



MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE YEAR ENDED DECEMBER 31, 2020

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## TO OUR SHAREHOLDERS

The following Management's Discussion and Analysis ("MD&A") relates to the financial condition and results of operations of Largo Resources Ltd. ("we", "our", "us", "Largo", or the "Company") for the year ended December 31, 2020 ("2020") and should be read in conjunction with the annual consolidated financial statements and related notes for the same period. References in the below discussion refer to the note disclosures contained in the annual consolidated financial statements for the years ended December 31, 2020 and 2019 ("2020 annual consolidated financial statements"). References in the below discussion to "Q4 2020" and "Q4 2019" refer to the three months ended December 31, 2020 and December 31, 2019 and references to "2019" refer to the year ended December 31, 2019.

The financial statements and related notes of Largo have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") applicable to a going concern. Certain non-GAAP measures are discussed in this MD&A, which are clearly disclosed as such. Additional information, including our press releases, has been filed electronically through the System for Electronic Document Analysis and Retrieval ("SEDAR") and is available online under our profile at [www.sedar.com](http://www.sedar.com).

This MD&A reports our activities through March 17, 2021, unless otherwise indicated. References to "date of this MD&A" mean March 17, 2021. Except as otherwise set out herein, all amounts expressed herein are in thousands of U.S. dollars, denominated by "\$". The Company's shares, options, units and warrants are expressed in thousands. Prices are not expressed in thousands. References to the symbol "C\$" mean the Canadian dollar and references to the symbol "R\$" mean the Brazilian real.

Mr. Paul Sarjeant B.Sc. P.Geo., is a Qualified Person as defined under National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101") and has reviewed the technical information in the MD&A. Mr. Sarjeant is Manager, Geology of the Company. Refer to the Operations section of this MD&A for details of the Qualified Persons involved in reviewing the updated reserves and resources at the Company's Maracás Menchen Mine.

## THE COMPANY

Largo is a Canadian, industry preferred producer and supplier of high-quality vanadium. Largo can service multiple vanadium market applications with its unrivaled VPURE™ and VPURE+™ products, which are sourced from one of the world's highest-grade vanadium deposits at the Company's Maracás Menchen Mine located in Brazil. Largo is also focused on the advancement of renewable energy storage solutions through Largo Clean Energy and its VCHARGE± vanadium redox flow battery technology. Additionally, Largo has secondary vanadium, iron-vanadium and tungsten projects located in Brazil and Canada. The Company is organized and exists under the *Business Corporations Act* (Ontario) and its common shares are principally listed on the Toronto Stock Exchange ("TSX") under the symbol "LGO".

## 2020 HIGHLIGHTS

- The Company's Maracás Menchen Mine produced a record 11,825 tonnes of vanadium pentoxide ("V<sub>2</sub>O<sub>5</sub>") in 2020, including a new quarterly production record of 3,340 tonnes of V<sub>2</sub>O<sub>5</sub> produced in Q4 2020. The global V<sub>2</sub>O<sub>5</sub> recovery rate for 2020 was 81.5%, with 80.6% seen in Q4 2020.
- The Company recorded net income before tax of \$7,723 for 2020 and net income of \$6,761 after the recognition of an income tax expense of \$139 and a deferred income tax expense of \$823.
- The Company's cash balance at December 31, 2020 was \$79,145.
- In March 2020, the Company secured two credit facilities in Brazil, for a total of \$24,788. These facilities were fully drawn down and were due for repayment as a lump sum, together with accrued interest, in March 2021. In February 2021, the Company completed the settlement of the outstanding credit facilities through the repayment in full of the outstanding principal amount of \$24,788.
- Following the election by the Company in 2019, the Company's off-take agreement with its former off-take partner expired at the end of April 2020. In connection with this and with the Company managing its own sales

activities from May 1, 2020 onwards, the Company and a number of its subsidiaries are generating U.S. dollar denominated revenues and incurring U.S. dollar denominated costs. Considering the significance of these revenues and costs, the Company has determined that the currency of the primary economic environment in which some of its entities operate changed to the U.S. dollar on May 1, 2020. In addition, the Company changed its presentation currency from the Canadian dollar to the U.S. dollar (refer to note 3).

- The Company completed its first independent shipment of vanadium from Brazil on May 14, 2020.
- On July 20, 2020, the Company announced the release of its 2019 sustainability report, highlighted by new performance metrics and reporting standards. This report is guided in part by SASB, the Sustainability Accounting Standards Board.
- On December 7, 2020, the Company completed the acquisition of certain intellectual property through an asset purchase agreement, with the Company issuing 2,518 common shares and 3,622 common share purchase warrants as consideration (refer to note 8). In connection with this, the Company announced the launch of Largo Clean Energy, a vertically integrated vanadium redox flow battery ("VRFB") business.
- The Company is conscious of the rapid expansion of the COVID-19 pandemic and the evolving global implications. To date, there have been no significant disruptions to the Company's operations, supply chain or on its shipment of products from the Maracás Menchen Mine. However, the Company cautions that the potential future impact of any restrictions on the Company's operations, supply chain, sales efforts and logistics is currently unknown but could be significant.

## SIGNIFICANT EVENTS AND TRANSACTIONS SUBSEQUENT TO 2020

- The Company's planned upgrades to the kiln and improvements in the cooler were completed in January 2021, with the start-up and commissioning period for the new equipment occurring in early February 2021. It is anticipated that these upgrades and improvements will increase the nameplate production capacity to 1,100 tonnes of  $V_2O_5$  per month by the end of Q2 2021.
- On February 3, 2021, the Company completed the settlement of the outstanding credit facilities through the repayment in full of the outstanding principal amount of \$24,788. Interest of \$891 and a break fee of \$74 were also paid as part of the settlement.
- Subsequent to December 31, 2020, and prior to the share consolidation, 56,912 warrants were exercised resulting in proceeds to the Company of \$3,017, with a further 8,092 warrants surrendered as part of cashless exercises. Included in this were exercises of 54,586 warrants by the ARC Funds for 46,497 shares, including 8,089 warrants surrendered as part of this cashless exercise.
- On January 14, 2021 the Company announced that it will hold a Special Meeting of Shareholders (the "Special Meeting") on March 1, 2021 to seek authorization from the Company's shareholders to enable the Board of Directors to consider a consolidation of the Company's issued and outstanding common shares at a ratio of up to one post-consolidation share for every ten pre-consolidation shares. Concurrent with the Special Meeting and related to the proposed share consolidation, the Company's Board of Directors is also considering a potential listing of the Company's shares in the United States (the "U.S.") with the view of increasing access to U.S. capital markets. On March 1, 2021, the consolidation of the Company's issued and outstanding common shares was approved by the Company's shareholders at the Special Meeting.
- On March 4, 2021, the Company completed the consolidation of its common shares on the basis of one post-consolidation common share for every 10 pre-consolidation common shares. This also includes RSUs, stock options and warrants of the Company. Any quantity relating to these instruments for 2020 and 2019 and up to March 4, 2021 or any per unit price such as exercise prices disclosed throughout this MD&A have not been retrospectively adjusted for the share consolidation except for the weighted average number of shares outstanding used in the calculation of basic and diluted earnings (loss) per share, which have been retrospectively adjusted to give effect to the share consolidation as required by IAS 33, Earnings per share. Consequently, the basic and diluted earnings (loss) per share for the periods presented have been retrospectively adjusted. The effect of the share consolidation on the issued and outstanding number of common shares, RSUs, stock options and warrants at December 31, 2020 is shown in note 25.

- On March 15, 2021, the Company announced that it had completed the first sale of iron ore from the Maracás Menchen Mine. The Company finalized a sales contract for 14,000 tonnes of iron ore to a leading steel producer on March 12, 2021. Transport of the contracted material has commenced, and full delivery is expected by the end of March 2021.
- On March 17, 2021, the Company announced the appointment of Mr. Ian Robertson to its Board of Directors.

## 2020 SUMMARY

### Financial

	Year ended		Movement	
	December 31, 2020	December 31, 2019		
Revenues	\$ 119,987	\$ 105,107	\$ 14,880	14%
Other gains (losses)	1,636	(1,360)	2,996	(220%)
	121,623	103,747	17,876	17%
Operating costs	(88,390)	(92,950)	4,560	(5%)
<i>Direct mine and production costs</i>	<i>(48,929)</i>	<i>(63,156)</i>	<i>14,227</i>	<i>(23%)</i>
Professional, consulting and management fees	(8,255)	(9,979)	1,724	(17%)
Foreign exchange loss	(9,064)	(6,011)	(3,053)	51%
Other general and administrative expenses	(3,329)	(3,184)	(145)	5%
Share-based payments	(1,638)	(3,554)	1,916	(54%)
Finance costs	(1,350)	(13,692)	12,342	(90%)
Interest income	1,148	4,913	(3,765)	(77%)
Exploration and evaluation costs	(3,022)	(2,784)	(238)	9%
	(113,900)	(127,241)	13,341	(10%)
Net income before tax	\$ 7,723	\$ (23,494)	\$ 31,217	(133%)
Income tax (expense)	(139)	(864)	725	(84%)
Deferred income tax (expense)	(823)	(2,612)	1,789	(68%)
Net income (loss)	\$ 6,761	\$ (26,970)	\$ 33,731	(125%)
Unrealized loss on foreign currency translation	(41,937)	(2,867)	(39,070)	1,363%
Comprehensive (loss)	\$ (35,176)	\$ (29,837)	\$ (5,339)	18%
Basic earnings (loss) per share (note 16)	\$ 0.12	\$ (0.50)	\$ 0.62	(124%)
Diluted earnings (loss) per share (note 16)	\$ 0.11	\$ (0.50)	\$ 0.61	(122%)
Cash provided before working capital items	\$ 12,065	\$ 21,627	\$ (9,562)	(44%)
Net cash (used in) provided by operating activities	(59,508)	104,597	(164,105)	(157%)
Net cash provided by (used in) financing activities	30,232	(85,310)	115,542	(135%)
Net cash (used in) investing activities	(18,106)	(37,948)	19,842	(52%)
Net change in cash	\$ (48,354)	\$ (23,889)	\$ (24,465)	102%

	Three months ended			
	December 31, 2020	December 31, 2019	Movement	
Revenues	\$ 42,254	\$ 25,808	\$ 16,446	64%
Other gains (losses)	-	(1,927)	1,927	(100%)
	42,254	23,881	18,373	77%
Operating costs	(31,604)	(22,679)	(8,925)	39%
<i>Direct mine and production costs</i>	(18,547)	(15,098)	(3,449)	23%
Professional, consulting and management fees	(3,229)	(2,703)	(526)	19%
Foreign exchange gain (loss)	2,572	178	2,394	1,345%
Other general and administrative expenses	(1,027)	(876)	(151)	17%
Share-based payments	(450)	(536)	86	(16%)
Finance costs	(380)	(39)	(341)	874%
Interest income	66	807	(741)	(92%)
Exploration and evaluation costs	(2,179)	(559)	(1,620)	290%
	(36,231)	(26,407)	(9,824)	37%
Net income (loss) before tax	\$ 6,023	\$ (2,526)	\$ 8,549	(338%)
Income tax recovery (expense)	282	(856)	1,138	(133%)
Deferred income tax recovery (expense)	576	(922)	1,498	(162%)
Net income (loss)	\$ 6,881	\$ (4,304)	\$ 11,185	(260%)
Unrealized gain on foreign currency translation	10,112	8,437	1,675	20%
Comprehensive income	\$ 16,993	\$ 4,133	\$ 12,860	311%
Basic earnings (loss) per share	\$ 0.12	\$ (0.08)	\$ 0.20	(250%)
Diluted earnings (loss) per share	\$ 0.11	\$ (0.08)	\$ 0.19	(238%)
Cash provided before working capital items	\$ 7,539	\$ 13,739	\$ (6,200)	(45%)
Net cash provided by operating activities	4,741	9,350	(4,609)	(49%)
Net cash provided by financing activities	2,589	9,250	(6,661)	(72%)
Net cash (used in) investing activities	(5,070)	(5,697)	627	(11%)
Net change in cash	\$ 4,250	\$ 10,725	\$ (6,475)	(60%)

The movements in the discussion below refer to those shown in the previous tables.

- The Company recorded net income of \$6,761 in 2020, compared with a net loss of \$26,970 in 2019. This movement was primarily due to a 14% increase in revenues, a 5% decrease in operating costs, a 17% decrease in professional, consulting and management fees, a 54% decrease in share-based payments and a 90% decrease in finance costs. This was partially offset by a 77% decrease in interest income and a 9% increase in exploration and evaluation costs. For Q4 2020, the Company recorded net income of \$6,881, compared with a net loss of \$4,304 for Q4 2019. This movement was primarily attributable to a 64% increase in revenues and a 16% decrease in share-based payments, partially offset by a 39% increase in operating costs, a 19% increase in professional, consulting and management fees, an 874% increase in finance costs and a 290% increase in exploration and evaluation costs.

#### Sales and Trading

- For 2020, the Company exceeded its annual sales guidance of 9,500 to 10,000 tonnes of V<sub>2</sub>O<sub>5</sub> equivalent with total sales of 10,254 tonnes of V<sub>2</sub>O<sub>5</sub> equivalent.
- In Q4 2020, the Company achieved a record quarterly sales level of 3,746 tonnes of V<sub>2</sub>O<sub>5</sub> equivalent sold. The Company delivered both standard grade and high purity V<sub>2</sub>O<sub>5</sub> as well as ferrovandium ("FeV") to customers globally.

- Following the logistics constraints experienced in Q3 2020, delays in deliveries to customers in Asia eased during Q4 2020. The Company continues to actively manage any logistics challenges it faces to provide premium products and service to its customers.
- During Q4 2020, the average price per lb of V<sub>2</sub>O<sub>5</sub> in Europe increased by 1%, ending the period with an average price of approximately \$5.40, compared with approximately \$5.35 at September 30, 2020 and \$5.33 at December 31, 2019. The average price per lb of V<sub>2</sub>O<sub>5</sub> for Q4 2020 was approximately \$5.29, compared with approximately \$5.37 for Q4 2019. The Company is now selling products with pricing based on several different V<sub>2</sub>O<sub>5</sub> and FeV benchmarks. The Company's revenues will be driven by the movements in these prices.
- The Company successfully completed its sales contract campaign and has allocated a significant proportion of its estimated monthly production in 2021 to these contracts. Geographically, these contracts are well diversified with a well-balanced global footprint. The Company maintains a strong focus on developing new markets for its high purity products, including chemical applications and an expected gradual recovery of the aerospace industry beginning in Q2 2021. With the launch of Largo Clean Energy, the Company also aims to grow its sales into the fast growing VRFB market.
- During 2020, the Company recognized revenues of \$119,987 (2019 - \$105,107) from sales of 10,254 tonnes of V<sub>2</sub>O<sub>5</sub> equivalent. Of the total revenues, \$64,512 is related to the Sales & trading segment and \$55,475 is related to the Mine properties segment (after the elimination of inter-segment transactions).
- During Q4 2020, the Company recognized revenues of \$42,254 (Q4 2019 - \$25,808) from sales of 3,746 tonnes of V<sub>2</sub>O<sub>5</sub> equivalent. Of the total revenues, \$37,833 is related to the Sales & trading segment and \$4,421 is related to the Mine properties segment (after the elimination of inter-segment transactions).

	Three months ended		Year ended	
	December 31, 2020	December 31, 2019	December 31, 2020	December 31, 2019
Revenues per pound sold <sup>1,2</sup>	\$ 5.12	\$ 4.09	\$ 5.31	\$ 4.69

1. The revenues per pound reported are on a non-GAAP basis. Refer to the "Non-GAAP Measures" section of this MD&A.

2. Revenues per pound sold are calculated based on the quantity of V<sub>2</sub>O<sub>5</sub> sold during the stated period.

- In connection with the expiry of the Company's off-take agreement and with the Company managing its own sales activities from May 1, 2020 onwards, the Company's vanadium products (note 7) are accounted for as finished products inventory (note 6) effective from May 1, 2020. Prior to this, the Company recognized other gains (losses) of \$1,636 for 2020 (Q4 2019 and 2019 - \$(1,927) and \$(1,360)), relating to realized and unrealized gains and losses on the purchases and sales of vanadium products.

### Costs

- Operating costs of \$31,604 in Q4 2020 (Q4 2019 - \$22,679) include direct mine and production costs of \$18,547 (Q4 2019 - \$15,098), conversion costs of \$1,330 (Q4 2019 - \$nil), product acquisition costs of \$2,965 (Q4 2019 - \$nil), royalties of \$1,958 (Q4 2019 - \$1,496), distribution costs of \$1,029 (Q4 2019 - \$nil), inventory write-down of \$47 (Q4 2019 - \$nil) and depreciation and amortization of \$5,728 (Q4 2019 - \$6,085). The increase in direct mine and production costs is primarily attributable to the increase in sales, with 3,746 tonnes of V<sub>2</sub>O<sub>5</sub> equivalent sold in Q4 2020 (Q4 2019 - 2,860 tonnes). Of the total, \$26,676 is related to the Sales & trading segment and \$4,928 is related to the Mine properties segment (after the elimination of inter-segment transactions).
- For 2020, operating costs of \$88,390 (2019 - \$92,950) include direct mine and production costs of \$48,929 (2019 - \$63,156), conversion costs of \$1,976 (2019 - \$nil), product acquisition costs of \$10,459 (2019 - \$nil), royalties of \$7,107 (2019 - \$5,947), distribution costs of \$2,269 (2019 - \$nil), inventory write-down of \$177 (2019 - \$nil) and depreciation and amortization of \$17,473 (2019 - \$23,847). Of the total, \$47,609 is related to the Sales & trading segment and \$40,781 is related to the Mine properties segment (after the elimination of inter-segment transactions).

- Cash operating costs excluding royalties per pound<sup>1</sup>, which are now calculated on pounds sold, were \$2.56 per lb in 2020, compared with \$3.06 for 2019. The decrease seen in 2020 compared with 2019 is largely due to a decrease in direct mine and production costs, which is primarily attributable to the lower costs recognized in Q2 2020 when the Company was ramping up its sales activities and cost reductions realized as a result of the expansion completed in 2019. Total cash costs<sup>2</sup> exclude royalties and include the Company's total professional, consulting and management fees and other general and administrative expenses and is calculated on total pounds of V<sub>2</sub>O<sub>5</sub> sold. For 2020, total cash costs<sup>2</sup> were \$3.34.

	Three months ended		Year ended	
	December 31, 2020	December 31, 2019 <sup>2</sup>	December 31, 2020	December 31, 2019 <sup>2</sup>
Cash operating costs per pound <sup>1</sup>	\$ 2.81	\$ 2.84	\$ 2.90	\$ 3.32
Cash operating costs excluding royalties per pound <sup>1</sup>	\$ 2.56	\$ 2.60	\$ 2.56	\$ 3.06
Total cash costs <sup>1</sup>	\$ 3.41		\$ 3.34	

1. The cash operating costs per pound, cash operating costs excluding royalties per pound and total cash costs reported are on a non-GAAP basis. Refer to the "Non-GAAP Measures" section of this MD&A.

2. Cash operating costs per pound and cash operating costs excluding royalties per pound for this period were calculated on a pounds produced basis. Effective Q1 2020, they are calculated on a pounds sold by basis. The amounts presented here are restated on a pounds sold basis. Refer to the "Non-GAAP Measures" section of this MD&A.

- Professional, consulting and management fees in Q4 2020 increased from Q4 2019 by 19%. The increase is primarily attributable to costs incurred in Q4 2020 in connection with the Company's Sales & trading segment, which was not yet operational in Q4 2019. Of the total professional, consulting and management fee expense in Q4 2020, \$476 related to the Sales & trading segment (Q4 2019 – \$nil), \$963 related to the Mine properties segment (Q4 2019 – \$1,045) and \$1,083 related to Corporate (Q4 2019 – \$1,658). For 2020, total professional, consulting and management fees decreased from 2019 by 17%. Of the total, \$1,274 related to the Sales & trading segment (2019 – \$nil), \$3,086 related to the Mine properties segment (2019 – \$4,513) and \$3,188 related to Corporate (2019 – \$5,466).
- The foreign exchange gain in Q4 2020 increased by 1,345% or \$2,394. For 2020, the foreign exchange loss increased by 51% as compared with 2019. This is primarily attributable to a weakening of the U.S. dollar against the Brazilian real by approximately 8% since September 30, 2020 (strengthening by approximately 29% since December 31, 2019) on U.S. dollar denominated cash and liabilities in Brazil and a strengthening of the Canadian dollar against the U.S. dollar by approximately 5% since September 30, 2020 on Canadian dollar denominated assets (strengthening of approximately 2% since December 31, 2019). Of the total foreign exchange gain in Q4 2020, \$27 related to the Sales & trading segment (Q4 2019 – \$nil), \$1,826 related to the Mine properties segment (Q4 2019 – \$2,769) and \$719 related to Corporate (Q4 2019 – loss of \$2,591). For 2020, a gain of \$44 related to the Sales & trading segment (2019 – \$nil), a loss of \$15,943 related to the Mine properties segment (2019 – \$1,551) and a gain of \$6,835 related to Corporate (2019 – loss of \$4,460).
- Finance costs in Q4 2020 increased from Q4 2019 by 874% or \$341. The increase is primarily attributable to interest expense on the debt in Q4 2020 following the draw-down of the facilities in Q1 2020. The redemption of Notes was completed by July 8, 2019 (refer to note 12) with minimal finance costs in Q4 2019. Of the total in Q4 2020, \$7 related to the Sales & trading segment (Q4 2019 – \$nil), \$370 related to the Mine properties segment (Q4 2019 – \$34) and \$3 related to Corporate (Q4 2019 – \$5). For 2020, finance costs decreased from 2019 by 90%, with \$17 related to the Sales & trading segment (2019 – \$nil), \$1,325 related to the Mine properties segment (2019 – \$211) and \$8 related to Corporate (2019 – \$13,481).
- Interest income in Q4 2020 decreased from Q4 2019 by 92%. The decrease is primarily due to lower deposit interest rates in Q4 2020 as compared with Q4 2019. Of the total in Q4 2020, \$29 related to the Mine properties segment (Q4 2019 – \$352) and \$37 related to Corporate (Q4 2019 – \$455). For 2020, interest income decreased

<sup>1</sup> The cash operating costs per pound, cash operating costs excluding royalties per pound and total cash costs reported are on a non-GAAP basis. Refer to the "Non-GAAP Measures" section of this MD&A.



from 2019 by 77%, with \$601 related to the Mine properties segment (2019 – \$3,278) and \$547 related to Corporate (2019 – \$1,635).

- Exploration and evaluation costs in Q4 2020 increased from Q4 2019 by 290%. For 2020, the increase from 2019 was 9%. These increases are a result of a catch up in exploration activities following previous delays to the Company's 2020 drilling program caused by the COVID-19 pandemic and the larger overall exploration program in 2020 as compared with 2019.
- Comprehensive income for Q4 2020 increased from Q4 2019 by 311% after an increase in the unrealized gain on foreign currency translation of 20%. For 2020, comprehensive loss increased from 2019 by 18% after an increase in the unrealized loss on foreign currency translation of 1,363%. The unrealized loss on foreign currency translation in 2020 is primarily due to a weakening of the Brazilian real against the U.S. dollar by approximately 29% since December 31, 2019.

### Cash Flows

- Cash provided by operating activities decreased from \$9,350 in Q4 2019 to \$4,741 in Q4 2020. This is primarily due to a decrease in cash provided before working capital items of \$6,200 and a net increase in working capital items of \$1,591. For 2020, cash used in operating activities was \$59,508, compared with cash provided by operating activities of \$104,597 in 2019. This movement is primarily attributable to a decrease in cash provided before working capital items of \$9,562 and a net decrease in working capital items of \$154,543, which is largely driven by movements in amounts receivable and accounts payable and accrued liabilities. The change in amounts receivable is primarily due to the increased payment terms with the Company's customers in 2020 as compared with 2019.
- Cash provided by financing activities in Q4 2020 decreased Q4 2019 by \$6,661. The movement is primarily due to a decrease in cash received from the issuance of common shares. For 2020, cash provided by financing activities changed from cash used in 2019 by \$115,542. The movement is primarily attributable to the receipt of debt of \$24,788 (2019 – \$nil), repayment of debt of \$nil (2019 – \$92,812), interest received of \$1,135 (2019 – \$4,917) and cash received from the issuance of common shares of \$4,233 (2019 – \$9,977).
- Cash used in investing activities in Q4 2020 of \$5,070 is largely consistent with the \$5,697 seen in Q4 2019. For 2020, the decrease from 2019 was \$19,842 and primarily due to the expansion project being undertaken in 2019.
- The net change in cash in Q4 2020 was an increase of \$4,250, compared with \$10,725 for Q4 2019. For 2020, the net change in cash was a decrease of \$48,354, compared with \$23,889 in 2019.

### Operations

- Production quantities and non-GAAP unit cost measures<sup>1</sup> are summarized in the following table:

Period	Production Tonnes	Production Pounds Equivalent <sup>2</sup>	Average Quarterly V <sub>2</sub> O <sub>5</sub> price \$/lb	Cash operating costs excluding royalties <sup>1</sup> \$/lb <sup>3</sup>	Total cash costs <sup>1</sup> \$/lb <sup>3</sup>
Q4 2020	3,340	7,363,431	\$5.29	\$2.56	\$3.41
Q3 2020	3,092	6,816,685	\$5.33	\$3.14	\$3.69
Q2 2020	2,562	5,648,236	\$6.14	\$1.89 <sup>5</sup>	\$3.68 <sup>5</sup>
Q1 2020	2,831	6,241,279	\$6.07	\$2.79	\$3.01
Q4 2019 <sup>4</sup>	3,011	6,638,111	\$5.37	\$2.60	
Q3 2019 <sup>4</sup>	2,952	6,508,038	\$7.16	\$3.02	
Q2 2019 <sup>4</sup>	2,515	5,544,619	\$8.59	\$3.34	
Q1 2019 <sup>4</sup>	2,099	4,627,497	\$16.34	\$3.41	

1. The cash operating costs excluding royalties per pound and total cash costs reported are on a non-GAAP basis. Refer to the "Non-GAAP Measures" section of this MD&A.

2. Conversion of tonnes to pounds, 1 tonne = 2,204.62 pounds or lbs.

3. For periods prior to Q2 2020, calculated from C\$ using average C\$/US\$ foreign exchange rates of 1.32, 1.32, 1.32, 1.34, 1.33 and 1.32 for Q1 2020, Q4 2019, Q3 2019, Q2 2019, Q1 2019 and Q4 2018, respectively.

4. Q4 2019, Q3 2019, Q2 2019 and Q1 2019 have been calculated and presented on a pounds sold basis. Refer to the "Non-GAAP Measures" section of this MD&A.

5. The measure for Q2 2020 includes the benefit of tax credits of \$2,187, without which the cash operating costs excluding royalties per pound would be \$3.04 and total cash costs would be \$4.66.

- 2020 production of 11,825 tonnes of V<sub>2</sub>O<sub>5</sub> (26.1 million lbs) marked a new annual record for the Company and within the 2020 guidance of 11,750 to 12,250 tonnes of V<sub>2</sub>O<sub>5</sub>. This represents an increase of 12% over 2019. The global recovery of 81.5% achieved in 2020 is 4% higher than that achieved in 2019.
- Q4 2020 production of 3,340 tonnes of V<sub>2</sub>O<sub>5</sub> was a new quarterly production record, being 11% higher than Q4 2019 and 8% higher than the previous record of 3,092 tonnes in Q3 2020. V<sub>2</sub>O<sub>5</sub> production in October 2020 was 1,119 tonnes, with 1,057 tonnes produced in November 2020 and 1,164 tonnes produced in December 2020.
- The global recovery achieved in Q4 2020 was 80.6%, 4% higher than the 77.3% achieved in Q4 2019 and 4% lower than the 84.2% achieved in Q3 2020. The global recovery in October 2020 was 79.8%, with 78.6% achieved in November and 82.9% achieved in December.
- Subsequent to 2020, production in January 2021 was 382 tonnes of V<sub>2</sub>O<sub>5</sub>, and production in February 2021 was 769 tonnes of V<sub>2</sub>O<sub>5</sub>. The decrease in production levels seen is due to the planned shutdown to implement upgrades to the kiln and improvements in the cooler. It is anticipated that these upgrades and improvements will increase the nameplate production capacity to 1,100 tonnes of V<sub>2</sub>O<sub>5</sub> per month by the end of Q2 2021.

## SELECTED QUARTERLY INFORMATION

Summary financial information for the eight quarters ended December 31, 2020, prepared in accordance with IFRS (in U.S. dollars):

Period	Revenue	Net Income (Loss)	Basic Earnings (Loss) per Share <sup>1</sup>	Total Assets	Non-current Liabilities
Q4 2020	\$ 42,254	\$ 6,881	\$ 0.12	\$ 297,806	\$ 6,295
Q3 2020	27,474	2,549	0.05	272,099	5,857
Q2 2020	8,350	(7,012)	(0.12)	268,874	5,893
Q1 2020	41,909	4,343	0.07	325,336	6,163
Q4 2019	25,808	(4,304)	(0.08)	357,661	7,342
Q3 2019	24,131	(5,949)	(0.11)	338,467	6,961
Q2 2019	21,963	(15,298)	(0.29)	377,678	7,368
Q1 2019	33,205	(1,419)	(0.02)	359,164	6,706

1. Basic earnings (loss) per share has been adjusted in order to reflect the effect of the share consolidation that was approved on March 1, 2021 and completed on March 4, 2021 (refer to note 25).

The Company's asset base has fluctuated over the last eight quarters ended December 31, 2020, with the high in Q2 2019 primarily attributable to cash and mine properties, plant and equipment.

During Q4 2020, the Company recognized revenues of \$42,254, which was offset by operating costs of \$31,604, finance costs of \$380 and a total tax recovery of \$858.

During Q3 2020, the Company recognized revenues of \$27,474, which was offset by operating costs of \$20,977, finance costs of \$368 and a total tax expense of \$803.

During Q2 2020, the Company recognized revenues of \$8,350, which was offset by operating costs of \$9,561, finance costs of \$476 and a total tax expense of \$1,479.

During Q1 2020, the Company recognized revenues of \$41,909, which was offset by operating costs of \$26,248, finance costs of \$126 and a total tax recovery of \$462.

During Q4 2019, the Company recognized revenues of \$25,808, which was offset by operating costs of \$22,679, finance costs of \$39 and a total tax expense of \$1,778.

During Q3 2019, the Company recognized revenues of \$24,131, which was offset by operating costs of \$23,673, finance costs of \$44 and a total tax recovery of \$903.

During Q2 2019, the Company recognized revenues of \$21,963, which was offset by operating costs of \$24,815, finance costs of \$8,133 and a total tax expense of \$166.

During Q1 2019, the Company recognized revenues of \$33,205, which was offset by operating costs of \$21,783, finance costs of \$5,476 and a total tax expense of \$2,435.

## OPERATIONS

### Maracás Menchen Mine

#### Recent Developments

Expenditures of \$19,759 were capitalized to mine properties, plant and equipment during 2020 (2019 – \$41,588), including \$8,512 of capitalized waste stripping and push back costs (2019 – \$7,484).

The following table is a summary of production statistics at the Maracás Menchen Mine.

	Q4 2020	Q4 2019	2020	2019
Total Ore Mined (tonnes)	338,226	329,792	1,087,518	1,156,016
Ore Grade Mined - Effective Grade <sup>1</sup> (%)	1.18	1.36	1.29	1.34
Effective Grade of Ore Milled (%)	1.28	1.57	1.34	1.50
Concentrate Produced (tonnes)	108,609	100,879	412,661	382,501
Grade of Concentrate (%)	3.24	3.28	3.28	3.29
Contained V <sub>2</sub> O <sub>5</sub> (tonnes)	3,515	3,310	13,540	12,580
Crushing Recovery (%)	98.1	96.6	98.1	97.0
Milling Recovery (%)	95.4	96.0	96.2	96.9
Kiln Recovery (%)	91.2	89.7	91.0	89.1
Leaching Recovery (%)	98.5	96.7	98.6	96.8
Chemical Plant Recovery (%)	95.8	96.1	96.3	96.8
Global Recovery (%) <sup>2</sup>	80.6	77.3	81.5	78.5
V <sub>2</sub> O <sub>5</sub> Produced (Flake + Powder) (tonnes)	3,340	3,011	11,825	10,577

1. Effective grade represents the percentage of magnetic material mined multiplied by the percentage of V<sub>2</sub>O<sub>5</sub> in the magnetic concentrate.

2. Global recovery is the product of crushing recovery, milling recovery, kiln recovery, leaching recovery and chemical plant recovery.

The production of 3,340 tonnes of V<sub>2</sub>O<sub>5</sub> in Q4 2020 was 11% higher than the 3,011 tonnes of V<sub>2</sub>O<sub>5</sub> produced in Q4 2019. This increase is attributable to the operational stability and strong performance in all areas of the plant.

The Q4 2020 global recovery of 80.6% was higher than Q4 2019. The global recovery of 81.5% achieved for 2020 was attributable to the strong performance in all areas of the plant throughout the year, with the crushing, kiln and leaching areas performing ahead of the levels seen in 2019.

In Q4 2020, 338,226 tonnes of ore were mined with an effective grade of 1.18% of V<sub>2</sub>O<sub>5</sub>. The ore mined in Q4 2020 was 3% higher than in Q4 2019 and 17% higher than in Q3 2020. The Company produced 108,609 tonnes of concentrate with an effective grade of 3.24%. The contained V<sub>2</sub>O<sub>5</sub> in the concentrate produced was 8% higher in 2020 than in 2019. The operational performance in Q4 2020 remained in-line with the Company's plans despite the COVID-19 restrictions put in place.

As a consequence of the necessary precautions implemented in response to the COVID-19 pandemic, the planned upgrades to the kiln and improvements in the cooler were postponed to January 2021. Even without this work being completed in 2020, the production performance remained in-line with the Company's plans and guidance. The strong operational performance was supported by the increase in global recovery and overall operational stability.

## 2021 Guidance

The Company has committed a significant proportion of its monthly production in 2021 to sales contracts. The balance of the Company's production will be targeted towards spot sales.

The Company has committed sales of its VPURE+™ and VPURE™ products, as well as FeV produced from VPURE™. The Company is confident that its nascent but growing sales and trading division will add significant long-term value to the Company.

The Company's Maracás Menchen Mine continued operations during 2020. The Company continues to monitor the evolving COVID-19 pandemic and has taken preventative measures at its mine site and corporate offices to mitigate potential risks. Although there have been some challenges with logistics, there continues to be no significant impact on the Company's production or on the shipment of products out of Maracás. To date, there continues to be no significant disruption to the Company's supply chain for its operations and the level of critical consumables continues to be at normal levels. In addition, the restrictions imposed by the government in Brazil have not significantly impacted operations. The Company continues to follow the recommendations provided by health authorities and all corporate office personnel have been instructed to work from home where possible. The Company continues to staff critical functions at the Maracás Menchen Mine and has encouraged those in non-essential roles to work from home.

The Company's 2021 guidance is presented on a "business as usual" basis. The Company continues to monitor measures being imposed by governments globally to reduce the spread of COVID-19 and the impact that this may have on the Company's operations, sales and guidance for 2021. Although these restrictions have not, to date, had a material impact on the Company's operations and sales, the potential future impact of COVID-19 both in Brazil and globally could have a significant impact on the Company's operations, sales efforts and logistics. The Company is continuing to monitor the rapidly developing impacts of the COVID-19 pandemic and will take all possible actions to help minimize the impact on the Company and its people. However, these actions may significantly change the guidance and forecasts presented and will, if and when necessary, update its guidance accordingly.

The Company is evaluating the timing for the construction of the FeV conversion plant, including the deferral of planned capital expenditures. This deferral will not impact the Company's commercial strategy in 2021. The Company is proceeding with its previously announced vanadium trioxide ("V<sub>2</sub>O<sub>3</sub>") project, with 2021 capital expenditures estimated to be in the range of \$7,000 to \$9,000. Refer to the Company's Annual Information Form for the year ended December 31, 2020 for the full discussion of the Company's Risks and Uncertainties, including those relating to the COVID-19 pandemic.

The Company has revised its 2021 guidance for cash operating costs excluding royalties<sup>1</sup> and total cash costs<sup>1</sup>. The revised guidance is presented below.

		2020 Guidance
Annual V <sub>2</sub> O <sub>5</sub> equivalent production	tonnes	12,000 – 12,500
Annual V <sub>2</sub> O <sub>5</sub> equivalent sales	tonnes	12,250 – 12,750
Cash operating costs excluding royalties <sup>1,2</sup>	\$/lb	3.10 – 3.30
Total cash costs <sup>1,2</sup>	\$/lb	3.50 – 3.70
V <sub>2</sub> O <sub>3</sub> processing plant capital expenditures	\$	7,000 – 9,000
Sustaining capital expenditures (excluding capitalized stripping costs)	\$	8,000 – 10,000

1. The cash operating costs excluding royalties and total cash costs reported are on a non-GAAP basis. Refer to the "Non-GAAP Measures" section of this MD&A.

2. These measures exclude royalties.

## Reserves and Resources

On October 16, 2017, the Company disclosed mineral reserve and mineral resource estimates with an effective date of May 2, 2017 in a report titled Maracás Menchen Project, Bahia, Brazil An Updated Mine Plan, Mineral Reserve and Preliminary Economic Assessment of the Inferred Resources (the "Technical Report"), prepared by GE21 Consultoria Mineral Ltda ("GE21").

The Mineral Resources for the Campbell deposit are estimated from diamond drill core information stored in a secured central database and were evaluated using a geostatistical block modelling approach. A three-dimensional block model was generated to enable grade estimation. The selected block size was based on the geometry of the domain interpretation and the data configuration. The block size of 5 m E by 5 m N by 5 m RL was selected. The "percent" block modelling technique was used to represent the volume of the interpreted wireframe models. Sufficient variables were included in the block model construction to enable grade estimation and reporting.

Resource estimation for the Campbell deposit was undertaken using ordinary kriging ("OK") as the principal estimation methodology for V<sub>2</sub>O<sub>5</sub>. The OK estimates were completed using Gemcom mining software. In 2016, Largo updated mineral resource estimate for the Campbell deposit as a result of depletion of mined resources. This Measured and Indicated resource was used to update the reserve and used for the new mine plan presented in the Technical Report prepared by GE21.

The new block model incorporates percent magnetics (percent of magnetic minerals in the mineralized rock) and magnetite concentrate grade for V<sub>2</sub>O<sub>5</sub> and silicon dioxide ("SiO<sub>2</sub>"). No new drilling was available for the estimate; however, it was adjusted for mining completed to date. The updated Mineral Resources for the Campbell deposit are presented below:

Campbell Mineral Resources – Maracás Menchen Mine					
Effective date: May 2, 2017					
Category	Tonnes (million)	V <sub>2</sub> O <sub>5</sub> head grade (%)	V <sub>2</sub> O <sub>5</sub> contained (kt)	V <sub>2</sub> O <sub>5</sub> in concentrate (%)	Magnetics (%)
Measured (M)	18.08	1.19	215.0	3.19	30.55
Indicated (I)	1.70	1.28	21.7	3.12	34.64
Total M&I	19.78	1.20	236.7	3.19	30.90
Inferred	1.65	1.20	19.8	3.10	33.08

*Resources within a pit shell using \$34.20/t all in operating cost and reported at a 0.45% V<sub>2</sub>O<sub>5</sub> cut-off, reviewed and confirmed by Fabio Valério Xavier (GE21).*

Mineral Reserves have been estimated for the Campbell deposit with an effective date of May 2, 2017. The mine plan developed in the Technical Report is based on Measured and Indicated resources only as delineated in the table above. Reserves are reported using a sales price of \$6.34 per lb of V<sub>2</sub>O<sub>5</sub>. The ultimate pit design and mine plan was done to optimize kiln feed. The open pit Mineral Reserve estimate is based on a mine plan and open pit designs developed using modifying parameters including metal prices, metal recovery based on performance of the processing plant, operating and sustaining capital cost estimates based on the production schedule and equipment requirements. Other factors including; dilution, mining recovery, shipping terms, geotechnical characteristics of the rock mass, and the likelihood of obtaining land title, required permits environmental, social and legal licenses may affect the final Mineral Resources and Reserves.

The Mineral Reserves presented below were estimated by Porfírio Cabaleiro Rodriguez of GE21, who is a qualified person under NI 43-101 and a Member of the Australian Institute of Geoscientists.

Campbell Mineral Reserves – Maracás Menchen Mine  
Block dimensions 5x5x5 (m) – Mine Recovery 100% and Dilution 5%  
Effective date: May 2, 2017

Reserve Category	Tonnage (kt)	V <sub>2</sub> O <sub>5</sub> head grade (%)	Magnetics (%)	V <sub>2</sub> O <sub>5</sub> in concentrate (%)	Contained V <sub>2</sub> O <sub>5</sub> (kt)
Proven	17,570	1.14	29.66	3.21	167.3
Probable	1,440	1.26	33.89	3.20	15.6
Total in pit Reserve	19,010	1.15	29.98	3.21	182.9

Notes to mineral reserve and mineral resource estimates:

1. A probable mineral reserve is the economically mineable part of an indicated mineral resource, and in some circumstances, measured mineral resource.
2. A proven mineral reserve is, in most common circumstances, the economically mineable part of a measured mineral resource.
3. Mineral reserves are included in measured and indicated resources.
4. The reference point at which mineral reserves are defined is the point where the ore is delivered from the open pit to the crushing plant.
5. The mineral resource and mineral reserve estimates are reported in accordance with the National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101) and the CIM Definition Standards on Mineral Resources and Reserves (CIM Definition Standards) as a minimum standard.

The Company also completed a revised block model and updated mineral resource estimate for the Near Mine Targets incorporating the drilling from the 2011 program including 72 holes totalling 13,401 metres. The Near Mine Targets which extend north from Gulçari A for eight kilometres include from south to north: Gulçari A Norte, Gulçari B, São José, Novo Amparo and Novo Amparo Norte. All are hosted in the Rio Jacaré Intrusion.

The Mineral Resources presented in the following table are considered current (subject to the update for Novo Amparo Norte in the following “Recent Developments” section) and do not include any drill results from the 2018 or 2019 drill programs.

Satellite Deposits Mineral Resources  
Effective date: May 2, 2017

Deposits	Category	Tonnes (kt)	V <sub>2</sub> O <sub>5</sub> (%)	Contained V <sub>2</sub> O <sub>5</sub> (t)
Gulçari A Norte**	Inferred	9,730	0.84	81,388
Gulçari B**	Inferred	2,910	0.70	20,312
Novo Amparo**	Inferred	1,560	0.72	11,255
Novo Amparo Norte**	Inferred	9,720	0.87	84,453
São José**	Inferred	3,900	0.89	34,706
Satellite Deposits (Total)**	Inferred	27,820	0.83	232,114

\*\* Resources within a pit shell using \$34.20/t all in operating cost and reported at a 0.45% V<sub>2</sub>O<sub>5</sub> cut-off, reviewed and confirmed by Porfirio Cabaleiro Rodriguez (GE21).

Notes to mineral reserve and mineral resource estimates:

1. Mineral resources within a pit shell using \$34.20/t all in operating cost and reported at a 0.45% V<sub>2</sub>O<sub>5</sub> cut-off, reviewed and confirmed by Fabio Valério Xavier (GE21).
2. Mineral resources are classified as measured, indicated and inferred based on relative levels of confidence in their estimation and on technical and economic parameters consistent with the methods most suitable to their potential commercial exploitation.
3. The mineral resource and mineral reserve estimates are reported in accordance with the National Instrument 43-101 – Standards of Disclosure for Mineral Projects (NI 43-101) and the CIM Definition Standards on Mineral Resources and Reserves (CIM Definition Standards) as a minimum standard.
4. The PEA is preliminary in nature and includes only inferred mineral resources that are considered too speculative geologically to have any economic consideration applied to them that would enable them to be categorized as a mineral reserve. There is no certainty that the PEA will be realized. These results have no impact on the results of any pre-feasibility or feasibility with respect to the Maracás Menchen Mine.

GE21 recommended the Near Mine Targets be developed sequentially as follows: Novo Amparo Norte, Gulçari A Norte & Gulçari B, São José, Campbell in pit resources and Novo Amparo.

The Technical Report prepared by GE21 was designed to allow the Company to more fully optimize operations in order to maximize the Maracás Menchen Mine’s NPV and is based on the production of V<sub>2</sub>O<sub>5</sub> from the Maracás Menchen Mine’s mineral resources as well as from its established mineral reserves. The report does not provide any credit for by-products, however Largo will continue to evaluate the technical and economic viability of all potential by-products. The Technical Report respects the definition of PEA as described in the CSA Staff Notice 43-307 – Mining Technical Report – Preliminary Economic Assessments, issued by the Canadian Securities Administrators on August 16, 2012.

## Qualified Persons

Porfirio Cabaleiro Rodriguez, Mining Engineer, BSc (Mine Eng), MAIG employed by GE21, Leonardo Apparicio da Silva, Mining Engineer, BSc (Min Eng), MSc (Met Eng), MAIG associated to GE21, and Fabio Valerio Xavier, Geologist, BSc, Geol, MAIG associated to GE21, are the Qualified Persons as defined in NI 43-101 responsible for the Technical Report and are all independent of the Company.

## Quality Assurance Quality Control

The scientific and technical information in this reserves and resources section of the MD&A has been reviewed and approved by Porfirio Cabaleiro Rodriguez, Mining Engineer, BSc (Mine Eng), MAIG, GE21 director; Leonardo Apparicio da Silva, Mining Engineer, BSc (Min Eng), MSc (Met Eng), MAIG; and Fabio Valerio Xavier, Geologist, BSc, Geol, MAIG, both employed by GE21, all of whom are Qualified Persons as defined in NI 43-101.

## Recent Developments

The Company completed a two-phase exploration program in 2018. Phase I was a 2,000 metre in-pit drill program designed to further define the reserve block model for production over the next two to three years in the Campbell Pit. This program began in the middle of April 2018 and was completed on May 30, 2018. The in-pit program completed 31 holes totalling 2,323 metres. The data was modelled and used for mine planning and development purposes. Consultants from GE21 assisted in the modelling.

Phase II included a 4,950 metre drilling program focused on upgrading and expanding the Near Mine Targets and along strike high priority targets. Drilling began on June 4, 2018 with two rigs focused at Novo Amparo Norte and the Company completed 24 holes totalling 4,223 metres prior to December 31, 2018. This included 13 infill and 11 step out holes. On December 19, 2018, the Company announced that this program had expanded the mineralization to the north and south at Novo Amparo Norte. Infill drilling was designed to upgrade the resource category at Novo Amparo Norte. Additionally, seven holes were drilled on targets south of the Campbell pit. The drill program was completed on October 23, 2018.

The Company extended the Phase II definition drilling program at Novo Amparo Norte in the first quarter of 2019. Diamond drilling was initiated at Novo Amparo Norte on January 15, 2019. In total, 47 diamond drill holes (5,404 metres) were completed. The work focused on increasing confidence in the resource categories and extending mineralisation at depth and along strike. This program was completed mid-February 2019. On June 11, 2019, the Company reported a new resource estimate for Novo Amparo Norte based on 12,911 metres (88 drill holes) of drilling with an effective date of May 31, 2019.

Novo Amparo Norte Mineral Resources						
Effective date: May 31, 2019						
Category	Tonnes (million)	V <sub>2</sub> O <sub>5</sub> head grade (%)	Magnetics (%)	Magnetic concentrate V <sub>2</sub> O <sub>5</sub> (%)	V <sub>2</sub> O <sub>5</sub> contained in magnetic concentrate (t)	
Measured (M)	6.25	0.91	33.1	2.32	48,046	
Indicated (I)	5.98	0.85	28.1	2.50	41,996	
Total M&I	12.23	0.88	30.7	2.41	90,042	
Inferred	11.33	0.90	31.2	2.46	86,960	

1. Mineral Resources have been classified using the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
2. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to the Measured and Indicated Mineral Resource. It is reasonably expected that a portion of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
3. Magnetic content is determined by Davis Tube Test methodology. V<sub>2</sub>O<sub>5</sub> content of the magnetic concentrate was determined by XRF79C methodology at the SGS facility in Belo Horizonte, Brazil.
4. Assuming only mineralized zones grading 0.45% V<sub>2</sub>O<sub>5</sub> or greater
5. Numbers may not add up exactly due to rounding.

In Q2 2019 exploration work shifted to the Novo Amparo deposit where 4,646 metres (24 drill holes) of drilling were completed. Drilling was also completed at the São José deposit where 2,813 metres (18 drill holes) of drilling were completed. Further drilling was carried out on the Gulçari A Norte and Gulçari B (now considered as one target – "Gulçari A Norte"). Drilling on all targets focused on extending and upgrading known mineralization as defined in the

2017 Technical Report. The Company also completed 1,177 metres of drilling (three holes) neat the Campbell Pit to explore for target horizons down dip and along strike of the current reserve area.

In Q4 2019 work focused primarily on the Gulçari A South target where 2,313 metres (16 drill holes) were completed.

Based on all diamond drilling across the Near Mine Targets, a new geological interpretation of the Rio Jacaré intrusion was formulated that has helped the Company to better understand the intrusive complex and improve drilling targeting and interpretation of mineralized zones. Diamond drilling was completed in early December 2019 and all analytical data has now been received.

After delays experienced in early 2020 due to the COVID-19 pandemic, exploration drilling was ramped up and 14,133 metres of drilling (80 holes) was completed in Q3 2020. Drilling focused on definition drilling at Novo Amparo Norte, Gulçari A Norte and additional drilling at the Campbell Pit.

In Q4 2020 the Company completed drilling at Novo Amparo Norte and Gulçari A Norte and continued its definition drill program focusing on São José (2,475 metres in 15 holes) and Novo Amparo (2,261 metres in 14 holes). In total in Q4 2020, the Company drilled 10,638 metres in 60 diamond drill holes. The Company initiated drilling at the Campbell Pit and drilled one condemnation hole within the new waste pile area. During 2020 the Company completed 24,771 metres in 125 holes, including 8,188 metres (32 holes) at Novo Amparo Norte, 6,898 metres (45 holes) at Gulçari A Norte, 2,475 metres (15 holes) at São José, 2,261 metres (14 holes) at Novo Amparo, 4,761 metres (19 holes) at the Campbell Pit and one condemnation hole (188 metres). 2020 drilling was completed on December 17<sup>th</sup>, 2020.

### Outlook

The Company has developed an Exploration Master Plan ("EMP") for 2019 to 2021 to advance known deposits, increase resources and reserves, further evaluate the potential for along strike continuation of the vanadium rich magnetite mineralization and to maintain the Company's mineral concessions to the north and south of the Campbell deposit. The EMP includes ground magnetic surveys, mapping, sampling, soil sampling, drilling and modelling of deposits on the mineral concessions. Where required, landowners are being contacted for permission to access their lands to perform exploration work. In addition, necessary permits for vegetation suppression are in process and upon receipt, the Company will continue with its planned exploration program.

The Company is currently reviewing this plan and updating it to reflect the work completed to date and new targets generated by the exploration work.

The Company has planned for 10,000 metres of drilling in 2021, focusing on the Campbell Pit and areas requiring work to maintain the concessions in good standing in accordance with the applicable rules and regulations in Brazil. Work on the Campbell Pit will focus on drilling to aid in developing a short-term block model to inform the mining process and also to complete drilling on down dip targets previously identified. Exploration on the South Block will include a soil geochemistry sampling survey to identify areas of anomalous mineralisation associated with known magnetic anomalies to further refine exploration targeting.

## Campo Alegre de Lourdes

### Recent Developments

The Company completed a 1,200-metre drilling program in December 2018 and has finalized the geological and structural mapping needed to satisfy the Company's contractual requirements and to develop the Company's knowledge of mineralization.

In Q3 2019, a limited drill program was completed at the Morro Branca target at the Campo Alegre de Lourdes project. From July 5 to August 5, 2019 the Company completed six diamond drill holes (1,016 metres) to test down dip extension of mineralisation and to collect material for additional metallurgical testing at the Morro Branca target. Internal studies to determine potential recovery of both V<sub>2</sub>O<sub>5</sub> and titanium dioxide ("TiO<sub>2</sub>") from the vanadiferous titanomagnetite ("VTM") mineralisation are being complimented with additional work currently underway at SGS Lakefield's facility in Canada. This metallurgical testing continues and is being supplemented through the Company's internal work. The agreement with Companhia Baiana de Pesquisa Mineral ("CBPM") expired on January 11, 2020. Prior to expiration the Company met with CBPM representatives and agreed to extend the Research Agreement for an additional two years to allow the Company to continue to evaluate the geological and economic potential of the project and the renewed agreement now extends the working relationship to January 11, 2022.



During Q4 2020, the Company incurred \$nil in expenditures (Q4 2019 – \$nil) at the Campo Alegre de Lourdes project and in 2020, the Company incurred \$57 in expenditures (2019 – \$285).

#### Outlook

Metallurgical work planned in 2020 was delayed due to the COVID-19 pandemic. The Company will look to complete this testing in 2021 and develop and exploration program based on these, and other technical results.

#### Northern Dancer

##### Recent Developments

Management is not conducting any further work at this time on the Northern Dancer property, as the majority of the Company's efforts are focused on the Maracás Menchen Mine.

During Q4 2020, the Company incurred \$2 in expenditures (Q4 2019 – \$2) at the Northern Dancer project and in 2020, the Company incurred \$7 in expenditures (2019 – \$8).

#### Outlook

Management is not planning any significant expenditures for the foreseeable future. The Company was issued with an amended Inspector's Direction for reclamation work with respect to historic drill roads and drill sites on the property. Due to COVID-19 restrictions for travel and work as defined by the Yukon Territory government, the time frame to complete this work was extended to July 1, 2021. The Company is in the process of assessing the Inspector's Direction and developing an action plan to resolve the outstanding issues.

#### Currais Novos Tungsten Tailings Project

##### Recent Developments

Management is not conducting any work at this time on the Currais Novos Tungsten Tailings Project, as the majority of the Company's efforts are focused on the Maracás Menchen Mine.

#### Outlook

Management is not planning any significant expenditures for the foreseeable future.

## FINANCIAL INSTRUMENTS

Financial assets and financial liabilities at December 31, 2020 and 2019 were as follows:

	December 31, 2020	December 31, 2019
Cash	\$ 79,145	\$ 127,499
Restricted cash	-	76
Amounts receivable	13,791	189
Accounts payable and accrued liabilities	15,968	77,741
Debt	24,788	-

The Company's risk exposures and the impact on the Company's financial instruments are summarized in note 22. There have been no changes in the risks, objectives, policies and procedures from the previous year.

## LIQUIDITY AND CAPITAL RESOURCES

The Company's continuance as a going concern is dependent on its ability to maintain profitable levels of operations.

At December 31, 2019, the price per lb of V<sub>2</sub>O<sub>5</sub> was between \$4.80 and \$5.85. This increased to a range of between \$5.30 and \$5.50 at December 31, 2020, with an average of approximately \$5.29 for Q4 2020, compared with approximately \$5.37 for Q4 2019, \$6.07 for Q1 2020, \$6.14 for Q2 2020 and \$5.33 for Q3 2020.

The average price per lb of V<sub>2</sub>O<sub>5</sub> was approximately \$6.01 for January 2021. At the date of the MD&A, the market price of V<sub>2</sub>O<sub>5</sub> was in a range of \$8.00 to \$8.65 per lb.

The Company is continuing to monitor the rapidly developing impacts of the COVID-19 pandemic and will take all possible actions to help minimize the impact on the Company and its people.

The adequacy of the Company's capital structure is assessed on an ongoing basis and adjusted as necessary after taking into consideration the Company's strategy, vanadium prices, economic conditions and associated risks. To maintain or adjust its capital structure, the Company may adjust capital expenditures, issue new common shares or take on new debt. At December 31, 2020, the Company's debt balance was \$24,788 as a result of the two credit facilities as described below and in note 12. On February 3, 2021, the Company completed the settlement of the outstanding credit facilities as described below and in note 25.

#### Credit facilities

On March 18, 2020, the Company secured a \$13,000 credit facility with a bank in Brazil. This facility was fully drawn down and proceeds of R\$65,980 (\$13,000) were received on March 20, 2020. This facility is due to be repaid as a lump sum payment on March 12, 2021, together with accrued interest at a rate of 3.35% per annum.

On March 24, 2020 the Company secured a \$11,788 credit facility with a second bank in Brazil. This facility was fully drawn down and proceeds of R\$60,000 (\$11,788) were received on March 24, 2020. This facility is due to be repaid as a lump sum payment on March 18, 2021, together with accrued interest at a rate of 6.29% per annum.

On February 3, 2021, the Company completed the settlement of the outstanding credit facilities through the repayment in full of the outstanding principal amount of \$24,788. Interest of \$891 and a break fee of \$74 were also paid as part of the settlement.

#### Maracás Menchen Mine

The Company's vanadium production commenced during August 2014, with the first sale of V<sub>2</sub>O<sub>5</sub> flake concluded during September 2014. Since this time, the Company has continued to further ramp up the production and sales of V<sub>2</sub>O<sub>5</sub>, as described in the "Maracás Menchen Mine" section above. In connection with the ramp-up, the Company has also evaluated its future financial requirements, including inter alia its sustaining capital and working capital needs for the next 12 months.

At December 31, 2020, the Company had an accumulated deficit of \$71,903 since inception (December 31, 2019 – \$78,870) and had a net working capital surplus of \$92,950 (December 31, 2019 – \$78,380) (defined as current assets less current liabilities). At December 31, 2020, the total amount due within 12 months on the Company's debt was \$24,788 (December 31, 2019 – \$nil). The debt was repaid in full on February 3, 2021 as noted above and in note 25.

The following table details the Company's expected remaining contractual cash flow requirements at December 31, 2020 for its liabilities and commitments with agreed repayment periods. The amounts presented are based on the undiscounted cash flows and therefore, may not equate to the carrying amounts on the consolidated statement of financial position.

	Less than 6 months	6 months to 1 year	1 to 3 years	Over 3 years
Accounts payable and accrued liabilities	\$ 15,968	\$ -	\$ -	\$ -
Debt	24,788	-	-	-
Operating and purchase commitments	12,296	1,370	324	-
	\$ 53,052	\$ 1,370	\$ 324	\$ -

The Company's principal sources of liquidity are its cash flow from operating activities and cash of \$79,145 (December 31, 2019 – \$127,499). In response to the vanadium price decreases throughout 2019, the Company has adopted certain measures to manage its liquidity risk including repaying its Notes during the year ended December 31, 2019, securing two new credit facilities in Q1 2020 and completing the settlement of these facilities in February 2021. Despite these measures, and in conjunction with the current vanadium price environment, a risk exists that the Company will not have sufficient liquidity to meet its obligations as they come due. At December 31, 2020, the Company's trade receivables balance was \$13,749, with the trade receivable with the Company's former off-take partner in a liability position of \$32 and classified as trade payables within accounts payable and accrued liabilities (refer to notes 11 and 22(a)) (December 31, 2019 – \$67,325).

## OUTSTANDING SHARE DATA

(Exercise prices presented in this section are in Canadian dollars and also not thousands).

At December 31, 2020, there were 587,789 common shares of the Company outstanding. At the date of this MD&A, there were 64,505 common shares of the Company outstanding (after giving effect for the share consolidation completed on March 4, 2021).

At December 31, 2020, under the share compensation plan of the Company, 2,256 RSUs were outstanding and 5,882 stock options were outstanding with exercise prices ranging from C\$0.46 to C\$3.04 and expiry dates ranging between September 16, 2021 and March 24, 2025. If exercised, the Company would receive proceeds of C\$4,862. The weighted average exercise price of the stock options outstanding is C\$0.83.

As of the date of this MD&A, 205 RSUs and 574 stock options were outstanding with exercise prices ranging from C\$4.60 to C\$30.40 and expiry dates ranging between September 16, 2021 and March 24, 2025 (after giving effect for the share consolidation completed on March 4, 2021).

At December 31, 2020, 83,659 common share purchase warrants were outstanding with exercise prices ranging from C\$0.29 to C\$1.30 and expiring between January 28, 2021 and December 8, 2025. If these warrants were exercised, the Company would receive proceeds of C\$40,788. The weighted average exercise price of the warrants is C\$0.49.

As of the date of this MD&A, 1,859 common share purchase warrants were outstanding with exercise prices ranging from C\$11.50 to C\$13.00 and expiring between December 1, 2022 and December 8, 2025 (after giving effect for the share consolidation completed on March 4, 2021).

## TRANSACTIONS WITH RELATED PARTIES

The 2020 annual consolidated financial statements include the financial statements of the Company and its subsidiaries. There have been no changes in the Company's ownership interests in its subsidiaries since December 31, 2019, with the addition of one new subsidiary as shown in note 4(a). The Company had transactions with related parties during 2020. Refer to note 18.

Additional information regarding the compensation of officers and directors of the Company is disclosed in the Company's management information circular, which is available under the profile of the Company on SEDAR at [www.sedar.com](http://www.sedar.com).

## COMMITMENTS AND CONTINGENCIES

At December 31, 2020, the Company was party to certain management and consulting contracts. Minimum commitments under the agreements are approximately \$2,455 and all payable within one year. These contracts also require that additional payments of up to approximately \$3,682 be made upon the occurrence of certain events such as change of control. As the triggering event has not occurred, the contingent payments have not been reflected in these consolidated financial statements.

In 2008, Largo agreed to sell 100% of its vanadium production under an off-take agreement which, following the election by the Company, expired at the end of April 2020. The Company has entered into a number of contracts with third party customers to deliver monthly quantities of the Company's vanadium products. A significant proportion of the Company's monthly vanadium production in 2021 has been committed.

The Company's mining and exploration activities are subject to various federal, provincial and international laws and regulations governing the protection of the environment. These laws and regulations are continually changing and generally becoming more restrictive. The Company has made payments to comply with such laws and regulations.

The Company indemnifies its directors and officers against any and all claims or losses reasonably incurred in the performance of their service to the Company to the extent permitted by law. The Company has acquired and maintains liability insurance for its directors and officers.

The Company is committed to a minimum amount of rental payments under five leases of office space which expire between October 31, 2021 and December 31, 2023. Minimum rental commitments remaining under the leases are approximately \$598, including \$277 due within one year. In addition, minimum rental commitments remaining under other short-term leases are approximately \$12, all due within one year.

At the Company's Maracás Menchen Mine, the Company has entered into purchase order contracts with remaining amounts due related to goods not received or services not rendered as of December 31, 2020 of \$10,925.

The Company, through its subsidiaries, is party to legal proceedings in the ordinary course of its operations related to legally binding agreements with various third parties under supply contracts and consulting agreements. At December 31, 2020 two such proceedings were ongoing, each in Brazil. The first relates to a supply agreement for the Maracás Menchen Mine which was filed with the courts in October 2014. The amount claimed totals R\$9,900 (\$1,905), with a counterclaim filed by Vanádio for R\$10,700 (\$2,059). A provision of R\$1,281 (\$247) has been recognized at December 31, 2020 for the probable loss (December 31, 2019 – R\$1,324 (\$329)). The second proceeding relates to a consulting agreement dispute for which R\$3,900 (\$750) (December 31, 2019 – R\$3,900 (\$968)) has been claimed against two of the Company's subsidiaries. No provision has been recognized for this proceeding. The Company and its subsidiaries are also party to legal proceedings regarding labour matters. A provision was recorded at December 31, 2019 for such proceedings in an amount of R\$3,468 (\$860). At December 31, 2020, the provision recognized was R\$3,538 (\$681). The outcome of these proceedings remains dependent on the final judgment, which the Company does not expect to be delivered within the next 12 months. Management does not expect the outcome of any of the remaining proceedings to have a materially adverse effect on the results of the Company's financial position or results of operations. Should any losses result from the resolution of these claims and disputes, they will be charged to operations in the period that they are determined.

## DISCLOSURE CONTROLS AND PROCEDURES AND INTERNAL CONTROLS OVER FINANCIAL REPORTING

### Disclosure Controls and Procedures

The Company's disclosure controls and procedures ("DC&P") are designed to provide reasonable assurance that all relevant information is communicated to management to allow timely decisions regarding required disclosure. An evaluation of the effectiveness of the Company's DC&P, as defined under the rules of the Canadian Securities Administration, was conducted as at December 31, 2020 under the supervision of the Chief Executive Officer ("CEO") and the Chief Financial Officer ("CFO") and with the participation of management. Based on the results of that evaluation, the CEO and CFO concluded that the Company's DC&P were effective as at December 31, 2020 providing reasonable assurance that the information required to be disclosed in the Company's annual filings, interim filings or other reports filed or submitted by it under securities legislation is recorded, processed, summarized and reported in accordance with securities legislation.

### Internal Control over Financial Reporting

Internal control over financial reporting ("ICFR") is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. ICFR should include those policies and procedures that establish the following:

- maintenance of records in reasonable detail, that accurately and fairly reflect the transactions and dispositions of assets;
- reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with applicable IFRS;
- receipts and expenditures are only being made in accordance with authorizations of management or the Board of Directors; and
- reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial instruments.

The Company's management, under supervision of the CEO and CFO, assessed the effectiveness of the Company's ICFR based on the criteria established in Internal Control – Integrated Framework (2013) issued by The Committee of Sponsoring Organizations of the Treadway Commission and concluded that as at December 31, 2020, the Company's ICFR was effective.

During the year ended December 31, 2020, the Company did not make any significant changes to its ICFR that would have materially affected, or reasonably likely to materially affect, its ICFR.

#### Limitations of Disclosure Controls and Procedures and Internal Control over Financial Reporting

The Company's management, including the CEO and CFO, believe that due to inherent limitations, any DC&P or ICFR, no matter how well designed and operated, can provide only reasonable, not absolute, assurance of achieving the desired control objectives. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that any design will not succeed in achieving its stated goals under all potential future conditions. Accordingly, because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. Additionally, management is required to use judgment in evaluating DC&P and ICFR.

## SIGNIFICANT ACCOUNTING JUDGMENTS, ESTIMATES AND ASSUMPTIONS

The preparation of the 2020 annual consolidated financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and reported amounts of expenses during the reporting period. Actual outcomes could differ from these estimates. These 2020 annual consolidated financial statements include estimates, which, by their nature, are uncertain. The impacts of such estimates are pervasive throughout the unaudited condensed interim consolidated financial statements and may require accounting adjustments based on future occurrences. Revisions to accounting estimates are recognized in the period in which the estimate is revised, and the revision affects both current and future periods.

Significant areas requiring the use of estimates and assumptions relate to the determination of mineral reserve estimates and the impact on stripping costs, useful lives of mine properties, plant and equipment, impairment analysis of non-financial assets, estimates of the timing of outlays for asset retirement obligations and the determination of functional currencies. Other significant areas include the valuation of mine properties, plant and equipment and development properties, estimates of provisions for environmental rehabilitation, current and deferred taxes and contingencies. Refer to note 4(d) for a detailed description of these areas of significant judgment, estimates and assumptions. Actual results could differ from those estimates.

## CHANGES IN ACCOUNTING POLICIES

The basis of presentation, and accounting policies and methods of their application in the 2020 annual consolidated financial statements are consistent with those used in the Company's annual consolidated financial statements for the year ended December 31, 2019, except as disclosed in note 3, which describes the change in functional and presentation currencies.

## NON-GAAP<sup>2</sup> MEASURES

The Company uses certain non-GAAP financial performance measures in its MD&A, which are described in the following section.

### Revenues Per Pound

The Company's MD&A refers to revenues per pound sold, a non-GAAP performance measure that is used to provide investors with information about a key measure used by management to monitor performance of the Company.

This measure, along with cash operating costs and total cash costs, is considered to be one of the key indicators of the Company's ability to generate operating earnings and cash flow from its Maracás Menchen Mine and sales activities. This revenues per pound measure does not have any standardized meaning prescribed by IFRS and differs from measures determined in accordance with IFRS. This measure is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in

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<sup>2</sup> GAAP – Generally Accepted Accounting Principles.

accordance with IFRS. This measure is not necessarily indicative of net earnings or cash flow from operating activities as determined under IFRS.

The following table provides a reconciliation of this measure per pound sold to revenues as per the 2020 annual consolidated financial statements.

	Three months ended		Year ended	
	December 31, 2020	December 31, 2019	December 31, 2020	December 31, 2019
Revenues <sup>1</sup>	\$ 42,254	\$ 25,808	\$ 119,987	\$ 105,107
V <sub>2</sub> O <sub>5</sub> equivalent sold (000s lb)	8,259	6,305	22,606	22,399
Revenues per pound sold (\$/lb)	\$ 5.12	\$ 4.09	\$ 5.31	\$ 4.69

1. Year ended as per note 23.

Three months ended calculated as the amount per note 23 less the amount disclosed for the nine-month periods in note 21 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020 and 2019: \$119,987 - \$77,733 = \$42,254 and \$105,107 - \$79,299 = \$25,808.

### Cash Operating Costs Per Pound

The Company's MD&A refers to cash operating costs per pound, a non-GAAP performance measure, in order to provide investors with information about a key measure used by management to monitor performance. This information is used to assess how well the Maracás Menchen Mine is performing compared to plan and prior periods, and also to assess its overall effectiveness and efficiency.

Cash operating costs includes mine site operating costs such as mining costs, plant and maintenance costs, sustainability costs, mine and plant administration costs, royalties and sales, general and administrative costs (all for the Mine properties segment), but excludes depreciation and amortization, share-based payments, foreign exchange gains or losses, commissions, reclamation, capital expenditures and exploration and evaluation costs. Operating costs not attributable to the Mine properties segment are also excluded, including conversion costs, product acquisition costs, distribution costs, and inventory write-downs. These costs are then divided by the pounds of vanadium sold that were produced by the Maracás Menchen Mine to arrive at the cash operating costs per pound. Prior to 2020, these costs were divided by the pounds of production from the Maracás Menchen Mine, rather than pounds sold. These periods have been recalculated using produced pounds sold in the following table. This measure differs to the new total cash costs non-GAAP measure the Company uses to measure its overall performance (see later in this section).

These measures, along with revenues, are considered to be one of the key indicators of the Company's ability to generate operating earnings and cash flow from its Maracás Menchen Mine. These cash operating costs measures do not have any standardized meaning prescribed by IFRS and differ from measures determined in accordance with IFRS. These measures are intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. These measures are not necessarily indicative of net earnings or cash flow from operating activities as determined under IFRS.

In addition, the Company's MD&A refers to cash operating costs excluding royalties. This is a non-GAAP performance measure and is calculated as cash operating costs less royalties, as disclosed in the following table.

The following table provides a reconciliation of cash operating costs per pound for the Maracás Menchen Mine to operating costs as per the 2020 annual consolidated financial statements.

	Three months ended		Year ended	
	December 31, 2020	December 31, 2019	December 31, 2020	December 31, 2019
Operating costs <sup>1</sup>	\$ 31,604	\$ 22,679	\$ 88,390	\$ 92,950
Professional, consulting and management fees <sup>2</sup>	963	1,045	3,086	4,513
Other general and administrative expenses <sup>3</sup>	514	257	1,669	859
Less: conversion costs <sup>4</sup>	(1,330)	-	(1,976)	-
Less: product acquisition costs <sup>5</sup>	(2,965)	-	(10,459)	-
Less: distribution costs <sup>6</sup>	(1,029)	-	(2,269)	-
Less: inventory write-down <sup>7</sup>	-	-	(3)	-
Less: depreciation and amortization expense <sup>8</sup>	(5,728)	(6,085)	(17,473)	(23,847)
Cash operating costs	22,029	17,896	60,965	74,475
Less: royalties <sup>9</sup>	(1,958)	(1,496)	(7,107)	(5,947)
Cash operating costs excluding royalties	20,071	16,400	53,858	68,528
Produced V <sub>2</sub> O <sub>5</sub> sold (000s lb) <sup>10</sup>	7,831	6,305	21,027	22,399
Cash operating costs per pound (\$/lb) <sup>10</sup>	\$ 2.81	\$ 2.84	\$ 2.90	\$ 3.32
Cash operating costs excluding royalties per pound (\$/lb) <sup>10</sup>	\$ 2.56	\$ 2.60	\$ 2.56	\$ 3.06

- Year ended as per note 24.  
Three months ended calculated as the amount per note 24 less the amount disclosed for the nine-month periods in note 22 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020 and 2019: \$88,390 – \$56,786 = \$31,604 and \$92,950 – \$70,271 = \$22,679.
- Year ended as per the Mine properties segment in note 19.  
Three months ended calculated as the amount for the Company's Mine properties segment in note 19, less the amount disclosed for the Mine properties segment for the nine-month periods in note 18 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020 and 2019: \$3,086 – \$2,123 = \$963 and \$4,513 – \$3,468 = \$1,045.
- Year ended as per the Mine properties segment in note 19.  
Three months ended calculated as the amount for the Company's Mine properties segment in note 19, less the amount disclosed for the Mine properties segment for the nine-month periods in note 18 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020 and 2019: \$1,669 – \$1,155 = \$514 and \$859 – \$602 = \$257.
- As per note 24.
- Year ended as per note 24.  
Three months ended calculated as the amount per note 24 less the amount disclosed for the nine-month period in note 22 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020 adjusted for inventory write-down now recognized in product acquisition costs: \$10,459 – \$7,180 – (\$317 – \$3) = \$2,965.
- Year ended as per note 24.  
Three months ended calculated as the amount per note 24 less the amount disclosed for the nine-month period in note 22 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020: \$2,269 – \$1,240 = \$1,029.
- As per note 6.
- Year ended as per note 24.  
Three months ended calculated as the amount per note 24 less the amount disclosed for the nine-month periods in note 22 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020 and 2019: \$17,473 – \$11,745 = \$5,728 and \$23,847 – \$17,762 = \$6,085.
- Year ended as per note 24.  
Three months ended calculated as the amount per note 24 less the amount disclosed for the nine-month periods in note 22 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020 and 2019: \$7,107 – \$5,149 = \$1,958 and \$5,947 – \$4,451 = \$1,496.
- Cash operating costs per pound and cash operating costs excluding royalties per pound for Q4 2019 and 2019 were previously calculated and presented on a pounds produced basis (V<sub>2</sub>O<sub>5</sub> produced (000s lb) = 6,638 and 23,318, respectively; V<sub>2</sub>O<sub>5</sub> sold (000s lb) = 6,305 and 22,399, respectively). These measures have been calculated and presented on a pounds sold basis in this MD&A.

## Total Cash Costs

The Company's MD&A refers to total cash costs, a non-GAAP performance measure, in order to provide investors with information about a key measure used by management to monitor performance. This information is used to assess how well the Company is performing at producing and selling vanadium products compared to plan and prior periods, and also to assess its overall effectiveness and efficiency.

Total cash costs are a non-GAAP performance measure that includes all operating costs, sales and distribution costs and the Company's total professional, consulting and management fees and other general and administrative expenses. Total cash costs exclude royalties, depreciation and amortization, share-based payments, foreign exchange gains or losses, commissions, reclamation costs, exploration and evaluation costs

and capital expenditures. These costs are then divided by the total pounds of vanadium sold by the Company to arrive at total cash costs.

This measure differs from cash operating costs per pound in that it includes all operating costs, sales and distribution costs, professional, consulting and management fees and other general and administrative expenses, rather than just those costs from the Mine properties segment, and is calculated on total V<sub>2</sub>O<sub>5</sub> equivalent pounds sold rather than pounds sold that were produced by the Maracás Menchen Mine. The Company believes this will be a more accurate reflection of its all-in unit costs.

This total cash costs measure does not have any standardized meaning prescribed by IFRS and differs from measures determined in accordance with IFRS. This measure is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. This measure is not necessarily indicative of net earnings or cash flow from operating activities as determined under IFRS.

The following table provides a reconciliation of total cash costs to operating costs as per the 2020 annual consolidated financial statements.

	Three months ended December 31, 2020	Year ended December 31, 2020
Operating costs <sup>1</sup>	\$ 31,604	\$ 88,390
Professional, consulting and management fees <sup>2</sup>	3,229	8,255
Other general and administrative expenses <sup>2</sup>	1,027	3,329
Less: depreciation and amortization expense <sup>3</sup>	(5,728)	(17,473)
Less: royalties <sup>4</sup>	(1,958)	(7,107)
	\$ 28,174	\$ 75,394
V <sub>2</sub> O <sub>5</sub> equivalent sold (000s lb)	8,259	22,606
Total cash costs (\$/lb)	\$ 3.41	\$ 3.34

1. Year ended as per note 24.

Three months ended calculated as the amount per note 24 less the amount disclosed for the nine-month period in note 22 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020: \$88,390 – \$56,786 = \$31,604.

2. As per the consolidated statements of income (loss) and comprehensive income (loss).

3. Year ended as per note 24.

Three months ended calculated as the amount per note 24 less the amount disclosed for the nine-month period in note 22 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020: \$17,473 – \$11,745 = \$5,728.

4. Year ended as per note 24.

Three months ended calculated as the amount per note 24 less the amount disclosed for the nine-month period in note 22 of the Company's unaudited condensed interim consolidated financial statements for the three and nine months ended September 30, 2020: \$7,107 – \$5,149 = \$1,958.

## RISKS AND UNCERTAINTIES

The Company is subject to various business, financial and operational risks that could materially adversely affect the Company's future business, operations and financial condition. These risks could cause such future business, operations and financial condition to differ materially from the forward-looking statements and information contained in this MD&A and as described in the Cautionary Statement Regarding Forward-Looking Information found in this MD&A.

The Company's business activities expose it to significant risks due to the nature of mining, development and exploration activities. The ability to manage these risks is a key component of the Company's business strategy. Management is forward looking in its assessment of risks. Identification of key risks occurs in the course of business activities, pursuing approved strategies and as part of the execution of risk oversight responsibilities at the management and Board of Directors' level.

For a full discussion of the Company's Risks and Uncertainties, please refer to the Annual Information Form for the year ended December 31, 2020, which is filed to the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).



## CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

The information presented in this MD&A contains “forward-looking information” and “forward-looking statements” within the meaning of applicable Canadian and United States securities laws concerning the Company’s projects, capital, anticipated financial performance, business prospects and strategies and other general matters. These statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those included in the forward-looking information. The use of words such as “intend”, “anticipate”, “continue”, “estimate”, “expect”, “may”, “will”, “project”, “should”, “believe” and similar expressions are intended to identify forward-looking information. Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions or future events or performance are not statements of historical fact and may constitute forward-looking information. Statements relating to mineral resources are also forward-looking information, as they involve the implied assessment, based on certain estimates and assumptions that the mineral resources described can be profitably produced in the future. There is no certainty that it will be commercially viable to produce any portion of the mineral resources.

Forward-looking information includes statements with respect to: the Company’s goals regarding development of its projects and further exploration and development of its properties; the Company’s proposed plans for advancing its projects, and potential future exploration and development projects; expectations regarding the continuity of mineral deposits; future prices of  $V_2O_5$ ; future production at our Maracás Menchen Mine; the extent and overall impact of the COVID-19 pandemic; the results in the Technical Report including resource estimates; expectations regarding any environmental issues that may affect planned or future exploration and development programs and the potential impact of complying with existing and proposed environmental laws and regulations; receipt and timing of third party approvals; government regulation of mineral exploration and development operations in Brazil; expectations regarding any social or local community issues in Brazil that may affect planned or future exploration and development programs; and statements in respect of  $V_2O_5$  demand and supply. These statements and information are only predictions based on current information and knowledge, some of which may be attributed to third party industry sources. Actual future events or results may differ materially. Undue reliance should not be placed on such forward-looking information, as there can be no assurance that the plans, intentions or expectations upon which they are based will occur. By its nature, forward-looking information involves numerous assumptions, known and unknown risks and uncertainties, both general and specific, that contribute to the possibility that the predictions, forecasts, projections and other forward-looking information will not be realized.

The following are some of the assumptions upon which forward-looking information is based: that general business and economic conditions will not change in a material adverse manner; demand for, and stable or improving price of  $V_2O_5$ ; receipt of regulatory and governmental approvals, permits and renewals in a timely manner; that the Company will not experience any material accident, labour dispute or failure of plant or equipment or other material disruption in the Company’s operations at the Maracás Menchen Mine; the availability of financing for operations and development; the Company’s ability to procure equipment and operating supplies in sufficient quantities and on a timely basis; that planned expansion at the Maracás Menchen Mine will be completed in budget and in a reasonable timeframe and that the results of such expansion will be sufficient to expand the existing resources consistent with management’s expectations; that the estimates of the resources and reserves at the Maracás Menchen Mine are within reasonable bounds of accuracy (including with respect to size, grade and recovery); that the Company’s current expansion of development programs and objectives can be achieved; the Company’s ability to attract and retain skilled personnel and directors; and the accuracy of the Company’s mineral resource estimates (including size, grade and recoverability) and the geological, operational and price assumptions on which these are based.

Actual results could differ materially from those anticipated in this forward-looking information as a result of the risks and uncertainties including, without limitation: volatility in prices of, and demand for,  $V_2O_5$ ; risks inherent in mineral exploration and development; uncertainties associated with estimating mineral resources; uncertainties related to title to the Company’s mineral projects; revocation of government approvals; tightening of the credit markets, global economic uncertainty and counterparty risk; failure of plant, equipment or processes to operate as anticipated; unexpected events and delays during construction and development; competition for, among other things, capital and skilled personnel; geological, technical and drilling problems; fluctuations in foreign

exchange or interest rates and stock market volatility; rising costs of labour and equipment; risks associated with political and/or economic instability in Brazil; inherent uncertainties involved in the legal dispute resolution process, including in foreign jurisdictions; changes in income tax and other laws of foreign jurisdictions; and other factors discussed under “Risk Factors” in the Company’s Annual Information Form for the year ended December 31, 2019 which is filed to the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com), and any additional risks as included in “Risks and Uncertainties” above. Assumptions relating to the potential mineralization of the Maracás Menchen Mine are discussed in the Technical Report which is available under the Company’s profile on SEDAR.

Additional risks and uncertainties not currently known to the Company, or that the Company currently deems to be immaterial, may also materially and adversely affect the Company’s business and prospects. Should one or more of these risks and uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in forward-looking information. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. The reader is cautioned not to place undue reliance on forward-looking information.

The forward-looking information is presented in this MD&A for the purpose of assisting investors in understanding the Company’s plans, objectives and expectations in making an investment decision and may not be appropriate for other purposes. This forward-looking information is expressly qualified in its entirety by this cautionary statement. Forward-looking information contained in this MD&A or documents incorporated herein by reference are made as of the date hereof or the document incorporated herein by reference, as applicable, and are accordingly subject to change after such date. The Company disclaims any obligation to update any such forward-looking information to reflect events or circumstances after the date of such information, or to reflect the occurrence of anticipated or unanticipated events, except as required by law.

The information presented contains “forward-looking statements”, within the meaning of the United States Private Securities Litigation Reform Act of 1995, and “forward-looking information” under similar Canadian legislation, concerning the business, operations and financial performance and condition of the Company. Forward-looking statements and forward-looking information include, but are not limited to, statements with respect to the estimation of mineral reserves and mineral resources; the realization of mineral reserve estimates; the timing and amount of estimated future production; costs of production; metal prices and demand for materials; capital expenditures; success of exploration and development activities; permitting time lines and permitting, mining or processing issues; government regulation of mining operations; environmental risks; and title disputes or claims. Generally, forward-looking statements and forward-looking information can be identified by the use of forward-looking terminology such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “guidance”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate”, or “believes”, or variations of such words and phrases or state that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved”. Certain terms appearing in the following table are defined previously in this MD&A. This table contains the material forward-looking statements made by the Company in this MD&A, the assumptions made by the Company in making those statements and the risk factors associated with those assumptions.

Forward-looking Statements	Assumptions	Risk Factors
The 2020 annual consolidated financial statements were prepared on a going concern basis. The going concern basis assumes that the Company will continue in operation for the foreseeable future and will be able to realize	The Company has assumed that it will be able to continue in operation for the foreseeable future and will be able to discharge its liabilities and commitments in the normal course of business, as it anticipates	The Company’s continuance as a going concern is dependent on its ability to maintain profitable levels of operations.  The adequacy of the Company’s capital structure is assessed on an ongoing basis and adjusted as necessary after taking into consideration the Company’s strategy, vanadium prices, economic conditions and associated risks. To maintain or adjust its capital structure, the Company may adjust capital

Forward-looking Statements	Assumptions	Risk Factors
its assets and discharge its liabilities and commitments in the normal course of business.	that it will address working capital and other shortfalls through positive cash flow from operations.	expenditures, issue new common shares or take on new debt. At the date of this MD&A, the Company's debt balance was \$nil as a result of the repayment subsequent to 2020 (note 25).
Production volumes are expected to achieve the expanded nameplate capacity of 1,100 tonnes per month during 2021.	The Company assumes that consistent production levels will reach a level of or in excess of 1,100 tonnes per month beginning in Q2 2021.	The Company prepares future production estimates with respect to existing operations.  Actual production and costs may vary from the estimates for a variety of reasons such as estimates of grade, tonnage, dilution and metallurgical and other characteristics of the ore varying from the actual ore mined, revisions to mine plans, risks and hazards associated with mining, adverse weather conditions, unexpected labour shortages or strikes, equipment or design failures and other interruptions in production.  Production costs may also be affected by increased mining costs, variations in predicted grades of the deposits, increases in level of ore impurities, labour costs, raw material costs, inflation and fluctuations in currency exchange rates. Failure to achieve production targets or cost estimates could have a material adverse impact on the Company's sales, profitability, cash flow and overall financial performance.  In the event that the Company obtains debt financing, repayment terms associated with such financing will likely be based, among other things, on production schedule estimates. Any failure to meet such timelines or to produce amounts forecast may constitute defaults under such debt financing, which could result in the Company having to repay loans.
2021 Production Guidance: 12,000 – 12,500 tonnes		
2021 Costs Guidance:  Cash operating costs excluding royalties <sup>1</sup> \$3.10 – 3.30  Total cash costs <sup>1</sup> \$3.50 – 3.70	The Company assumes that its current estimation of future operating costs is accurate, as it is largely based on the current cost profile of operations at the Maracás Menchen Mine.	Capital and operating cost estimates made by management with respect to future projects, or current operations in the early stages of production are estimates which are in turn based, among other things, on interpretation of geological data, feasibility studies, anticipated climactic conditions and other information.  Any or all of the above could affect the accuracy of the estimates including unanticipated changes in grade and tonnage to be mined and processed; incorrect data on which engineering assumptions are made; unanticipated transportation costs; accuracy of equipment and construction cost estimates; difficulty or failure to meet scheduled construction completion dates, facility or equipment commissioning dates, or metal production dates; poor or unsatisfactory construction quality resulting in failure to meet completion, commissioning or production dates;
<sup>1</sup> These measures are on a non-GAAP basis. Refer to the "Non-GAAP Measures" section of this MD&A.		

Forward-looking Statements	Assumptions	Risk Factors
Sustaining capital expenditures of approximately \$8,000 to \$10,000 are expected to be required in 2021 to reach and sustain the operational capacity to produce 1,100 tonnes per month (excluding capitalized waste stripping costs).	Management assumes that its current estimation of capital expenditures is accurate, as based on operational estimates produced and current experience with operations.	<p>increased expenditures required as a failure to meet completion, commissioning or production dates; capital overrun related to the completion of any construction phase including capital overrun associated with demobilization of construction workers and contractors; labour negotiations; unanticipated costs relating to the commencement of operations, ramp up and production sustainment; changes in government regulation (including regulations regarding prices, cost of consumables, royalties, duties, taxes, permitting and restrictions on production quotas or exportation of the Company's products; and change in commodity input costs and quantities).</p> <p>Capital and operating costs estimates made by management with respect to future projects, or current operations in production, or not yet in the production phase are estimates which are in turn based, among other things, on interpretation of geological data, feasibility studies, anticipated climactic conditions and other information.</p> <p>Any or all of these can affect the accuracy of the estimates including unanticipated changes in grade and tonnage to be mined and processed; incorrect data on which engineering assumptions are made; unanticipated transportation costs; accuracy of equipment and construction cost estimates; difficulty or failure to meet scheduled construction completion dates, facility or equipment commissioning dates, or metal production dates; poor or unsatisfactory construction quality resulting in failure to meet completion, commissioning or production dates; increased expenditures required as a failure to meet completion, commissioning or production dates; capital overrun related to the completion of any construction phase including capital overrun associated with demobilization of construction workers and contractors; labour negotiations; unanticipated costs relating to the commencement of operations, ramp up and production sustainment; changes in government regulation (including regulations regarding prices, cost of consumables, royalties, duties, taxes, permitting and restrictions on production quotas or exportation of the Company's products; and change in commodity input costs and quantities).</p>

Forward-looking statements and forward looking information are based on the opinions and estimates of management as of the date such statements are made, and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking statements or forward looking information, including, but not limited to, unexpected events during operations; variations in ore grade; risks inherent in the mining industry; delay or failure to receive board approvals; timing and availability of external financing on acceptable terms; risks relating to international operations; actual results of exploration activities; conclusions of economic valuations; changes in project parameters as plans continue to be refined; and fluctuating metal prices and currency exchange rates.

Although management of the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements or forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements and forward-looking information. The Company does not undertake to update any forward-looking statements or forward-looking information that are incorporated by reference herein, except in accordance with applicable securities laws.

Investors are advised that National Instrument 43-101 of the Canadian Securities Administrators (“NI 43-101”) requires that each category of mineral reserves and mineral resources be reported separately. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

#### Cautionary Note to U.S. Investors Concerning Estimates of Measured, Indicated or Inferred Resources

This MD&A uses the terms “measured”, “indicated” and “inferred” mineral resources. United States investors are advised that while such terms are recognized and required by Canadian regulations, the United States Securities and Exchange Commission does not recognize them. Inferred mineral resources have a great amount of uncertainty as to their existence, and as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of feasibility or other economic studies. United States investors are cautioned not to assume that all or any part of measured or indicated mineral resources will ever be converted into mineral reserves. United States investors are also cautioned not to assume that all or any part of an inferred mineral resource exists or is economically or legally mineable.