities when due by monitoring actual and projected cash flows. The Board of Directors reviews and approves the operating plan as well as any material transactions outside the ordinary course of business. This oversight process is also supplemented by a continuous and detailed cash forecasting process. The Company is dependent on raising funds through the issuance of shares, loan facilities, government grants and/or attracting partners to undertake further development and commercialization of its technology. As at December 31, 2021, the Company had an aggregate cash balance of $407,782 (December 31, 2020 - $2,655,894) to settle current cash liabilities of $346,943 (December 31, 2020 - $659,572). Most of the Company's financial liabilities have contractual terms of 30 days or less. A private placement occurred in January 2022, which provided $5 million in additional capital. These proceeds will provide additional working capital for the Company to settle its current liabilities and provide sufficient liquidity for the forthcoming year.

Financial Instruments and Financial Risk Factors (continued)

d. Market risk

Market risk is the risk of loss that may arise from changes in market factors such as interest rates and foreign exchange rates.

i. Interest rate risk

The Company's current policy is to invest excess cash in interest bearing cash accounts, bankers' acceptances and guaranteed investment certificates issued by Schedule I Canadian banks. The Company periodically monitors its investments and the creditworthiness of the banks it holds investments in.

ii. Foreign currency risk

The Company's reporting and functional currency is the Canadian dollar and most purchases are transacted in Canadian dollars. The Company does not hold any significant balances in foreign currencies to give rise to exposure to foreign exchange risk. Any impact from fluctuations in foreign exchange rates would be minimal and therefore the Company does not hedge its foreign exchange risk.

Capital management

The Company considers its shareholders' equity as its capital. At December 31, 2021 the Company had a deficit of $881,685 (December 31, 2020 - shareholders' equity of $1,334,312). A private placement which occurred in January 2022, as disclosed in note 16, provided $5 million of additional capital in the form of common shares and warrants. The reduction in shareholders' equity during 2021 is due to the operating loss incurred during the year. The Company does not have any bank debt or externally imposed capital requirements. The Company's capital management objectives are to manage its cash and cash equivalents prudently; to minimize the expenditures on general and administrative costs to ensure funds are available to continue to advance the commercialization of CVW™ projects; and to access available government funding for research and development and commercialization.

Management reviews its capital management approach on an ongoing basis and believes that its current approach, given the relative size and stage of the Company, is appropriate.

Related Party Transactions

There were no related party transactions for the year ended December 31, 2021.

Off Balance Sheet Arrangements

The Company does not have any off-balance sheet arrangements.

Additional Disclosure for Venture Issuers Without Significant Revenue

During the years ended December 31, 2021 and 2020, CVW CleanTech has not capitalized any research and development costs. All amounts that have been expensed as general and administrative expenses, along with research and development costs are disclosed in the Company’s annual financial statements and in this MD&A. The Company has not established any deferred development costs and has not incurred any costs related to exploration activities.

Discussion of Risks

Current and prospective shareholders should specifically consider various risk factors, including, but not limited to, the risks outlined below. Should one or more of these risks or uncertainties, including the risks listed below, or a risk that is not currently known to us materialize, or should assumptions underlying those forward-looking statements prove incorrect, actual results may vary materially from those described herein.

We may not be able to successfully execute our business plan.

The execution of our business plan poses many challenges, including those as further described in this discussion of risks, and is based on a number of assumptions. In addition, we cannot guarantee that we will be able to leverage our relationships with oil sands producers or that commodity prices will support the capital expenditures required by oil sands producers for the implementation and development of our CVW™ process. We may not be able to proceed past the engineering phase with oil sands producers to develop a commercial project. If we experience significant cost overruns on our programs, including the optimization and validation engineering Project activities currently ongoing and anticipated, or if our business plan is costlier than we anticipate, certain of currently anticipated Project activities may be delayed or eliminated, resulting in changes or delays to our commercialization plans, or we may be compelled to secure additional funding (which may or may not be available) to execute our business plan. Additionally, we are expecting to complete certain Project activities, including optimization of the concentrator, tailings thickener, and minerals facilities which may take additional time and resources. We cannot predict with certainty our future revenues or results from our operations. If the assumptions on which our revenue or expenditure forecasts are based change, the benefits of our business plan may change as well.

COVID-19 continues to affect the global economy, affecting supply chains in many industries. Vaccinations have proven an effective mechanism to reduce the number and severity of illnesses and deaths. There has been a limited return to office workplaces and hope that there will not be another 'wave' that causes further loss of life or disruption to business operations. While there was curtailed demand for oil earlier in the pandemic, prices have increased in the latter part of 2021 and into 2022. Average prices in 2020 for West Texas Intermediate oil ("WTI") were $39 USD per barrel in 2020, in $67 US per barrel in 2021. Spot prices at the end of March 2022 are $113 USD per barrel. The invasion of the Ukraine by Russia in Q1 2022 has brought about global sanctions on Russia, which has constrained supply, created uncertainty in global markets and has increased market prices.

Discussion of Risks (continued)

The extent and the impact of these events is not known but could adversely affect the progress and timing of the CVW™ Horizon Project. Concerns over COVID-19, commodity pricing, fluctuations in interest rates and foreign exchange rates, stock market volatility, geopolitical issues, OPEC+ actions, inflation, the availability and cost of credit, the volatility of major stock exchanges, the pace of economic growth in the People's Republic of China and trade disputes between the United States and the People's Republic of China have all contributed to increased economic uncertainty, and precipitated the reduction of oil sands producers' capital spending budgets, which could have a significant impact on the Company's ability to complete its ongoing optimization and validation engineering Project activities. The occurrence or threat of terrorist attacks in the United States or other countries could adversely affect the economies of Canada, the United States and other countries. The unprecedented and rapid outbreak of COVID-19 in addition to continued concerns about global economic growth had a significant adverse impact on global financial markets and commodity prices. Volatility in global and Canadian markets may continue to affect the petroleum industry, including oil sands producers, which in turn could affect the ability of the Company to continue with the optimization and validation engineering Project activities. This would be expected ultimately to adversely impact the current and anticipated optimization and validation engineering Project activities. As a result, these activities may be delayed or eliminated, resulting in changes or delays to our commercialization plans and potentially higher costs.

We are dependent upon oil sands producers to adopt and integrate our CVW™ process in their oil sands operations.

Our success depends on the willingness and capacity of oil sands producers to adopt and integrate our CVW™ process into their own oil sands operations. For oil sands producers to adopt and implement our CVW™ process, we will have to negotiate commercial terms for the implementation of these technologies. This will require the interest and cooperation of the oil sands producers. The cost and complexity of integrating our CVW™ process is uncertain and will vary depending on the site and the objectives of each oil sands producer. We can offer no guarantee we will be able to conclude such commercial negotiations on reasonable terms or at all. Additionally, dramatic changes and volatile commodity prices and other recent global events, such as the invasion of the Ukraine by Russia, may delay or cause revisions in oil sands producers capital programs. This could result in delaysor resistance to, adopting the Company's CVW™ technology.

Furthermore, any integration, design, construction, or operational problems encountered by oil sands producers associated with adopting and integrating our CVW™ process could adversely affect the market opportunity for our CVW™ process and our financial results.

Discussion of Risks (continued)

The success CVW CleanTech has had to date on the Project does not provide any guarantee that Canadian Natural will proceed with a subsequent Engineering Procurement and Construction ("EPC") phase or the future commissioning of the Company's CVW™ technology.

Depending on the amount and scope of optimization and validation engineering Project activities or length of time these activities may take to complete, the Company may be required to raise additional capital through the issuance of securities, loans, new or additional government grants and/or some form of partnership or joint venture to fund these costs. There can be no guarantee that the Company will be able to raise additional capital or funding on acceptable terms or at all. Each of these processes may take longer and be costlier than expected, may not be on terms favourable to the Company or may not materialize into binding agreements for a commercially scaled version of our CVW™ process at all. As such, there is still uncertainty and risk that our CVW™ process will not be adopted on a commercial scale.

While the Company and Canadian Natural have consciously demonstrated a strong focus on Project activities and continue to actively work towards commercialization of the Project, investment decisions in Project activities are expected to be undertaken on a year-by-year basis and a final investment decision with respect to commercialization of the Project is uncertain at this time. As a result, there is the potential for delay or revision to the Project activities, which will be affected by, amongst other factors, the current state of the global economy, global crude oil prices and current public health concerns, including those relating to COVID-19.

Crude oil and bitumen price fluctuations are beyond our control and may affect the ability and willingness of oil sands producers to evaluate our CVW™ process or enter into commercial projects with us.

Crude oil and bitumen price fluctuations are beyond our control and may have a material adverse effect on the willingness of oil sands producers to adopt and integrate our CVW™ process in existing or new oil sands projects and on the economics, operating results, financial condition and profitability of any commercial projects involving our CVW™ process.

The financial condition, operating results and future growth of oil sands producers are substantially dependent on prevailing and expected prices of oil and bitumen. Prices for oil are subject to large fluctuations in response to changes in supply and demand, geo-political uncertainty and a variety of additional factors, including access to markets and sufficient transportation capacity, all of which are beyond the control of oil sands producers.

Discussion of Risks (continued)

Global crude oil prices may remain volatile for the near future because of market uncertainties over the supply and demand of these commodities due to the current state of the world economy, current public health concerns, including COVID-19 , shale oil production in the United States, OPEC+ actions, political uncertainties, changes in global supply and demand due to the war between the Ukraine and Russia, sanctions imposed on certain oil producing nations by other countries, conflicts in the Middle East and ongoing credit and liquidity concerns, among other factors.

Inflation may disrupt the Company's ability to secure necessary services and equipment for the expected price, causing time delays or rendering the Project uneconomic.

The Company's operating costs could escalate and become uncompetitive due to supply chain disruptions, inflationary cost pressures, equipment limitations, escalating supply costs, commodity prices, and additional government intervention through stimulus spending or additional regulations. The Company's inability to manage costs may impact future development decisions, which could have a material adverse effect on its financial performance and cash flows.

The cost or availability of specialized industrial equipment for oil sands operations may adversely affect the Company's ability to undertake development and construction projects. A failure to secure the services and equipment necessary to the Company's operations for the expected price, on the expected timeline, or at all, may have an adverse effect on the Company's financial performance and cash flows.

In response to inflation in the Canadian economy, the Bank of Canada recently increased its benchmark interest rate to 1% from 0.5%. While this rate remains low, additional increases in interest rates in Canada, and in global financial markets, due to inflation, could affect the Company’s ability to access capital. Higher borrowing costs could impact the available capital for our Project or possibly constrain credit available to our future commercial partners. These constraints could cause delays or Project cancellations.

Discussion of Risks (continued)

Global or national health concerns, including the outbreak of pandemic or contagious diseases, such as COVID-19, may adversely affect the Company

In March 2020, the World Health Organization declared COVID-19 a global pandemic, prompting many countries around the world to close international borders and order the closure of institutions and businesses deemed non-essential. This resulted in a swift and significant reduction in economic activity in Canada and internationally along with a sudden drop in demand for oil, liquids and natural gas. Since 2020, oil prices have largely recovered from their historic lows, but price support from future demand remains uncertain as countries experience varying degrees of virus outbreak and newly emerging virus variants following efforts to re-open local economies and international borders. If we see a return to low commodity prices due to reduced demand associated with the impact of COVID-19 , it could have a negative impact on the Company's ability to move forward with the Project and cause operational delays or increases in operating expenses. Increased operating expenses could arises due to disruptions in the supply chain, limiting access to materials and services, increases employee absenteeism from illness, and temporary closures of the Company's or its future commercial partner's facilities

The extent to which the Corporation's operational and financial results are affected by COVID-19 will depend on various factors and consequences beyond its control such as the duration and scope of the pandemic; additional actions taken by business and government in response to the pandemic, and the speed and effectiveness of responses to combat the virus. Additionally, COVID-19 and its effect on local and global economic conditions stemming from the pandemic could also aggravate the other risk factors identified herein, the extent of which is not yet known.

Should an employee or visitor in any of the Company's facilities, offices or work sites become infected with a serious illness that has the potential to spread rapidly, this could place the Company's small workforce at risk. COVID-19 is one example of such an illness. The Company takes every precaution to strictly follow industrial hygiene and occupational health guidelines. There can be no assurance that this virus or another infectious illness will not impact the Company's personnel and ultimately its operations.

Discussion of Risks (continued)

We expect to continue incurring losses and consuming cash for several years and will likely need to raise additional capital, the availability of which cannot be assured.

We expect to incur continued losses until we can produce sufficient revenues to cover our costs. If we are unable to successfully implement our business plan, our cash requirements may increase, and we may find it difficult to raise additional funding and continue operations. We expect our cash reserves will be reduced due to future operating losses, and we cannot provide certainty as to how long our cash reserves will last or whether we will be able to access additional capital when necessary in order to carry on business.

CVW expects to rely on funding commitments from the Governments of Canada and Alberta to pay part of the project costs associated with the first implementation of CVW's Creating Value from Waste™ clean technology, the availability of which cannot be assured.

To secure ongoing and future government funding commitments, we will have to negotiate the terms and conditions under which such funding will be provided and enter into a definitive agreement with government agencies within prescribed time periods. Changes in governments and delays or other difficulties in satisfying pre-conditions for the signing of such definitive agreements create uncertainty in securing these and other government funding commitments. We can offer no guarantee that we will be able to conclude such negotiations and enter into such definitive agreements on reasonable terms or at all.

Even if definitive agreements are entered into, the terms and conditions of such agreements may not be favorable to the Company or may otherwise be subject to conditions which the Company cannot satisfy. For instance, the governments' obligations to fund payment of eligible-Project costs will be subject to the satisfaction of several conditions, including the successful completion of other government funding programs, CVW's compliance with the other terms and conditions of the government funding agreements and within the time periods required, and CVW securing, within certain prescribed time periods, the remaining funding necessary to complete the Project. Given the need to first secure satisfactory commercial arrangements with an oil sands producer to adopt and integrate our CVW™ process, CVW may not be able to comply with the current government-imposed deadlines to secure, within certain prescribed time periods, the remaining funding necessary to complete the Project. As such, an extension of time to satisfy that condition may be required from the responsible government agencies in order to secure such funding commitments, the availability of which cannot be assured. Even if such an extension is granted, no assurance can be given that CVW will be able to satisfy the other conditions necessary to receive payment of eligible-Project costs.

Discussion of Risks (continued)

If the government funding commitments are not available, the Company may be required to raise additional capital through the issuance of securities, loans, new or additional government grants and/or some form of partnership or joint venture to fund the costs that would have otherwise been paid for with government funding. No assurances can be given that the Company will be able to raise additional capital or funding on acceptable terms or at all.

We could lose or fail to attract the personnel necessary to run our business.

Our success depends in large part on our ability to attract and retain key management, engineering, scientific and operating personnel. As we develop additional capabilities and expand the scope of our operations, we will require additional skilled personnel. Recruiting personnel for the oil sands and waste remediation industry is often highly competitive. Other companies have significant capital resources and other business activities as compared to the Company. We may not be able to continue to attract and retain qualified executive, managerial, technical and operational personnel needed for our business. Our failure to attract or retain qualified personnel could have a material adverse effect on our business.

The breadth and complexity of changes to Canadian federal and provincial environmental laws make it difficult for oil sands producers to predict the potential financial impacts of these changes on oil sands producers and their operations which may affect the timing and willingness of oil sands producers to evaluate our CVW™ process or enter into commercial projects with us.

A number of statutes, regulations and frameworks are under development or have been issued by various Canadian federal and provincial regulators that affect oil sands developments, including changes relating to such issues as tailings management, water use, air emissions and land use. The breadth and complexity of these changes and proposed changes make it difficult for oil sands producers to predict the potential financial impacts of these changes on them and their operations. Because it is not currently possible to predict the nature of any future requirements or the impact on oil sands producers and their business, financial condition, results of operations and cash flow, oil sands producers may be unwilling to evaluate our CVW™ process or proceed past the engineering design phase and enter into commercial projects with us until these uncertainties and risks are better understood.

Discussion of Risks (continued)

Our potential customer base is concentrated, and we are subject to risks from those customers' internal research and development of competing tailings management strategies.

Based on the current stage of our CVW™ process, our potential customer base is limited to the mining sector of Canada's oil sands industry now consisting of Canadian Natural (Horizon and Albian Sands sites), Suncor Energy Inc. (Base Plant and Fort Hills sites), Syncrude Canada and Imperial Oil Limited (Kearl), each of whom may prefer other methods of dealing with froth treatment tailings that do not include our CVW™ process.

As our CVW™ process has the potential to replace existing methods of dealing with froth treatment tailings, competition for our process will come from current oil sands producers, from improvements to current methods of dealing with froth treatment tailings and from new alternative methods of dealing with froth treatment tailings.

Additionally, oil sands producers are working on developing alternative methods of dealing with froth treatment tailings, such as thickening and dewatering methods, which could meet current regulatory requirements. The industry may elect to use such methods or develop others as alternatives to adopting the Company's technology.

While the Company has completed the FEED and subsequent optimization and validation engineering for the implementation of the Company's CVW™ technology at Canadian Natural's Horizon oil sands site, Canadian Natural is not required to proceed past this phase nor has it agreed to adopt the Company's CVW™ technology on a commercial scale.

Other companies, research facilities and universities are actively engaged in the research and development of processes for dealing with froth treatment tailings. Each of these organizations has the potential to develop competing processes that would diminish the competitiveness of our CVW™ process. These organizations, including the oil sands producers themselves, have substantial financial resources, research and development capabilities, and other resources, which give them significant competitive advantages over us.

Discussion of Risks (continued)

The CVW™ process has not been commercially demonstrated and process recoveries on a commercial level are uncertain.

To date, we have focused primarily on R&D, engineering design and optimization and validation. The CVW™ process is a new process and consequently we have no experience operating on a large-scale commercial basis. As such, the recovery of bitumen, heavy minerals, solvent and water in commercial projects and the environmental impacts of using the CVW™ process involves uncertainty. There can be no assurance that the Company's CVW™ process will recover bitumen, heavy minerals, solvent and water at the expected levels, with the expected environmental benefits and/or capital and operating costs or on the expected schedule.

We are dependent on the composition of froth treatment tailings for quantity and quality of bitumen, solvents and minerals.

There is inherent variability and uncertainty regarding the composition of the feed tailings that may be processed by the CVW™ process from different oil sands sites in commercial projects and over time from the same site, which could impact realized recovery rates, product volumes, revenues and unit operating costs significantly.

More specifically, there is uncertainty relating to the volumes of bitumen, heavy minerals, solvent and water that may be recovered from froth treatment tailings using the CVW™ process due to uncertainties in froth tailings composition and process recovery rates. While there have been many Athabasca basin studies that have assessed the composition of oil sands ores, as well as extensive sampling conducted by the Company and some of its potential oil sands commercialization partners on live froth treatment tailings at various oil sands sites, there remains uncertainty about the levels of bitumen, solvent and heavy minerals, and the composition of such heavy minerals, in any froth treatment tailings streams that may be used in a commercial project. These could vary substantially and adversely from the levels and composition expected by the Company. As such, actual production, and the net revenues and cash flows to be derived therefrom, may vary from time to time, and over the life of a commercial project from expected levels, and such variations may be material.

Discussion of Risks (continued)

We have no experience operating our CVW™ process on a commercial basis and there are uncertainties involved with commercial project execution.

The execution of commercial projects once negotiated involves risks associated with the planning, engineering, cost, construction, integration, commissioning, and start-up of new CVW™ facilities with existing or new oil sands operations. Risks include failures in the specification, design or technology selection; determining and agreeing upon a scope for the Project; building the Project in the approved time and at the agreed cost; and meeting agreed performance targets, including capital and operating costs, efficiency, recoveries and maintenance costs. Actual results in the execution of any commercial projects could materially and adversely vary from expected outcomes. Many factors can affect key outcomes, including general economic, business and market conditions, the availability and cost of qualified personnel, key materials and equipment, the complexity of managing multiple suppliers and contractors, the complexity of building within existing operating sites, weather conditions, changing government regulations, approval requirements, permits and public expectations.

Capital cost overruns or delays in achieving commercial implementation could have a material adverse effect on the Company's business, financial condition, results of operations and cash flow. Moreover, commercial implementation may require substantial capital and we do not know whether we will be able to secure sufficient funding on terms acceptable to us or at all. Our failure to complete commercial implementation or financing could have a material adverse effect on our business and financial results.

We are dependent on oil sands operators for froth treatment tailings volumes.

There are numerous uncertainties involved with estimating the quantities of froth treatment tailings that may be available for processing in future commercial projects using the CVW™ process. The quantity of froth treatment tailings available will depend on a number of factors, including the overall volumes of oil sands ore mined and processed by oil sands operators, their extraction and froth treatment efficiency, and the amount and timing of any operational downtime due to planned or unplanned slowdowns, shutdowns or other restrictions on production. The availability of froth treatment tailings for processing will depend on oil sands operators' froth tailings volumes, over which the Company has no control.

Discussion of Risks (continued)

Heavy minerals price fluctuations are beyond our control and may have a material adverse effect on our business, operating results, financial condition and profitability.

The ability of the Company to develop, finance and operate minerals facilities in the future will be significantly affected by the price of zircon and CVW in the world market. In particular, zircon prices have fluctuated widely since 2009 and are affected by numerous factors beyond the Company's control such as global and regional supply and demand (particularly from China), global or regional political, economic or financial conditions, the cost of substitutes, interest rates, inflation or deflation, and fluctuations in the value of the United States dollar and foreign currencies. There is a high degree of uncertainty regarding the future price of zircon and other minerals that could have an adverse effect on the Company's ability to develop, finance and operate minerals facilities.

As provided elsewhere in this discussion of risks, as a result of COVID-19, trade disputes between the United States and China and the volatility in global financial markets and commodity prices, amongst other factors, including the outlook for economic growth in China, it is unclear how long, or to what extent, these conditions will prevail.

The Chinese market has become a significant source of global demand for commodities, including zircon, ilmenite and titanium. The volatility in China's economic growth could result in lower prices and demand for the products from our CVW™ process, which would have a negative impact on the Company. We could also experience these negative effects if demand from China slowed for other reasons, such as increased self-sufficiency, trade barriers, or certain thrifting initiatives by customers.

Additionally, mineral price declines could adversely affect our continued development of, and eventual commercial production from, our CVW™ process. These declines could impair the economic feasibility to develop, finance and operate minerals facilities. Depending on the price of and demand for zircon and other minerals, the Company may not be able to proceed with the development of minerals facilities. Additionally, continuing to commercially develop our CVW™ process may not be feasible. Even if the continued commercial development of our CVW™ process is ultimately determined to be economically viable, the need to conduct such a reassessment may cause substantial delays and interrupt operations until the reassessment can be completed.

Discussion of Risks (continued)

Forecasting our financial and business results due to fluctuations in commodity prices creates complexities and may restrict our access to funding for our commercialization plan.

Due to the stage of development of our business, it is difficult to predict our future revenues or results of operations accurately. We are also subject to normal market and financial risks such as credit risks, foreign currency risks and fluctuations in commodity prices. As a result, it is possible that in one or more future quarters, our operating results may fall below the expectations of investors and securities analysts. Not meeting investor expectations may materially and adversely impact the trading price of our common shares and restrict our ability to secure required funding to pursue our commercialization plans.

The royalty regime in Alberta and other fiscal incentives may not encourage oil sands operators to enter into commercialization agreements and could significantly reduce the value of the Company's CVW™ process and technologies.

The prospects for commercializing the CVW™ process, and the Company's operating cash flow from commercial projects, will be affected by the applicable royalty regime, any future changes to the royalty regime by the Government of Alberta and any Alberta or Federal fiscal incentives. The Province of Alberta receives royalties linked to price and production levels on the production of natural resources from lands in which it owns the mineral rights, including lands with new and existing oil sands projects. The Government of Alberta may not implement a fiscal regime for minerals and bitumen from oil sands tailings that incentivizes oil sands operators to enter commercialization agreements. Further, the Government of Alberta may implement a regime that adversely affects the results of operations, financial condition or prospects of the Company or its oil sands partners. In addition, the Company may not be successful in obtaining Alberta or Federal fiscal incentives as part of the commercialization process.

Exchange rate fluctuations are beyond our control and may have a material adverse effect on our business, operating results, financial condition and profitability.

Our revenues will be affected by fluctuations in the exchange rate between the Canadian dollar and the United States dollar. Once a commercial deal is arranged, we would expect to generate a significant portion of our revenues in United States dollars while a significant portion of our operating expenses and capital expenditures are in Canadian dollars. As a result, any decrease in the value of the United States dollar relative to the Canadian dollar reduces the amount of Canadian dollar revenues we realize on sales, without a corresponding decrease in expenses.

Discussion of Risks (continued)

Exchange rate fluctuations are beyond our control, and the United States dollar may depreciate against the Canadian dollar in the future, which would result in lower revenues and margins. In order to reduce the potential negative effect of a weakening United States dollar, we may enter into various hedging programs. However, if the Canadian dollar increases in value, it will negatively affect our financial results.

We depend on our intellectual property and our failure to protect that intellectual property could adversely affect our future growth and success.

Our success depends in part on our ability to protect our intellectual property rights. We rely on patent, trade secret, trademark and copyright laws to protect our intellectual property. However, our patent position remains subject to complex factual and legal issues, which may give rise to uncertainty as to the validity, scope and enforceability of a particular patent. Accordingly, there is no assurance that effective patent, trade secret, trademark and copyright protection will always be available for our intellectual property rights, both in Canada and other countries.

We also seek to protect our proprietary intellectual property, including intellectual property that may not be patented or patentable, in part by confidentiality agreements and, if applicable, inventors' rights agreements with our strategic partners and employees. We can provide no assurance that these agreements will not be breached, that we will have adequate remedies for any breach, or that such persons or institutions will not assert rights to intellectual property arising out of these relationships.

There are cyber-security threats that may jeopardize our reliance on information technology.

Our operations are dependent on the functioning of several information technology systems. Exposure of our information technology systems to external threats poses a risk to the security of these systems. Such cyber-security threats include unauthorized access to information technology systems due to hacking, viruses and other causes that can result in service disruptions, system failures and the disclosure, deliberate or inadvertent, of confidential business information. Significant interruption or failure of any or all of these systems could result in operational outages, delays, lost profits, lost data, increased costs, and other adverse outcomes. These factors could include a loss of communication links or reliable information, security breaches by computer hackers and cyber terrorists, and the inability to automatically process commercial transactions or engage in similar automated or computerized business activities.

Discussion of Risks (continued)

We may be involved in intellectual property legal proceedings that cause us to incur significant expenses or prevents us from selling the CVW™ process.

We may become subject to legal proceedings in which it is alleged that we have infringed the intellectual property rights of others or commence legal proceedings against others who we believe are infringing upon our rights. Our involvement in intellectual property litigation could result in significant expense to us, adversely affecting the development of sales of the challenged process or intellectual property and diverting the efforts of our technical and management personnel, whether or not such litigation is resolved in our favour. In the event of an adverse outcome as a defendant in any such litigation, we may, among other things, be required to: (a) pay substantial damages; (b) cease the development, use, sale or importation of processes that infringe upon other patented intellectual property; (c) expend significant resources to develop or acquire non-infringing intellectual property; (d) discontinue processes incorporating infringing technology; or (e) obtain licenses to the infringing intellectual property. We may not be successful in such development or acquisition or such licenses may not be available on reasonable terms. Any such development, acquisition or license could require the expenditure of substantial time and other resources and could have a material adverse effect on our business and financial results.

There are operational hazards involved in the CVW™ process.

CVW™ projects will involve the typical risks associated with recovering, transporting and processing hydrocarbons, including fires, explosions, gaseous leaks, migration of harmful substances and spills. A casualty occurrence might result in the loss of life and equipment, as well as injury, property damage or the interruption of the operations of a commercial project. The Company may not carry adequate insurance with respect to all potential casualties, damages, losses and disruptions. Losses and liabilities arising from uninsured or under-insured events could have a material adverse effect on the Company's results of operations, financial condition and prospects.

We may consider new business opportunities.

We may consider expanding our business beyond what is currently contemplated in our business plan. Depending on the financing requirements of a potential acquisition or new process opportunity, we may be required to raise additional capital through the issuance of equity or debt. If we are unable to raise additional capital on acceptable terms, we may be unable to pursue a potential acquisition or new process opportunity.

Critical Accounting Estimates and Judgements

The preparation of financial statements in accordance with IFRS requires management to make critical accounting estimates and judgements that affect the amounts reported in the financial statements and accompanying notes. These estimates and judgements are re-evaluated regularly, based upon historical experience and other factors, including expectations of future events, as believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the actual results. Management considers the following areas to be those where critical accounting policies affect the significant estimates and judgements used in the preparation of the Company's financial statements.

In early March 2020, the World Health Organization declared COVID-19 to be a pandemic. Responses to the spread of COVID-19 have resulted in a disruption to business operations and a significant increase in economic uncertainty worldwide. Canadian oil sands operators have been impacted by both volatile oil and gas prices and critical staffing levels. As a result, it is difficult to reliably estimate the length or severity of these developments, their financial impact and how the timing of commercialization of CVW's technology could be affected.

Government assistance

Agreements for government assistance contain many conditions prior to cash amounts being advanced. Some agreements provide a proportion of expenditures to be reimbursed, while others provide funding in advance of expenditures. Estimates about the timing of these expenditures and the dollar value involved are required. In addition, most government assistance contracts allow the funding agency to withhold a portion of funds until certain events occur. Determining the timing of these events, to reach reasonable assurance about the timing and amount to be collected from the funding agency, requires significant judgement.

Critical Accounting Estimates and Judgements (continued)

Equity based compensation

The compensation cost for stock options and the amount attributed to warrants when share units are issued is based upon the estimated fair value of those instruments at the time of the grant using the Black-Scholes option pricing model. Measurement inputs to the Black-Scholes model include the share price on measurement date, exercise price, expected volatility, expected life, expected dividends and the risk-free interest rate. Significant estimates and assumptions are used in determining the expected volatility, the weighted average expected life and the expected forfeitures. Changes to the input assumptions could have a significant impact on the amounts recognized for equity based compensation.

Internally generated intangible assets and research and development expenditures

Research activities, such as pilot projects, and related development costs which are undertaken to commercialize CVW™ Technologies, are expensed as incurred. Significant judgement is required to determine when costs meet the criteria for recognition as an intangible asset. To date, no project costs have been capitalized nor met the criteria to be classified as internally generated intangible assets.

Outstanding Share Data

Outstanding Share Data - as of April 25, 2022:

Common shares issued and outstanding:		114,579,627
Common share awards granted and outstanding:		
	Options	7,131,666
	RSU's	1,639,520
	DSU's	1,486,614
	Total	10,257,800
Number of warrants outstanding:		15,302,242

Compliance

Mr. Daniel Erasmus, a registered professional engineer in the Province of Alberta and a member of CIM, is acting as the Qualified Person for the Company on the CVW Horizon project, for the purposes of this MD&A.

Forward looking information or statements and cautionary factors that may affect future results

Certain statements contained in the following MD&A constitute forward-looking statements (within the meaning of the Canadian securities legislation and the U.S. Private Securities Litigation Reform Act of 1995) that involve risks and uncertainties. Forward-looking statements are frequently, but not always, identified by words such as “expects”, “anticipates”, “believes”, “intends”, “estimates”, “potential”, “possible” and similar expressions, or statements that events, conditions or results “will”, “may”, “could” or “should” occur or be achieved. The forward-looking statements may include statements regarding work programs, capital expenditures, timelines, strategic plans, market price of commodities or other statements that are not statement of fact. Forward-looking statements are statements about the future and are inherently uncertain, and actual achievements of the Company may differ materially from those reflected in forward-looking statements due to a variety of risks, uncertainties and other factors. For the reasons set forth above, investors should not place undue reliance on forward-looking statements. Important factors that could cause actual results to differ materially from the Company’s expectations include uncertainties involved in disputes and litigation, fluctuations in interest rates, commodity prices and currency exchange rates; changes in the availability, and cost, of technical labour required for our Project; price escalation and/ or inflationary pressures affecting the cost of equipment and material required to commercialize the Project; the uncertainty of estimates of capital and operating costs; the need to obtain additional financing and uncertainty as to the availability and terms of future financing; the duration and full impact of COVID-19; the impact on the Company of increasing inflation; and other risks and uncertainties disclosed in other information released by the Company from time to time and filed with the appropriate regulatory agencies.

All forward looking statements are based on the Company’s beliefs and assumptions which are based on information available at the time these assumptions are made. The forward-looking statements contained herein are as of April 25, 2022 and are subject to change after this date, and the Company assumes no obligation to publicly update or revise the statements to reflect new events or circumstances, except as may be required pursuant to applicable laws.

Although management believes that the expectations represented by such forward-looking information or statements are reasonable, there is significant risk that the forward-looking information or statements may not be achieved, and the underlying assumptions thereto will not prove to be accurate.

Forward looking information or statements and cautionary factors that may affect future results (continued)

Actual results or events could differ materially from the plans, intentions and expectations expressed or implied in any forward-looking information or statements, including the underlying assumptions thereto, as a result of numerous risks, uncertainties and factors including: the possibility that opportunities will arise that require more cash than the Company has or can reasonably obtain; dependence on key personnel; dependence on corporate collaborations; potential delays; uncertainties related to early stage of technology and product development; uncertainties as to fluctuation of the stock market; uncertainties as to future expense levels and the possibility of unanticipated costs or expenses or cost overruns; and other risks and uncertainties which may not be described herein. The Company has no policy for updating forward looking information beyond the procedures required under applicable securities laws.