

## MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE THREE-MONTH PERIOD ENDED MARCH 31, 2019

Titanium Corporation Inc. ("Titanium" or the "Company") has prepared the following management's discussion and analysis ("MD&A") to provide information to assist investors and others in understanding the financial results for the three-month period ended March 31, 2019. This MD&A should be read in conjunction with Titanium's audited financial statements as at and for the year ended December 31, 2018, and the interim condensed unaudited financial statements for the three-month period ended March 31, 2019. (the "Financial Statements"). This MD&A is dated as of May 30, 2019. The Company is a development stage company whose common shares are listed on the TSX Venture Exchange under the symbol "TIC".

The above referenced material is available on Titanium's website at [www.titaniumcorporation.com](http://www.titaniumcorporation.com). The material can also be found, along with additional information about Titanium, on the System for Electronic Document Analysis and Retrieval ("SEDAR") at [www.sedar.com](http://www.sedar.com).

The Financial Statements have been prepared in accordance with Canadian generally accepted accounting principles as set out in the Handbook of the Chartered Professional Accountants of Canada ("CPA Handbook") which incorporates International Financial Reporting Standards ("IFRS"). All amounts included in this MD&A are in Canadian dollars, unless otherwise specified.

*This MD&A contains forward-looking statements and information within the meaning of applicable Canadian securities laws (collectively, "forward-looking information") that reflect the current expectations of management about the future results, performance, achievements, prospects or opportunities for Titanium, including statements relating to the discussion of Titanium's research and development and commercialization plans under the heading "Titanium's Business"; the advantages of the Company's technology and the creation of a mineral sands industry; the timing expectations for completion of the post-Front End Engineering and Design ("FEED") project activities; the scope of activities that will be undertaken in the post-FEED project; the timing expectation for making a final investment decision and proceeding with potential detailed engineering and construction of facilities; the expected contribution from ERA; the Company's ongoing engagement with Indigenous communities and other stakeholders; the Company's ongoing investor outreach campaign and discussions with Canadian investment banks; the Company's continuing cash conservation program; the Company's ongoing evaluation of financing opportunities; the expected next steps for the Company as described in this MD&A under the headings "Update" and "Next Steps" and the impact of new accounting standards on the Company's financial statements. This forward-looking information generally can be identified by use of forward-looking words such as "may", "will", "expect",*

*“estimate”, “anticipate”, “believe”, “project”, “should” or “continue” or the negative thereof or similar variations.*

*Forward-looking information is presented in this MD&A for the purpose of assisting investors and others in understanding certain key elements of our financial results and business plan, as well as our objectives, strategic priorities and business outlook, and in obtaining a better understanding of our anticipated operating environment. Readers are cautioned that such forward-looking information may not be appropriate for other purposes.*

*Forward-looking information, by its very nature, is subject to inherent risks and uncertainties and is based on many assumptions, both general and specific, which give rise to the possibility that actual results or events could differ materially from our expectations expressed in or implied by such forward-looking information and that our business outlook, objectives, plans and strategic priorities may not be achieved. In addition to other factors and assumptions which may be identified in this MD&A, assumptions have been made regarding, among other things: the success of the post-FEED study project activities; the ability of the Company to enter into commercial contracts with oil sands producers and to achieve commercialization of the CVW™ technology, including the anticipated scope of such commercial contracts; the ability of the Company to enter into commercial contracts with other strategic partners in relation to building and operating facilities, as required; the ability of the Company to retain qualified staff; the ability of the Company to obtain financing on acceptable terms; the translation of the results from the Company's research, pilot programs, FEED project activities, post-FEED study project activities and studies into the results expected on a commercial scale; future oil and zircon prices and the impact of lower prices on activity levels and cost savings of oil sands producers; the impact of increasing competition; the general stability of the economic and political environment in which the Company operates; the ability to protect and maintain the Company's intellectual property; currency, exchange and interest rates; the regulatory framework regarding royalties, taxes and environmental matters in the jurisdictions in which the Company operates; and the ability of the Company to successfully market its CVW™ technology. The forward-looking information contained in this MD&A is based on the results of our research, pilot programs, FEED project activities, post-FEED project activities and related studies and commercialization efforts described in this MD&A under the headings “Titanium’s Business”, “Update” and “Next Steps”. The Company has not commercially demonstrated its technologies and there can be no assurance that such research, pilot programs, FEED project activities, post-FEED project activities and related studies will prove to be accurate nor that such commercialization efforts will be successful, as actual results and future events could differ materially from those expected or estimated in such forward-looking statements. As a result, we cannot guarantee that any forward-looking information will materialize and we caution you against relying on any of this forward-looking information. Accordingly, readers should not place undue reliance on forward-looking information.*

*Additional information on these and other factors are disclosed elsewhere in this MD&A, including under the heading “Discussion of Risks”, and in other reports filed with the securities regulatory authorities in Canada from time to time and available on SEDAR (sedar.com).*

*The forward-looking information contained in this MD&A describes our expectations as of May 30, 2019 and, accordingly, is subject to change after such date. Except as may be required by Canadian securities laws, we do not undertake any obligation to update or revise any forward-looking information contained in this MD&A, whether as a result of new information, future events or otherwise.*

## **Titanium’s Business**

The Company has developed innovative Creating Value from Waste™ (“CVW™”) technology that recovers bitumen, solvents, valuable minerals and water from oil sands froth treatment tailings. 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 and the recovery of the lost commodities will create economic growth, jobs and diversification.

The Company is operating in the mining sector of Canada’s oil sands industry. In July 2017, the Company announced that it was working with Canadian Natural Resources Limited (“Canadian Natural”) on a FEED project for the first commercial implementation of CVW™ technology at Canadian Natural’s Horizon oil sands site. The \$10.2 million engineering design phase was supported by a \$5 million of grant funding from Emissions Reduction Alberta (“ERA”) with the Company funding \$1.5 million and Canadian Natural funding \$3.7 million.

The oil sands mining sector surface mines deposits in northern Alberta’s Athabasca Oil Sands region to extract bitumen (heavy oil trapped in the sands) for local upgrading into synthetic crude oil or for dilution and pipelining to refineries. Heavy minerals that naturally occur in these oil sands deposits are concentrated in tailings during the secondary bitumen extraction step referred to as ‘froth treatment’. Oil sands producers currently use either a naphtha or paraffinic based solvent to process bitumen at the froth treatment stage. These solvent-based processes result in the loss of solvents, bitumen and heavy minerals in froth treatment tailings streams which are currently deposited in tailings ponds. The combination of solvent and bitumen losses to tailings ponds results in substantial volatile organic compound (“VOC”) emissions and greenhouse gas (“GHG”) emissions from the ponds in the form of methane. Global Warming Potential (“GWP”) is widely used as the measure of the relative climate impact of different GHGs. The 100–year GWP of methane is reported to be 28 to 36 times greater than CO<sub>2</sub> and the 20-year GWP is reported as 84 to 87 times greater.

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

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requirements of the Alberta Energy Regulator's (the "AER") Directive 85 outlined below. In particular, the Company's technology has the potential to address a number of the aspects of sub-objective 2 by mitigating risks associated with treated froth fluid fine tailings.

Oil sands tailings are comprised of water, fine clays, residual bitumen, salts and soluble organic compounds. They also contain solvents which are added to the oil sands during the separation process (froth treatment). In 2016 and 2017, the AER issued the first version of a new Directive 85 and a revised version: Fluid Tailings Management for Oil Sands Mining Projects, which sets out requirements for managing and reclaiming fluid tailings including the following requirements: existing operators were required to submit fluid tailing management applications by November 1, 2016; operators must minimize fluid tailings accumulation by ensuring that fluid tailings are treated and reclaimed progressively during the life of the project; new fluid tailings must be ready to reclaim by ten years after the end of mine life, while legacy fluid tailings must be ready to reclaim by the end of mine life; and operators are required to report annually on the performance of their fluid tailings management plans.

In order to evaluate whether active treated tailings deposits are on a trajectory to meet the high-level objective, there are two sub-objectives of Directive 85 that address different aspects of performance: Sub-objective 1: the deposit's physical properties are on a trajectory to support future stages of activity; Sub-objective 2: to minimize the effect the deposit has on the surrounding environment and ensure that it will not compromise the ability to reclaim to a locally common, diverse, and self-sustaining ecosystem. Sub-objective 2 focuses on circumstances where the operator may propose management strategies, design features, or mitigation measures for risks associated with the specific nature of the deposit or its surrounding environment that could impact reclamation—for example, design features that control specific water movement such as drainage control systems, or management of risks associated with deposit characteristics such as treated froth fluid fine tailings, acidification, specific additives, or gas formation. If appropriate, an operator may propose and justify additional sub objectives.

Six large oil sands mining sites are currently operated by Canadian Natural (Horizon and Albian Sands sites), Suncor Energy Inc. (Base Plant and Fort Hills sites), Syncrude Canada and Imperial Oil Limited (Kearl). Expansion projects doubling production at Albian Sands and Kearl have been completed in recent years and an expansion phase at Canadian Natural's Horizon site and the new Fort Hills oil sands mining project have been commissioned and are now in continuous production. The expansions and new site have significantly increased Canada's oil sands mining production. The growth of the oil sands mining industry means that increased volumes of bitumen, solvents and heavy minerals will be lost in froth treatment tailings until new technology is adopted to recover this lost value. Growth also means that GHG and VOC emissions will continue to rise.

Since 2008, the Company has been conducting a series of research and development (“R&D”) and demonstration piloting programs including:

- Successfully executing a two-year research program endorsed by the Alberta Government and supported by a \$3.5 million Alberta Energy Innovation Fund (“AEIF”) grant received in March 2008. The key achievements of the program were the development of technologies to remove bitumen from heavy minerals and recover bitumen, solvents and water from froth treatment tailings.
- Following the research program, the Company completed successful integrated demonstration pilot programs over a four-year period in collaboration with a consortium comprised of oil sands operators and the Federal and Alberta governments. The programs were supported by \$6.5 million of Federal government grants from Sustainable Development Technology Canada (“SDTC”) which funded approximately 25% of the programs.

The Company’s technology has been developed to meet the current and future needs of all the major oil sands operators related to froth treatment tailings recovery and remediation. In addition to the anticipated benefits of additional commodity recoveries and emissions reductions, the Company’s technology affords a number of other opportunities to reduce the environmental footprint of mining oil sands operations. Based on the results of the Company’s research programs, 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.

Based on our research, pilot programs and studies, key economic drivers that support the adoption of Titanium’s technology include: the commodity value and reduced operating costs for recovery of bitumen and solvents currently lost to tailings ponds; the value of recovered zircon and titanium products and the potential for the recovery of rare earth minerals; the value of emissions reductions under current and future regulatory regimes; potential energy cost reductions due to hot process water reuse; and potential cost reductions related to enhanced tailings remediation. We believe that, with a heightened focus by the oil sands operators on reducing operating costs, optimizing production and reducing environmental impacts and the strong commitment by the Alberta and Federal governments to reduce carbon emissions and increased monitoring of oil sands emissions, there is now a shared urgency by stakeholders to implement technology solutions that address these concerns. Potential economic returns, incremental resource recovery, development of a new minerals industry and reduction of environmental impacts, we believe, all favor adoption of the Company’s technology. Please refer to the material risks, uncertainties

and other factors which may affect the Company which are described in more detail in this MD&A under the heading “Discussion of Risks”.

## Update

The Company has continued to make excellent progress on commercialization of its CVW™ technology at Canadian Natural’s Horizon oil sands site with the completion of the FEED project and the recently announced award of \$50 million in Government grant funding for the next phase of the project. FEED, the first phase in project planning and engineering, has been completed with final project reporting and financial reporting complete. The FEED project was completed on time and budget with the fifth and final milestone completed on February 28, 2019. The Federal and Alberta governments continue to prioritize climate change reduction, innovation, clean technology and economic diversification with a variety of programs designed to leverage investments in projects that generate clean growth and reduce GHG emissions.

On March 14, 2019 the Company announced \$50 million in funding toward the next phase of the CVW™ Horizon Project. The Federal Government awarded \$45 million from two clean technology programs; Environment and Climate Change Canada, through its Low Carbon Economy Fund (“LCEF”) has committed to investing \$40 million and NRCan’s Clean Growth Program (“CGP”) has committed to investing \$5 million in Titanium’s first of a kind sustainable technology designed to remediate oil sands froth treatment tailings. Emissions Reduction Alberta (“ERA”) awarded \$5 million from their Partner Intake Program aimed at improving environmental performance in Alberta’s oil and gas sector. Funding from the LCEF and CGP programs are subject to finalizing funding agreements which will outline the conditions under which federal funding would be provided, including securing the remaining funding necessary to complete the project, fulfilling all applicable requirements associated with the project environmental assessments and Indigenous consultation requirements and finalizing the scope of the project costs eligible for program funding. Funding from ERA is subject to the same conditions as well as being subject to the successful close-out of the current \$5 million program awarded under the Methane Challenge Program. This new funding brings ERA’s commitment to the project to \$10 million. In addition to the awards noted above, the Company is in the process of qualifying for other government grant programs for future phases of the project.

Other highlights for the three-month periods ended March 31, 2019 and recent months are set out in more detail below:

- The Company continued with the project execution phase working with Canadian Natural and the engineering firms of Stantec and IHC Robbins on the FEED and associated studies. Third-party engineering commenced in April 2018 and was completed in early 2019, with the overall FEED project completed on

February 28, 2019. The Company also retained consultants and technical firms to assist with other aspects of the engineering design and associated planning including project management, regulatory approvals, Indigenous engagement and minerals marketing.

- With the completion of the final Milestone 5 of the FEED phase of its CVW™ Horizon project, the final project reporting has been completed. ERA funding is provided in stages during the project as the Company meets and reports against predetermined milestones established under the ERA Contribution Agreement. Direct project and in-kind costs incurred up to February 28, 2019 were \$9.9 million. ERA and Canadian Natural contributions for their share of eligible direct project expenditures were \$7.8 million, of which \$1.0 million represents a 20% ERA holdback payable with final project reporting. The Company anticipates receiving the holdback in the second quarter of 2019 with the completion of final outcomes reporting to ERA.
- With the conclusion of FEED, the Company and Canadian Natural are working on optimizing the engineering design to achieve targeted environmental and business benefits. The project scope is being refined, capital and operating costs evaluated, and the flow sheet and integration plan optimized to achieve the most efficient and cost-effective implementation of our CVW™ technology.
- On May 10 and 30, 2019 the Company announced the first and second closings of its non-brokered private placement for gross proceeds of \$4,262,640 resulting in the issuance of 6,089,485 common shares and 3,044,743 warrants entitling the holder to purchase one common share of the Company at an exercise price of \$1.40 expiring on May 9 and May 30, 2022. As a result of the transaction the Company now has 88,166,359 common shares issued and outstanding. Legal expenses, exchange fees, and selling commissions are expected to be \$218,400 which will result in the net proceeds of \$4,044,240. The net proceeds of the offering will be used to fund ongoing efforts to commercialize the Company's CVW™ technology and for general operating purposes.
- Minerals evaluation and testing will continue with this winter's drilling program, including the new Horizon South area.
- The Company has been actively engaged with the minerals industry including meeting with industry participants and prospective international customers. The Company has also been participating in a number of industry conferences, meeting industry participants and prospective customers.
- The Company has been meeting with Canadian investment banks regarding their potential participation in the structuring and financing of the project and their support of the Company in financial markets.
- The Company is continuing cash conservation programs including those under which executive officers and directors receive a portion of their compensation and fees in RSUs and DSUs. This program is aimed to conserve cash and further align Management and the Board with shareholder interests.

## Next Steps

Implementing Titanium's technology would require concentrator facilities to be built at an oil sands site which integrate with existing oil sands operations. Separate minerals separation facilities would be constructed to process heavy mineral concentrates ("HMC") into final minerals products. The facilities may be jointly owned and operated along with oil sands operators or other strategic partners. The Company has advanced proposals and flexible business models whereby customers may elect to license technology and build certain aspects of the facilities or elect to have the Company, together with partners, build and operate these facilities.

With the completion of FEED on February 28, 2019, the Company and Canadian Natural are working to optimize the engineering design to achieve targeted environmental and economic benefits. These activities include refining the project scope, evaluating capital and operating costs, optimizing the process flow sheet and integration plan to achieve the most efficient and cost-effective implementation of the CVW™ technology. Further minerals evaluation and testing is required for the new Horizon South mining area which Canadian Natural recently acquired. This area is expected to be mined in the timeframe a potential CVW™ project would be commissioned. Information from the winter's drill program will be analyzed for heavy minerals content when drill cores are available later in the first half of the year.

During the engineering design phase, the Company and Canadian Natural have undertaken a number of related commercialization activities including: pursuing and securing available Federal and Alberta government funding programs and other sources of funding for the potential construction phase of the project; minerals market development activities, and working with potential partners in participating in the project. Once engineering optimization is complete, the Company expects to file regulatory applications for the proposed project and continue engagement with Indigenous communities.

Subject to the evaluation of results from the FEED project and post-FEED project activities, the Company and Canadian Natural's next steps would include finalizing the business model, potential partners, commercial structure, financing plans and making decisions to proceed with the detailed engineering and construction of the facilities. Detailed engineering and construction of the facilities are estimated to take approximately 33 months from commencement. The Company is aiming for an investment decision in the second half of 2019. The Company completed a private placement in May 2019 for gross proceeds of \$4.3 million to provide necessary resources to execute programs to support a final investment decision.

There is wide acceptance that innovation and new technologies will be the principal solutions for reducing both environmental impacts and operating costs in Canada's oil sands industry. Through a disciplined R&D approach and with cooperation from industry and governments, the Company believes that it has successfully developed



unique, practical technology solutions for oil sands froth treatment tailings waste that offer significant improvements to technologies currently used to address both environmental and economic challenges.

## Financial Information & Analysis

### Summary of Selected Quarterly Results

The following table summarizes the financial results of the Company for the three -month periods ended March 31, 2019 and each of the seven most recently completed three and/or four-month (transition) periods prepared under IFRS (Canadian dollars in millions except per share data):

|  | <b>3-month<br/>period ended<br/>Mar 31, 2019</b> | 3-month<br>period ended<br>Dec 31, 2018 | 3-month<br>period ended<br>Sep 30, 2018 | 3-month<br>period ended<br>Jun 30, 2018 |
|--|--|---|---|---|
| <b>STATEMENT OF (INCOME) LOSS</b>            |  |   |   |   |
| Net (Income) Loss                            | \$ (0.4)   | \$ 1.1                                  | \$ 1.1                                  | \$ 2.0                                  |
| Basic and Diluted (Income) Loss<br>per Share | \$ (0.005)                                       | \$ 0.01                                 | \$ 0.01                                 | \$ 0.02                                 |
|  | <b>3-month<br/>period ended<br/>Mar 31, 2018</b> | 4-month<br>period ended<br>Dec 31, 2017 | 3-month period<br>ended<br>Aug 31, 2017 | 3-month<br>period ended<br>May 31, 2017 |
| Net Loss                                     | \$ 1.6   | \$ 1.5                                  | \$ 0.7                                  | \$ 0.8                                  |
| Basic and Diluted Loss per Share             | \$ 0.02  | \$ 0.02                                 | \$ 0.01                                 | \$ 0.01                                 |

Titanium is focused on achieving long-term financial success by implementing its innovative CVW™ technologies as commercial operations at oil sands sites. With the FEED project completed, the Company is working with Canadian Natural on the potential implementation of its technology at Canadian Natural’s Horizon site. However, until commercial arrangements and investment decisions are made, facilities constructed and operating, the Company expects to continue to incur losses. Currently, quarterly (income)/losses are comprised of R&D project costs and recoveries, and general and administrative (“G&A”) expenditures. Changes in quarterly (income)/losses are dependent on the level of commercialization, R&D project activity, and the timing of payments related to project cost recovery that the Company has underway at any time.

The following explains the Company’s financial results for the three-month periods ended March 31, 2019 compared to the three-month period ended March 31, 2018:

- During the three-month period ended March 31, 2019 the Company reported net income of \$0.4 million or \$0.005 per share. The net income of \$0.4 million was the result of the timing of receipt of project contributions for costs incurred in previous fiscal periods. The Company received \$1.5 million in January 2019 from ERA and Canadian Natural for project costs incurred in the prior year. The recovery of FEED project costs of \$1.5

million exceeded total R&D costs of \$0.5 million and \$0.6 million in G&A expenses. For the three-month period ended March 31, 2018, the Company recorded a loss of \$1.6 million or \$0.02 per share where project costs were being incurred and recovery of eligible costs occurred in subsequent quarters. For a development stage company, and given the deferred timing of project cost recoveries, the net income was in line with expectations.

- In addition, \$1.0 million was received from ERA and Canadian Natural in April and May of 2019 for contributions related to the costs incurred from December 1, 2018 to February 28, 2019 for the completion of the fifth milestone of the project. The funding contributions from ERA and Canadian Natural are recognized as a recovery of project costs upon collection of cash from ERA and Canadian Natural after achievement of the agreed milestones contained in the ERA Contribution Agreement.
- The Company had \$0.3 million of cash consisting of interest-bearing cash accounts at March 31, 2019 as compared to \$0.8 million at December 31, 2018. The decrease in cash related to payment of FEED project costs in advance of receiving ERA and Canadian Natural contributions. In January 2019, \$1.5 million was received for the completion of milestone four and \$1.0 million was received in April and May 2019 for the completion of the fifth and final milestone of the FEED project. Further, the Company anticipates it will receive \$1.0 million in the second quarter with the FEED project completion representing a 20% holdback of ERA's contributions throughout the project. To strengthen its balance sheet, the Company also completed a non-brokered private placement in May 2019 for gross proceeds of \$4.3 million. With the completion of the FEED project, collection of partner contributions (other than the holdback of \$1.0 million) and the closing of the private placement, the Company's cash position is estimated at \$5.0 million as of May 30, 2019.

## Research and Development Expenditures

Below is a summary of the R&D expenditures by category (\$ thousands):

|                                | Three months ended |                   |                        |
|--------------------------------|--------------------|-------------------|------------------------|
|                                | March 31,<br>2019  | March 31,<br>2018 | Increase<br>(decrease) |
| Projects and other             | \$ 276             | \$ 715            | \$ (439)               |
| Compensation and benefits      | 180                | 164               | 16                     |
| Deferred compensation          | 25                 | 32                | (7)                    |
| Equity-based compensation      | 61                 | 57                | 4                      |
| <b>R&amp;D costs</b>           | <b>\$ 542</b>      | <b>\$ 968</b>     | <b>\$ (426)</b>        |
| Recovery of project costs      | (1,520)            | -                 | (1,520)                |
| <b>R&amp;D net of recovery</b> | <b>\$ (978)</b>    | <b>\$ 968</b>     | <b>\$ (1,946)</b>      |

R&D spending in the current quarter consisted primarily of project costs related to the FEED project and compensation for technical staff. R&D was in a net recovery of \$1.0 million for the three-month period ended March 31, 2019 due to the \$1.5 million recovery of FEED project costs from the prior fiscal period. Project costs were lower by \$0.4 million for the three-month period ended March 31, 2019 compared to the comparable period in 2018 due to the completion of the project on February 28, 2019. For the three-month period ended March 31, 2018, significant third-party engineering costs were incurred as the engineering phase was commencing. The FEED project was completed with milestone five on February 28, 2019 with actual costs incurred of \$9.9 million compared to the original budget of \$10.2 million, or 2.6% below the project budget. ERA's share of project and in-kind costs was \$5.0 million, Canadian Natural's share was \$3.5 million, with Titanium contributing the balance of \$1.4 million. There are no on-going costs or other obligations related to the FEED project. The Company is working with Canadian Natural on engineering optimization and a minerals evaluation program for the new Horizon South mining area that is expected to be mined in the timeframe a potential CVW™ project would be commissioned.

### General and Administrative Expenditures

The following table provides details of G&A expenditures by category (\$ thousands):

|                                   | Three months ended |                   |                        |
|-----------------------------------|--------------------|-------------------|------------------------|
|                                   | March 31,<br>2019  | March 31,<br>2018 | Increase<br>(decrease) |
| Compensation and benefits         | \$ 194             | \$ 193            | \$ 1                   |
| Deferred compensation             | 57                 | 64                | (7)                    |
| Consulting and professional fees  | 45                 | 65                | (20)                   |
| Directors fees                    | 83                 | 92                | (9)                    |
| Travel                            | 15                 | 20                | (5)                    |
| Rent, insurance and office        | 31                 | 48                | (16)                   |
| Investor relations and regulatory | 35                 | 42                | (7)                    |
| Stock-based compensation          | 94                 | 76                | 18                     |
|                                   | <b>\$ 555</b>      | <b>\$ 600</b>     | <b>\$ (45)</b>         |

G&A expenses for the three-month period ending March 31, 2019 were \$0.55 million compared to \$0.6 million for the three-month period ended March 31, 2018, a \$0.05 million decrease. The decrease relates primarily to a reduction in consulting and professional fees and rent, insurance, and office expenses. Consulting and professional fees were lower during the three-month period ended March 31, 2019 compared to the three-month period ended March 31, 2018 as the Company was executing on the FEED project and legal costs related to the engineering contracting process for the FEED project were primarily incurred during the three-month period ended March 31, 2018. Stock based compensation was higher during the three-month period ended March 31, 2019 as the Company granted 1,125,000 incentive stock options on April 30, 2018 and the number and fair value of stock options being amortized was greater than the comparative three-month period ended March 31, 2018.

## Liquidity and Capital Resources and Recoverability

The Company had \$0.3 million of cash consisting of interest-bearing cash accounts at March 31, 2019 as compared to \$0.8 million at December 31, 2018. The decrease in cash related to payment of FEED project costs in advance of receiving ERA and Canadian Natural contributions. In January 2019, \$1.5 million was received for the successful completion of milestone four and \$1.0 million was received in April and May 2019 for the successful completion of the fifth and final milestone of the FEED project. Further, the Company anticipates receiving the holdback of \$1.0 million from ERA in the second quarter with the completion of final outcomes reporting. To strengthen its balance sheet, the Company also completed a non-brokered private placement in May 2019 for gross proceeds of \$4.3 million. With the completion of the FEED project, collection of partner contributions (other than the holdback of \$1.0 million) and the closing of the private placement the Company's cash position is estimated at \$5.0 million as of May 30, 2019.

The Company is a development stage enterprise as it has yet to earn any revenues from its planned operations. The Company is devoting substantially all its efforts toward commercializing its proprietary technology. The recoverability of amounts expended on R&D is dependent on the ability of the Company to complete commercialization at oil sands sites and achieve future profitable operations. The Company is dependent on raising funds through the issuance of shares or other securities, loans, government grants and/or attracting partners to undertake further development and commercialization of its technology. While the Company has been successful in obtaining the necessary financing to develop the business to this point, there are no assurances that the Company will be successful in the future in these endeavors. See "Discussion of Risks" in this MD&A.

The following is a summary of the cash flow for the periods noted:

- Cash used in operating activities for the three-month period ended March 31, 2019 was \$0.5 million compared to \$1.2 million for the three-month period ended March 31, 2018. The decreased use of cash for project and operating expenses related to the completion of the FEED project on February 28, 2019.
- During the three-month period ended March 31, 2019 there were no proceeds received from investing activities compared to \$1.0 million received for the three-month period ended March 31, 2018. Short term investments of \$1.0 million matured and proceeds were deposited in interest bearing cash accounts. These proceeds were used to fund project expenditures in advance of collecting contributions from ERA and Canadian Natural.
- Cash provided by financing activities for the three-month period ended March 31, 2019 was nil compared to \$1.2 million for the three-month period ended March 31, 2018. During the three-month period ended March 31, 2018, cash provided by financing activities related to the exercise of 1,000,000 common share purchase

warrants for proceeds of \$0.7 million and \$0.5 million from the exercise of 482,500 stock options by management.

## **Financial Instruments and Financial Risk Factors**

The Company has, for accounting purposes, designated its cash, cash equivalents, short term investments, goods and services tax receivable, as loans and receivables. Trade and other payables and accrued liabilities are classified for accounting purposes as other financial liabilities. 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. The Company manages the risks relating to the financial instruments by investing in short-term highly liquid certificates of investment issued by Schedule I Canadian chartered banks. This discussion on risks is not all-inclusive and other factors may currently, or in the future, affect the Company and should also be read in conjunction with the other risks described under the heading "Discussion of Risks" in this MD&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 of the Company. The Board of Directors of the Company also provides guidance for enterprise risk management.

### *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 costs related to the FEED project under the ERA Contribution Agreement and the contribution agreement with Canadian Natural. 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 financial instruments and project cost recovery is minimal as most of the project costs were recovered subsequent to year end.

### *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 adequate resources are available to meet its obligations as they come due. As at March 31, 2019, the Company had aggregate cash of \$0.3 million (December 31, 2018 - \$0.8 million) to settle current liabilities of \$0.2 million (December 31, 2018 - \$1.5

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million). The current liabilities at December 31, 2018 consisted of \$1.2 million related to eligible project costs of which \$1.0 million were recoverable from ERA and Canadian Natural with the completion of milestone five. On December 20, 2018, the Company announced the completion of the fourth milestone and received \$1.5 million in January 2019 as project cost recovery towards the project costs incurred to November 30, 2018. Currently, most of the Company's liabilities have contractual terms of 30 days or less with the remainder due within one year. The Company concluded the FEED project and is in the final reporting phase with project cost recovery of \$1.0 million in April and May 2019 for the completion of the fifth milestone, with a 20% holdback of \$1.0 million anticipated to be received in the second quarter of 2019. The Company completed a private placement for gross proceeds of \$4.3 million on May 9 and 30, 2019 which the Company expects will support it through a final investment decision for a commercial project. Depending on commercial arrangements for the first project, the Company may need to raise additional funds for its participation in the project. Other potential sources which may be available to the Company to fund its future cash requirements include, but are not limited to, new or additional government grants, loans, issuances of securities or some form of partnership or joint venture.

#### *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.

##### a) *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 income statement includes interest income associated with the Company's financial instruments. The Company periodically monitors its investments and the creditworthiness of the banks it holds investments in.

##### b) *Foreign currency risk*

The Company's reporting and functional currency is the Canadian dollar and most purchases are transacted in Canadian dollars. Some research and development expenses are denominated in Australian dollars and to a lesser extent, US 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.

## Discussion of Risks

An investment in our common shares is risky. Investors should carefully consider the risk factors set out below and consider all other information contained herein and in our other public filings before making an investment decision. The risks and uncertainties described below and elsewhere in this MD&A are not the only ones the Company faces. Additional risks and uncertainties, including those that the Company is not currently aware of or that management of the Company currently deems immaterial, may also adversely affect the Company's economics, operating results, financial condition, prospects for commercialization and the profitability of commercial projects.

***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.

***We are dependent upon oil sands producers to adopt and integrate our CVW<sup>TM</sup> process in their oil sands operations.***

Our success depends on the willingness and capacity of oil sands producers to adopt and integrate our CVW<sup>TM</sup> process into their own oil sands operations. For oil sands producers to adopt and implement our CVW<sup>TM</sup> 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 operators. The cost and complexity of integrating our CVW<sup>TM</sup> process is uncertain and will vary depending on the site and the objectives of each oil sands operator. We can offer no guarantee we will be able to conclude such commercial negotiations on reasonable terms or at all.

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

As described elsewhere in this MD&A, the Company and Canadian Natural have completed the FEED project for the implementation of the Company's CVW<sup>TM</sup> technology at Canadian Natural's Horizon oil sands site. The successful completion of this phase does not provide any guarantee that Canadian Natural will proceed with a subsequent EPC phase or the further commissioning of the Company's CVW<sup>TM</sup> technology. Additionally, following completion of the FEED project, it is expected that there will be a number of other project activities required to be undertaken by the Company and Canadian Natural prior to proceeding with an Engineering

Procurement and Construction (“EPC”) phase, including the continuation of minerals evaluation and testing; engineering optimization, including development of the project scope, and the evaluation of capital and operating costs; the filing of regulatory applications for the proposed project along with Indigenous engagement and commercial structure and financing related activities, which are expected to be completed in 2019; however, these post-FEED activities may also take longer, be of a different scope and be costlier than currently expected. Depending on the amount and scope of post-FEED 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.

***Titanium 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 Titanium's Creating Value from Waste™ clean technology, the availability of which cannot be assured.***

Environment and Climate Change Canada, through its Low Carbon Economy Fund Challenge, has committed to investing \$40 million and NRCan’s Clean Growth Program has committed to investing \$5 million in the Company's CVW™ Horizon Project. ERA has also committed an additional \$5 million through its Partnership Intake Program bringing its total investment to \$10 million for the project. To secure these funding commitments, we will have to negotiate the terms and conditions under which such funding will be provided and enter into definitive agreements with the responsible 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, Titanium's compliance with the other terms and conditions of the government funding agreements within the time periods required, and Titanium securing, within certain prescribed time periods, the remaining funding necessary to complete the proposed project. Given the need to first secure satisfactory commercial arrangements with an oil sands producer to adopt and integrate our CVW™ process, Titanium 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 proposed project.



As such, an extension of time to satisfy that condition will 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 Titanium will be able to satisfy the other conditions necessary to receive payment of project-eligible costs.

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.

***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 evaluate whether 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 the supply of and demand for oil, 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.

Oil prices could remain volatile and may decline in the future as a result of global excess supply due to the increased growth of shale oil production in the United States, the decline in global demand for exported crude oil commodities, and the Organization of the Petroleum Exporting Countries' ("OPEC") decisions pertaining to the oil production of OPEC member countries, among other factors.

Prolonged periods of low crude oil and bitumen prices could result in certain oil sands producers reducing or eliminating their spending on new capital-intensive projects (as opposed to sustaining capital expenditures or existing projects) which could have a material adverse effect on the timing and willingness of oil sands producers to adopt and integrate our CVW™ process into their existing and future oil sands operations.

***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.

***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 project 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.

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

The execution of our business plan poses many challenges and is based on a number of assumptions. We may not be able to successfully execute our business plan. In addition, we cannot guarantee that we will be able to leverage our relationships with oil sands producers for the implementation and development of our CVW™ process. We may not be able to proceed past the engineering design phase with oil sands producers to develop a commercial

project. If we experience significant cost overruns on our programs, including the post-FEED activities currently anticipated, or if our business plan is costlier than we anticipate, certain research and development activities and currently anticipated post-FEED 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. 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. In addition, 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.

***The CVW<sup>TM</sup> process has not been commercially demonstrated and process recoveries on a commercial level are uncertain.***

To date, we have focused primarily on R&D and engineering design. The CVW<sup>TM</sup> 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<sup>TM</sup> process involves uncertainty. There can be no assurance that the Company's CVW<sup>TM</sup> process will recover bitumen, heavy minerals, solvent and water at the expected levels, with the expected operating costs or on the expected schedule. In addition, there is inherent variability and uncertainty regarding the composition of the feed tailings that may be processed by the CVW<sup>TM</sup> 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<sup>TM</sup> 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.

***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 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.

***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 titanium 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.

The Chinese market has become a significant source of global demand for commodities, including zircon and other minerals. Chinese demand has been a major driver in global commodities markets for a number of years. A slowing 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.

Future 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.

***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 and security analyst 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. 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.

***We may be involved in intellectual property legal proceedings that cause us to incur significant expenses or prevents us from selling the CVW<sup>TM</sup> 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 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 more skilled personnel. Recruiting personnel for the oil sands and waste remediation industry is often highly competitive. 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.

## **Related Party Transaction**

There were no related party transactions.

## **Off Balance Sheet Arrangements**

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

## Critical Accounting Estimates and Judgements

The preparation of financial statements in accordance with IFRS requires management to make critical accounting estimates and judgments that affect the amounts reported in the financial statements and accompanying notes. These estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are 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 judgments used in the preparation of the Company's financial statements.

a) Government grants and partner project contributions

The recovery of government grants and partner project contributions requires judgement to determine that reasonable assurance exists when the Company has complied with conditions contained in the ERA Contribution Agreement and the contribution agreement with Canadian Natural.

b) Recognition of intangible assets

Determining the commencement of capitalization of development costs requires judgement to determine when conditions exist to capitalize costs related to the development of intangible assets.

c) Fair value of stock options

Determining the fair value of stock options requires judgment related to the choice of a pricing model, the estimation of stock price volatility, the expected term of the underlying instruments, the estimation of the risk-free interest rate and the rate of forfeiture of the options granted.

### Changes in Accounting Policies

Effective January 1, 2019, IFRS 16, "Leases" ("IFRS 16") was a new standard applicable for lease accounting. It was determined that the new standard did not impact the Company's financial statements at January 1, 2019, however, any future lease transactions will be accounted for under the new standard.

IFRS 16 – "Leases". This is a new standard whereby a lessee recognizes a right-of-use asset and a lease liability. The right-of-use asset ("ROU") is treated similarly to other non-financial assets and depreciated accordingly. The liability accrues interest. This accounting treatment will typically produce a front-loaded expense profile.



## Other Information

### Outstanding Share Data - as at May 30, 2019:

|  |            |
|--|------------|
| Number of common shares issued and outstanding:        | 88,166,359 |
| Number of common share awards granted and outstanding: | 7,104,889  |

## Compliance

Mr. Neil Dawson, of Australia, and a registered member of AusIMM is the independent consultant who acts as the Qualified Person for the Company on the *CVW*<sup>TM</sup> project.