# VANADIUMCORP RESOURCE INC.

Management Discussion and Analysis for the year ended October 31, 2019

The following management discussion and analysis has been prepared as of March 5, 2020. The selected financial information set out below and certain comments which follow are based on and derived from the annual consolidated financial statements of VanadiumCorp Resource Inc. for the year ended October 31, 2019 and should be read in conjunction with them.

The financial statements and the notes thereto are presented in accordance with International Financial Reporting Standards ("**IFRS**"). The statements, together with the following management discussion and analysis, are intended to provide investors with a reasonable basis for assessing the status and financial performance of the Company. All dollar amounts are in Canadian dollars.

# BACKGROUND

VanadiumCorp Resource Inc. ("VanadiumCorp" or the "Company") was incorporated under the Corporations Act (British Columbia) as Homestead Resources Inc. on October 23, 1980. VanadiumCorp is a mining exploration firm focused on two Canadian exploration and evaluation stage projects in Canada and green process technology. The Company owns a number of Canadian mineral assets in Ontario and Quebec, Canada. During several years, VanadiumCorp has succeeded in building a substantial portfolio of strategically located mineral claims and assemblages in the Canadian provinces of Quebec and Ontario. The properties are prospective for Vanadium, Titanium, Iron, Copper, Gold and Nickel. In 2016 The Company partnered with Electrochem Materials & Technologies Inc. in Canada which resulted in Electrochem inventing a new method of production for vanadium, iron and titanium products from various feedstocks and waste. The Company owns 50% of VanadiumCorp-Electrochem Chemical Process Technology "VEPT" as it pertains to signed agreement and current patent applications including: US Provisional Patent Applications US 62/463.411 and US 62/582.060 and International Patent Application PCT CA2018/050196 entitled "METALLURGICAL AND CHEMICAL PROCESSES FOR RECOVERING VANADIUM AND IRON VALUES FROM VANADIFEROUS TITANOMAGNETITE AND VANADIFEROUS FEEDSTOCKS". During the year ended October 31, 2019, the Company expanded its Intellectual Property portfolio into the European Union.

VanadiumCorp is a publicly traded junior resource company. It is classified as a Tier 1 company on the TSX Venture Exchange where its trading symbol is "VRB". The Company's trading symbol on the Frankfurt Stock Exchange is "NWN.F".

During the year ended October 31, 2019, the Company formed a wholly-owned German subsidiary, VanadiumCorp GmbH, to focus on next generation vanadium redox flow batter development.

# OPERATIONS

In December 2017, the Company announced completion of Phase II production trials. Phase II yielded positive results that demonstrated the great potential for VanadiumCorp-Electrochem Technology. Phase II resulted in successful processing of a variety of global feedstocks ranging from magnetite, slags, and calcine that related industries cannot process efficiently or avoid the significant release of greenhouse gases.

# Phase II results include:

- Efficient processing of a plethora of feedstocks with 95% average metal recovery
- Direct recovery of vanadium as vanadyl sulfate which is a precursor for the preparation of vanadium electrolyte (VE)
- Demonstration of the full potential of the VanadiumCorp-Electrochem chemical technology for primary production and monetization of waste materials

- Detailed mass and energy balances allowing the calculations of specific energy consumptions for the overall chemical and electrochemical integrated processes
- Titania and silica were recovered as value added byproducts with good marketable values
- Excellent reproducibility with similar yields and recoveries of vanadium, iron, titanium and silica products from magnetite from various geographical origins Technical and cost-effective confirmation of Electrochem's patented technology (Canadian Patent 2,717,887 C) for electrowinning pure electrolytic iron from the ferrous sulfate heptahydrate (copperas) produced
- Confirmed industrial potential for the fully integrated CO<sup>2</sup> free iron making process for replacing the blast furnace in the iron and steel making industries in global jurisdictions having access to affordable electricity
- Trial production reactor and equipment are located at Electrochem facilities in Boucherville

# The following products were recovered:

- Vanadyl sulfate targeting VanadiumCorp Electrolyte<sup>™</sup>
- Ferrous sulfate heptahydrate (Copperas) to be processed into pure electrolytic iron using Electrochem's patented iron electrowinning technology (Can. Pat. 2,717,887 C)
- Pure red ferric oxide as an alternate recovery option for plant locations facing high electricity cost
- Vanadium oxides and vanadium chemicals
- Titania-rich by-product
- Silica by-product

# Phase III objectives for 2019

- Piloting the technology at client locations using custom designed units mounted onto a skid
- Commercial plant in Canada or internationally
- Global licensing and deployment strategy for the two technologies
- Continued prototype and pilot testing and evaluation of the robustness of the technologies for the vanadium, steel, oil and energy storage industries

In January 2018, the Company announced it signed a partnership agreement further to the memorandum of understanding with Electrochem. This agreement formalizes the partnership and expands on successful collaboration that began in 2016 with invention and subsequent objective of commercial demonstration. The new chemical process represents a green and efficient alternative to current polluting and inefficient methods of processing utilized in the vanadium, steel, iron and energy storage industries.

# Terms of the Partnership Agreement Include:

- 50/50 agreement on development and licensing of VanadiumCorp-Electrochem Chemical Process Technology "VEPT"
- Development partnership targeting North American demonstration, commercialization and scaled production plans relating to secured feedstock supply
- Development partnership targeting pilot plant demonstration, commercialization and scaled production applied to VanadiumCorp's 100% owned VTM Resources
- Buyout provision

In February 2018, the Company it jointly filed for an international patent application under the Patent Cooperation Treaty (PCT), in order to secure IP rights for the new VanadiumCorp-Electrochem technology worldwide. With the filing of the PCT Application, the VanadiumCorp-Electrochem Process Technology is now protected and once the PCT will be issued patent applications will be filed in selected countries and become patent pending in the chosen national jurisdictions.

In March 2018, the Company announced it signed a letter of intent (LOI) with Ultra Power Systems Limited ("Ultra") of the United Kingdom to pursue joint interest of commercializing and deploying Vanadium Redox Flow Batteries (VRFB) for microgrid applications.

In September 2018, the Company announced the World Intellectual Property Organization ("WIPO") has officially published the Patent Corporation Treaty of the International Patent Application WO 2018-152628 (A1) on August 30, 2018, entitled: "Metallurgical and Chemical Process for Recovering Vanadium and Iron Values From Vanadiferous Titanomagnetite and Vanadiferous Feedstocks".

On November 23, 2018, the Company signed a Patent Option Agreement ("POA") for Ultra Power Systems Pty Ltd. ("Ultra") to purchase an exclusive license. Ultra plans to utilize the Australian license of VEPT to expedite construction of the world's first dedicated vanadium processing facility. Ultra's core objective is to directly integrate low cost battery grade vanadium electrolyte into vanadium redox batteries from virtually any source in a fraction of the time and capital requirements of current vanadium extraction processes.

Key aspects of the signed POA include the following terms with all financial considerations split evenly between the Company and Electrochem:

- USD \$500,000 payment
- Non-reimbursable down payment received upon signed of the POA
- 6-month option to acquire the exclusive license of VEPT for the jurisdiction of Australia Territory
- Definitive license terms in the POA include minimum annual payment, financing fees, and a gross royalty due upon production, applicable to all vanadium products, ferrous sulfate heptahydrate (copperas), titanium products, and other by-products for a project duration of 25 years.

In May 2019, the Company received the second scheduled payment from Ultra as specified in the POA. The final payment, enabling the right to finalize the terms of the license, was received in June 2019. Ultra intends to commence final license discussions immediately.

In March 2019, the Company announced Electrochem began commercial production at its facilities in Quebec of all-vanadium equimolar electrolyte solutions directly from vanadium pentoxide purchased on the market by using an electrochemical process. Production is now performed on-demand.

On May 15, 2019, the Company entered into a letter of intent (the "LOI") whereby a private company may earn a 100% interest in the Company's Iron-T Vanadium-Titanium-Iron Project through a three-stage option. If the projects reaches production, a first right of refusal is granted, allowing the Company to acquire up to 200,000 metric tonnes per annum "Mtpa" of vanadiferous titanomagnetite ("VTM") concentrate as an offtake valid for up to 15 years.

Key terms of the LOI include:

- An exclusive non-refundable \$25,000 payment;
- Earn a 75% interest on completion of US\$5 million of exploration expenditures and \$1 million of cash and stock payments to the Company within the 4<sup>th</sup> anniversary of signing of the JV Agreement (the "First Option");
- Earn an additional 10% interest on completion of positive preliminary economic assessment ("Second Earn-in"); and
- Earn an additional 15% interest on completion of a positive feasibility study ("Third Earnin").
- The private company will become the operator and is responsible for ongoing costs related to the project. Property will have the right to accelerate the exercise of the earn-in by completing all the exploration expenditures and any outstanding cash and stock payments to the Company in a period shorter than the earn-in term.

In September 2019, the Company announced its plants to open a vanadium redox flow battery "VRB", "VRFB" research and development facility in Karlsruhe, Germany, focused on next generation flow battery innovation.

During February 2020, the Company signed a Memorandum of Understanding ("MOU") with Delectrik Systems Private Limited ("Delectrik"). The Company and Delectrik share a vision to develop integrated energy storage solutions through the development of vanadium redox flow battery ("VRFB") technologies.

# The MOU allows the companies to collaborate on a number of key strategic initiatives including:

- VRFB high power stack and electrolyte development
- Development of intellectual property
- Production of VRFB systems with integrated technology
- Production of VRFB systems for evaluation by third parties
- Engineering, commissioning and logistics framework relating to the production of VRFB
- Systems
- Assess and model manufacturing of VRFB integrated solutions
- Assess all cost reduction possibilities and requirements for scaled manufacturing
- Potential commercialization of high power stack and electrolyte
- Application modeling for many different use cases
- Assess collaboration, partnership or joint venture possibilities

Upon a successful VRFB demonstration, VanadiumCorp and Delectrik will enter into a definitive agreement which may include manufacturing rights and other considerations supporting scaling commercial production.

# **Exploration Activity**

Mineral exploration is highly speculative in nature and involves many risks. The projects in which the Company holds interests are without proven economic bodies of ore. Each work program undertaken by the Company is an exploratory search for economic bodies of ore. Development of the projects will only follow upon obtaining satisfactory exploration results.

# Lac Dore Project

The Lac Dore was originally identified for rich iron and titanium potential, the presence of vanadium was discovered in 1966 by Dr. Gilles Allard. In 2007, VanadiumCorp ground staked what became the Company's flagship project of vanadium rich titanomagnetite "VTM" that spans over 45 square km and is located next to highway 167 just 35 km from to the mining center of Chibougamau, Quebec, Canada. VTM mineralization is accessible at surface and confirmed by the largest geophysical footprint in the region. The rich VTM is open at depth and along strike and close to infrastructure such as road, rail, 161Kv power, workforce, water and a local airport. The VanadiumCorp Lac Dore Project is adjacent to mineral claims fully permitted for mineral extraction owned by Blackrock Metals, who are moving ahead with plans exceeding \$1B USD to construct a mine and concentrator at Lac Dore to transport magnetite concentrate approximately 400km to Saguenay, where they propose construction of a smelter to transform Lac Dore VTM into various end products.

In February 2019, the Company announced plans to commence a drill program at its 100% owned Lac Dore vanadiferous titanomagnetite ("VTM") Project. The Company intends to implement a drill program aligned with recommendations from Micon International Limited's NI 43-101 technical report dated October 11, 2018. These recommendations include the drilling of 25 sections spaced 50 meters apart with minimum NQ-sized core. Drill holes are to be inclined toward the northwest, perpendicular to the dip of the magnetite-bearing layers. An estimated total of 16,000 metres of NQ drilling is expected during this program, which will include the Lac Dore East & West deposits held by the Company. The Company aims to use the results of the drilling to estimate a Mineral Resource for the deposit.

In September 2019, the Company announced the commencement of a 8,500m drilling project at the Lac Dore property. A total of 32 drill holes are planned, comprising infill and extension

drilling together with selected twinning of historical holes. Concurrent to the drilling, the Company will resample select historical trenches. VTM mineralized intersections will then be tested using a combination of major and trace element assays, Davis Tube testing, and other magnetic tests to assess the head grades and concentrate grades for vanadium, titanium, and iron, as well as magnetite content and magnetite proportions relative to ilmenite. Conditional to the success of the exploration program, the Company aims to use the results of the drilling and trench resampling to prepare a Mineral Resource Estimate for the Lac Dore project in accordance with National Instrument 43-101 and CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines.

In October 2019, the Company completed its planned 32 hole (8,500 m) infill and extension drilling program plus an additional five (5) drill holes for a total of 37 holes drilled (9,598 m) at the Company's wholly owned Lac Doré Vanadium property. The Lac Doré Vanadium property is located 27 km east-southeast from the city of Chibougamau, in Eeyou Istchee James Bay Territory, Northern Québec. The 2019 drill program targeted the Company's Lac Doré Vanadium prospect where historical drilling and surface channel sampling conducted between 1958 and 2013 have revealed the presence within property limits of a 2 km long by 200 m wide and minimum 200 m deep corridor hosting massive, semi-massive and disseminated bands of vanadiumbearing titanomagnetite (VTM) mineralization.

Highlights

- 35 holes drilled (total: 9,196 m) within the outline of the corridor hosting banded VTM mineralization that was the focus of historic drilling, including:
  - 28 holes drilled to map the continuity of VTM mineralization between historic holes (7,642 m)
  - 7 holes drilled to twin historic holes (total: 1,554 m)
- 2 holes drilled test the extensions of VTM mineralization to the northeast (total: 402 m)
- Banded semi-massive to massive titanomagnetite mineralization observed in all drill holes

The 2019 exploration program at the Lac Doré Vanadium property has been designed by the Company with the aid of mining industry consultant InnovExplo of Val-d'Or, Québec. The exploration program is being managed by InnovExplo under the supervision of the Table Jamésienne de Concertation Minière (TJCM) of Chibougamau, Québec. The drilling was carried out by Miikan Drilling Ltd of Chibougamau.

Core logging and core sampling activities are currently underway by InnovExplo in Chibougamau. A first batch of core samples (including 26 batches of core samples and 2 batch of chips samples) has been expedited to SGS Canada Laboratories, an independent ISO 90001:2015 accredited laboratory facility located in Val-d'Or, Québec, for assaying and for selective Davis Tube testing.

Strict QA/QC protocols for the 2019 drill program, designed by InnovExplo, are being implemented in accordance with industry standards to ensure that upcoming core assay results are relevant and reliable and comply with National Instrument (NI) 43-101 requirements and follow CIM Definition Standards for Mineral Resource Estimates. Analytical results from the 2019 drill program at Lac Doré will be disclosed by the Company once received and validated by a Qualified Person (QP), per NI 43-101 standards of disclosure for mineral projects.

The Company is also nearing the completion of its previously announced duplicate outcrop channel sampling program targeting 12 historic trenches excavated across strike of the Lac Doré Vanadium prospect. To date, 483 m of repeat channel sampling (total: 593 m) have been completed and 154 samples have been collected.

The resampling of select core from available historical drill holes will also be executed this fall. The same assaying and QA/QC protocols used in the current drilling will be used for the re-assaying of historical holes and outcrop channels.

Results from the duplicate channel sampling program and resampling of historical core will be

integrated along with results from the 2019 drill program into the global database for the Lac Doré Vanadium project in preparation for future Mineral Resource estimation.

All new and historic drill hole collars, historic drill hole collars and historic trenches will be surveyed by a professional surveyor. A Lidar survey will be performed during the fall to have an accurate 3D surface image of the property.

## **Iron-T Project**

Located adjacent to the mining center of Matagami, Quebec, 350km west of Lac Dore. The current NI 43-101 VTM resource, titled the "Genesis Zone" measures 14,376,000 tonnes inferred at 0.42% V2O5. VTM mineralization is at surface, open at depth and along strike. Consistent drill results, trench samples and geophysics along the entire 22km strike-length indicate remarkably similar geology to the Lac Doré Vanadium Project including virtually no impurities and exceptional metallurgical recoveries.

- 3,500 Hectares encompasses the NI 43-101 resource titled "The Genesis Zone"
- Remarkably similar geology to the prolific Bushveld Complex and Lac Doré Complex
- Open at depth and along a 22 km Strike
- Consistent drill results along the entire 22km strike-length
- NI 43-101 technical report indicates positive metallurgy and high recovery rates
- 3km from Glencore Matagami (Copper-Zinc) Mine

On October 18, 2019, the Company entered into a Definitive Agreement whereby a private Canadian corporation ("Private Company") may earn a 100% interest in the Company's Iron-T Vanadium-Titanium-Iron Project through a three-stage option ("The Option"). Should the project reach production, a first right of refusal is granted; allowing VanadiumCorp to acquire up to 200,000 metric tonnes per annum "MTPA" of VTM concentrate, as an offtake valid for life of mine.

The Definite Agreement contains a three-stage earn-in, where the Private Company will have the right to:

- Earn a 75% interest on completion of US\$5 million of exploration expenditures and \$1 million of cash and stock payments to VanadiumCorp within the 4th anniversary of the signing of the Definitive Agreement ("First Option").
- Earn an additional 10% interest on completion of preliminary economic assessment ("Second Earn-in"); and
- Earn an additional 15% interest on completion of a positive feasibility study ("Third Earnin").

Private Company will become the operator and responsible for ongoing costs related to the project, and will have the right to accelerate the exercise of the earn-in by completing all the exploration expenditures and any outstanding cash and stock payments to VanadiumCorp in a period shorter than the earn-in term.

Should the project reach production, Private Company will grant VanadiumCorp a right of first refusal ("Offtake ROFR") to acquire (i) 100 000 MTPA of the VTM concentrate at cost price and (ii) 100 000 MTPA of a VTM concentrate market price, being agreed that the total concentrate 200,000 MTPA in aggregate) allotted to VanadiumCorp cannot exceed a maximum of ten percent of total VTM concentrate tonnage established.

#### **Mineral Interests**

The following is a summary by province of the Company's mineral interests, which includes acquisition and exploration costs, impairment and tax credits (government assistance) during the period (see notes below):

	October 31, 2018 \$	Acquisition and exploration during the period <sup>*</sup> \$	Option proceeds received during the period \$	Mining tax credit recovered during the period \$	October 31, 2019 \$
Quebec					
Iron-T	1,924,854	19,511	(25,000)	-	1,919,365
Lac Dore	1,490,059	1,842,801	_	(556,117)	2,776,743
Total – mineral Interests	3,414,913	1,862,312	(25,000)	(556,117)	4,696,108

\*net of impairment

#### FINANCIAL

The Company's consolidated financial statements are presented on a going-concern basis and assume that the Company will continue to realize on its assets and discharge its liabilities in the normal course of operations. The Company has no significant source of operating cash flow and no revenues from operations. None of the Company's mineral projects currently have identified reserves. The Company has limited financial resources. Substantial expenditures are required to be made by the Company to establish ore reserves.

Future revenue could be generated by licensing or commercializing VEPT or the sale or optioning of prospective projects to other junior resource companies or to major mining corporations or alternatively, by the internal development of one or more of the projects, should this prove feasible. In the meantime, the Company intends to continue to rely upon the issuance of securities to finance its future activities but there can be no assurance that such financing will be available on a timely basis or on terms acceptable to the Company.

Although the consolidated financial statements do not include any adjustments that may result from the inability to secure future financing, such a situation could have a material adverse effect on the Company's ability to operate and thus on the Company's financial position.

The reader is also directed to Note 15 of the Company's October 31, 2019 annual consolidated financial statements regarding risk management.

#### Results of Operations for the Year Ended October 31, 2019

## STATEMENT OF FINANCIAL POSITION

Cash and cash equivalents increased by \$754,803 during the year ended October 31, 2019. Receivables increased by \$64,590, primarily due to government tax credits. Prepaid expenses increased by \$96,305, primarily due to deposits prepaid on services.

Accounts payable and accrued liabilities increased by \$368,312. Flow-through share premium liability increased by \$520,547. Loans payable decreased by \$208,300.

#### STATEMENT OF COMPREHENSIVE LOSS

During the year ended October 31, 2019, the Company recorded a comprehensive loss of \$1,489,235 (\$0.01 per share) compared to a comprehensive loss of \$2,255,996 (\$0.01 per share) for the year ended October 31, 2018.

Administrative expenses were \$1,863,116 for the year ended October 31, 2019, compared to \$2,255,874 for the year ended October 31, 2018.

An explanation of the changes in the significant administrative expenses is as follows:

- a) Consulting fees of \$118,434 (2018 \$33,683) The increase was mainly due to additional consultants being engaged by the Company during the year.
- b) Directors fees of \$100,366 (2018 \$61,000) The increase was due to an increase in time devoted by two directors to the Company during the year.
- c) Investor relations expenditures of \$8,899 (2018 \$86,172) The decrease was mainly due to the Company cutting costs to related to investor relations, shareholder communications, and business communications by taking care of these responsibilities in-house.
- Management fees of \$110,000 (2018 \$60,000) the increase was mainly due to a bonus paid to management during the year.
- e) Office expenses of \$99,550 (2018 \$81,870) the increase was mainly due to an increased in office and administrative activity due to an increase in exploration activity.
- f) Professional fees of \$67,417 (2018 \$44,166) The increase was mainly due a increase in legal fees incurred for general corporate purposes due to contracts and agreements entered into during the year.
- g) Share-based payment of \$794,600 (2018 \$1,364,290) This is a non-cash transaction. 12,600,000 (2018 11,800,000) incentive stock options were granted during the year.
- h) Travel and entertainment of \$92,698 (2018 \$63,307) The increase was due to an increase in executive travel for corporate purposes during the current year.
- i) Other items totaling a gain of 373,881 (2018 loss of 122).
  - i) Write down of exploration and evaluation assets on the Company's Cornerback and Point After properties of \$Nil (2018 \$50,122).
  - ii) Option payment received on exploration and evaluation assets of \$50,000 (2018 \$50,000).
  - iii) Option payment received under Patent Option Agreement of \$323,881 (2018 \$Nil)

# **Summary of Quarterly Results**

The following is a summary of the Company's financial results under IFRS for the eight most recent quarters:

	October 31,	July 31,	April 30,	January 31,	October 31,	July 31,	April 30,	January 31,
	2019	2019	2019	2019	2018	2018	2018	2018
	\$	\$	\$	\$	\$	\$	\$	\$
Total Revenue Net loss for period Loss per share	– (359,167) (0.00)	- (87,053) (0.00)	- (228,020) (0.00)	- (814,995) (0.00)	– (183,133) (0.00)	- (241,214) (0.00)	– (1,625,549) (0.01)	- (206,100) (0.00)

# FINANCIAL CONDITION, LIQUIDITY AND CAPITAL RESOURCES

As at October 31, 2019, the Company had cash and cash equivalents of \$795,004 (October 31, 2018 - \$40,201). The Company had current assets of \$1,131,696 (October 31, 2018 - \$215,998) and current liabilities of \$1,285,828 (October 31, 2018 - \$605,269) with a working capital deficiency of \$154,132 (October 31, 2018 – working capital deficiency of \$389,271).

The Company has limited capital resources and has to rely upon the sale of securities for cash required for exploration and development purposes, for acquisitions and to fund the administration of the Company. Since the Company does not expect to generate any revenues in the near future, it must continue to rely upon the sales of its securities to raise capital. There can be no assurance that financing, whether debt or equity, will always be available to the Company in the amount required at any particular time or, if available, that it can be obtained on terms satisfactory to the Company.

The Company intends to undertake further private placements for additional working capital and exploration capital, as required.

# RELATED PARTY TRANSACTIONS

Transactions with related parties were at the amounts agreed to by the related parties. Related party transactions not otherwise disclosed in these consolidated financial statements were as follows:

- a) During the year ended October 31, 2019, the Company paid a salary of \$120,000 (2018 - \$120,000) and a bonus of \$25,000 (2018 - \$Nil) to the President of the Company.
- b) During the year ended October 31, 2019, the Company incurred management fees of \$60,000 (2018 - \$60,000) and a bonus of \$25,000 (2018 - \$Nil) to the Chief Financial Officer of the Company.
- c) During the year ended October 31, 2019, the Company incurred consulting fees of \$40,000 (2018 - \$Nil) to a company controlled by a director of the Company and a bonus of \$25,000 (2018 - \$Nil) to the director.
- d) Included in receivables at October 31, 2019 is \$25,981 (2018 \$14,599) owed from directors and officers.
- e) Included in trade payables and accrued liabilities at October 31, 2018 is \$126,543 (2018 \$115,645) owing to directors and officers.
- f) Included in share subscriptions receivable is \$Nil (2018 \$5,500) owed from a director and officer.
- g) During the year ended October 31, 2018, the Company incurred directors fees of \$100,366 (2018 \$61,000) which includes a bonus of \$25,000 (2018 \$Nil).
- h) During the year ended October 31, 2019, the Company recorded share-based payments for options granted to directors and officers totaling \$622,422 (2018 \$809,325).

In the normal course of business, the Company advances and/or reimburses directors and officers for expenses incurred on the Company's behalf. Amounts due to and from related parties are non-interest bearing, unsecured and due on demand.

# SHARES, WARRANTS AND OPTIONS OUTSTANDING

# Share Capital

Authorized: unlimited common shares without par value

Issued and Outstanding:	Number of Shares	Amount \$	
Balance, October 31, 2018 Issuance of shares for cash Share issuance costs Flow-through share premium Exercise of warrants Warrant modification	229,026,676 23,249,570 666,667 	29,187,582 1,789,000 (99,694) (520,547) 1,324,167 (109,502)	
Balance, October 31, 2019	268,553,389	31,571,006	

Subsequent to July 31, 2019, the Company issued 7,690,000 common shares pursuant to nonbrokered private placements for gross proceeds of \$384,500, and 12,307,731 flow-through common shares pursuant to a non-brokered private placement for gross proceeds of \$800,003. As at the date of this MD&A, there were 288,551,120 shares outstanding.

## Warrants Outstanding

The following table summarizes stock purchase warrant transactions:

	Number of Warrants	Weighted Average Exercise Price \$
Balance, October 31, 2017	56,729,487	0.08
Exercised Expired	(6,107,878) (502,435)	0.06 0.07
Balance, October 31, 2018	50,119,174	0.08
Exercised	(15,610,476)	0.06
Expired	(21,089,999)	0.09
Balance, October 31, 2019	13,418,699	0.10

During the year ended October 31, 2019, 15,610,476 warrants were exercised for gross proceeds of \$968,800. Subsequent to October 31, 2019, the Company issued 7,690,000 warrants in connection with non-brokered private placements.

As of the date of this MD&A there were 21,108,699 warrants outstanding.

# **Stock Options Outstanding**

The following table summarizes stock option transactions that occurred:

wing table summarizes stock option transa	Number of Options	Weighted Average Exercise Price \$
Outstanding, October 31, 2017	14,480,000	0.10
Granted	11,800,000	0.12
Expired	(10,400,000)	0.10
Cancelled	(3,780,000)	0.10
Outstanding, October 31, 2018	12,100,000	0.12
Granted	12,600,000	0.07
Expired	(300,000)	0.10
Outstanding, October 31, 2019	24,400,000	0.09
Exercisable, October 31, 2019	24,400,000	0.09

As at the date of this MD&A, there were 24,400,000 stock options outstanding.

# OTHER INFORMATION

# **Risks and Uncertainties**

The discovery, development and acquisition of mineral properties are in many respects unpredictable events. Future metal prices, capital equity markets, the success of exploration programs and other property transactions can have a significant impact on capital requirements.

The Company's principal activity is mineral project exploration and development. Companies in this industry are subject to many and varied kinds of risks, including but not limited to environmental, metal prices, political and economic.

Although the Company has taken steps to verify the title to the mineral claims in which it has an interest, in accordance with industry standards for the current stage of exploration of the same, these procedures do not guarantee the Company's title to these mineral claims. Mineral claim entitlement may be subject to unregistered prior agreements or transfers and title may be affected by undetected defects.

The Company has no significant source of operating cash flow and no revenues from operations. The Company's properties have no reserves. The Company has limited financial resources. Substantial expenditures are required to be made by the Company to establish ore reserves.

The Company's various projects are in the exploration stages only and are without known bodies of commercial mineralization and have no ongoing mining operations. Mineral exploration involves a high degree of risk and not all projects which are explored are ultimately developed into producing mines. Exploration of such projects may not result in any discoveries of commercially economic bodies of mineralization. If the Company's efforts do not result in any discovery of commercial mineralization on any of its current projects, the Company could be forced to look for other exploration projects or cease operations.

The Company is subject to the laws and regulations relating to environmental matters in all jurisdictions in which it operates, including provisions relating to property reclamation, discharge of hazardous material and other matters. In certain circumstances the Company may also be held liable should environmental problems be discovered that were caused by former owners and operators of the mineral claims and mineral claims in which it has previously had an interest. The Company attempts to conduct its mineral exploration activities in compliance with applicable environmental protection legislation. The Company is not aware of any existing environmental problems related to its current projects that may result in any kind material liability to the Company.

# Additional Disclosure

Pursuant to section 5.3 of National Instrument 51-102 "*Continuous Disclosure Obligations*", issuers who are listed on the Exchange who do not have significant revenue from operations are required to provide additional financial information in their management discussion and analysis. That information is as follows:

The Company is a venture issuer that has not had significant revenue from operations in either of the last two financial years. The Company has capitalized all expenditures relating to the exploration of its various projects. Details of deferred expenditures for each project are shown in the notes to the accompanying financial statements. (see "Mineral Interests") Disclosure concerning the Company's general and administrative expenses is provided in the Company's annual and quarterly consolidated financial statements and the notes therein.

#### **Disclosure Controls and Procedures and Internal Control Over Financial Reporting**

Under Canadian securities laws, because the Corporation is a venture issuer, it is not required to certify the design nor provide an evaluation of its disclosure controls and procedures ("DC&P") and internal control over financial reporting ("ICFR") and therefore, has not completed such an evaluation. Accordingly, this MD&A does not contain a discussion relating to the establishment and maintenance of DC&P and ICFR, as defined in National Instrument 52-109. In particular, management of the Corporation is not making any representations relating to the establishment and maintenance of:

i) controls and other procedures designed to provide reasonable assurance that information required to be disclosed by the issuer in its annual filings, interim filings or other reports filed or submitted under securities legislation is recorded, processed, summarized and reported within the time periods specified in securities legislation; and

ii) a process to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes.

Accordingly, inherent limitations on the ability of the Corporation's management to design and implement on a cost effective basis DC&P and ICFR for the Corporation may result in additional risks to the quality, reliability, transparency and timeliness of interim and annual filings and other reports provided under securities legislation.

For the years ended October 31, 2019 and 2018, there were no changes in policies or procedures for DC&P and ICFR as compared to the prior fiscal years.

# CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements contained in the foregoing Management Discussion and Analysis, in the referenced financial statements and elsewhere, which are not historical, may be considered "forward-looking statements" and are prospective. These forward-looking statements sometimes include words to the effect that the Company or management believes or expects a stated condition or result. All estimates and all statements that describe the Company's objectives, goals, or future plans are forward-looking statements. Since forward-looking statements address future events and conditions, by their very nature, they involve inherent risks and uncertainties. Actual results could differ materially from those currently anticipated in such statements, and even if such actual results are realized or substantially realized, there can be no assurance that they will have the expected consequences to, or effects on the Company. Factors that could cause such differences include, but are not limited to, the possibility that future exploration results will not be consistent with the Company's expectations, changes in world equity markets, political developments in Canada and other mining countries, changes in commodity prices, foreign currency fluctuations, changes to regulations affecting the Company's activities, uncertainties relating to the availability and costs of financing needed in the future, the uncertainties involved in interpreting exploration results and the other risks involved in the mining industry. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, the Company disclaims any intent or obligation to update any forward-looking statement, whether as a result of new information, future events or results or otherwise. Although the Company believes that the assumptions inherent in the forward-looking statements are reasonable, forward-looking statements are not guarantees of future performance and accordingly undue reliance should not be put on such statements due to the inherent uncertainty therein.

# FURTHER INFORMATION

Further information can be obtained from VanadiumCorp's website at <u>www.vanadiumcorp.com</u> or at <u>www.sedar.com</u>.