

800, 736 – 8th Avenue SW, Calgary, Alberta T2P 1H4

NOTICE OF ANNUAL AND SPECIAL MEETING OF SHAREHOLDERS

NOTICE IS HEREBY GIVEN THAT the annual and special meeting of the shareholders (the "**Meeting**") of TITANIUM CORPORATION INC. (the "**Company**") will be held as a virtual only meeting via live audio webcast online at <https://virtual-meetings.tsxtrust.com/1239> on December 21, 2021 at 11:00 a.m. (Toronto time) for the following purposes:

1. to receive and consider the financial statements of the Company for the fiscal year ended December 31, 2020 and the auditor's report thereon and the unaudited interim financial statements of the Company for the three and nine months ended September 30, 2021;
2. fixing the number of directors to be elected at the Meeting at five (5);
3. the election of directors of the Company;
4. the appointment of the auditor and the authorization of the directors of the Company to fix the auditor's remuneration;
5. to consider and, if thought advisable, confirm and approve the stock option plan of the Company;
6. to consider and, if thought advisable, confirm and approve the deferred share unit plan of the Company;
7. to consider and, if thought advisable, confirm and approve the restricted share unit plan of the Company; and
8. to consider any amendment or variation of the above matters or any other matter that may be brought before the Meeting or any adjournment or adjournments thereof in such manner as such proxy, in such proxyholder's sole judgment, may determine.

The specific details of the matters proposed to be put before the Meeting are set forth in the management information circular of the Company dated November 11, 2021.

The board of directors of the Company has determined that shareholders registered on the books of the Company at the close of business on November 11, 2021 are entitled to notice of the virtual Meeting and to vote at the virtual Meeting.

In view of the COVID-19 pandemic, out of an abundance of caution and to mitigate risks to the health and safety of our communities, shareholders, employees and other stakeholders, the Company will hold its Meeting in a virtual only format, which will be conducted via live audio webcast commencing at 11:00 a.m. (Toronto time) on December 21, 2021. Shareholders will have an equal opportunity to participate at the Meeting online regardless of their geographic location. See "*Virtual Only Meeting – Attending and Participating at the Meeting*" in the accompanying management information circular of the Company for instructions on how to participate in the Meeting.

Shareholders of the Company who are unable to attend the virtual Meeting are requested to date and sign the enclosed form of proxy and return it in the enclosed envelope. In order to be valid and acted upon at the virtual Meeting, forms of proxy must be returned to the Company's registrar and transfer agent, TSX Trust Company, not later than 48 hours (excluding Saturdays, Sundays and holidays) prior to the commencement of the virtual Meeting or any adjournment thereof. Registered shareholders of the Company may revoke their proxies by depositing an instrument in writing at the registered office of the Company at any time up to and including the last business day preceding the day of the virtual Meeting or any adjournment thereof or in any other manner permitted by law, including pursuant to the provisions of the *Canada Business Corporations Act*. Registered Shareholders who submit proxies in advance of the Meeting can still attend the Meeting, but will not need to vote. If they do vote at the Meeting, the online vote will revoke their previously submitted proxy.

DATED this 11th day of November, 2021.

BY ORDER OF THE BOARD

"David C.W. Macdonald"
David C.W. Macdonald
Chair

November 11, 2021

Dear Fellow Shareholders,

Titanium Corporation's annual and special meeting (AGM) for the fiscal year ended December 31, 2020 will be held via live audio webcast online on Tuesday, December 21, 2021 as set out in the attached Notice of Meeting. This meeting, which was originally scheduled for mid-June, was postponed when the Board of Directors entered discussions with key shareholders focused on financing and potential management and Board renewal. While we cannot disclose the details of these discussions, which are ongoing, this letter provides some additional background on how the Board approaches these issues and sees Titanium's future.

The Board of Directors is committed to responsible Board and management renewal that balances shareholders' desire for change with the continuity, stability and historical perspective needed to ensure continued progress towards successfully commercializing the first implementation of our CVW™ technology at an oil sands site. This requires strengthening the Company's balance sheet, to ensure that it has sufficient resources to carry out its commercialization plans, to maintain the confidence of our industry and government partners, to cover the costs of renewal and to attract high caliber potential Board and management team candidates with the right skills, experience, and relationships. In recent years, the Board has sought to be transparent on its approach to succession planning and Board and management renewal, setting out our detailed thoughts in the annual Management Information Circular for each of the past several years under "Succession Planning".

The Board is exploring financing options, but does not have a committed plan to share with shareholders today and will continue this process. If we announce a committed financing before the AGM date, certain directors who are currently standing for election at the AGM may remove their names for re-election and the Board of Directors may choose to nominate alternative directors for election at the meeting. If we do not announce a committed financing before the AGM, we will continue to explore options. We expect to initiate a search process for new Board members as soon as we have completed a financing. All Board members are open minded on how this process may play out and Scott Nelson has elected not to stand for re-election to the Board at this time. Consistent with balancing management renewal with the need for continuity, stability and historical perspective, we also expect to initiate a search for a new CEO coupled with the development of transition and consulting arrangements with the current CEO that ensure our commercialization activities and industry partner and government funding relationships are not disrupted at this critical juncture. The timing of such changes may be determined in part by the requirements of investors participating in a financing.

In 2021, the joint Titanium and Canadian Natural Resources Limited project team completed many critical milestones, including updating the Class 3 cost estimate for the CVW™ Horizon Project ("Project"), engineering validation, optimization and economics (including operational savings and environmental benefits), which remain under review. Further technical studies are being undertaken to identify and quantify additional potential benefits from new environmental mitigation opportunities, which will extend into 2022 and could potentially result in Project modifications and associated engineering changes. Completing this technical work and progressing new government funding applications will be important to finalizing the Project evaluation, prior to determining next steps.

Your Board and management believe that the case for adoption of our CVW™ technology in the oils sands mining sector remains strong, underpinned by substantial commodity recovery value (bitumen, solvents and heavy minerals); rapidly rising value of emissions reductions, operating cost savings related to enhanced tailings management, hot water reuse, improved facilities efficiency and other environmental mitigation opportunities; increasingly stringent government climate policy and generous government funding support for clean technology innovation; and the emergence of Environmental, Social and Governance investment considerations as a powerful force in fighting climate change. These factors, we believe, all favour the adoption of our technology. Project timing, which is also affected by industry priorities, economic uncertainty, and COVID-19 challenges, is less clear, particularly in the short term.

While challenges remain, we are excited by the opportunities ahead for our Company. Thank you for your patience and your continued support.

"David C.W. Macdonald"

David Macdonald
Chair

MANAGEMENT INFORMATION CIRCULAR

NOVEMBER 11, 2021

SOLICITATION OF PROXIES

This management information circular (the "**Circular**") is furnished in connection with the solicitation of proxies by or on behalf of the management (the "**Management**") of Titanium Corporation Inc. (the "**Company**" or "**Titanium**") to be used at the annual and special meeting (the "**Meeting**") of the holders ("**Shareholder**") of common shares of the Company ("**Shares**") to be held as a virtual only meeting via live audio webcast online at <https://virtual-meetings.tsxtrust.com/1239> on December 21, 2021 at 11:00 a.m. (Toronto time) and at any adjournment or adjournments thereof for the purposes set forth in the notice of the Meeting. The solicitation of proxies will be primarily by mail. Proxies may also be solicited by the directors or officers of the Company at nominal cost. Arrangements have been made with brokerage houses and other intermediaries, clearing agencies, custodians, nominees and fiduciaries to forward solicitation materials to the beneficial owners of the Shares held of record by such persons and the Company may reimburse such persons for reasonable fees and disbursements incurred by them in doing so. The cost of solicitation by or on behalf of Management will be borne by the Company. Unless otherwise specified, all information set forth herein is as at November 11, 2021.

THE VIRTUAL ONLY MEETING

In view of the COVID-19 pandemic, out of an abundance of caution and to mitigate risks to the health and safety of our communities, shareholders, employees and other stakeholders, the Meeting will be held in a virtual only format. The virtual Meeting will be conducted via live audio webcast. Shareholders will have an opportunity to participate at the Meeting online regardless of their geographic location.

Attending and Participating at the Meeting

Registered Shareholders (as defined below) and duly appointed proxyholders will be able to listen to the Meeting, ask questions and vote online, all in real time, provided they are connected to the Internet and comply with all of the requirements set out herein.

Non Registered Holders (as defined below) (commonly referred to as beneficial shareholders) who have not duly appointed themselves as proxyholders may still attend the Meeting as guests. **Guests will be able to listen to the Meeting but will not be able to vote at the Meeting.**

- Go to <https://virtual-meetings.tsxtrust.com/1239> in your web browser. The latest versions of Chrome, Safari, Microsoft Edge or Firefox will be needed. The Company recommends that attendees log in at least thirty (30) minutes before the Meeting starts. Attendees should allow ample time to login to the Meeting to check compatibility and complete the related procedures.
- If you have voting rights (Registered Shareholders and duly appointed proxyholders), select "*I have a Control Number*", enter the control number or username and the password "**titanium2021**" (case sensitive) and follow the instructions. See "*– Logging into the Meeting to Vote – Registered Shareholders and Duly Appointed Proxyholders*".
- If you do not have voting rights (Non Registered Holders and guests), select "*I am a Guest*" and fill in the form. See "*– Registration of a Proxyholder for Online Meeting Participation*" below.

See "*– Participating and Voting at the Meeting*" below for additional instructions on voting. The Company recommends that Shareholders log in to the site at least thirty (30) minutes before the time of the Meeting. Shareholders will be able to log in to the site one hour before the time of the Meeting.

Logging into the Meeting to Vote – Registered Shareholders and Duly Appointed Proxyholders

Registered Shareholders and duly appointed proxyholders, including Non Registered Holders who have duly appointed themselves as proxyholder, can participate, ask questions and vote, all in real time, during the Meeting by:

- Logging in online at <https://virtual-meetings.tsxtrust.com/1239>.
The Company recommends that Shareholders log in at least thirty (30) minutes before the time of the Meeting. Shareholders will be able to log in to the site one hour before the time of the Meeting.
- Clicking "*I have a Control Number*" and then entering control number or username and the password "**titanium2021**" (case sensitive).

For Registered Shareholders, the Control Number is located on the accompanying form of proxy or in the email notification received from the Company's registrar and transfer agent, TSX Trust Company, (the "**Transfer Agent**"). For duly appointed proxyholders, provided that the instructions provided in this Circular have been followed, the Transfer Agent will provide a Meeting-specific control number by e-mail after the proxy deposit deadline has passed.

Participating and Voting at the Meeting

Attending the Meeting online gives Shareholders an opportunity to hear directly from Management and the Board. Registered Shareholders and duly appointed proxyholders can participate, ask questions and vote virtually via live audio webcast, including by asking questions during the question and answer session and voting online, provided they follow the instructions herein.

Registered Shareholders who wish to participate and vote at the Meeting do not need to complete or return the accompanying form of proxy. A Control Number is located on the accompanying form of proxy and it may be used to login to the Meeting and vote at the Meeting by completing a ballot online during the Meeting. If a Registered Shareholder submits a form of proxy, they do not need to vote again at the Meeting as their vote will already be recorded. Registered Shareholders who submit proxies in advance of the Meeting can still attend the Meeting and not vote. If they do vote at the Meeting again, the online vote will revoke their previously submitted proxy. See "*Appointment, Revocation and Deposit of Proxies*" below.

Non Registered Holders who wish to attend the Meeting and vote by completing a ballot online during the Meeting must appoint themselves as their own proxyholders by following the instructions herein. See "*Registration of a Proxyholder for Online Meeting Participation*" and "*Advice to Beneficial Shareholders*" below.

Registration of a Proxyholder for Online Meeting Participation

The following applies to Shareholders who wish to appoint someone as their proxyholder other than the management designees named in the form of proxy or voting instruction form ("**VIF**") to attend the virtual Meeting and vote on their behalf. This includes Beneficial Shareholders who wish to appoint themselves as proxyholder to attend and participate in the virtual Meeting. Shareholders who wish to appoint someone other than the management designees as their proxyholder to attend and participate at the Meeting as their proxy and vote their Common Shares **MUST** submit their form of proxy or VIF, as applicable, appointing that person as proxyholder (see "*Solicitation of Proxies*" above and "*Beneficial Holders of Common Shares*" below) **AND** must register that proxyholder, as described below. **Registering a Shareholder's proxyholder is an additional step to be completed AFTER such Shareholder has submitted their form of proxy or VIF. Failure to register the proxyholder will result in the proxyholder not receiving the Meeting-specific control number from the Transfer Agent that is required in order to participate and vote at the Meeting.** If you are a Non Registered Holder and you wish to participate or vote at the Meeting, you must appoint yourself as proxyholder by inserting your own name in the space provided on the form of proxy or VIF sent to you by your intermediary, and follow all of applicable instructions provided by your intermediary **AND** you must also register yourself as your proxyholder, as described below. By doing so, you are instructing your Intermediary (as defined herein) to appoint you as proxyholder. Non Registered Holders who have not appointed themselves as proxyholder (and registered as instructed below) cannot vote online during the Meeting. This is because the Company and the Transfer Agent do not maintain the records for Non Registered Holders and we have no knowledge of your shareholdings or entitlement to vote, unless you appoint yourself as proxyholder.

Shareholders must register their proxyholder in advance of the Meeting. Before registering, you must first appoint your proxyholder (see above). To register a proxyholder, Shareholders MUST contact tsxtrustproxyvoting@tmx.com

by 11:00 a.m. (Toronto time) on December 17, 2021 and provide the Transfer Agent with the required proxyholder contact information, so that Transfer Agent may provide the proxyholder with a Meeting-specific control number via email. Without a Meeting-specific control number, proxyholders will not be able to attend and vote online at the Meeting.

APPOINTMENT, REVOCATION AND DEPOSIT OF PROXIES

The persons named in the enclosed form of proxy are officers and/or directors or nominees of Management. **A SHAREHOLDER HAS THE RIGHT TO APPOINT ANY OTHER PERSON TO REPRESENT HIM OR HER AT THE MEETING OR ANY ADJOURNMENT THEREOF AND MAY DO SO BY INSERTING IN THE BLANK SPACE PROVIDED IN THE FORM OF PROXY THE NAME OF THE PERSON, WHO NEED NOT BE A SHAREHOLDER, WHOM HE OR SHE WISHES TO APPOINT, OR BY COMPLETING ANOTHER FORM OF PROXY.** In order to be valid and acted upon at the Meeting, forms of proxy must be returned to the Transfer Agent, not later than 48 hours (excluding Saturdays, Sundays and holidays) prior to the commencement of the Meeting or any adjournment thereof. See also "*The Virtual Only Meeting – Registration of a Proxyholder for Online Meeting Participation*".

A Shareholder executing the enclosed form of proxy has the power to revoke it at any time before it is exercised. The *Canada Business Corporations Act* (the "CBCA") sets out a procedure for revoking proxies by depositing an instrument in writing at the registered office of the Company at any time up to and including the last business day preceding the day of the Meeting or in any other manner permitted therein or by law. Further, a Registered Shareholder attending the Meeting has the right to vote online directly at the Meeting and if he or she does so, his or her proxy is automatically revoked.

ADVICE TO BENEFICIAL SHAREHOLDERS

Only a holder (a "**Registered Shareholder**") whose Shares are registered in its own name and proxies deposited by Registered Shareholders, or the persons they duly appoint as their proxies, are permitted to attend and vote at the Meeting. However, in many cases, Shares beneficially owned by a holder (a "**Non Registered Holder**") are registered in the name of an intermediary (an "**Intermediary**") that the Non Registered Holder deals with in respect of such Shares, such as, among others, banks, trust companies, securities dealers or brokers and trustees or administrators of self-administered RRSPs, RRIFs, RESPs, TFSAs and similar plans. In accordance with the requirements of National Instrument 54-101 – *Communication with Beneficial Owners of Securities of a Reporting Issuer* ("**NI 54-101**") of the Canadian Securities Administrators, the Company has elected to use the "notice-and-access" provisions (the "**Notice-and-Access Provisions**") for the Meeting in respect of the mailing of the notice of the Meeting, this Circular and the form of proxy (collectively, the "**meeting materials**"), annual and interim financial statements and related management's discussion and analysis to the Non Registered Holders, but not in respect of mailings to registered holders of Shares (i.e., a shareholder whose name appears on the Company's records as a holder of Shares). The Notice-and-Access Provisions are a set of rules developed by the Canadian Securities Administrators that reduce the volume of materials that must be physically mailed to shareholders by allowing a reporting issuer to post its information circular in respect of a meeting of its shareholders and related materials online.

Titanium has also elected to use procedures known as "stratification" in relation to the Company's use of the Notice-and-Access Provisions. Stratification occurs when a reporting issuer using the Notice-and-Access Provisions provides a paper copy of an information circular and, if applicable, a paper copy of financial statements and related management's discussion and analysis ("**Financial Information**"), to some shareholders together with a notice of a meeting of its shareholders. In relation to the Meeting, Registered Shareholders will receive a paper copy of the meeting materials and the Financial Information whereas all Non Registered Holders will receive a notice containing information prescribed by the Notice-and-Access Provisions and a VIF. Titanium intends to pay for Intermediaries to deliver proxy-related materials to objecting Non Registered Holders. Furthermore, a paper copy of the Financial Information in respect of the Company's most recently completed financial year and for the period ended September 30, 2021 was mailed to those Registered Shareholders and Non Registered Holders who previously requested to receive such information.

Shares held by Intermediaries can only be voted upon with the instructions of the Non Registered Holders. Intermediaries are required to seek voting instructions from Non Registered Holders in advance of the Meeting. Each Intermediary has its own procedures and provides its own instructions, which should be carefully followed by Non Registered Holders to ensure that their Shares are voted at the Meeting. In Canada, the vast majority of such shares are registered under the name of CDS & Co. (the registration name for The Canadian Depository for Securities Limited, which acts as nominee for many Canadian brokerage firms). Without specific instructions, Intermediaries are prohibited from voting shares for their clients. The directors and officers of Titanium do not know for whose benefit the Shares registered in the names of Intermediaries are held.

The Company is taking advantage of those provisions of NI 54-101 which permit the Company to deliver proxy-related materials directly to its Non Registered Holders who do not object to the Company knowing who they are ("**NOBOs**"). As a result, NOBOs can expect to receive a VIF from the Transfer Agent. These VIFs are to be completed and returned to the Transfer Agent as set out in the instructions provided on the VIF. The Transfer Agent will tabulate the results of the VIFs received from NOBOs and will provide appropriate instructions at the Meeting with respect to the Shares represented by the VIFs it receives. By choosing to send these materials to you directly, the Company (and not the Intermediary holding your Shares on your behalf) has assumed responsibility for (i) delivering these materials to you; and (ii) executing your proper voting instructions. Please return your VIF as specified in your request for voting instructions that you receive.

Other Non Registered Holders who have not waived the right to receive meeting materials may be given a proxy which is restricted as to the number of Shares beneficially owned by the Non Registered Holder but which is otherwise uncompleted. This form of proxy need not be signed by the Non Registered Holder. Often, the form of proxy supplied to a Non Registered Holder by its Intermediary is identical to the form of proxy provided to Registered Shareholders. However, its purpose is limited to instructing the Registered Shareholders how to vote on behalf of the Non Registered Holder. The majority of Intermediaries now delegate responsibility for obtaining instructions from clients to Broadridge Financial Solutions, Inc. ("**Broadridge**"). Broadridge typically applies a special sticker to the proxy forms, mails those forms to the Non Registered Holders and asks Non Registered Holders to return the proxy forms to Broadridge. Broadridge then tabulates the results of all instructions received and provides appropriate instructions respecting the voting of Shares to be represented at the Meeting. **A Non Registered Holder receiving a proxy with a Broadridge sticker on it cannot use that proxy to vote Shares directly at the Meeting. The proxy must be returned to Broadridge well in advance of the Meeting in order to have the Shares voted.**

The purpose of these procedures is to permit Non Registered Holders to direct the voting of the Shares they beneficially own. **Should a Non Registered Holder who receives either a proxy or a VIF wish to attend and vote at the Meeting online (or have another person attend and vote on behalf of the Non Registered Holder), the Non Registered Holder should strike out the names of the persons named in the proxy and insert the Non Registered Holder's (or such other person's) name in the blank space provided or, in the case of a VIF, follow the corresponding directions therein and in this Circular. In either case, Non Registered Holders should carefully follow the instructions of their Intermediaries and their service companies. It is important that the VIF or form of proxy be received by the Intermediary or its agent sufficiently in advance of the Meeting to enable the Intermediary or its agent to provide voting instructions on your behalf. See "*The Virtual Only Meeting – Registration of a Proxyholder for Online Meeting Participation*" above.**

All references to Shareholders in this Circular and the accompanying form of proxy and notice of the Meeting are to Shareholders of record unless specifically stated otherwise.

MANNER OF VOTING AND EXERCISE OF DISCRETION BY PROXIES

All Shares represented by properly executed proxies received by the Company in a timely fashion will be voted at the Meeting in accordance with the instructions of the Shareholders appointing them. If a choice is specified in respect of any matter to be acted upon, the Shares will be voted accordingly. **IN THE ABSENCE OF SUCH DIRECTION, THE SHARES WILL BE VOTED "FOR" IN REGARDS TO THE FOLLOWING MATTERS:**

1. fixing the number of directors to be elected at the Meeting at five (5);
2. the election of directors of the Company;
3. the appointment of the auditor and the authorization of the directors of the Company to fix the auditor's remuneration;
4. confirming and approving the stock option plan of the Company (the "**Option Plan**");
5. confirming and approving the deferred share unit plan of the Company (the "**DSU Plan**");
6. confirming and approving the restricted share unit plan of the Company (the "**RSU Plan**" and, collectively with the Option Plan and the DSU Plan, the "**Security Based Compensation Arrangements**"); and
7. considering any amendment or variation of the above matters or any other matter that may be brought before the Meeting or any adjournment or adjournments thereof in such manner as such proxy, in such proxyholder's sole judgment, may determine.

THE ENCLOSED FORM OF PROXY, WHEN PROPERLY EXECUTED, CONFERS DISCRETIONARY AUTHORITY WITH RESPECT TO ALL AMENDMENTS OR VARIATIONS TO MATTERS IDENTIFIED IN THE NOTICE OF THE MEETING OR OTHER MATTERS WHICH MAY PROPERLY COME BEFORE THE MEETING. **HOWEVER, IF ANY SUCH AMENDMENTS, VARIATIONS OR OTHER MATTERS WHICH ARE NOT NOW KNOWN TO MANAGEMENT SHOULD PROPERLY COME BEFORE THE MEETING, THE SHARES REPRESENTED BY THE PROXIES HEREBY SOLICITED WILL BE VOTED THEREON IN ACCORDANCE WITH THE BEST JUDGMENT OF THE PERSON OR PERSONS VOTING SUCH PROXIES.** As of the date hereof, Management knows of no such amendments, variations or any other such matters.

The CBCA permits certain eligible Shareholders to submit shareholder proposals to the Company for inclusion in a management proxy circular for an annual meeting of Shareholders. As of the date of this Circular, no shareholder proposals were submitted for consideration at the upcoming Meeting.

VOTING SHARES AND PRINCIPAL HOLDERS THEREOF

As at November 11, 2021, the Company had 88,480,791 Shares issued and outstanding. Each Share carries the right to one vote at the Meeting.

The Company has fixed the close of business on November 11, 2021 as the record date for the purpose of determining Shareholders entitled to receive notice of the Meeting. All Shareholders of record as at the close of business on the record date will be entitled to vote at the Meeting and at all adjournments thereof.

Except as disclosed below, to the knowledge of the directors and officers of the Company, no person or company beneficially owns, directly or indirectly, or controls or directs, voting securities carrying 10% or more of the voting rights attached to any class of voting securities of the Company. The officers and directors of the Company together beneficially own, directly or indirectly, or exercise control or direction over, Shares carrying approximately 23.5% of the votes attached to the Shares.

Based on publicly available information as of November 11, 2021, Mr. Moss Kadey beneficially owns, or controls or directs, directly or indirectly, 11,619,167 Shares representing approximately 13.1% of the outstanding Shares.

INTEREST OF CERTAIN PERSONS AND COMPANIES IN MATTERS TO BE ACTED UPON

The current directors and officers of the Company and their associates and affiliates may have a material interest, direct or indirect, by way of beneficial ownership of securities or otherwise, in a matter to be acted upon at the Meeting as they currently hold, and may be granted additional, options, warrants, deferred share units and restricted share units, as applicable. See "*Particulars of Matters to be Acted Upon – Annual Approval of the Security Based Compensation Arrangements – Option Plan*", "*Particulars of Matters to be Acted Upon – Annual Approval of the Security Based Compensation Arrangements – DSU Plan*", "*Particulars of Matters to be Acted Upon – Annual Approval of the Security Based Compensation Arrangements – RSU Plan*", "*Statement of Executive Compensation – Compensation Discussion and Analysis – Elements of Compensation – DSU Plan*" and "*Statement of Executive Compensation – Compensation Discussion and Analysis – Elements of Compensation – RSU Plan*".

PARTICULARS OF MATTERS TO BE ACTED UPON

Financial Statements

The Company's audited financial statements for the fiscal year ended December 31, 2020 and the report of the auditor on those financial statements, and the Company's unaudited interim financial statements for the three and nine months ended September 30, 2021 will be presented at the Meeting. No formal action will be taken at the Meeting to approve the financial statements. The board of directors of the Company (the "**Board**") approved the financial statements upon the recommendation of the audit committee of the Board (the "**Audit Committee**") prior to their delivery.

Election of Directors

The Company's articles currently provide that the Board shall consist of a minimum of three and a maximum of fifteen directors. At the Meeting, Shareholders will be asked to fix the number of directors to be elected at the Meeting at five (5) members and to elect five (5) directors to hold office until the next annual meeting or until their successors are elected or appointed.

In the event that, prior to the Meeting, any vacancies occur in the slate of nominees appearing below, it is intended that discretionary authority shall be granted to vote proxies solicited by or on behalf of Management for the election of any person or persons as directors. Each director elected will hold office until the next annual meeting of Shareholders or until his or her successor is duly elected, unless the office is earlier vacated in accordance with the by-laws of the Company.

The following table and the notes thereto state the names of all persons proposed to be nominated by Management for election as directors, their principal occupations and the number of Shares beneficially owned, directly or indirectly, by each of them as of November 11, 2021. Having served on the Board since February 2005, Mr. Scott Nelson has opted not to stand for re-election to the Board at the Meeting.

Name and Province and Country of Residence	Position	Principal Occupation During Past 5 Years	Director Since	Number of Shares Beneficially Owned or Controlled
Bruce Griffin ⁽³⁾ London, United Kingdom	Director	Since February 2020, owner of Farview Solutions Limited, a private consulting and advisory company since April 2021 Executive Chairman of Sheffield Resources Limited. Prior thereto, Senior Vice President Strategic Development of Lomon Billions Group from February 2017 to January 2020.	August 7, 2019	Nil
Moss Kadey ⁽²⁾ Ontario, Canada	Director	Since 2000, an independent businessman and a director of private companies.	July 23, 2008	11,619,167 ⁽⁴⁾
David Macdonald ⁽¹⁾⁽²⁾⁽³⁾ Ontario, Canada	Director	Since 2002, a Managing Partner of Glencoban Capital Management Inc., a private merchant banking firm.	January 25, 2012	5,193,612 ⁽⁵⁾
Brant G. Sangster ⁽¹⁾⁽²⁾ Alberta, Canada	Director	Since August 2006, an independent businessman, strategic consultant and a director of public companies. Prior thereto, Senior Vice-President, Oil Sands of Petro-Canada.	September 1, 2006	86,796
John W. Stevens ⁽¹⁾⁽³⁾ Ontario, Canada	Director	Since 2000, Executive Vice President of Arva Limited, a private equity investment company. Prior thereto, a partner in the Canadian Law firm Osler, Hoskin & Harcourt practicing commercial and corporate law.	November 9, 2016	973,600 ⁽⁶⁾

Notes:

- (1) Member of the Audit Committee.
- (2) Member of the Compensation and Corporate Governance Committee.
- (3) Members of the Commercialization Committee.
- (4) 840,000 Shares are held directly by Mr. Kadey, 2,400,000 Shares are held by the Kadey Family Trust, 7,419,167 Shares are held by Mossco Capital Inc., 860,000 Shares are held by Mosskd Inc. and 100,000 Shares are held by his spouse, Vivette Kadey.
- (5) 5,175,612 Shares are held directly by Mr. Macdonald, 6,000 Shares are held by the Katrina Macdonald Trust, 6,000 Shares by the Sophie Golets Trust and 6,000 Shares by the William Golets Trust.
- (6) 393,400 Shares are held by Mr. Stevens, 330,200 Shares are held by his spouse, Katherine Stevens and 250,000 Shares are held by John W. Stevens Family Trust. Additionally, Arva Limited holds 1,500,000 Shares and Mr. Stevens is a director and officer of such company.

The information with respect to Shares beneficially owned, controlled or directed by the nominees for election as directors named above is in each instance based upon information furnished by the person concerned.

Biographical Information

Bruce Griffin is the owner of Fairview Solutions Limited, a company providing consulting and advisory services to the mineral sands, titanium pigment and industrial minerals industries. Mr. Griffin has previously held senior management

positions in several mining and minerals companies, including as Senior Vice President Strategic Development of Lomon Billions Group, the world's third largest producer of titanium dioxide pigments, Chief Executive Officer and a director of TZ Minerals International Pty. Ltd., the leading independent consultant on the global mineral sands industry, World Titanium Resources Ltd., a development stage titanium project in Africa and as Vice President Titanium for BHP Billiton, then one of the world's leaders in the industry. In April 2021 Mr. Griffin was appointed Executive Chairman of Sheffield Resources Limited.

Moss Kadey is the Founder and CEO of Mossco Capital Inc., a Toronto based strategic investor specializing in consumer goods, real estate and technology companies. He is the Chairman and Founder of Luxury Brand Partners, a Miami based creator and owner of branded consumer products in the beauty and hair care industries. Some of the brands he has been involved with from start up to eventual sale have been Bumble and Bumble, sold to Estee Lauder, Becca Cosmetics sold to Estee Lauder, Oribe Hair Care sold to Kao Industries and the North and South American owner of the Brita Water Filter rights sold to The Clorox Company. He is on the boards of numerous privately held corporations and is currently the Chairman of the Supervisory Board of Hanvest Holdings, the parent company of Brita GmbH in Germany, the world leader in household pour through water filtration systems. Mr. Kadey obtained his Chartered Accountant designation in South Africa.

David Macdonald is a co-founder and Managing Partner of Glencoban Capital Management Inc. ("**Glencoban**"), a private merchant banking firm founded in 2002. Glencoban invests in development-stage public and private companies, mainly in the alternative energy, energy and mining sectors. Glencoban manages a limited number of concentrated investments and seeks to add value through active involvement in strategy, financing and governance. From 1989 to 2002, Mr. Macdonald worked as an investment banker at UBS Bunting Warburg Inc. at its offices in Toronto, Ontario. He was Head of Corporate Finance in Canada and served as Joint Managing Director of the firm from 1994 to 2002. From 1983 to 1989, Mr. Macdonald worked in investment banking with S.G. Warburg & Co. Ltd. in London, England. As an investment banker, Mr. Macdonald was active in debt and equity financings, mergers and acquisitions, and demutualization and privatization advice for a wide range of clients across many sectors. From 2004 to 2009 when it was sold, Mr. Macdonald was also a director of Centenario Copper Corporation ("**Centenario**"), a company formerly listed on the Toronto Stock Exchange. From 2006 to 2009, Mr. Macdonald chaired the Compensation Committee and the Governance Committee and chaired the Special Committee on the sale of Centenario. Mr. Macdonald is also a director of Georgian Bay Spirit Co., a private company engaged in the development, production, marketing and distribution of alcohol beverage products in Canada and the United States. Mr. Macdonald is currently the chair of the National Ballet of Canada, Endowment Foundation and a director of the National Ballet of Canada. He is also a past director of the Art Gallery of Ontario Foundation and the Art Gallery of Ontario.

Brant G. Sangster has extensive experience in Canada's energy industry. He retired in 2006 from a 25-year career with Petro-Canada, one of Canada's largest oil and gas companies at the time. In his most recent role as Senior Vice President for Petro-Canada, Mr. Sangster was responsible for the company's oil sands production and development, as well as Petro-Canada's participation in Syncrude. He was also a member of Petro-Canada's Executive Leadership Team, accountable for the effective integration of the planning and execution of oil sands business objectives with overall strategies and activities of Petro-Canada. Mr. Sangster was a director of Inter Pipeline Ltd. and Canadian Oil Sands Limited. Mr. Sangster graduated from Dalhousie University with a Bachelor of Science degree in Chemical Engineering.

John W. Stevens is the Executive Vice President of Arva Limited and has been a director of Arva Limited since 1993. Arva Limited is a private Canadian corporation engaged in the private equity investment business headquartered in Toronto, Ontario. Arva Limited has investments in a variety of industries including telecommunications and automotive. Mr. Stevens is both an Ontario qualified lawyer and CPA (CA). He was employed in the public accounting profession from 1978 to 1980 with Clarkson Gordon. He subsequently obtained his law degree from Queens University in 1983. Mr. Stevens joined the Canadian law firm of Osler, Hoskin & Harcourt LLP in 1983, became a partner in the firm in 1991 and, from 1994 to 2000, was the Managing Partner of Osler's New York office. He practised in the corporate and commercial areas with emphasis on securities law, mergers and acquisitions and dealt with a broad range of finance, legal and corporate governance issues servicing the needs of many successful private and public companies. Mr. Stevens joined Arva Limited on a full time basis in June 2000. He has served as director on numerous boards of both private and public companies and charitable institutions.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

No proposed director is, as at the date hereof, or has been, within ten years of the date hereof, a director or chief executive officer or chief financial officer of any company, including Titanium, that: (i) while that person was acting in that capacity, was the subject of a cease trade or similar order or an order that denied the relevant company access to any exemption under securities legislation, for a period of more than 30 consecutive days; or (ii) was subject to an event that resulted in such company, after the director or executive officer ceased to be a director, chief executive officer or chief financial officer of the

company, being the subject of a cease trade or similar order or an order that denied the relevant company access to any exemption under securities legislation, for a period of more than 30 consecutive days and which resulted from an event that occurred while that person was acting in the capacity as a director, chief executive officer or chief financial officer.

No proposed director is, as at the date hereof, or has been, within ten years of the date hereof, a director, chief executive officer or chief financial officer of any company, including Titanium, that: (i) while that person was acting in their capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or became subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold its assets; or (ii) has, within the ten years before the date hereof, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceeding, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold the assets of the proposed director.

In addition, no proposed director has been subject to: (i) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or (ii) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable security holder in deciding whether to vote for a proposed director.

Advance Notice By-laws

The Company has adopted advance notice by-laws (the "**AVN By-laws**") which provide that advance notice to the Company must be made in circumstances where nominations of persons for election to the Board are made by Shareholders other than pursuant to: (a) a "proposal" made in accordance with the CBCA; or (b) a requisition of a meeting made pursuant to the CBCA.

The AVN By-laws fix a deadline by which Shareholders must submit director nominations to the Corporate Secretary of the Company prior to any annual or special meeting of Shareholders and outlines the specific information that a nominating shareholder must include in the written notice to the Corporate Secretary of the Company for an effective nomination to occur. No person nominated by a Shareholder will be eligible for election as a director of the Company unless nominated in accordance with the provisions of the AVN By-laws.

In the case of an annual meeting of shareholders, notice to the Corporate Secretary of the Company must be made not earlier than the 65th day and not less than 30 days prior to the date of the annual meeting; provided, however, that in the event that the annual meeting is to be held on a date that is less than 50 days after the date on which the first public announcement of the date of the annual meeting was made, notice may be made not later than the close of business on the 10th day following such public announcement. In the case of a special meeting of shareholders (which is not also an annual meeting), notice to the Company must be made not later than the close of business on the 15th day following the day on which the first public announcement of the date of the special meeting was made.

In the event of an adjournment or postponement of an annual meeting or special meeting of shareholders or any announcement thereof, a new time period will not commence for the giving of timely notice.

The Board may, in its sole discretion, waive any requirement of the advance nomination of directors provisions of the AVN By-laws.

Majority Voting for Directors

The Board has adopted a policy stipulating that if the votes "for" the election of a director nominee at a meeting of Shareholders are fewer than the number voted "withheld", the nominee is expected to submit his or her resignation promptly after the meeting for the consideration of the Compensation and Corporate Governance Committee of the Board (the "**Compensation Committee**"). The Compensation Committee will make a recommendation to the Board after reviewing the matter, and the Board will then decide whether to accept or reject the resignation. The Board's decision to accept or reject the resignation will be disclosed to the Shareholders. The nominee will not participate in any Compensation Committee deliberations whether to accept or reject the resignation. The Company's majority voting policy does not apply in circumstances involving contested director elections.

Unless a proxy specifies that the Shares it represents should be voted against fixing the number of directors of the Company at five (5), the proxy holders named in the accompanying proxy intend to use it to vote FOR fixing the

number of directors of the Company at five (5). Additionally, unless a proxy specifies that the Shares it represents should be withheld from voting in the election of directors, the proxy holders named in the accompanying proxy intend to use it to vote FOR the election of the nominees as directors of the Company.

Appointment of Auditor

The persons designated in the enclosed form of proxy intend to vote for the appointment of PricewaterhouseCoopers LLP as auditor of the Company to hold office until the next annual meeting of Shareholders and to authorize the Board to fix its remuneration as such. PricewaterhouseCoopers LLP was first appointed as auditor of the Company on February 23, 2006.

Unless a proxy specifies that the Shares it represents should be withheld from voting in the appointment of the auditor, the proxy holders named in the accompanying proxy intend to use it to vote FOR the appointment of PricewaterhouseCoopers LLP as auditor of the Company to hold office until the close of the next annual meeting of Shareholders at a remuneration to be fixed by the Board.

Annual Approval of the Security Based Compensation Arrangements

As at the date hereof, there are 8,848,079 Shares reserved for issuance under the Security Based Compensation Arrangements (representing 10% of the issued and outstanding Shares), made up of: (i) 2,233,943 Shares available for issuance upon the exercise of future awards to be granted under the Security Based Compensation Arrangements (representing approximately 2.5% of the issued and outstanding Shares); and (ii) 6,614,136 Shares issuable upon the exercise of awards previously granted under the Security Based Compensation Arrangements (representing approximately 7.5% of the issued and outstanding Shares).

In addition, an aggregate of 3,539,232 Shares are available for issuance upon the exercise or redemption of securities to be granted under the RSU Plan and DSU Plan combined (representing 4.0% of the issued and outstanding Shares). Under the RSU Plan: (i) 1,639,520 Shares are issuable upon the exercise or redemption of outstanding RSUs (representing 1.9% of the issued and outstanding Shares); and (ii) 130,096 Shares are available for issuance under the RSU Plan (representing approximately 0.1% of the issued and outstanding Shares). Under the DSU Plan: (i) 1,769,616 Shares are issuable upon the exercise or redemption of outstanding DSUs (representing 2.0% of the issued and outstanding Shares); and (ii) no Shares are available for issuance under the DSU Plan.

Option Plan

Background

The Company has a "rolling" stock option plan pursuant to which the aggregate number of Shares that may be issued under the Option Plan and any other security based compensation arrangement, as that term is defined in the Option Plan, which includes the DSU Plan and the RSU Plan, may not exceed 10% of the issued and outstanding Shares, on a non-diluted basis, at any time.

Pursuant to Policy 4.4 of the TSX Venture Exchange (the "**Exchange**"), a "rolling" plan, such as the Option Plan, must receive shareholder approval each year at the annual meeting of shareholders. In addition, the Company must receive Exchange acceptance of a "rolling" plan each year. The Option Plan was last approved by the Shareholders at the annual and special meeting of Shareholders held on June 25, 2020. Management and the directors of the Company recommend that Shareholders approve the Option Plan at the Meeting.

A summary of the Option Plan is included in this Circular under the heading "*Statement of Executive Compensation – Compensation Discussion and Analysis – Elements of Compensation – Stock Option Plan*". This summary is qualified in its entirety by the full text of the Option Plan, which is attached as Schedule "A" to the Company's management information circular dated January 8, 2015.

Approval Requirements

The Option Plan must be approved by a simple majority (50%) of the votes cast by Shareholders present or represented by proxy at the Meeting.

Approval of the Option Plan by Shareholders

At the Meeting, Shareholders will be asked to consider and, if deemed advisable, to approve the following ordinary resolution to approve the Option Plan (the "**Plan Resolution**"):

"BE IT RESOLVED THAT:

1. the stock option plan of the Company be and it hereby is approved;
2. any director or officer of the Company is hereby authorized to execute and deliver and to do all such other acts and things as such director or officer may determine to be necessary or advisable in connection with the foregoing resolution; and
3. notwithstanding that this resolution has been passed by the shareholders of the Company, the adoption of the proposed share option plan of the Company is conditional upon receipt of final approval from the TSX Venture Exchange and the directors of the Company are hereby authorized and empowered to revoke this resolution, without any further approval of the shareholders of the Company, at any time if such revocation is considered necessary or desirable by the directors."

The Board has concluded that the approval of the Option Plan is in the best interests of the Company. **Accordingly, the Board unanimously recommends that Shareholders ratify, confirm and approve the Option Plan by voting FOR the Plan Resolution at the Meeting.**

Proxies received in favour of Management will be voted in favour of the Plan Resolution unless the Shareholder has specified in the proxy that his or her Shares are to be voted against such resolution.

DSU Plan

Background

The Company has a deferred share unit plan pursuant to which the aggregate number of Shares that may be issued under such plan and other security based compensation arrangement, as that term is defined in the DSU Plan, which includes the Option Plan and the RSU Plan, may not exceed 10% of the issued and outstanding Shares, on a non-diluted basis, at any time.

The Board and Management have determined that, as a best practice, the DSU Plan should receive Shareholder approval each year. In addition, the Company should submit the DSU Plan to the Exchange for review each year. Management and the directors of the Company recommend that Shareholders approve the DSU Plan at the Meeting.

A summary of the DSU Plan is included in this Circular under the heading "*Statement of Executive Compensation – Compensation Discussion and Analysis – Elements of Compensation – DSU Plan*". This summary is qualified in its entirety by the full text of the DSU Plan, which is attached as Schedule "B" to the Company's management information circular dated January 8, 2015.

Approval Requirements

The DSU Plan must be approved by a simple majority (50%) of the votes cast by Shareholders present or represented by proxy at the Meeting.

Approval of the DSU Plan by Shareholders

At the Meeting, Shareholders will be asked to consider and, if deemed advisable, to approve the following ordinary resolution to approve the DSU Plan (the "**DSU Plan Resolution**"):

"BE IT RESOLVED THAT:

1. subject to approval by the TSX Venture Exchange, the deferred share unit plan of the Company be and it hereby is approved;

2. any director or officer of the Company is hereby authorized to execute and deliver and to do all such other acts and things as such director or officer may determine to be necessary or advisable in connection with the foregoing resolution; and
3. notwithstanding that this resolution has been passed by the shareholders of the Company, the adoption of the proposed deferred share unit plan of the Company is conditional upon receipt of final approval from the TSX Venture Exchange and the directors of the Company are hereby authorized and empowered to revoke this resolution, without any further approval of the shareholders of the Company, at any time if such revocation is considered necessary or desirable by the directors."

The Board has concluded that the approval of the DSU Plan is in the best interests of the Company. **Accordingly, the Board unanimously recommends that Shareholders ratify, confirm and approve the DSU Plan by voting FOR the DSU Plan Resolution at the Meeting.**

Proxies received in favour of Management will be voted in favour of the DSU Plan Resolution unless the Shareholder has specified in the proxy that his or her Shares are to be voted against such resolution.

RSU Plan

Background

The Company has a restricted share unit plan pursuant to which the aggregate number of Shares that may be issued under such plan and any other security based compensation arrangement, as that term is defined in the RSU Plan, which includes the Option Plan and the DSU Plan, may not exceed 10% of the issued and outstanding Shares, on a non-diluted basis, at any time.

The Board and Management have determined that, as a best practice, the RSU Plan should receive Shareholder approval each year. In addition, the Company should submit the RSU Plan to the Exchange for review each year. Management and the directors of the Company recommend that Shareholders approve the RSU Plan at the Meeting.

A summary of the RSU Plan is included in this Circular under the heading "*Statement of Executive Compensation – Compensation Discussion and Analysis – Elements of Compensation – RSU Plan*". This summary is qualified in its entirety by the full text of the RSU Plan, which is attached as Schedule "C" to the Company's management information circular dated January 8, 2015.

Approval Requirements

The RSU Plan must be approved by a simple majority (50%) of the votes cast by Shareholders present or represented by proxy at the Meeting.

Approval of the RSU Plan by Shareholders

At the Meeting, Shareholders will be asked to consider and, if deemed advisable, to approve the following ordinary resolution to approve the RSU Plan (the "**RSU Plan Resolution**"):

"BE IT RESOLVED THAT:

1. subject to approval by the TSX Venture Exchange, the restricted share unit plan of the Company be and it hereby is approved;
2. any director or officer of the Company is hereby authorized to execute and deliver and to do all such other acts and things as such director or officer may determine to be necessary or advisable in connection with the foregoing resolution; and
3. notwithstanding that this resolution has been passed by the shareholders of the Company, the adoption of the proposed restricted share unit plan of the Company is conditional upon receipt of final approval from the TSX Venture Exchange and the directors of the Company are hereby authorized and empowered to revoke this resolution,

without any further approval of the shareholders of the Company, at any time if such revocation is considered necessary or desirable by the directors."

The Board has concluded that the approval of the RSU Plan is in the best interests of the Company. **Accordingly, the Board unanimously recommends that Shareholders ratify, confirm and approve the RSU Plan by voting FOR the RSU Plan Resolution at the Meeting.**

Proxies received in favour of Management will be voted in favour of the RSU Plan Resolution unless the Shareholder has specified in the proxy that his or her Shares are to be voted against such resolution.

General

Management knows of no other matters to come before the Meeting other than the matters referred to in the notice of the Meeting. **HOWEVER, IF ANY OTHER MATTERS WHICH ARE NOT NOW KNOWN TO MANAGEMENT SHOULD PROPERLY COME BEFORE THE MEETING, THE PROXY WILL BE VOTED ON SUCH MATTERS IN ACCORDANCE WITH THE BEST JUDGMENT OF THE PERSON OR PERSONS VOTING THE PROXY.**

STATEMENT OF EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Background

Titanium's mission is "Creating Value from Waste™" ("CVW™"). The Company has developed innovative CVW™ technologies to recover valuable heavy minerals, bitumen, solvent and water from oil sands waste tailings. The recovery of bitumen, associated solvents and water from froth treatment tailings streams enables important and timely environmental improvements for the oil sands industry. The Company completed demonstration piloting which was the culmination of several years of progressive research and development of its proprietary technology. From July 2017 until the middle of 2019, the Company worked on front end engineering and design for the first commercial implementation of the CVW™ technology at Canadian Natural Resources' Horizon site. Titanium and its partner are currently working on engineering, validation and optimization and planning next steps for the project.

All disclosure provided herein is for the Company's most recently completed financial year, being December 31, 2020.

Compensation and Corporate Governance Committee

In order to assist the Board in fulfilling its oversight responsibilities regarding human resource and compensation matters, the Board has established the Compensation Committee. The Compensation Committee is currently comprised of three directors, namely Moss Kadey, Brant Sangster and David Macdonald, all of whom are independent within the meaning of National Instrument 58-101 – *Disclosure of Corporate Governance Practices* ("NI 58-101"). Mr. Sangster is the current Chair of the Compensation Committee.

Mr. Sangster has extensive experience in Canada's energy industry, most recently as the Senior Vice President for Petro-Canada where he was responsible for the company's oil sands production and development, as well as Petro-Canada's participation in Syncrude. He was also a member of Petro-Canada's Executive Leadership Team, accountable for the effective integration of the planning and execution of oil sands business objectives with overall strategies and activities of Petro-Canada. For more information on the members of the Compensation Committee see "*Particulars of Matters to be Acted Upon – Election of Directors – Biographical Information*".

The Board recognizes the importance of appointing knowledgeable and experienced individuals to the Compensation Committee; in particular, those who have the necessary background in executive compensation and risk management in order to fulfill the Compensation Committee's obligations to the Board. All current members of the Compensation Committee bring strong business and industry knowledge to the committee and have experience as senior leaders of successful organizations.

The Compensation Committee's responsibilities include recommending to the Board for approval the remuneration of the Chief Executive Officer, including salary, bonus, options and any other incentive plan; the annual compensation budget for staff of the Company; the number of Shares to be reserved under the Security Based Compensation Arrangements; the number of securities to be granted pursuant to the Security Based Compensation Arrangements; salaries, target bonus awards, other

incentive awards and options for the officers of the Company; implementation of, or changes to, compensation and benefits policies; and administering the Security Based Compensation Arrangements.

In establishing the Company's executive compensation program, the Compensation Committee considers the implication of the risks associated with the Company's compensation program, including the risk of executives taking inappropriate or excessive risks; the risk of inappropriate focus on achieving short term goals at the expense of long term returns to Shareholders; and the risk of encouraging aggressive accounting practices.

While no program can fully mitigate these risks, the Company believes that many of these risks are mitigated by: weighting the Company's long term incentives towards share ownership and vesting the Company's long term incentives over a number of years; establishing a uniform incentive program for all executive officers and employees; avoiding narrowly focused performance goals which may encourage loss of focus on providing long term Shareholder returns and retaining adequate discretion to ensure that the Compensation Committee and the Board retain their business judgment in assessing actual performance; and establishing a strong "tone at the top" for accounting, regulatory, environmental and health and safety compliance.

No compensation consultant or advisor has, at any time since the Company's most recently completed financial year, been retained to assist the Board or the Compensation Committee in determining compensation for any of Titanium's directors or executive officers.

Compensation Philosophy and Objectives

The Company's overall compensation philosophy is that executives should be compensated for performance in their position and for achievement of additional personal and corporate objectives. The main objective of the Company's compensation program is to attract, motivate and retain highly qualified and competent executives, consistent with general sector practices, while specifically recognizing the size of the Company and its stage of development. The Company's compensation program also has an objective of aligning the interests of executives with those of Shareholders. The Company's compensation program is designed to reward executives for performance in their position and for achievement of general personal and corporate objectives in a manner consistent with the Company's strategic plan, including further development of the Company and achieving Shareholder returns.

Short Sales, Puts, Calls and Options

Pursuant to the Company's Insider Trading and Blackout Policy, directors, officers and all employees of the Company, shall not knowingly sell, directly or indirectly, a security of the Company if such person selling such security does not own or has not fully paid for the security to be sold. Directors, officers and employees of the Company shall not, directly or indirectly, buy or sell a put, call, option or other right or obligation to purchase or sell securities of the Company.

Elements of Compensation

The elements of compensation awarded to, earned by, paid to or payable to Named Executive Officers (as hereinafter defined) for the most recently completed financial year are as follows: (i) a base salary; (ii) a short term incentive in the form of a cash bonus and/or award of restricted share units ("**RSUs**"); (iii) a long term incentive in the form of stock options and RSUs; and (iv) retention bonuses for certain Named Executive Officers in the form of a cash bonus and/or award of RSUs.

Generally, the Compensation Committee considers a broad range of factors when setting overall compensation for the Named Executive Officers and each element of compensation, including but not limited to what is required to recruit and retain the Named Executive Officers who are critical to the success of the Company; what general sector compensation practices are; what the Company can afford; what is necessary to incentivize individual and corporate performance; and what is necessary to align the interests of Named Executive Officers with those of shareholders on a longer term basis.

Base Salary

Base salary is intended to provide Named Executive Officers with basic compensation consistent with the individual's level of responsibility, skills, knowledge and experience; the contribution expected from each individual; and general sector compensation practices for individuals in the applicable position, all with a view to attracting and retaining the Named Executive Officers. In some circumstances, the level of base salary may affect the Company's decisions relating to short term

incentives (i.e., cash bonuses) given that, in some cases, bonuses are payable as a percentage of base salary (i.e., if performance criteria are achieved).

Short Term Incentives

The Company may award short term incentives to Named Executive Officers from time to time based on their annual performance. Short term incentive compensation is intended to motivate and incentivize Named Executive Officers to meet certain shorter term personal and corporate objectives, which vary from individual to individual, from year to year. The Compensation Committee communicates to the Named Executive Officers the key accomplishments it wishes to reward in a given year, such as individual achievements, research and development success, specific progress during the year on advancing the Company's commercialization of its technology, and overall cost savings. These short term incentives are intended to ensure that a portion of a Named Executive Officer's compensation correlates with corporate objectives and varies with actual performance in a given year. In some circumstances, a maximum level of bonus (expressed as a percentage of base salary) or a set amount upon achievement of a specified goal is included in an employment agreement with a Named Executive Officer (see "*Summary Compensation Table – Discussion – Employment Agreements*"), but generally the award of short term incentives is at the discretion of the Board, based upon the recommendations of the Compensation Committee.

The Company's process for awarding short term incentives to Named Executive Officers varies depending on the circumstances. From time to time, the Chief Executive Officer will present the Compensation Committee with the performance of certain other Named Executive Officers and will make recommendations to the Compensation Committee regarding possible bonuses to such Named Executive Officers to reward them for specific performance. Annually, the Compensation Committee will then consider and determine whether to recommend such awards to the Board for approval. The Compensation Committee also independently considers whether awards of short term incentives should be made to the Chief Executive Officer.

The Company generally grants short term incentives in the form of cash bonuses. In 2013, the Company implemented the RSU Plan for the purposes of, among other things, reducing the cash expense of compensating Management and promoting greater alignment of interests between Shareholders and Management, including payment of short term incentives (see "*Summary Compensation Table – Discussion – Employment Agreements*"). Given the greater reliance on the use of RSUs to compensate the Company's officers in light of the Company's financial condition and to promote alignment with Shareholders, the Board approved certain amendments to the RSU Plan to mitigate the adverse tax consequences associated with this type of compensation award for short term incentive purposes, which were approved by the Board in January 2015 and subsequently approved by Shareholders at the Company's annual and special meeting held on February 12, 2015.

In respect of the fiscal year ended December 31, 2020, the Compensation Committee recommended that awards of certain components of variable compensation be made to certain Named Executive Officers for general achievement of individual and corporate objectives (see "*Summary Compensation Table – Discussion – Employment Agreements*"). As at November 11, 2021, there were 130,096 RSUs available to settle compensation awards with Management. Given the Company's equity constraints, only cash components related to retention payments were paid for the year ended December 31, 2020 and the Board resolved to defer the grant and pricing of RSUs to settle outstanding compensation amounts to certain Named Executive Officers relating to the fiscal years ended December 31, 2019 and 2020 until such time as there are sufficient Shares available to be reserved for issuance pursuant to the RSUs under the RSU Plan (the "**Management Compensation Deferral**").

Long Term Incentives

The Company may award long term incentives in the form of stock options and RSUs to Named Executive Officers from time to time. Long term incentive compensation is intended to ensure a commonality of interests between the Named Executive Officers and Shareholders. The forms of long term incentive are intended to ensure that a portion of a Named Executive Officer's compensation is tied to the growth in the value of the Shares over the longer term. This is the high risk, high return component of the Company's executive compensation program because the value received by the Named Executive Officers for such awards correlates to the market value of the Shares. In some circumstances, an initial grant of stock options and/or RSUs to a new Named Executive Officer or a future grant of such awards upon achievement of a specified goal may be included in an employment agreement with a Named Executive Officer (see "*Summary Compensation Table – Discussion – Employment Agreements*"), but in most circumstances, the award of long term incentives is at the discretion of the Board.

The process by which the Company grants stock options and/or RSUs for long term incentive purposes to Named Executive Officers varies depending on the circumstances. Annually, the Chief Executive Officer will present the Compensation

Committee with the performance of certain other Named Executive Officers and will make recommendations to the Compensation Committee regarding possible grants to such Named Executive Officers to reward them for specific performance. The Compensation Committee will then consider and determine whether to recommend such grants to the Board for approval. The Compensation Committee also independently considers from time to time whether grants should be made more generally to Named Executive Officers or to specific Named Executive Officers, such as the Chief Executive Officer, to incentivize performance over the longer term. For the Chief Executive Officer, the Compensation Committee considers the steps required to achieve the Company's strategic plan, the Chief Executive Officer's performance to date, and the number of awards judged necessary to retain the Chief Executive Officer. Finally, the Compensation Committee also considers and determines whether to recommend to the Board for approval grants to new Named Executive Officers when employment agreements are being negotiated by the Chief Executive Officer on behalf of the Company.

In setting or amending the plans for such awards, the Compensation Committee takes into account the recommendations of senior Management, including the Named Executive Officers. Previous grants of such awards are taken into account when considering new grants. Details regarding the plans for stock options, deferred share units ("DSUs") and RSUs are set out below. Also see "*Particulars of Matters to be Acted Upon – Annual Approval of the Security Based Compensation Arrangements*".

Stock Option Plan

The Company has the Option Plan for its directors, officers, employees and consultants. The Option Plan was initially approved at a special meeting of the Shareholders held on July 7, 2009 and has subsequently been reapproved each year at the annual and special meeting of Shareholders.

The purpose of the Option Plan is to encourage ownership of Shares by the directors, officers, employees and consultants of the Company; advance the interests of the Company by providing additional incentives for superior performance by such persons; and enable the Company to attract and retain valued directors, officers, employees and consultants.

The Option Plan is a "rolling" 10% plan that provides that the aggregate number of Shares reserved for issuance shall not exceed 10% of the issued and outstanding Shares.

As at the date hereof, there are 8,848,079 Shares reserved for issuance under the Security Based Compensation Arrangements (representing 10% of the issued and outstanding Shares). There are 2,233,943 Shares available for issuance upon the exercise of future awards to be granted under the Security Based Compensation Arrangements (representing approximately 2.5% of the issued and outstanding Shares). There are 6,614,136 Shares issuable upon the exercise of awards previously granted under the Security Based Compensation Arrangements (representing approximately 7.5% of the issued and outstanding Shares). For clarity, there are an aggregate of 3,539,232 Shares available for issuance upon the exercise or redemption of securities to be granted under the DSU Plan and the RSU Plan combined (representing 4.0% of the issued and outstanding Shares) and there are: (i) 1,639,520 Shares issuable upon the exercise or redemption of outstanding RSUs (representing 1.9% of the issued and outstanding Shares), resulting in 130,096 Shares available for issuance under the RSU Plan (representing approximately 0.1% of the issued and outstanding Shares); and (ii) 1,769,616 Shares issuable upon the exercise or redemption of outstanding DSUs (representing 2.0% of the issued and outstanding Shares), resulting in no Shares available for issuance under the DSU Plan.

The following summary of the Option Plan is qualified in its entirety by the full text of the Option Plan attached as Schedule "A" to the Company's management information circular dated January 8, 2015. The key features of the Option Plan are as follows:

1. the Option Plan is administered by the Board or, if the Board so delegates, a committee of the Board appointed from time to time by the Board;
2. the aggregate number of Shares reserved for issuance pursuant to options granted under the Option Plan and any other Security Based Compensation Arrangements shall not exceed 10% of the issued and outstanding Shares as at the date of grant (on a non-diluted basis). Further, any grant of options under the Option Plan shall be subject to the following restrictions:
 - (a) the aggregate number of Shares reserved for issuance pursuant to options and other securities issued under other Security Based Compensation Arrangements granted to any one individual in any 12 month period

shall not exceed 5% of the issued and outstanding Shares, unless disinterested shareholder approval is obtained;

- (b) the aggregate number of Shares reserved for issuance pursuant to options and other securities issued under other Security Based Compensation Arrangements granted to any one Consultant (as defined in the Option Plan) in any 12 month period shall not exceed 2% of the issued and outstanding Shares;
 - (c) the aggregate number of Shares reserved for issuance pursuant to options and other securities issued under other Security Based Compensation Arrangements granted to all optionees who are engaged in Investor Relations Activities (as defined in the Option Plan) in any 12 month period shall not exceed 2% of the issued and outstanding Shares;
 - (d) the aggregate number of Shares reserved for issuance pursuant to options and other securities issued under other Security Based Compensation Arrangements granted to Insiders (as defined in the Option Plan) shall not exceed 10% of the issued and outstanding Shares, unless disinterested shareholder approval is obtained; and
 - (e) the aggregate number of Shares reserved for issuance pursuant to options and other securities issued under other Security Based Compensation Arrangements granted to Insiders in any 12 month period shall not exceed 10% of the issued and outstanding Shares, unless disinterested shareholder approval is obtained;
3. the Board will fix the exercise price of each option at the time the option is granted, provided that such price shall not be less than the closing price of the Shares on the Exchange on the last trading day immediately preceding the date of grant of such option, less any applicable discount permitted under the policies of the Exchange;
 4. if an optionee is an Insider, the exercise price of his or her options may only be reduced if disinterested shareholder approval is obtained, provided that such approval is then a requirement of the Exchange;
 5. the period of time during which a particular option may be exercised is determined by the Board at the time the option is granted, provided that no such option term shall exceed ten years;
 6. if the normal expiry date of an option falls within any black-out period (being a period of time when pursuant to any policies of the Company, any securities of the Company may not be traded by certain persons as designated by the Company) and the optionee is subject to the black-out period, the expiry date of such options shall be extended to the date that is ten business days following the end of such black-out period;
 7. subject to the Exchange policies, the Board will determine the vesting period or periods within the term of an option during which an optionee may exercise an option or a portion thereof;
 8. if any optionee ceases to be a director, officer, employee or consultant of the Company or its subsidiaries for any reason other than death, retirement or permanent disability, the optionee may within 30 days after such termination or prior to the expiry of the option period, whichever is earlier, exercise any option held by the optionee to the extent that the optionee was entitled to exercise the option at the date of such termination;
 9. in the event of death of an optionee, the option previously granted is exercisable by the optionee's legal personal representative within 12 months following the date of death of the optionee;
 10. in the event of retirement or permanent disability of an optionee, the optionee may within three months after such termination exercise any option held by the optionee to the extent that the optionee was entitled to exercise the option at the date of such termination;
 11. in the event of termination for cause of an optionee, all options held by the optionee shall expire and terminate immediately;
 12. options and rights related thereto held by an optionee are not assignable or transferable except effectively to the legal personal representative of an optionee upon his or her death;

13. the Board may amend, modify, change or discontinue the Option Plan and may amend, modify or change any outstanding option granted under the Option Plan, provided this does not alter or impair any option previously granted under the Option Plan (except as permitted under the Option Plan) and that this has been approved by the Exchange and, where necessary, by the Shareholders;
14. the Company shall have the power and the right to deduct or withhold, or require an optionee to remit to the Company, the required amount to satisfy federal, provincial and local taxes, domestic or foreign, required by law or regulation to be withheld with respect to any taxable event arising as a result of the Option Plan, including the grant or exercise of options granted under the Option Plan. With respect to required withholding, the Company shall have the irrevocable right to, and the optionee consents to, the Company setting off any amounts required to be withheld, in whole or in part, against amounts otherwise owing by the Company to the optionee (whether arising pursuant to the optionee's relationship as a director, officer or employee of the Company or as a result of the optionee providing services on an ongoing basis to the Company or otherwise), or may make such other arrangements satisfactory to the optionee and the Company. In addition, the Company may elect, in its sole discretion, to satisfy the withholding requirement, in whole or in part, by withholding such number of Shares as it determines are required to be sold by the Company, as trustee, to satisfy the withholding obligation net of selling costs. The optionee consents to such sale and grants to the Company an irrevocable power of attorney to effect the sale of such Shares and acknowledges and agrees that the Company does not accept responsibility for the price obtained on the sale of such Shares; and
15. optionees (or their beneficiaries) shall be responsible for all taxes with respect to any options under the Option Plan, whether arising as a result of the grant or exercise of options or otherwise. The provision further provides that the Board and the Company make no guarantees to any person regarding the tax treatment of options or payments made under the Option Plan and none of the Company, nor any of its employees or representatives shall have any liability to an optionee with respect thereto.

DSU Plan

The DSU Plan is designed to promote the alignment of interests between Non-Management Directors (as defined in the DSU Plan) and the Shareholders. The Board is responsible for administering the DSU Plan with the advice of the Compensation Committee or such other committee the Board deems appropriate.

The following is a summary of the DSU Plan and is qualified in its entirety by the full text of the DSU Plan attached as Schedule "B" to the Company's management information circular dated January 8, 2015.

Benefits of the DSU Plan

The DSU Plan is designed to provide long term incentives for Non-Management Directors. The Board believes that DSUs have the following primary benefits:

1. current practice in corporate governance favours the use of DSUs over options for directors because the value of the DSUs can only be realized upon the director ceasing to serve the Company, which helps to ensure that directors act in the long term interests of the Company; and
2. the DSUs provide the Board with an additional compensation tool which can be used to help retain and attract qualified directors and further align the interests of Non-Management Directors with the interest of the Shareholders.

Nature and Administration of the DSU Plan

Only Non-Management Directors ("**Eligible Directors**") are eligible to participate in the DSU Plan. A DSU issued under the DSU Plan is a bookkeeping entry representing a future right to receive one Share at the time of the holder's retirement, death or the holder otherwise ceasing to be an Eligible Director.

Each Eligible Director is a member (a "**DSU Plan Member**") in the DSU Plan.

A DSU Plan Member has the right to elect at any time by August 15th of each financial year to be credited with DSUs in lieu of all or any part of his or her Annual Board Retainer, Annual Chair Retainer, Annual Committee and/or Meeting Fees (as such terms are defined in the DSU Plan) otherwise payable to him or her in cash in the immediately succeeding financial year.

Each DSU awarded by the Company is initially equal to the value of a Share at the time the DSU is awarded. The value of the DSU increases or decreases as the price of the Shares increases or decreases, thus promoting alignment of the interest of the Eligible Directors with the Shareholders. DSUs vest upon grant and are credited to an Eligible Director's account.

The value of the DSUs credited to a DSU Plan Member's account is redeemable upon the DSU Plan Member ceasing to be an Eligible Director of the Company. The value of the DSUs is redeemed by filing a written notice of redemption with the Company, specifying (i) either one or two redemption dates, and (ii) the percentage of DSUs held by the DSU Plan Member to be redeemed on each such redemption date (which when added together must equal 100%). Each redemption date specified in the notice of redemption must occur during the period commencing at least five business days following the date on which the notice is filed with the Company and ending:

1. in the event of death, termination for cause, termination without cause and resignation, 60 days after the DSU Plan Member's termination date; or
2. in the event of retirement from active employment, not later than the last day of the calendar year following the year of the DSU Plan Member's termination date.

Subject to applicable income tax and other withholdings as required by law, the value of the vested DSUs redeemed by or in respect of a DSU Plan Member will be paid to the DSU Plan Member or to his or her estate, as the circumstances warrant, in the form of one or two issuances of Shares on the basis of one Share for each DSU redeemed, less the Applicable Withholding Amount (as the term is defined in the DSU Plan), as soon as practicable after the applicable redemption date.

DSUs are personal and non-assignable. DSUs cannot be pledged, hypothecated, charged, transferred, assigned or otherwise encumbered or disposed of by the DSU Plan Member otherwise than by testate succession or the laws of descent and distribution. Any attempt to do so will cause the DSUs to be null and void. During the lifetime of the DSU Plan Member, a vested DSU is redeemable only by the DSU Plan Member or, upon the death of a DSU Plan Member, the DSU Plan Member's estate.

Limitations under the DSU Plan

Notwithstanding any other provision of the DSU Plan:

1. the aggregate number of Shares reserved for issuance pursuant to DSUs granted under the DSU Plan and other Security Based Compensation Arrangements cannot exceed 10% of the issued and outstanding Shares as at the date of grant (on a non-diluted basis);
2. the aggregate number of Shares reserved for issuance pursuant to DSUs granted to any one individual in any 12 month period cannot exceed 1% of the issued and outstanding Shares, unless disinterested shareholder approval is obtained;
3. the aggregate number of Shares reserved for issuance pursuant to DSUs granted to Insiders (as defined in the policies of the Exchange) cannot exceed 2% of the issued and outstanding Shares, unless disinterested shareholder approval is obtained; and
4. all DSUs granted pursuant to the DSU Plan are subject to the policies of the Exchange.

Adjustments

In the event of any stock dividend, stock split, combination or exchange of Shares, merger, consolidation, spinoff or other distribution (other than normal cash dividends) of the Company's assets to the Shareholders, or any other changes affecting the Shares, the Board can make such proportionate adjustments with respect to the number of DSUs outstanding under the DSU Plan to reflect this change or changes as it deems appropriate.

No additional DSUs will be granted to a DSU Plan Member to compensate for a downward fluctuation in the price of the Shares, nor will any other form of benefit be conferred upon, or in respect of, a DSU Plan Member for such purpose.

Dividends

Whenever cash dividends are paid on the Shares, additional DSUs will be credited to the DSU Plan Member's account. The number of additional DSUs will be calculated by dividing (i) the dividends that would have been paid to the DSU Plan Member if the DSUs in the DSU Plan Member's account on the relevant dividend record date had been Shares; by (ii) the Market Price (as defined in the DSU Plan) at the date of payment of such dividend. Any fractional DSUs resulting from such calculation will be rounded to the nearest whole number.

Amendment and Termination

The DSU Plan can be amended or terminated at any time by the Board, except as to rights already accrued under the DSU Plan by the DSU Plan Members. Notwithstanding the foregoing, any amendment or termination of the DSU Plan will be such that the DSU Plan continuously meets the requirements of paragraph 6801(d) of the Regulations under the *Income Tax Act* (Canada) or any successor provision thereto.

RSU Plan

The RSU Plan is designed to provide certain officers and other key employees of the Company and its related entities with the opportunity to acquire RSUs in order to enable them to participate in the long-term success of the Company and to promote a greater alignment of their interests with the interests of the Shareholders. The Compensation Committee (or such other committee as the Board may appoint) is responsible for administering the RSU Plan.

The following is a summary of the RSU Plan and is qualified in its entirety by the full text of the RSU Plan attached as Schedule "C" to the Company's management information circular dated January 8, 2015.

Benefits of the RSU Plan

The RSU Plan is designed to be an incentive for the officers and other key employees of the Company with the flexibility to provide for short-term and long-term incentive compensation based on decisions of the Compensation Committee. RSUs provide the Compensation Committee with an additional compensation tool which can be used to help retain and attract highly qualified officers and employees and further align the interests of officers and key employees with the interests of Shareholders.

Nature and Administration of the RSU Plan

All Employees (as defined in the RSU Plan) of the Company and its related entities ("**Eligible Persons**") are eligible to participate in the RSU Plan (as "**RSU Plan Participants**"), though the Company reserves the right to restrict eligibility or otherwise limit the number of persons eligible for participation in the RSU Plan at any time. Eligibility to participate in the RSU Plan does not confer upon any person a right to receive an award of RSUs.

Subject to certain restrictions, the Compensation Committee can, from time to time, award RSUs to Eligible Persons. RSUs will be credited to an account maintained for each RSU Plan Participant on the books of the Company as of the award date. The number of RSUs to be credited to each RSU Plan Participant's account in respect of a fiscal year shall be determined by dividing: (a) the dollar amount of the portion of the RSU Plan Participant's compensation which the Compensation Committee, in its sole discretion, determines to be paid as RSUs; by (b) the Fair Market Value (as defined in the RSU Plan) per Share on the award date or such higher price per Share as the Compensation Committee determines. Any fractional RSUs resulting from this calculation will be rounded to the nearest whole number.

Each award of RSUs vests on the date(s) (each a "**Vesting Date**") specified by the Compensation Committee on the award date and reflected in the applicable Award Notice (as defined in the RSU Plan). Additionally, the term of the RSUs shall be determined by the Compensation Committee on the date of the award of RSUs and shall not exceed ten years from the date the RSUs are awarded. Each RSU outstanding and all rights thereunder shall expire at the expiry time determined by the Compensation Committee, subject to earlier termination in accordance with the RSU Plan.

Rights and obligations under the RSU Plan can be assigned by the Company to a successor in the business of the Company, any company resulting from any amalgamation, reorganization, combination, merger or arrangement of the Company, or any corporation acquiring all or substantially all of the assets or business of the Company. The RSUs are non-transferable and non-assignable by the RSU Plan Participant. Certificates representing RSUs will not be issued by the Company.

Credit for Dividends

An RSU Plan Participant's account will be credited with additional RSUs as of each dividend payment date in respect of which cash dividends are paid on Shares. The number of additional RSUs to be credited to an RSU Plan Participant's account is computed by dividing: (a) the dividends that would have been paid to such RSU Plan Participant if each RSU in the RSU Plan Participant's account on the relevant dividend record date had been a Share, by (b) the Fair Market Value of the Shares determined as of the date of payment of such dividend. Any fractional RSUs resulting from this calculation will be rounded to the nearest whole number. Any additional RSUs credited to the RSU Plan Participant's account will vest in proportion to and will be paid under the RSU Plan in the same manner as the RSUs to which they relate. Note that the Company is not obligated to pay dividends on Shares.

Acquisition of Vested RSUs

An RSU Plan Participant or, if applicable, the RSU Plan Participant's estate, who wishes to acquire a Share for any vested RSUs may do so by delivering a completed Notice of Acquisition (as defined in the RSU Plan) to the Company on or before the Expiry Time (as defined in the RSU Plan) of the RSU and paying the required exercise price, following which the Company shall issue, within ten days following receipt of the Notice of Acquisition, one Share for each RSU in the RSU Plan Participant's account that the RSU Plan Participant has included on the Notice of Acquisition (the "**Payment Amount**"). Given the greater reliance on the use of RSUs to compensate the Company's officers in light of the Company's financial condition, the RSU Plan was amended to provide for an exercise price to mitigate the adverse tax consequences associated with this type of compensation award for short term incentive purposes. The RSUs in respect of which Shares are issued will be cancelled and no further issuances will be made to the RSU Plan Participant under the RSU Plan in relation to such RSUs.

Resignation, Termination, Leave of Absence or Death

Generally, if an RSU Plan Participant's employment or service is terminated, or if the RSU Plan Participant resigns from their employment with the Company, then any RSUs credited to him or her under the RSU Plan which have not vested on or before the separation date for the RSU Plan Participant are forfeited, cancelled and terminated without payment. An RSU Plan Participant may, but only within the next 30 days following the separation date, deliver a completed Notice of Acquisition to the Company to acquire Shares for the vested RSUs, together with payment of the required exercise price. Any vested RSUs in respect of which an RSU Plan Participant has not delivered a completed Notice of Acquisition to the Company and paid the required exercise price shall be forfeited and cancelled effective at 4:00 p.m. (Calgary time) on such 30th day and shall terminate without payment and shall be of no further force or effect from and after such time.

If an RSU Plan Participant is terminated without Cause (as defined in the RSU Plan), any RSUs which will vest within 60 days of the separation date will be deemed to have been vested on the separation date.

If an RSU Plan Participant's employment or service is terminated, within 30 days of a termination, the Compensation Committee can: (i) accelerate the vesting of all or any portion of the RSU Plan Participant's RSUs; or (ii) determine that an RSU Plan Participant will continue to be an RSU Plan Participant, but subject to such terms and conditions (including vesting) if any, established by the Compensation Committee.

If an RSU Plan Participant takes a leave of absence other than an Approved Leave of Absence (as defined in the RSU Plan), all RSUs granted to the RSU Plan Participant that have not then vested will terminate and be null and void, subject to applicable law and the Board's sole and absolute discretion to determine otherwise.

Upon the death of an RSU Plan Participant, any RSUs granted to an RSU Plan Participant which, as of the date of the death have not yet vested, immediately vest.

Control Change

In the event of a Control Change (as defined in the RSU Plan), the Compensation Committee may:

1. cause the conversion or exchange of any outstanding RSUs into or for rights or other securities of substantially equivalent value (or greater value) in any entity participating in or resulting from a Control Change; or
2. accelerate the vesting of any or all outstanding RSUs to provide that outstanding RSUs are fully vested upon (or immediately prior to) the completion of the transaction resulting in the Control Change.

If, before the completion of the Vesting Date with respect to any award of RSUs, an RSU Plan Participant's employment is terminated in circumstances where the termination occurs:

1. subsequent to a Control Change and during the Control Change Period (as defined in the RSU Plan); or
2. prior to the date on which a Control Change occurs and it is reasonably demonstrated that such termination:
 - (a) was at the request of a third party who has taken steps reasonably calculated to effect a Control Change; or
 - (b) otherwise arose in connection with or anticipation of a Control Change; and
3. such termination was for any reason whatsoever other than death or termination for Cause,

then the award shall immediately vest on the separation date and the Payment Amount shall be equal to the number of Shares determined on the separation date multiplied by the number of RSUs in the RSU Plan Participant's account.

Adjustments

In the event of any subdivision, consolidation, stock dividend, capital reorganization, reclassification, exchange or other change with respect to the Shares, or a consolidation, amalgamation, merger, spin-off, sale, lease or exchange of all or substantially all of the property of the Company or other distribution of the Company's assets to the Shareholders (other than the payment of dividends in respect of the Shares as contemplated is the RSU Plan), the account of each RSU Plan Participant and the RSUs outstanding under the RSU Plan will be adjusted in such manner, if any, as the Compensation Committee deems appropriate to preserve, proportionally, the interests of RSU Plan Participants.

Discretion to Permit Vesting

The Compensation Committee can, at any time, permit both the vesting of any or all RSUs held by an RSU Plan Participant and determine the form and terms of payment of the Payment Amount in respect of such RSUs.

Limitations under the RSU Plan

Notwithstanding any other provision of the RSU Plan:

1. the aggregate number of Shares reserved for issuance pursuant to RSUs granted under the RSU Plan and other Security Based Compensation Arrangements (as defined in the RSU Plan) cannot exceed 10% of the issued and outstanding Shares as at the date of grant (on a non-diluted basis);
2. the aggregate number of Shares reserved for issuance pursuant to RSUs granted to any one individual in any 12 month period shall not exceed 1% of the issued and outstanding Shares, unless disinterested shareholder approval is obtained;
3. the aggregate number of Shares reserved for issuance pursuant to RSUs granted to Insiders (as defined in the policies of the Exchange) shall not exceed 2% of the issued and outstanding Shares, unless disinterested shareholder approval is obtained; and
4. all RSUs granted pursuant to the RSU Plan are subject to the policies of the Exchange.

Amendment, Suspension or Termination of Plan

Subject to applicable law, the Compensation Committee can, without notice or Shareholder approval, amend, suspend or terminate the RSU Plan for any purpose which, in the good faith opinion of the Compensation Committee, may be expedient or desirable. That being said, the Compensation Committee cannot materially adversely alter or impair any rights of an RSU Plan Participant or materially increase any obligations of an RSU Plan Participant with respect to RSUs previously awarded under the RSU Plan without the consent of the affected RSU Plan Participant.

If the RSU Plan is terminated or suspended, no new RSUs will be credited to the account of RSU Plan Participants. Previously credited RSUs will remain outstanding but will not be entitled to Dividend Equivalents (as such term is defined in the RSU Plan) following suspension or termination unless at the time of suspension or termination the Compensation Committee determines the entitlement to Dividend Equivalents should be continued.

The Compensation Committee shall not require the consent of any affected RSU Plan Participant in connection with a termination of the RSU Plan in which the vesting of all RSUs held by the RSU Plan Participant are accelerated and the Payment Amount (less Applicable Withholding Amount) is paid to the RSU Plan Participant in respect of all such RSUs.

The RSU Plan will terminate on the date upon which no further RSUs remain outstanding provided that such termination is confirmed by a resolution of the Compensation Committee.

Perquisites and Personal Benefits

Named Executive Officers who are employees of the Company are eligible to participate in the Company's various benefit programs on the same basis as other employees of the Company. Those Named Executive Officers receive the following perquisites and personal benefits: a corporate contribution to the employee's registered retirement savings account at an amount equal to 5% of the employee's base salary; and participation in the Company's group benefit plan, which includes the payment by the Company of life insurance premiums for an insured benefit equal to one times salary, accidental death and dismemberment insurance coverage for an insured benefit equal to one times salary and dental and extended health coverage for the employee and his or her immediate family. For information regarding perquisites and personal benefits relating to specific Named Executive Officers, see "*Summary Compensation Table – Discussion – Employment Agreements*". While these perquisites and personal benefits do not significantly affect the Company's decisions about other elements of compensation, the Compensation Committee considers such perquisites and personal benefits necessary to attract highly qualified individuals at the executive level.

Termination and Change of Control Provisions

All of the Named Executive Officers have termination and change of control provisions in their employment agreements. The events that trigger payment under these arrangements were determined through negotiation of such employment agreements at the time they were entered into. See also "*Employment Agreements*" and "*Termination and Change of Control Benefits*" below.

Summary Compensation Table

The following table (presented in accordance with Form 51-102F6 – Statement of Executive Compensation ("**Form 51-102F6**") under National Instrument 51-102 – *Continuous Disclosure Obligations* ("**NI 51-102**")) sets forth all direct and indirect compensation for, or in connection with, services provided to the Company for the fiscal years ended December 31, 2020, December 31, 2019 and December 31, 2018 in respect of the Chief Executive Officer, the Chief Financial Officer and the other two most highly compensated executive officers of the Company (the "**Named Executive Officers**").

Name and principal position	Fiscal Year	Salary (\$)	Share based awards (\$)	Option-based awards (\$)	Non-equity incentive plan compensation (\$)		Pension value (\$)	All other compensation (\$)	Total compensation (\$)
					Annual incentive plans	Long-term incentive plans			
Scott Nelson President and Chief Executive Officer	2020 ⁽¹⁾	276,200	Nil	Nil	50,000	Nil	N/A	29,900 ⁽²⁾	356,100
	2019	325,000	Nil	202,200 ⁽³⁾⁽⁴⁾⁽⁶⁾	108,500 ⁽⁶⁾	Nil	N/A	32,200	667,900
	2018	300,000 ⁽⁴⁾	Nil	188,600 ⁽³⁾⁽⁴⁾	105,700	Nil	N/A	32,000	626,300
Jennifer Kaufeld ⁽⁸⁾ Vice President,	2020 ⁽¹⁾	171,900	Nil	30,000 ⁽³⁾⁽⁷⁾	30,000 ⁽⁷⁾	Nil	N/A	9,700	241,600
	2019	175,800 ⁽³⁾	Nil	136,300 ⁽³⁾⁽⁴⁾	66,000 ⁽⁶⁾	Nil	N/A	9,500	387,600

Name and principal position	Fiscal Year	Salary (\$)	Share based awards (\$)	Option-based awards (\$)	Non-equity incentive plan compensation (\$)		Pension value (\$)	All other compensation (\$)	Total compensation (\$)
					Annual incentive plans	Long-term incentive plans			
<i>Finance and Chief Financial Officer</i>	2018	200,400 ⁽³⁾	Nil	184,900 ⁽³⁾⁽⁴⁾	74,750	Nil	N/A	10,500	470,600
Kevin Moran <i>Executive Vice President and Chief Technology Officer</i>	2020 ⁽¹⁾	243,000	Nil	50,000 ⁽³⁾⁽⁷⁾	50,000 ⁽⁷⁾	Nil	N/A	18,900	361,900
	2019	275,000	Nil	155,300 ⁽³⁾⁽⁵⁾	85,000 ⁽⁶⁾	Nil	N/A	22,500	537,800
	2018	275,000	Nil	208,500 ⁽³⁾⁽⁵⁾	98,400	Nil	N/A	23,300	605,200
Niel Erasmus <i>Vice President, Mineral Sands</i>	2020 ⁽¹⁾	195,300	Nil	Nil	40,000	Nil	N/A	15,000	253,300
	2019	220,000	Nil	70,300 ⁽³⁾⁽⁵⁾	47,000	Nil	N/A	15,800	282,800
	2018	200,000	Nil	110,100 ⁽³⁾⁽⁵⁾	57,600	Nil	N/A	15,600	383,300

Notes:

- (1) In response to the uncertainty created by the COVID-19 pandemic and the resulting economic uncertainties, the Company implemented salary reductions in the range of 15% to 20% effective April 1, 2020. The salaries noted above reflect the actual amount of salary paid in cash. In addition, there were no RSUs issued to management during the year-ended December 31, 2020 due to equity plan constraints.
- (2) Scott Nelson is entitled to a \$12,000 per year vehicle allowance in addition to a registered retirement savings plan entitlement representing 5% of base pay. Mr. Nelson did not receive any compensation in his role as a director of the Company.
- (3) As the Company's RSUs issued after February 12, 2015, being the last date that any amendments to the RSU Plan was approved by Shareholders, require an exercise price to be paid prior to issuance, the RSUs have been classified as "option-based awards" for the purposes of this Statement of Executive Compensation since the RSUs have "option-like features" for the purposes of the definition of "option-based awards" in Form 51-102F6.
- (4) Commencing May 1, 2015, as a part of the Company's cost savings measures, Mr. Nelson and Ms. Kauffield voluntarily elected to receive 20% of their annual salary in the form of RSUs, which amounts were agreed to be paid quarterly. As a result, the salaries noted for each of Mr. Nelson and Ms. Kauffield for the year ended 2018 have been adjusted in the salary column to reflect the amount of salary paid in cash. The percentage of Mr. Nelson's annual salaries that were paid in RSUs has been reflected in the option-based awards column. Due to RSU Plan limits, only 75% (\$23,200) of Mr. Nelson's \$31,250 was settled with RSUs during the year ended December 31, 2018. As a result, the salary noted for Mr. Nelson for the year ended December 31, 2018 has been adjusted in the salary column to reflect the amount of salary paid in cash. The \$23,400 of annual salary of Mr. Nelson which was paid in RSUs has been reflected in the option-based awards column.
- (5) For the year ended December 31, 2018, the Board awarded: (i) Mr. Nelson an aggregate bonus and retention payment of \$269,000, of which \$169,300 was payable in RSUs and \$99,700 was payable in cash; (ii) Ms. Kauffield a bonus and retention payment of \$149,500, of which \$74,750 was settled in cash and \$74,750 was settled in RSUs; (iii) Mr. Moran an aggregate bonus and retention payment of \$196,800, of which \$98,400 was settled in cash and \$98,400 was settled in RSUs; and (iv) Mr. Erasmus an aggregate bonus and retention payment of \$57,600, all of which was settled in cash. As at December 31, 2018, there were 328,715 RSUs available to settle compensation awards with Management. Given the Company's equity constraints, Mr. Nelson decided to forgo the RSU compensation of \$169,300 awarded to him and allocated the remaining RSUs to settle Mr. Moran's and Ms. Kauffield's RSU incentive compensation. Mr. Moran's and Ms. Kauffield's RSUs were issued on January 3, 2019 and were priced at \$0.53, being the closing price per Share on the Exchange on December 31, 2018. All of the RSUs vested immediately and have an exercise price of \$0.0001 per RSU expiring 10 years following the grant date on January 3, 2029.
- (6) For the year ended December 31, 2019, the Board awarded: (i) Mr. Nelson an aggregate bonus and retention payment of \$217,000, of which \$108,500 was paid in cash and \$108,500 is to be settled in RSUs; (ii) Ms. Kauffield an aggregate bonus and retention payment of \$132,000, of which \$66,000 was paid in cash and \$66,000 is to be settled in RSUs; (iii) Mr. Moran an aggregate bonus and retention payment in the amount of \$170,000, of which \$85,000 was paid in cash and \$85,000 is to be settled in RSUs; and (iv) Mr. Erasmus an aggregate bonus and retention payment of \$47,000, which was paid in cash. As at April 28, 2021, there were only 130,096 RSUs available to settle outstanding compensation awards for Management. Given the Company's equity constraints, the Board approved the Management Compensation Deferral in order to defer the grant and pricing of all RSUs to Management payable related to the retention payments outlined herein until such time as there are sufficient Shares available to be reserved for issuance pursuant to the RSUs under the RSU Plan.

- (7) For the year ended December 31, 2020, the Board awarded: (i) Mr. Nelson a retention payment of \$50,000, which was paid in cash; (ii) Ms. Kauffield a retention payment of \$60,000, of which \$30,000 was paid in cash and \$30,000 is to be settled in RSUs; (iii) Mr. Moran a retention payment of \$100,000, of which \$50,000 was paid in cash and \$50,000 is to be settled in RSUs; and (iv) Mr. Erasmus a retention payment of \$40,000, which was paid in cash. As at April 28, 2021, there were only 130,096 RSUs available to settle outstanding compensation awards for Management. Given the Company's equity constraints, the Board approved the Management Compensation Deferral in order to defer the grant and pricing of all RSUs to Management payable related to the retention payments outlined herein until such time as there are sufficient Shares available to be reserved for issuance pursuant to the RSUs under the RSU Plan.
- (8) Ms. Kauffield retired from the position of Vice President, Finance and Chief Financial Officer of the Company effective June 1, 2021.

Discussion

Significant factors necessary to understand the information disclosed in the Summary Compensation Table above include the terms of each Named Executive Officer's employment/consulting agreement.

Employment Agreements

Scott Nelson – Scott Nelson, President and Chief Executive Officer of the Company, entered into an employment agreement with the Company effective January 1, 2010. Pursuant to this agreement, Mr. Nelson's employment shall continue indefinitely until terminated in accordance with the terms of the employment agreement. Mr. Nelson's annual base salary under the agreement was \$300,000, which has been reviewed annually and may, in the discretion of the Board, be increased. On October 31, 2011, it was determined by the Company that Mr. Nelson's base pay was increased to \$325,000 per annum effective January 1, 2012. Effective May 1, 2015, as a part of the Company's cost savings measures, Mr. Nelson voluntarily elected to receive 20% of his annual salary in the form of RSUs, which amount was agreed to be paid quarterly. Effective January 1, 2018, the Compensation Committee determined that Mr. Nelson would receive \$31,250 of his annual salary in the form of RSUs, which amount was agreed to be paid quarterly. The Company reached its RSU 2% limit during the fiscal year of 2018 and Mr. Nelson received \$23,400 in the form of RSUs. Effective January 1, 2019 the Company determined that it would reinstate Mr. Nelson's base salary to \$325,000. Effective April 1, 2020 Mr. Nelson's salary was reduced by 20% in response to the uncertainty created by the COVID-19 pandemic and the resulting economic uncertainties.

Mr. Nelson is eligible for an annual bonus of up to 65% of his annual base salary. The granting and amount of any such annual bonus is in the sole discretion of the Board. For the year ended December 31, 2020, the Board awarded Mr. Nelson a retention payment of \$50,000, which was paid in cash.

As Chief Executive Officer, Mr. Nelson's specific objectives are set annually and reviewed by the Compensation Committee. For the fiscal year ended December 31, 2020, such specific objectives included developing strategic and annual business plans; program formulation and advancement of the Company's commercialization and implementation of its technology at an oil sands site; arranging grant funding for research and development and engineering programs; managing programs to budget targets and reducing overhead costs.

The Company may immediately terminate Mr. Nelson's employment for "Cause" as that term is defined in the agreement. The agreement also provides that Mr. Nelson can resign on 90 days advance written notice. The Company may also terminate the agreement at any time for any reason other than "Cause" but termination payments are required. See "*Termination and Change of Control Benefits*" below.

Jennifer Kauffield – The Company entered into an employment agreement with Jennifer Kauffield as Vice President, Finance and Chief Financial Officer effective March 1, 2010. The agreement provided that her employment would continue indefinitely until terminated in accordance with the agreement. Ms. Kauffield's compensation was based on a daily rate of \$800 which was reviewed annually and may, in the discretion of the Board, be increased. On October 31, 2011, it was determined by the Board that Ms. Kauffield's daily rate effective January 1, 2012 would be increased to \$960. Effective September 1, 2016, the Company amended Ms. Kauffield's employment agreement to, *inter alia*, provide for: (i) her to receive 20% of her annual salary in the form of RSUs, which amount was agreed to be paid quarterly; and (ii) her eligibility for an annual bonus of up to 40% of her daily salary aggregated over a 12 month period.

Effective January 1, 2018, the Compensation Committee determined that Ms. Kauffield's hourly effective rate would be \$138 per hour and would be paid in cash. The granting and amount of any annual bonus is in the sole discretion of the Board. Ms. Kauffield was awarded an aggregate bonus and retention payment of \$60,000, of which \$30,000 was paid in cash and \$30,000 is to be settled in RSUs through the issuance of RSUs at a future date given the Company's equity constraints and the

Management Compensation Deferral approved by the Board as noted above. Ms. Kaufield was entitled to receive vacation pay equal to 5% of the daily salary paid and a monthly payment by the Company of a contribution to her retirement savings plan in an annual amount that is equal to 5% of the daily salary paid.

Under the terms of the employment agreement, the Company could immediately terminate Ms. Kaufield's employment for "Just Cause" (as that term is defined in her employment agreement). The employment agreement further provides that, if the Company should terminate Ms. Kaufield's employment for "Just Cause", she would be paid her daily salary earned for services rendered up to and including the termination date, plus any accrued vacation pay and reimbursable expenses owing up to and including the termination date. Subsequent to the year ended August 31, 2015, the Board approved an amendment to Ms. Kaufield's employment agreement to provide for a retiring allowance equal to 12 months of her annual aggregate daily salary as at the termination date if her employment was terminated for any reason other than for "Just Cause". The agreement also provided that Ms. Kaufield could resign on 90 days advance written notice.

Effective June 1, 2021, Ms. Kaufield retired as the Vice President, Finance and Chief Financial Officer of the Company and agreed to act as an advisor to the Company under a separate arrangement.

Kevin Moran – The Company entered into an employment agreement with Kevin Moran as Vice President, Process Development effective June 30, 2008. The agreement provides that his employment shall continue indefinitely until terminated in accordance with the agreement. Mr. Moran's initial annual base salary under the agreement was \$185,000, which was increased to \$215,000 effective June 30, 2010, and subsequently increased again to \$225,750 effective June 30, 2011 and to \$275,000 effective October 1, 2015. Effective April 1, 2020 Mr. Moran's salary was reduced by 15% in response to the uncertainty created by the COVID-19 pandemic and the resulting economic uncertainties. Effective January 1, 2021 Mr. Moran's base salary of \$275,000 was reinstated. Mr. Moran's annual base salary is reviewed annually and may, in the discretion of the Board, be increased.

Mr. Moran is eligible for an annual bonus of up to 40% of his annual base salary. The granting and amount of any such annual bonus is in the sole discretion of the Board. Specific achievement objectives are set and reviewed annually. For the fiscal year ended December 31, 2020, such objectives included technical management and advancement of engineering and validation programs; achievement and testing of viable technical solutions; and planning and execution of commercialization plans. The Board awarded Mr. Moran an aggregate bonus and retention payment of \$100,000, of which \$50,000 was paid in cash and \$50,000 is to be settled in RSUs through the issuance of RSUs at a future date given the Company's equity constraints and the Management Compensation Deferral approved by the Board as noted above.

Mr. Moran is also entitled to a monthly payment by the Company of a contribution to his registered retirement savings plan in an annual amount that is equal to 5% of his annual base salary.

The Company may immediately terminate Mr. Moran's employment for "Just Cause" as that term is defined in the agreement. The agreement also provides that Mr. Moran can resign on 90 days advance written notice. The Company may also terminate the agreement at any time for any reason other than "Just Cause" but termination payments are required. See "*Termination and Change of Control Benefits*" below.

Niel Erasmus – The Company entered into an employment agreement with Niel Erasmus as Vice President, Mineral Sands effective June 15, 2017. The agreement provides that his employment shall continue indefinitely until terminated in accordance with the agreement. Mr. Erasmus' initial annual base salary under the agreement is \$200,000. Mr. Erasmus' annual base salary will be reviewed annually and may, in the discretion of the Board, be increased. Effective January 1, 2019, Mr. Erasmus's base salary was increased to \$220,000. Effective April 1, 2020 Mr. Erasmus's salary was reduced by 15% in response to the uncertainty created by the COVID-19 pandemic and the resulting economic uncertainties. Effective January 1, 2021 Mr. Erasmus's base salary of \$220,000 was reinstated.

Mr. Erasmus is eligible for an annual bonus of up to 30% of his annual base salary. The granting and amount of any such annual bonus is in the sole discretion of the Board. Specific achievement objectives will be set and reviewed annually. For the fiscal year ended December 31, 2020, such objectives included the management of the Company's validation and optimization engineering activities. Mr. Erasmus was awarded an aggregate bonus and retention payment in respect of the fiscal year ended December 31, 2020 in the amount of \$40,000 which was paid in cash.

Mr. Erasmus is also entitled to a monthly payment by the Company of a contribution to his registered retirement savings plan in an annual amount that is equal to 5% of his annual base salary.

The Company may immediately terminate Mr. Erasmus' employment for "Just Cause" as that term is defined in the agreement. The agreement also provides that Mr. Erasmus can resign on 90 days advance written notice. The Company may also terminate the agreement at any time for any reason other than "Just Cause" but termination payments are required. See "*Termination and Change of Control Benefits*" below.

Incentive Plan Awards

Outstanding Share based Awards and Option based Awards

The following table sets forth for each Named Executive Officer all awards outstanding at the end of the most recently completed fiscal year, including awards granted before the most recently completed fiscal year.

Name	Option-based Awards ⁽⁴⁾				Share-based Awards		
	Number of securities underlying unexercised options (#)	Option exercise price (\$)	Option expiration date	Value of unexercised in-the-money options (\$)	Number of Shares or units of Shares that have not vested (#)	Market or payout value of share-based awards that have not vested (\$)	Market or payout value of vested share-based awards not paid out or distributed (\$) ⁽⁴⁾
Scott Nelson <i>President and Chief Executive Officer</i>	10,280	0.0001 ⁽³⁾	October 1, 2028	N/A	N/A	N/A	180,600
	9,301	0.0001 ⁽³⁾	June 30, 2028	N/A			
	8,401	0.0001 ⁽³⁾	March 31, 2028	N/A			
	128,375	0.0001 ⁽³⁾	January 2, 2028	N/A			
	15,273	0.0001 ⁽³⁾	December 1, 2027	N/A			
	15,388	0.0001 ⁽³⁾	September 1, 2027	N/A			
	21,382	0.0001 ⁽³⁾	June 1, 2027	N/A			
	35,022	0.0001 ⁽³⁾	March 1, 2027	N/A			
	324,219	0.0001 ⁽³⁾	December 29, 2026	N/A			
	40,625	0.0001 ⁽³⁾	December 1, 2026	N/A			
	31,738	0.0001 ⁽³⁾	September 1, 2026	N/A			
	16,601 ⁽²⁾	0.0001 ⁽³⁾	June 1, 2026	N/A			
	300,000 ⁽¹⁾	1.07	April 21, 2022	Nil ⁽²⁾			
	300,000 ⁽¹⁾	0.80	April 30, 2023	Nil ⁽²⁾			
200,000 ⁽¹⁾	0.69	June 9, 2024	Nil ⁽²⁾				
Jennifer Kauffield ⁽⁵⁾ <i>Vice President, Finance and Chief Financial Officer</i>	141,038	0.0001 ⁽³⁾	January 3, 2029	N/A	N/A	N/A	115,000
	66,667	0.0001 ⁽³⁾	January 2, 2028	N/A			
	8,214	0.0001 ⁽³⁾	December 1, 2027	N/A			
	5,379	0.0001 ⁽³⁾	September 1, 2027	N/A			
	8,750	0.0001 ⁽³⁾	June 1, 2027	N/A			
	16,853	0.0001 ⁽³⁾	March 1, 2027	N/A			
	166,667	0.0001 ⁽³⁾	December 29, 2026	N/A			
	4,664 ⁽²⁾	0.0001 ⁽³⁾	December 1, 2026	N/A			
	150,000 ⁽¹⁾	1.07	April 21, 2022	Nil ⁽²⁾			
	200,000 ⁽¹⁾	0.80	April 30, 2023	Nil ⁽²⁾			
150,000 ⁽¹⁾	0.69	June 9, 2024	Nil ⁽²⁾				
Kevin Moran <i>Executive Vice President and Chief Technology Officer</i>	185,660	0.0001 ⁽³⁾	January 3, 2029	N/A	N/A	N/A	143,800
	33,333	0.0001 ⁽³⁾	January 2, 2028	N/A			
	108,759	0.0001 ⁽³⁾	July 25, 2027	N/A			
	177,237	0.0001 ⁽³⁾	August 2, 2026	N/A			
	18,027 ⁽²⁾	0.0001 ⁽³⁾	October 21, 2025	N/A			
	250,000 ⁽¹⁾	1.07	April 21, 2022	Nil ⁽²⁾			
	200,000 ⁽¹⁾	0.80	April 30, 2023	Nil ⁽²⁾			
150,000 ⁽¹⁾	0.69	June 9, 2024	Nil ⁽²⁾				
Niel Erasmus <i>Vice President, Mineral Sands</i>	41,667	0.0001 ⁽³⁾	January 2, 2028	N/A	N/A	N/A	11,500
	200,000 ⁽¹⁾	1.37	July 25, 2022	Nil			
	200,000 ⁽¹⁾	0.80	April 30, 2023	Nil ⁽²⁾			
	150,000 ⁽¹⁾	0.69	June 9, 2024	Nil ⁽²⁾			

Notes:

- (1) Vesting of such options occurs over three years with one-third vesting every 12 months following the date of grant.
- (2) The value of unexercised options was calculated using the closing price of the Shares on December 31, 2020, which was \$0.275 per Share, less the exercise price of the options.
- (3) As the RSUs issued after February 12, 2015 require an exercise price to be paid prior to issuance, such RSUs have been classified as "option-based awards" for the purposes of this Statement of Executive Compensation since the RSUs have "option-like features" for the purposes of the definition of "option-based awards" in Form 51-102F6.

- (4) The value of RSUs was calculated using the closing price of the Shares on December 31, 2020, which was \$0.275 per Share. Such RSUs were granted prior to the amendments made to the RSU Plan on February 12, 2015 (see note 3) and have therefore been classified as "share-based awards" for the purposes of this Statement of Executive Compensation.
- (5) Ms. Kauffield retired from the position of Vice President, Finance and Chief Financial Officer of the Company effective June 1, 2021.

Incentive Plan Awards – Value Vested or Earning During the Year

The following table sets forth details of the value vested or earned during the most recently completed fiscal year for each incentive plan award.

Name	Option-based awards - Value vested during the year (\$)⁽¹⁾⁽²⁾	Share-based awards - Value vested during the year (\$)⁽²⁾	Non-equity incentive plan compensation - Value earned during the year (\$)
Scott Nelson <i>President and Chief Executive Officer</i>	Nil	N/A	50,000
Jennifer Kauffield ⁽³⁾ <i>Vice President, Finance and Chief Financial Officer</i>	Nil	N/A	30,000
Kevin Moran <i>Executive Vice President and Chief Technology Officer</i>	Nil	N/A	50,000
Niel Erasmus <i>Vice President, Mineral Sands</i>	Nil	N/A	40,000

Notes:

- (1) The value vested during the year of option-based awards was calculated using the closing price of the Shares on April 22, May 1, June 10, July 27 and August 10 (the first trading day following the vesting date), which was \$0.29, \$0.30, \$0.39, \$0.30 and \$0.32 per Share respectively, less the exercise price of \$1.07, \$0.80, \$0.69, \$1.37, and \$0.67 respectively for the options. There was no value associated with the vested stock option awards during 2020. There were no share-based awards that vested during the year ended December 31, 2021. When RSU awards are vested the value of vested RSUs is calculated based on the difference between the market price of the Shares underlying the RSUs on the vesting date and the exercise price of the RSUs on the vesting date.
- (2) As the RSUs issued after February 12, 2015 require an exercise price to be paid prior to issuance, the RSUs have been classified as "option-based awards" for the purposes of this Statement of Executive Compensation since the RSUs have "option-like features" for the purposes of the definition of "option-based awards" in Form 51-102F6.
- (3) Ms. Kauffield retired from the position of Vice President, Finance and Chief Financial Officer of the Company effective June 1, 2021.

Discussion

The significant terms of all plan based awards, including non-equity incentive plan awards, issued or vested, or under which options have been exercised, during the year, or outstanding at year end, are set out above under the heading "*Compensation Discussion and Analysis*".

Pension Plan Benefits

The Company does not have a defined benefit plan or a defined contribution plan for any of its executive officers, nor does it have a deferred compensation plan for any of its executive officers.

Termination and Change of Control Benefits

The following contracts, agreements, plans and arrangements provide for payments to the applicable Named Executive Officers at, following or in connection with any termination (whether voluntary, involuntary or constructive), resignation, retirement, a change in control of the company or a change in such Named Executive Officers' responsibilities:

Scott Nelson – If Mr. Nelson's employment is terminated other than for "Cause" as that term is defined in his employment agreement, the Company is required to pay Mr. Nelson: (i) the accrued and unpaid annual base salary to the date of

termination; (ii) all accrued and unused vacation pay owing to the date of termination; and (iii) a retiring allowance equal to a cash amount calculated by multiplying the Service Factor (as hereinafter defined) times one twelfth (1/12) of the sum of: (A) his annual salary as at the termination date; plus (B) a pro rated portion of his annual bonus for the year of such termination, calculated by multiplying the bonus awarded in the year prior to the termination by a fraction, the numerator of which is the number of days that have lapsed in the year of termination, up to the date of termination, and the denominator of which is 365. With the "Service Factor" equalling one month of salary for each year of completed service up to a maximum of 24, commencing with an initial "Service Factor" of 12 months for the 2010 calendar year.

Kevin Moran – If Mr. Moran's employment is terminated other than for "Just Cause" as that term is defined in his employment agreement, the Company is required to pay Mr. Moran: (i) the pro rata annual base salary to the date of termination; (ii) all accrued and unused vacation pay and reimbursable expenses owing to date of termination; and (iii) a retiring allowance equal to 12 months of his annual base salary as at the termination date.

Niel Erasmus – If Mr. Erasmus' employment is terminated other than for "Just Cause" as that term is defined in his employment agreement, the Company is required to pay Mr. Erasmus: (i) the pro rata annual base salary to the date of termination; (ii) all accrued and unused vacation pay and reimbursable expenses owing to date of termination; and (iii) a retiring allowance equal to 6 months of his annual base salary as at the termination date plus the average of any annual bonuses awarded to Mr. Erasmus in the two full calendar years prior to the calendar year in which the termination date falls.

For illustrative purposes, if these Named Executive Officers had been terminated on December 31, 2020, the following amounts would have been payable:

Name	Aggregate amount payable for base salary ⁽¹⁾	Aggregate amount payable for bonus ⁽²⁾	Aggregate amount payable for perquisites and benefits	Option-based awards – Assuming all awards vested ⁽³⁾	Total
Scott Nelson <i>President and Chief Executive Officer</i>	\$595,800	\$50,000	\$Nil	\$Nil	\$645,800
Jennifer Kauffield ⁽³⁾ <i>Vice President, Finance and Chief Financial Officer</i>	\$171,900	\$30,000	\$Nil	\$30,000	\$231,900
Kevin Moran <i>Vice President and Chief Technology Officer</i>	\$275,000	\$50,000	\$Nil	\$50,000	\$375,000
Niel Erasmus <i>Vice President, Mineral Sands</i>	\$110,000	\$40,000	\$Nil	\$Nil	\$150,000

Notes:

- (1) As a result of the Company's equity constraints, the Board approved the Management Compensation Deferral to defer the grant and pricing of all RSUs to Management related to the retention payments outlined in this Circular until such time as there are sufficient Shares available to be reserved for issuance under the RSU Plan. As at December 31, 2020, the following represented each applicable member of Management's aggregate deferred compensation amounts, which would need to be settled upon such person's termination: Scott Nelson \$108,500; Kevin Moran \$135,000; Jennifer Kauffield \$96,000.
- (2) Bonus amounts payable to the Named Executive Officers for the year ended December 31, 2020 disclosed in the table above are based on the bonus amounts paid to such Named Executive Officers, in respect of the period ended December 31, 2020.
- (3) The value of option-based awards was calculated using the closing price of the Shares on December 31, 2020, which was \$0.275 per Share, less the exercise price of the option-based awards. The table disclosure above provides the value of each Named Executive Officer's option-based awards should they vest upon a change of control, assuming that the Board has determined that such vesting of all option-based awards should occur. Such accelerated vesting is not provided for under the Name Executive Officers' employment agreements on termination, but may, at the discretion of the Board and on such terms as the Board sees fit,

occur on a change of control. On the occurrence of a change in control, the Board may determine to accelerate the vesting of none or only some of the Named Executive Officers' option-based awards.

- (4) Ms. Kaufield retired from the position of Vice President, Finance and Chief Financial Officer of the Company effective June 1, 2021.

Director Compensation

Director Compensation Table

The following table sets forth all amounts of compensation provided to the Non-Management Directors for the Company's most recently completed financial year.

Name	Fees earned (\$) ⁽¹⁾	Share-based awards (\$) ⁽²⁾	Option-based awards (\$)	Non-equity incentive plan compensation (\$)	Pension value (\$)	All other compensation (\$) ⁽²⁾	Total (\$)
David Macdonald (Non-Executive Chair)	109,633	-	-	-	-	-	109,633
Bruce Griffin	70,617	-	-	-	-	-	70,617
Moss Kadey	40,250	-	-	-	-	-	40,250
Brant Sangster	56,250	-	-	-	-	-	56,250
John W. Stevens	83,750	-	-	-	-	-	83,750

Notes:

- (1) As at December 31, 2020, there were no DSUs available to settle compensation with Non-Management Directors. Given the Company's equity constraints, the Board resolved to defer the payment of \$360,500 in compensation to the Non-Management Directors (the "**Director Compensation Deferral**") for the year ended December 31, 2020. The deferred compensation liability will be settled at some time in the future once the Company has the capacity to settle the liability with DSUs or through other arrangements. No stock options were granted to Non-Management Directors in respect of the year ended December 31, 2020.
- (2) Non-Management directors have made elections under the DSU Plan to receive 100% of their applicable retainers and fees on a quarterly basis in DSUs in lieu of cash payments. See "*Discussion – Board Fees*" below.

Discussion

Significant factors necessary to understand the information disclosed in the Director Compensation Table above include board fees and DSUs.

Board Fees

During the fiscal year ended December 31, 2020, each of the Non-Management Directors was entitled to annual compensation in the amount of \$25,000 and the payment of \$1,200 per meeting in connection with attending meetings of the Board and meetings of the Board's committees. The Non-Executive Chair of the Board was entitled to additional annual compensation in the amount of \$25,000. The Chair of the Audit Committee was entitled to additional annual compensation in the amount of \$10,000. The Chair of the Compensation Committee was entitled to additional annual compensation in the amount of \$8,000. On January 24, 2018, the board approved the establishment of the Commercialization Committee. The Chair of the committee was entitled to additional annual compensation of \$30,000 with member compensation established at \$20,000 per annum.

Non-Management Directors participate in the DSU Plan, pursuant to which Non-Management Directors receive a portion of their compensation in the form of DSUs, which are not redeemable until after a Non-Management Director has retired from the Board. Each Non-Management Director has the right to elect at any time prior to August 15 of each financial year to be credited with DSUs in lieu of all or any part of the annual board retainer, annual chair retainer, annual committee retainer and any meeting fees otherwise payable to such Non-Management Director in cash in the immediately succeeding financial year.

Each Non-Management Director will be credited with the percentage of elected DSUs in lieu of the applicable retainer or fees quarterly in arrears on the last day of each quarter in each year. DSUs will be settled by way of issuance of Shares when the director retires from all positions with the Company, forming a direct alignment between director remuneration and Shareholder interests. Management directors (i.e., Mr. Nelson) are not eligible to participate in the DSU Plan.

During the year ended December 31, 2020, each Non-Management Director was allocated an additional 25% of their aggregate fees for each such quarter as bonus fees, of which 100% of each Non-Management Director's entitlement was deferred until such time as the Company has the capacity to issue DSUs in settlement of the deferred compensation liability. As noted above, \$365,751 in compensation remains outstanding to the Non-Management Directors which will be settled through the issuance of DSUs or through other arrangements at a future date given the Company's equity constraints and the Director Compensation Deferral approved by the Board noted above.

DSUs

The Company adopted the DSU Plan on December 15, 2013 and the DSU Plan was approved by Shareholders at the annual and special meeting held January 23, 2014 and was subsequently amended, such amendments being approved by Shareholders at the annual and special meeting held February 12, 2015. The purpose of the DSU Plan is to promote the alignment of interests between directors and Shareholders while enabling the Non-Management Directors to participate in the long-term success of the Company through the grant of DSUs.

A summary of the DSU Plan is included in this Circular under the heading "*Statement of Executive Compensation – Compensation Discussion and Analysis – Elements of Compensation – DSU Plan*".

Other Information

There were no changes to, or any repricing of, the terms of the DSU Plan during the fiscal year ended December 31, 2020.

Other than as described below, the Company did not have any other share based or option based award programs for Non-Management Directors in place during the fiscal year ended December 31, 2020.

Incentive Plan Awards for Directors

Outstanding Option Based Awards and Share Based Awards

The following table sets forth for each Non-Management Director all awards outstanding at the end of the most recently completed fiscal year, including awards granted before the most recently completed fiscal year.

Name	Option-based Awards				Share-based Awards		
	Number of securities underlying unexercised options (#)	Option exercise price (\$)	Option expiration date	Value of unexercised in-the-money options ⁽²⁾ (\$)	Number of shares or units of shares that have not vested (#)	Market or payout value of share-based awards that have not vested (\$)	Market or payout value of vested share-based awards not paid out or distributed (\$) ⁽³⁾
David Macdonald	50,000 75,000 ⁽¹⁾ 50,000 ⁽¹⁾	0.69 0.80 1.07	June 9, 2024 April 30, 2023 April 21, 2022	Nil - Nil	Nil	Nil	178,200
Bruce Griffin	75,000 ⁽¹⁾	0.67	August 7, 2023	Nil	Nil	Nil	9,100
Moss Kadey	35,000 50,000 ⁽¹⁾ 50,000 ⁽¹⁾	0.69 0.80 1.07	June 9, 2024 April 30, 2023 April 21, 2022	Nil	Nil	Nil	92,900
Brant Sangster	35,000 50,000 ⁽¹⁾ 50,000 ⁽¹⁾	0.69 0.80 1.07	June 9, 2024 April 30, 2023 April 21, 2022	Nil	Nil	Nil	128,600

	Option-based Awards				Share-based Awards		
John W. Stevens	35,000	0.69	June 9, 2024	Nil	Nil	Nil	77,800
	50,000 ⁽¹⁾	0.80	April 30, 2023				
	50,000 ⁽¹⁾	1.07	April 21, 2022				

Notes:

- (1) Vesting of such options occurs over three years with one-third vesting every 12 months following the date of grant.
- (2) The value of unexercised options was calculated using the closing price of the Shares on December 31, 2020, which was \$0.275 per Share, less the exercise price of the options.
- (3) The value of DSUs was calculated using the closing price of the Shares on December 31, 2020, which was \$0.275 per Share.

Incentive Plan Awards – Value Vested or Earning During the Year

The following table sets forth details of the value vested or earned by each Non-Management Director during the most recently completed financial year for each incentive plan award.

Name	Option-based awards - Value vested during the year (\$) ⁽¹⁾	Share-based awards - Value vested during the year (\$) ⁽²⁾	Non-equity incentive plan compensation - Value earned during the year (\$)
David Macdonald	Nil	Nil	Nil
Bruce Griffin	Nil	Nil	Nil
Moss Kadey	Nil	Nil	Nil
Brant Sangster	Nil	Nil	Nil
John W. Stevens	Nil	Nil	Nil

Notes:

- (1) The value vested during the year of option-based awards was calculated using the closing price of the Shares on April 22, May 1, June 10 and August 10, 2020 (the first trading day following the vesting date), which was \$0.29, \$0.30, \$0.39 and \$0.32 respectively, per Share, less the exercise price of \$1.07, \$0.80, \$0.69 and \$0.67 respectively for the options. There was no value associated with the vested stock option awards during 2020.
- (2) Non-Management Directors have made elections under the DSU Plan to receive 100% of their applicable retainers and fees on a quarterly basis in DSUs in lieu of cash payments. See "*Discussion – Board Fees*" above. No DSUs vested during the year-ended December 31, 2020. Given the Company's equity constraints, the Board resolved to implement the Director Compensation Deferral.

Discussion

The significant terms of all plan based awards, including equity incentive plan awards, issued or vested, or under which options have been exercised, during the year, or outstanding at year end, are set out above in the Compensation Discussion and Analysis. No outstanding options held by directors were exercised during the financial year ended December 31, 2020.

Generally, each year the Board considers whether to grant additional options and/or DSUs to the directors. However, there are no definitive arrangements and such consideration is done after review, consideration and recommendation by the Compensation Committee.

Directors' and Officers' Liability Insurance and Indemnification

The Company maintains directors' and officers' liability insurance (containing industry standard exclusions and deductibles) in order to protect the Company and its directors and officers against any legal action which may arise due to alleged wrongful acts on the part of directors and officers of the Company. In addition, the Company, as provided for in the Company's by-laws, has entered into indemnity agreements with each of its directors and officers. The Board considers it desirable and in the best interests of the Company to enter into these agreements in order to set out the circumstances and manner in which the indemnified party may be indemnified in respect of certain liabilities or expenses which the indemnified party may incur as a result of acting as a director or officer of the Company.

Succession Planning

Attracting, developing and retaining a talented and experienced management team is critical to Titanium's success. The Board,

in conjunction with the Compensation Committee, is responsible for reviewing, approving and implementing succession planning processes for Management, including the Chief Executive Officer, and for ensuring that criteria and processes are in place to identify, develop, appoint and retain senior executives that fit Titanium's strategic and operational needs as its business evolves. Succession planning involves two core objectives: (i) to evaluate and determine the Company's strategic and operational needs going forward, and (ii) to identify, develop, appoint and retain senior executives, including the Chief Executive Officer, and key employees to meet those needs.

In developing its succession plans, the Board has focused on two distinct time periods – the period leading up to commercialization during which the activity streams required to enable a commercialization decision to be reached are undertaken and completed ("**Pre-Commercialization Phase**") and the period after an investment decision is made which leads to engineering, procurement, construction and operations ("**Post-Commercialization Phase**"). During the Pre-Commercialization Phase, the Board's focus continues to be on ensuring the development, retention and full engagement of its senior management team. This reflects the intensity of the work activities currently underway, the current state of the Company's progress towards commercialization, the relative uniqueness of the experience and expertise developed within the team and the fact the Company's senior management team is small and functionally organized, with limited overlap. The Board has encouraged, and the Chief Executive Officer has actively sought, ways to provide senior management with development opportunities, mentorship and enhanced responsibilities outside their core functional responsibilities to help accelerate their professional growth, to ensure a level of shared knowledge and experience and to build multiple customer, supplier and Government relationships across the senior management team. During this period, the Chief Executive Officer, with 15 years of experience and trusted relationships in advancing Titanium's CVW™ technology to commercialization, continues to play a key leadership role. However, in both phases the Board considers it essential for both management and the Board to have the skill sets, reputation, and corresponding experience to communicate and work effectively with the Company's major partner.

With the completion of the FEED project, the award of \$50 million of Government grants and continuing progress in other activity streams towards commercialization of a first project at Canadian Natural's Horizon site, succession planning for the Post-Commercialization Phase continues to be an area of importance. The Board and the Chief Executive Officer are working together to develop succession plans for the Board and senior management, including the Chief Executive Officer. This plan is also expected to identify areas where additional management resources will be required as the Company moves to the Post-Commercialization Phase, identify the attributes, skills, experience and relationships required to meet the Company's new strategic, operational, partner and investor needs and develop processes to identify, attract and appoint strong qualifying candidates to fill these roles. Unless and until an investment decision is made and a business model is finalized, the additional management resources required cannot be defined with certainty. In this context, the Board has adopted a broad perspective on what commercialization may look like and has considered a wide range of potential business model outcomes.

The Board, in conjunction with the Compensation Committee, is also reviewing whether and how the size, composition and structure of the Board might be changed as the Company moves to the Post-Commercialization Phase, to ensure that it has the skills, experience, relationships and structure to provide effective oversight of management and, where appropriate, to assist management in achieving the Company's objectives. The Company has not adopted any Board term limits or other specific mechanisms for Board renewal (see "*Statement of Corporate Governance Practices – Nomination of Directors*").

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table details all compensation plans under which equity securities of the Company are authorized for issuance as at December 31, 2020:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders ⁽¹⁾	4,755,000 Shares issuable pursuant to Options 1,769,616 Shares issuable pursuant to DSUs 1,639,520 Shares issuable pursuant to RSUs	\$0.73 Options Nil DSUs \$0.0001 RSUs	553,847 Options Nil DSUs 130,096 RSUs
Equity compensation plans not approved by security holders	N/A	N/A	N/A
Total	8,164,136		683,943

Note:

- (1) For descriptions of the Option Plan, the DSU Plan and the RSU Plan, see "*Statement of Executive Compensation – Compensation Discussion and Analysis – Elements of Compensation – Long-term Incentives – Stock Option Plan*", "*– DSU Plan*" and "*– RSU Plan*", respectively.

INDEBTEDNESS OF DIRECTORS AND OFFICERS

Other than routine indebtedness, no current or former director, officer or employee of the Company or any of its subsidiaries, proposed nominee for election as a director of the Company or any associate or affiliate of any director, officer, employee or proposed nominee is, or at any time during the recently completed fiscal year was, indebted to the Company or any of its subsidiaries (in connection with a purchase of securities or otherwise) or to another entity where the indebtedness was the subject of a guarantee, support agreement, letter of credit or other similar arrangement or understanding provided by the Company or any of its subsidiaries.

INTEREST OF INFORMED PERSONS IN MATERIAL TRANSACTIONS

Except as disclosed under the heading "*Statement of Executive Compensation*", no transaction has been entered into since December 31, 2020 or is proposed to be entered into by the Company involving an officer or director of the Company, a proposed nominee for election as a director of the Company, a principal shareholder of the Company, an informed person (as such term is defined in NI 51-102) or any associate or affiliate of any such person or company which has materially affected or would materially affect the Company or any of its subsidiaries.

STATEMENT OF CORPORATE GOVERNANCE PRACTICES

NI 58-101 requires the Company to disclose annually in its information circular certain information relating to the Company's corporate governance practices.

Board of Directors

The Board currently consists of six (6) directors, five (5) of whom are considered by the Board to be "independent" within the meaning of NI 58-101, thereby facilitating the Board's exercise of independent supervision over Management. The following directors are considered by the Board to be independent: Brant Sangster, David Macdonald, John Stevens, Moss Kadey and Bruce Griffin.

In determining independence, the Board considers a number of factors, including, but not limited to whether any Board member's relationship with the Company could be reasonably expected to interfere with the exercise of such member's independent judgment.

Directorships

Except as set out below, none of the Company's directors are presently a director of any other issuer that is a reporting issuer (or the equivalent) in Canada or a foreign jurisdiction.

Name	Company
Bruce Griffin	Sheffield Resources Limited

Orientation and Continuing Education

The Board orients new directors by providing them with background and due diligence information, such as the minutes for the prior year's Board and Audit Committee meetings, a copy of the Exchange's Corporate Finance Manual, information respecting the Board's committees, information regarding directors' and officers' liability insurance, copies of all the Company's governance policies and a memorandum of the duties and liabilities of directors. In addition, new directors meet with the Chair, the Chief Executive Officer and members of the management team. The Board provides continuing education for directors by arranging for presentations from members of management and outside advisors and circulating materials on new issues and developments, when applicable. Management presents to and refreshes the directors on the strategic plan of the Company.

Ethical Business Conduct

To encourage and promote a culture of ethical business conduct, the Board has adopted a Code of Business Conduct and Ethics (the "**Code**") that is applicable to the Company's employees, officers and directors. The Code requires the reporting of actual or potential violations of the Code or of any law or regulation, whether committed by employees of the Company or by others associated with the Company, to the Chair of the Audit Committee, on a confidential, anonymous basis, if desired. The Audit Committee is responsible for investigating each matter so reported and for taking corrective disciplinary actions, if appropriate, up to and including termination of employment. A copy of the Code is available on SEDAR at www.sedar.com.

Nomination of Directors

The Compensation Committee is responsible for assisting the Board in carrying out its corporate governance and nomination responsibilities. The Compensation Committee's responsibilities include formulating criteria for Board membership; canvassing Board members for possible candidates; developing a list of potential candidates, as required; and recommending to the Board proposed nominees for election to the Board. The process of identifying new candidates generally involves the Compensation Committee determining the necessary skills required for the Board, and, when a vacancy occurs, the independent directors identifying candidates and then presenting them to the Board as a whole for consideration. The Company has not adopted any Board term limits or other specific mechanisms for Board renewal. At this time, the Board does not believe that it is in the best interest of the Company to establish term limits on a director's mandate or a mandatory retirement age. The Board is of the opinion that term limits may disadvantage the Company through the loss of beneficial contributions of directors who have developed increasing knowledge of the Company, its operations, and the industry over a period of time.

Compensation

The Compensation Committee is also responsible for assisting the Board in fulfilling its oversight responsibilities with respect to human resource and compensation matters. The Compensation Committee's responsibilities include recommending to the Board for approval the remuneration of the Chief Executive Officer, including salary, bonus, options and any other incentive plan; the annual compensation budget for staff of the Company; the number of Shares to be reserved under the Security Based Compensation Arrangements; the number of securities to be granted pursuant to the Security Based Compensation Arrangements; salaries, target bonus awards, other incentive awards and options for the officers of the Company; implementation of or changes to compensation and benefits policies; and administering the Security Based Compensation Arrangements. The process for determining compensation generally involves the Compensation Committee reviewing recommendations by management, assessing general sector practices and reviewing the circumstances under which compensation is warranted. Following such considerations, the Compensation Committee recommends to the Board for approval the compensation of the Chief Executive Officer and senior executive officers, including any grants of stock options and RSUs. For more information, see "*Statement of Executive Compensation*" in this Circular.

Other Board Committees

The Board presently has three standing committees being the Audit Committee, the Compensation Committee and the Commercialization Committee.

Commercialization Committee

The Company's Commercialization Committee is presently comprised of Bruce Griffin (Chair), John W. Stevens and David Macdonald. The Commercialization Committee's responsibilities include overseeing the strategy and activities of the Company's management in connection with the development, marketing and commercialization of its CVW™ technologies. The Commercialization Committee oversight mandate is achieved through: (i) the review, on at least an annual basis, of the Company's overall commercialization strategy and plans; (ii) the quarterly monitoring, evaluation and advising of the Board in respect of the Company's performance relative to such strategy and working with management to redress any performance shortfalls; (iii) the review, with management, of the overall marketing strategy and plans for engaging with potential adopters of the Company's CVW™ technologies; (iv) the review, with management, of the overall strategy and plans for engaging with the federal and provincial governments on matters potentially affecting commercialization, including fiscal terms for commodities recovered from tailings, terms of grant funding programs and the submission of grant funding applications; (v) the review and advisement of all material proposals relating to significant technology plans and commercialization made to prospective adopters of the Company's CVW™ technologies and the presentation of final proposals to the Board for approval prior to such proposals being provided to prospective adopters; and (vi) the coordination with management, when required

or helpful, on the implementation of commercialization projects and the development of a process for monitoring key milestones during the implementation of commercialization projects and reporting metrics to track actual performance of commercialization projects against initial plans and expectations. Following such considerations, the Commercialization Committee reports to the Board on the activities of the Commercialization Committee and presents for approval all final commercialization project terms and agreements. For more information, see "*Statement of Executive Compensation*" in this Circular.

Assessments

To satisfy itself that the Board, its committees and its individual directors are performing effectively, the Board, through the Chair, informally determines the needs of the Company as its development proceeds and considers the requisite skills and contribution of the directors at such stage of development. To assist in this assessment, the Compensation Committee facilitates a process which involves a formal director's questionnaire being provided annually to each director to review the effectiveness of the Board and to assess if it is meeting its objectives. The results of the assessment are summarized by the Corporate Secretary and provided to the Chair of the Compensation Committee as well as the Chair of the Board. The Chair of the Compensation Committee presents a summary of the results to the Board as a whole, with a discussion as to how the Board can improve its effectiveness and communicates the results of the committee assessment to each committee Chair.

Other Governance Related Policies

The Board has also adopted a Disclosure and Confidentiality Policy, an Investment Policy, an Insider Trading and Blackout Policy, Whistleblower Policy and Alcohol and Drug Policy.

Diversity Disclosure

The Company's senior management and the members of its Board have diverse backgrounds and expertise and were selected on the belief that the Company and its stakeholders would benefit from such a broad range of talent and experiences. The Board considers merit as the key requirement for board and executive appointments, and as such, it has not adopted any target number or percentage, or a range of target numbers or percentages, respecting the representation of women, Indigenous peoples (First Nations, Inuit, and Métis), persons with disabilities or members of visible minorities (collectively, "**members of designated groups**") on the Board or in senior management roles.

While the Company believes that diversity is important and thus considers diversity when reviewing, identifying and nominating candidates to director or senior management positions, the Company has not adopted a written diversity policy. The Company seeks to attract and maintain diversity at the executive and board of directors levels informally through the recruitment efforts of management in discussion with directors prior to proposing nominees to the Board as a whole for consideration (also see "*Statement of Corporate Governance Practices – Nomination of Directors*"). Considering the size of the Company, the Pre-Commercialization Phase of the Company's business and consistent with its view that all appointments should be made based on merit, the Board has refrained from setting specific diversity targets, including targets regarding the representation of members of designated groups on the Board. The Company currently has one woman serving in a senior management role, representing 25% of the Company's members of senior management and no members of designated groups holding positions on the Board (0%). The following table details the Company's members of designated groups on the Board and in senior management roles as of the date hereof:

	Women		Persons with Disabilities, Indigenous Peoples & Members of Visible Minorities	
	Number	Percentage	Number	Percentage
Board of Directors	0	0%	0	0%
Senior Management	1	25%	0	0%

AUDIT COMMITTEE INFORMATION

National Instrument 52-110 – *Audit Committees* ("**NI 52-110**") of the Canadian Securities Administrators requires the Company to disclose annually in its information circular certain information relating to the Audit Committee and its relationship with the Company's independent auditors.

The Audit Committee's Charter

The Company's Audit Committee is governed by its audit committee charter, a copy of which is attached hereto as Schedule "A".

Composition of the Audit Committee

The Company's Audit Committee is presently comprised of John Stevens (Chair), David Macdonald and Brant Sangster. As defined in NI 52-110, each of the members of the Audit Committee is "financially literate" and is considered "independent".

Mr. Stevens is both an Ontario qualified lawyer and CPA (CA). He was employed in the public accounting profession from 1978 to 1980 with Clarkson Gordon. He subsequently obtained his law degree from Queen's University in 1983. From September 1982 to April 1983, Mr. Stevens was an associate professor at Queen's University and taught an undergraduate course in accounting offered by the Faculty of Commerce for two semesters. Mr. Stevens joined the Canadian law firm of Osler, Hoskin & Harcourt LLP in 1983, became a partner in the firm in 1991 and, from 1994 to 2000, was the Managing Partner of Osler's New York office. He practised in the corporate and commercial areas with emphasis on securities law, mergers and acquisitions and dealt with a broad range of finance, legal and corporate governance issues servicing the needs of many successful private and public companies. Since 2000, Mr. Stevens has been actively involved in the oversight of the financial management and reporting of Arva Limited's strategic investment companies.

Mr. Macdonald has spent almost 38 years in investment and merchant banking and has been a director and audit committee member of public and private companies and non-profit organizations which has provided him with extensive experience reviewing financial statements.

Mr. Sangster has extensive experience in Canada's energy industry. He retired in 2006 from a 25-year career with Petro-Canada, one of Canada's largest oil and gas companies at the time. In his most recent role as Senior Vice President for Petro-Canada, Mr. Sangster was responsible for the company's oil sands production and development, as well as Petro-Canada's participation in Syncrude. He was also a member of Petro-Canada's Executive Leadership Team, accountable for the effective integration of the planning and execution of oil sands business objectives with overall strategies and activities of Petro-Canada. Mr. Sangster is a director of Inter Pipeline Ltd. and an audit committee member from 2010 to 2017 and was a director of Canadian Oil Sands Limited. Mr. Sangster graduated from Dalhousie University with a Bachelor of Science degree in Chemical Engineering and obtained his ICD.D designation in 2014 from the Institute of Corporate Directors. Mr. Sangster, while a director of Harvest Operations Corporation, was the Chair of the Audit Committee for several months before the eventual sale.

Given the scope and nature of the Company's business, its financial statements and the accounting issues arising therefrom, all of the members of the Audit Committee have an understanding of the accounting principles used by the Company to prepare its financial statements, have the ability to assess the general application of such accounting principles in connection with the accounting for estimates, accruals and reserves and have experience in evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Company's financial statements.

Audit Committee Oversight

Since the commencement of the Company's most recently completed financial year, the Board has not failed to adopt a recommendation of the Audit Committee to nominate or compensate an external auditor.

Reliance on Certain Exemptions

Since the commencement of the Company's most recently completed fiscal year, the Company has not relied on the exemptions contained in section 2.4 or Part 8 of NI 52-110. Section 2.4 provides an exemption from the requirement that the Audit Committee must pre-approve all non-audit services to be provided by the auditors, where the total amount of the fees related to the non-audit services are not expected to exceed 5% of the total fees payable to the auditors in the fiscal year in which the non-audit services were provided. Part 8 permits a company to apply to a securities regulatory authority for an exemption from the requirements of NI 52-110, in whole or in part.

Pre-Approval Policies and Procedures

The Audit Committee has not adopted specific policies and procedures for the engagement of non-audit services. The Audit Committee reviews the engagement of non-audit services as required.

External Auditor Service Fees (By Category)

The fees billed by the Company's external auditor in each of the last two fiscal years for audit fees are as follows:

Fiscal Year Ending	Audit Fees	Audit-Related Fees	Tax Fees	All Other Fees
December 31, 2020	\$48,000	Nil	\$6,000	Nil
December 31, 2019	\$50,000	\$2,400	\$9,000	Nil

Services for which "Audit Related Fees" were billed comprised of reviews of the Company's unaudited first, second and third quarter financial statements.

Services for which "Tax Fees" were billed comprised of fees for professional services rendered by the Company's external auditor for tax compliance, tax advice and tax planning and assistance with the Company's scientific research and experimental development claims.

ADDITIONAL INFORMATION

Additional information relating to the Company is available on SEDAR at www.sedar.com and the Company's website at www.titaniumcorporation.com. Financial information is provided in the Company's comparative financial statements and management's discussion and analysis for the year ended December 31, 2020 and the three and nine months ended September 30, 2021. Shareholders may contact the Chief Financial Officer at the Company's registered office to request copies of the Company's financial statements and management's discussion and analysis.

BOARD APPROVAL

The contents and sending of this Circular have been approved by the directors of the Company.

DATED this 11th day of November, 2021.

BY ORDER OF THE BOARD

"David C.W. Macdonald"

David C.W. Macdonald
Chair

SCHEDULE "A"

TITANIUM CORPORATION INC.

CHARTER OF THE AUDIT COMMITTEE

The audit committee (the "**Audit Committee**") assists the Board of Directors (the "**Board**") in overseeing the financial controls and reporting of Titanium Corporation Inc. and any and all subsidiary corporations (collectively, the "**Company**"). The Audit Committee also monitors whether the Company complies with financial covenants and legal and regulatory requirements governing financial disclosure matters and financial risk management.

COMPOSITION AND QUORUM

The Audit Committee is composed of a minimum of three and a maximum of five members. A majority of the members of the Audit Committee must qualify as independent directors in accordance with National Instrument 52-110 of the Canadian Securities Administrators ("**NI 52-110**") as determined by the Board. Each member of the Audit Committee must be financially literate, capable of reading and understanding a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company's financial statements. At least one member of the Audit Committee must have accounting or related financial experience, being the ability to analyze and interpret a full set of financial statements, including notes thereto, in accordance with generally accepted accounting principles.

Independent members of the Audit Committee may not receive, directly or indirectly, any compensation from the Company other than compensation received in their roles as directors and committee members and must be free of any material relationship with the Company which could, in the view of the Board, be reasonably expected to interfere with the exercise of a member's independent judgment. The Board shall, in making any such determination, exercise its discretion in accordance with the guidance contained in NI 52-110.

The quorum at any meeting of the Audit Committee is a majority of its members.

The Compensation and Corporate Governance Committee shall review the candidacy of any director being considered for the Audit Committee prior to the invitation being extended to such director to join the Audit Committee and shall periodically review the composition of the Audit Committee.

AUTHORITY

The Audit Committee has the authority to:

1. engage independent counsel and other advisors as it determines necessary to carry out its duties;
2. set and pay the compensation for any advisors employed by the Audit Committee; and
3. communicate directly with any auditors performing audit, review of attest services for or on behalf of the Company.

RESPONSIBILITIES

The Audit Committee has the following responsibilities:

With respect to financial reporting

1. Assuming overall responsibility for the disclosure of all financial and related information by the Company in accordance with all legal and regulatory requirements, both with respect to content and timing governing the dissemination of such information.

2. Reviewing the annual financial statements and accompanying notes, the external auditors' report thereon, the annual management's discussion and analysis ("MD&A") and the related press release announcing the Company's earnings and obtaining explanations from management on all significant variances with comparative periods, before recommending their approval by the Board and their release.
3. Reviewing the quarterly financial statements, the interim MD&A and the related press release announcing the Company's earnings before recommending their approval by the Board and their release.
4. Reviewing the financial information contained in the annual information form, annual report, prospectuses and other documents, as applicable, containing similar financial information extracted or derived from the Company's financial statements before their public disclosure or filing with regulatory authorities in Canada and periodically assessing the adequacy of the procedures established to review the Company's public disclosure of such financial information.
5. Reviewing with management and the external auditors the quality and not just the acceptability of the Company's accounting policies and any changes that are proposed to be made thereto, including (i) all critical accounting policies and practices used, (ii) any alternative treatments of financial information that have been discussed with management, the ramification of their use and the external auditors' preferred treatment, and (iii) any other material communications with management with respect thereto, and reviewing the disclosure and impact of contingencies and the reasonableness of the provisions, reserves and estimates that may have a material impact on financial reporting.
6. Reviewing with the external auditors any audit problems or difficulties and management's response thereto and resolving any disagreement between management and the external auditors regarding financial reporting.
7. Reviewing periodically any policies of the Company with respect to the communication of financial and related information to ensure that they conform with applicable legal and regulatory requirements.

With respect to risk management and internal controls

1. Monitoring the quality and integrity of the Company's system of internal controls and management information systems, through discussions with management and the external auditors.
2. Reviewing all audit plans of external auditors and arranging for any additional independent audit procedures deemed necessary by the Audit Committee to gain reasonable assurance that the combined evaluation and testing of internal financial controls is comprehensive, coordinated and cost-effective.
3. Overseeing management's reporting on internal controls.
4. At least annually, reviewing a report of the external auditors describing the Company's internal quality-control procedures, any material issues raised by the most recent reviews of internal controls and management information systems or by any inquiry or investigation by governmental or professional authorities and any recommendations made and steps taken to deal with any such issues.
5. Monitoring the execution of all audit plans.
6. Ensuring that persons auditing internal controls are always ultimately accountable to the Audit Committee and the Board.
7. Establishing procedures for:
 - (a) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters; and

- (b) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.

With respect to the external auditors

1. Overseeing the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company, including the resolution of disagreements between management and the external auditor regarding financial reporting.
2. Reviewing the annual written statement of the external auditors regarding all their relationships with the Company and discussing any relationships or services that may impact on their objectivity or independence.
3. Making recommendations to the Board concerning the appointment and, if appropriate, the termination (both subject to shareholder approval) of the external auditor to be nominated for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Company and monitoring their qualifications, performance and independence.
4. Approving the performance of all non-audit services to be provided to the Company by the Company's external auditors.
5. Approving and overseeing the disclosure of all audit services provided by the external auditors to the Company or any of its subsidiaries, determining which non-audit services the external auditors are prohibited from providing and, exceptionally, approving and overseeing the disclosure of permitted non-audit services to be performed by the external auditors.
6. Making recommendations to the Board concerning the basis and amount of the external auditors' fees for both audit and authorized non-audit services.
7. Reviewing the audit plan with the external auditors and management and approving the scope, extent and schedule of such audit plan.
8. Reviewing and approving the Company's hiring policies for partners, employees or former partners or employees of the present and former external auditors.
9. Ensuring the respect of legal requirements regarding the rotation of applicable partners of the external auditors, on a regular basis, as required.
10. Ensuring that the external auditors are always accountable to the Audit Committee and the Board.
11. Making arrangements for sufficient funds to be available to effect payment of the fees of the external auditors and of any advisors or experts retained by the Audit Committee.

With respect to the Chief Financial Officer

1. Annually reviewing the performance of the Chief Financial Officer.

With respect to the Company's insurance policies

1. Annually reviewing all of the Company's insurance policies.

METHOD OF OPERATION

1. Meetings of the Audit Committee are held at least quarterly, and as required.

2. The Chair of the Audit Committee develops the agenda for each meeting of the committee in consultation with the Chief Financial Officer. The agenda and the appropriate material are provided to members of the Audit Committee on a timely basis prior to any meeting of the Audit Committee.
3. The Chair of the Audit Committee reports regularly to the Board on the business of the Audit Committee.
4. The Audit Committee has at all times a direct line of communication with the Company's auditors.
5. The Audit Committee meets on a regular basis without management or the external auditors.
6. The Audit Committee meets separately with management and the auditors at least annually, and more frequently as required.
7. The Audit Committee may, in appropriate circumstances, engage external advisors, subject to advising the Chair of the Board thereof.
8. The Audit Committee annually reviews its mandate and reports to the Board on its adequacy and publication requirements.
9. The Compensation and Corporate Governance Committee annually supervises the performance assessment of the Audit Committee and its members.

Nothing contained in this mandate is intended to expand applicable standards of conduct under statutory or regulatory requirements for the directors of the Company or the members of the Audit Committee. Even though the Audit Committee has a specific Charter and its members may have financial experience, they do not have the obligation to act as auditors or to perform auditing, or to determine that the Company's financial statements are complete and accurate. Members of the Audit Committee are entitled to rely, absent knowledge to the contrary, on (i) the integrity of the persons and organizations from whom they receive information, (ii) the accuracy and completeness of the information provided, and (iii) representations made by management as to the non-audit services provided to the Company by the external auditor. The Audit Committee's oversight responsibilities are not established to provide an independent basis to determine that (i) management has maintained appropriate accounting and financial reporting principles or appropriate internal controls and procedures, or (ii) the Company's financial statements have been prepared and, if applicable, audited in accordance with generally accepted accounting principles.

The purposes and responsibilities outlined in this Charter are meant to serve as guidelines rather than inflexible rules and the Audit Committee may adopt such additional procedures and standards as it deems necessary from time to time to fulfill its responsibilities.

Dated: November 13, 2019