



**ANNUAL INFORMATION FORM  
FOR THE YEAR ENDED DECEMBER 31, 2017**

**DATED March 21, 2018**

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## **CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION**

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This annual information form contains forward-looking information under Canadian securities legislation. Forward-looking information includes, but is not limited to, statements with respect to the Company's development potential and timetable of the Company's properties, future mineral prices; ability to raise additional financing; the estimation of mineral reserves and mineral resources; conclusions of economic evaluations; the realization of mineral reserve estimates; the timing and amount of estimated future production; costs of production; capital expenditures; success of exploration activities; mining or processing issues; currency exchange rates; government regulation of mining operations; and environmental risks. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking information is based on the opinions and estimates of management as of the date such statements are made. Estimates regarding the anticipated timing, amount and cost of mining at the Company's projects are based on assumptions underlying mineral reserve and mineral resource estimates and the probability of realizing such estimates are set out herein. Capital and operating cost estimates are based on extensive research of the Company and independent consultants, actual expenditures incurred, recent estimates of construction and mining costs and other factors that are set out herein. Production estimates are based on mine plans and production schedules that have been developed by the Company's personnel and independent consultants. Forward-looking information is 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 information, including but not limited to risks related to: unexpected events and delays during construction; expansion and start-up; variations in mineral grade and recovery rates; revocation of government approvals; timing and availability of external financing on acceptable terms; ability to finalize required agreements for operations; actual results of current exploration activities; changes in project parameters as plans continue to be refined; future mineral prices; failure of plant, equipment or processes to operate as anticipated; reliance on joint venture partners; accidents, labour disputes and other risks of the mining industry. 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 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 information. The Company does not undertake to update any forward-looking information, except in accordance with applicable securities laws.

## **CAUTIONARY NOTE TO UNITED STATES INVESTORS CONCERNING ESTIMATES OF MEASURED, INDICATED AND INFERRED MINERAL RESOURCES**

This annual information form 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.**

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## DEFINITIONS AND GLOSSARY OF TERMS

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In this annual information form, references to “Largo”, or the “Company” mean Largo Resources Ltd. and its subsidiaries as applicable (unless the context otherwise requires), and the following abbreviations and defined terms are also used:

“AIF”	means this annual information form.
“Audit Committee”	means the audit committee of the Board.
“Banks”	means, collectively, Banco Itau BBA S.A., Banco Votorantim S.A. and Banco Bradesco S.A.
“Banco Pine”	means Banco Pine S.A.
“Banco Pine Debt Settlement”	has the meaning given to that term under heading “ <i>General Description of the Business – Three Year History – 2017</i> ”.
“BNDES”	means the Brazilian Development Bank or Banco Nacional do Desenvolvimento.
“BNDES Facility”	means the agreement with BNDES for a R\$333 million (approximately US\$166 million equivalent) debt financing facility for the construction and development of the Maracás Mine.
“Board”	means the board of directors of the Company.
“Bridge Loan”	has the meaning given to that term under heading “ <i>General Description of the Business – Three Year History – 2017</i> ”.
“Campo Alegre Project”	means the Campo Alegre de Lourdes iron-titanium-vanadium exploration project in Brazil.
“CBPM”	means Companhia Baiana de Pesquisa Mineral, an entity controlled by the Brazilian State of Bahia.
“CDI”	means certificado de deposito interbancario and is the Brazilian interbank rate. CDI is updated daily and calculated by CETIP and the rate on March 5, 2018 was 6.64%.
“CIH”	means Cranley Investments Holdings LLC.
“Common Shares”	means the common shares in the capital of the Company.
“FS”	has the meaning given to that term under heading “ <i>Description of Mineral Properties – The Maracas Mine</i> ”.
“Guarantee”	means the Guarantee agreement entered into by the Company with the Banks as a condition precedent to and as security for the BNDES Facility.
“Governance Agreement”	means the amended and restated investor nomination rights and governance agreement, made as of the 9 <sup>th</sup> day of March, 2012, by the Company and the Lead Investors pursuant to which the Lead Investors are each entitled, among other things, to nominate one director to

the Board so long as their holding of Common Shares represents no less than 10% of the issued and outstanding Common Shares.

<b>“Currais Novos Project”</b>	means the Currais Novos tungsten tailings project in Rio Grande De Norte, Brazil.
<b>“kg”</b>	means kilogram.
<b>“km”</b>	means kilometre.
<b>“Lead Investors”</b>	means Arias Resource Capital Fund LP, Arias Resource Capital Fund II LP, and Arias Resource Capital Fund II (Mexico) LP (collectively, the <b>“ARC Funds”</b> ), EP Cayman Ltd. and Eton Park Master Fund, Ltd. (collectively, the <b>“Eton Park Funds”</b> ) and Ashmore Cayman SPC No. 2 Limited.
<b>“LOMP”</b>	has the meaning given to that term under heading <i>“Description of Mineral Properties – The Maracas Mine”</i> .
<b>“m”</b>	means metre.
<b>“Maracás Mine”</b>	means the Maracás vanadium mine in Bahia State, Brazil, later renamed the Maracás Menchen Mine, which includes the Campbell Pit and the Ford Facility, also referred to the <b>“Property”</b> or the <b>“Project”</b> .
<b>“NI 43-101”</b>	means the Canadian Securities Administrators National Instrument 43-101 – <i>Standards of Disclosure for Mineral Projects</i> .
<b>“Northern Dancer Project”</b>	means the tungsten-molybdenum deposit property in Yukon Territory, Canada.
<b>“tonnes”</b>	means metric tonnes, where 1 tonne = 1,000 kg.
<b>“PEA”</b>	has the meaning given to that term under heading <i>“Description of Mineral Properties – The Maracas Mine”</i> .
<b>“Promon”</b>	means Promon Engenharia Ltda.
<b>“Satellite Deposits”</b>	has the meaning given to that term under heading <i>“Description of Mineral Properties – The Maracas Mine”</i> .
<b>“Short Term Loan”</b>	Has the meaning given to that term under heading <i>“General Development of the Business – Three Year History – 2016”</i> .
<b>“Supply Agreement”</b>	has the meaning given to that term under the heading <i>“General Development of the Business – Three Year History – 2015”</i> .
<b>“tpa”</b>	means tonnes per annum (year).
<b>“Technical Report”</b>	has the meaning given to that term under heading <i>“Description of Mineral Properties – The Maracas Mine”</i> .
<b>“TSX”</b>	means the Toronto Stock Exchange.

**"V2O5"** means vanadium pentoxide or  $V_2O_5$ , the form vanadium is, generally, converted to following extraction.

**"Vanádio" or "VMSA"** means Vanádio de Maracás S.A., a subsidiary of the Company.

The disclosure in this AIF is supplemented throughout the year by, and is to be read in context with, subsequent continuous disclosure filings including news releases, material change reports, financial statements, management discussion and analysis and technical reports filed under NI 43-101. This AIF contains information which the Company believes, in context and in exercising its judgement, to be material. Information which the Company, in exercising its judgement, believes, in context, is not material (or, due to the passage of time, is no longer material), has not been included in this AIF. References to various elements, where not defined above, have the meaning given to them in the periodic table which is available in the public domain.

Except as otherwise noted in this AIF, Mr. Robert Campbell, M.Sc. P. Geo is the Qualified Person (as that term is defined under NI 43-101) who has reviewed and approved the technical disclosure in this AIF. Mr. Campbell is an officer of the Company.

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**CURRENCY PRESENTATION AND DATE OF INFORMATION**

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This AIF contains references to Canadian dollars, United States dollars and Brazilian reals. All dollar amounts referenced herein, unless otherwise indicated, are expressed in Canadian dollars “\$”. United States dollars may be referred to as “United States dollars” or “US\$”. Brazilian reals may be referred to as “Brazilian reals” or “R\$”.

The following tables set out the average annual exchange rates and the resulting currency conversion if (i) one US\$ were exchanged for the equivalent in Canadian dollar(s) and (ii) one Brazilian real were exchanged for the equivalent in Canadian dollar(s), according to information published by the Bank of Canada.

<b>One US Dollar</b>	<b>Year Ended December 31</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
Closing in Cdn Dollar(s)	\$1.25506	\$1.3427	\$1.3840

<b>One Brazilian Real</b>	<b>Year Ended December 31</b>		
	<b>2017</b>	<b>2016</b>	<b>2015</b>
Closing in Cdn Dollar(s)	\$0.3787	\$0.4125	\$0.3494

Based on information published by the Bank of Canada, (i) the value of one US\$, if exchanged for one Canadian dollar, would have been \$1.2771 for the month of December of 2017 and (ii) the value of one Brazilian real, if exchanged for one Canadian dollar, would have been \$0.3878 for the month of December of 2017.

All information in this AIF is given as of December 31, 2017, unless otherwise indicated. The Company’s fiscal year end is December 31.

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**CORPORATE STRUCTURE**

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The Company is a company continued under the *Business Corporations Act* (Ontario).

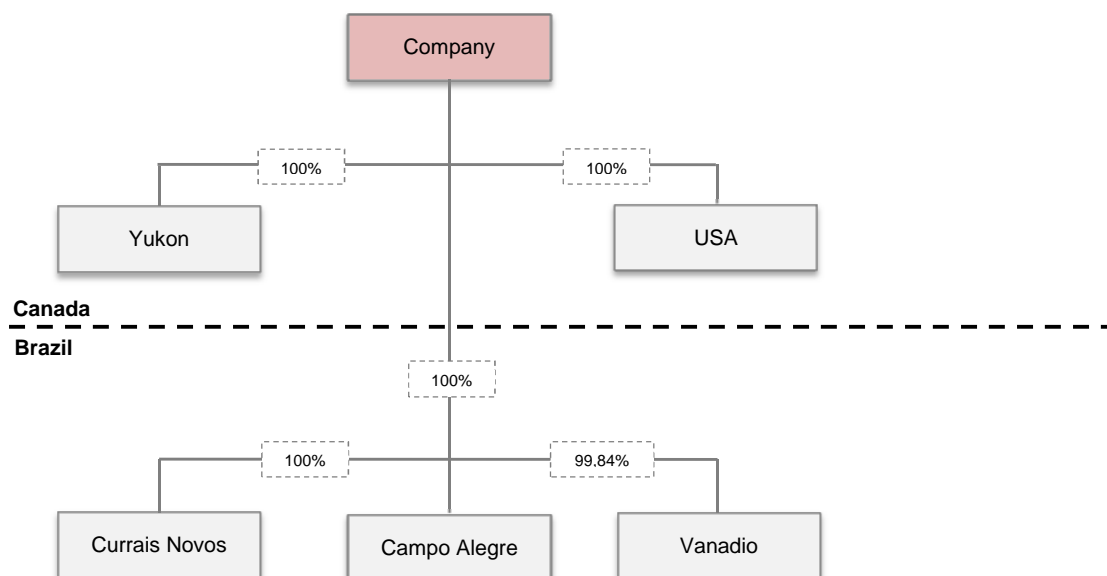
The Company was originally incorporated under the name Kaitone Holdings Ltd. in the Province of British Columbia on April 18, 1988. On September 3, 1991, the Company changed its name to Consolidated Kaitone Holdings Ltd. On May 8, 2003, the Company changed its name to Largo Resources Ltd. On June 10, 2004, the Company continued to the Province of Ontario and filed articles of amendment to amend its authorized share capital to an unlimited number of Common Shares. On October 17, 2014, the Company completed a consolidation of its Common Shares on the basis of one (1) post consolidation Common Share for each ten (10) pre-consolidation Common Shares.

The head office and registered office of the Company is located at 55 University Avenue, Suite 1101, Toronto, Ontario, Canada M5J 2H7.

As at the date of this AIF, the Company’s subsidiaries consist of the following:

<b>Subsidiary and Jurisdiction of Existence</b>	<b>% Ownership by the Company</b>
Mineração Currais Novos Ltda. (Brazil)	100%*
Vanádio de Maracás S.A. (Brazil)	99.84%
Largo Resources (Yukon) Ltd. (Canada)	100%
Largo Resources USA Inc. (United States)	100%
Campo Alegre de Lourdes Ltda. (Brazil)	100%*

The corporate structure of the Company and its subsidiaries is as follows:



\* Under Brazilian law, a corporation must have at least two shareholders or quotaholders, as applicable. Shareholders/quotaholders can be individuals or legal entities. Accordingly, Mr. Kurt Herwig Menchen, the former President of Brazilian Operations of the Company, holds an interest of <0.001% and <0.017% in the capital stock of Currais Novos and Campo Alegre, respectively. With respect to Vanádio, the remaining shares in its capital are owned by CBPM.

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## GENERAL DEVELOPMENT OF THE BUSINESS

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Largo is a Canadian natural resource development and exploration company listed on the TSX and OTCQB.

Largo is a strategic mineral company focused on the production of vanadium pentoxide ( $V_2O_5$ ) at its Maracás Mine located in Bahia, Brazil, being the Company's sole material project for the purposes of NI 43-101. Vanadium is primarily used as an alloy to strengthen steel and reduce its weight. Vanadium enhanced steels are currently used in a vast range of products including, rebar, automobiles, transport infrastructure and is increasingly being adopted in other products and applications that demand stronger and lighter steel.

Largo's Maracás Mine boasts the highest grade vanadium deposit of any active primary vanadium mine. With an off-take in place with Glencore International AG, Largo is well positioned and is becoming a leading producer of vanadium globally. Largo also has interests in a portfolio of other projects, including a 100% interest in the tungsten tailings Currais Novos Project, in Brazil a 100% interest in the iron-vanadium Campo Alegre Project in Brazil, and a 100% interest in the tungsten-molybdenum Northern Dancer Project in the Yukon, Canada.

### Three-Year History

The following is a summary of the general development of the Company's business, since January 1, 2015, in chronological order.

#### 2015

In early 2014 construction at the Maracás Mine was completed and the Company received its operating license. By mid-second quarter of 2014, the Company had begun feeding vanadium concentrate into the kiln at the Maracás Mine.

At the beginning of January 2015, approximately 1,140 tonnes (2.5 million lbs) of  $V_2O_5$  had been shipped from the Maracás Mine. This represented an increase of approximately 408 shipped tonnes since the beginning of December 2014. During the month of January 2015, Maracás Mine output was running at 55%-75% of capacity. Vanadium pricing had decreased slightly since January 2014 and was at a five-year low in January 2015.



In February 2015, the Company provided its 2015 production guidance and outlook for the Maracás Mine. The Company stated that its focus for 2015 was achieving nameplate production capacity in the third quarter of 2015 which is 9,634 tonnes of V2O5 per annum (approximately 26.4 tonnes per day).

In March 2015, the Company announced the closing of a \$12 million non-revolving, convertible term loan facility (the "Bridge Loan"). The lenders under the Bridge Loan were the ARC Funds. The Bridge Loan had a 6-month term and bore an interest rate of 20% per annum. Any portion of the outstanding indebtedness under the Bridge Loan was convertible into common shares of the Company at the option of the ARC Funds at a conversion price of \$1.01 per common share. The Bridge Loan was subject to mandatory repayment if the Company raised any additional financing, upon a change of control of Largo or if the loan was accelerated upon an event of default. The ARC Funds were granted a participation option to subscribe for up to an aggregate of \$40 million of securities under any proposed offering of common shares or securities exchangeable or convertible into common shares on or after the date of the loan agreement. The Bridge Loan was fully drawn by early May 2015 and was repaid in full in connection with the May 2015 Financing (as defined below).

In March 2015, McGovern, Hurley, Cunningham, LLP, Chartered Accountants (now UHY McGovern Hurley LLP) resigned as the Company's external auditors, at the request of the Company, and PricewaterhouseCoopers was appointed as auditor of the Company effective March 18, 2015.

In April 2015, the Company announced that it entered into a settlement agreement with Global Tungsten & Powders Corp. ("**GTP**") relating to the supply agreement between the parties entered into in January of 2011 (the "**Supply Agreement**") in respect of tungsten to be produced at the Currais Novos Project (the "**GTP Settlement Agreement**"). The settlement provided for the termination of all obligations, past and future, under the Supply Agreement in exchange for the payment by the Company to GTP of US\$11.5 million, which will be made in monthly installments over the course of the 2016 calendar year. Following receipt by GTP of the final payment from the Company, the Company will have no further obligations to GTP.

In May 2015, the Company announced that it received a firm commitment letter from its consortium of lenders to defer its debt amortization schedule and extend the maturities for the BNDES Facility and its export credit facilities (together, the "**Facilities**") for the Maracás Mine. The final restructuring package included the following: (i) an additional one-year grace period on the amortization schedules for the Facilities; (ii) a two-year extension of maturity for its export credit facilities; and (iii) a three-year extension of maturity for the US dollar component of the BNDES Facility and no change in the maturity of the R\$ component of the BNDES Loan. This debt restructuring received final approval from BNDES in June 2015.

In May 2015, the Company announced the closing of a non-brokered private placement (the "**May 2015 Financing**") of 93,999,996 units of the Company (the "**2015 Units**") at a price of \$0.80 per 2015 Unit for aggregate gross proceeds of \$75,200,000. This private placement closed in three tranches. Each 2015 Unit was comprised of one Common Share and one half of one Common Share purchase warrant (each whole warrant a "**2015 Warrant**"). Each 2015 Warrant entitled the holder to acquire one further Common Share at a price of \$1.50 per Common Share for a period of one year from the date of issuance. The Company also issued 168,000 compensation warrants to an eligible finder in connection with the May 2015 Financing. Each compensation warrant is exercisable until May 22, 2016, at a price of \$0.80 per compensation warrant, into a unit of the Company consisting of one Common Share and one-half of one warrant, with each whole warrant expiring on May 22, 2016 and entitling the holder to acquire one further Common Share at a price of \$1.50 per Common Share. Certain ARC Funds participated in the private placement and acquired an aggregate of 63,312,498 2015 Units in the May 2015 Financing. The ARC Funds' participation in the May 2015 Financing was conditional upon, among other things, the execution and delivery of a director nomination agreement (the "**Director Nomination Agreement**") with Largo permitting the ARC Funds to designate (a) two additional persons to be nominated for election to Largo's board of directors for election by Largo shareholders, including at the next annual meeting of Largo shareholders, for so long as the ARC Funds, whether individually or together, own at least 40% of the issued and outstanding Common Shares and (b) to designate one additional person to be nominated for election to Largo's board of directors for election by Largo shareholders, for so long as the ARC Funds, whether individually or together, own less than 40% but not less than 20% of the issued and outstanding Common Shares. These nomination rights are in addition to the ARC Funds' existing right to nominate one director to the Company's

board of directors under the Governance Agreement and, accordingly, the ARC Funds designated three directors for election at the subsequent annual meeting of shareholders.

In August 2015, the Company reported overall production rates improved in July, averaging approximately 19.6 tonnes per day, or 74% of the Mine's capacity. In August, the Company marked a production milestone of 10 million pounds of V<sub>2</sub>O<sub>5</sub> produced since production began in August 2014 and the Maracás Mine achieved two new production records over consecutive days by achieving daily production rates above design capacity.

In 2015, Mr. Mark Brennan resigned as the Company's President and CEO and the Company announced that Mr. Mark A. Smith would succeed him as President and CEO effective April 1, 2015. Mark A. Smith was also appointed to the Company's Board of Directors on April 1, 2015. John F. Ashburn, Jr. succeeded Andrew Hancharyk as the Company's Chief Legal Officer. Mr. Daniel Tellechea, Mr. Sam Abraham and Ms. Koko Yamamoto were elected to the Company's Board of Directors following the departure of Mr. Dirk Donath and Mr. Alexandre Monteiro at the AGM on July 9, 2015.

On December 17, 2015 the Company announced the signing of an indicative term sheet with the Banks for a new debt facility (the "2016 Facility") and the restructuring of the Company's existing export credit facilities for the Maracás Mine. The 2016 Facility and the restructuring of the Company's export credit facilities was conditional upon, among other things, the Company raising an additional US\$20 million in equity for on-going working capital requirements at the Maracás Mine. In addition, the Company announced that Vanádio had entered into a R\$867,447 short-term bridge loan facility repayable on January 15, 2016 with a separate existing lender and the Company as guarantor, in order to fund certain payment obligations in respect of currency swap contracts with said existing lender.

## 2016

On January 14, 2016 the Company announced that it had entered into a short-term secured loan agreement with Mr. Mark A. Smith, Largo's Chief Executive Officer and a director of the Company, pursuant to which Mr. Smith advanced a US\$1 million non-revolving term loan bearing interest at 12% per annum (the "Smith Bridge Loan"). The proceeds of the Smith Bridge Loan were used for ongoing working capital requirements at the Maracás Mine. The Smith Bridge Loan was secured by a general security agreement over the assets of the Company. As consideration for entering into the Smith Bridge Loan, the Company paid Mr. Smith a loan establishment fee in the amount of US\$40,000. This loan was repaid upon closing of the first tranche of the 2016 Financing (as defined below).

In January and March of 2016, the Company announced the closing of a non-brokered private placement (the "January/March 2016 Financing") of an aggregate of 209,392,178 units of the Company (the "January/March 2016 Units") at a price of \$0.175 per January/March 2016 Unit for aggregate gross proceeds of \$36,643,631. This private placement closed in two tranches. Each January/March 2016 Unit was comprised of one Common Share and one half of one Common Share purchase warrant (each whole warrant a "January/March 2016 Warrant"). Each January/March 2016 Warrant entitled the holder to acquire one further Common Share at a price of \$0.29 per Common Share for a period of five years from the date of issuance. Certain ARC Funds acquired 153,333,485 2016 Units in the January/March 2016 Financing.

As a condition precedent to ARC Funds' participation in the 2016 Financing, Largo and the ARC Funds amended and restated the Director Nomination Agreement entered into in connection with the May 2015 Financing pursuant to which the ARC Funds were granted a continuing right to, as a group, designate one additional person to be nominated for election to Largo's board of directors by Largo shareholders, including at the next annual meeting of Largo shareholders, for so long as the ARC Funds, whether individually or together, own at least 50% of the issued and outstanding Common Shares. The foregoing nomination rights are supplemental to existing nomination rights set out in the Governance Agreement and, accordingly, until such time as ARC Funds' ownership of Largo falls below 50% of the issued and outstanding Common Shares or its nomination rights are otherwise amended, the ARC Funds will designate four of the seven persons to be nominated for election as directors at the next, and any subsequent, annual meetings of Largo's shareholders.

The closing of the January/March 2016 Financing was a condition precedent to the entering into of the 2016 Facility with the Banks and the restructuring of the Company's existing export credit facilities for the Maracás Mine. On March 2, 2016 the Company announced that it had entered into the 2016 Facility and completed the restructuring of its export credit facilities. The terms of the 2016 Facility include (i) a working capital facility of up to R\$104,596,000, disbursed in 11 monthly payments over 2016; (ii) a working capital facility in an amount equivalent to the mark-to-market value of the swap contract applicable to one of the Company's export facilities; (iii) a margin equal to the interbank rate (CDI) + 5.70% per annum; (iv) a two-year grace period on the payment of interest and principal, measured from the disbursement date, and quarterly repayment (in arrears) of the 2016 Facility commencing after the end of the grace period; (v) a final maturity 84 months after the disbursement date; and (vi) use of proceeds strictly to pay interest and principal falling due under the BNDES Facility and to pay the swap settlements pertaining to one of the Company's export facilities. The restructuring of the existing export facilities included an amendment confirming that the principal and interest installments due for the 12 months after the disbursement date would be payable on the same payment terms as the 2016 Facility, including, the addition of a grace period.

Concurrently with the 2016 Facility, the Company announced that it had agreed to new commercial terms for a US\$3,850,000 loan facility with Banco Pine (the "**Short Term Loan**") to roll over its existing facility on roughly the same terms as the 2016 Facility, and that Vanádio also agreed to commercial terms with the same existing lender for a new facility of up to R\$80,000,000 to close out its existing swap contracts with the lender.

In April 2016, the Company surpassed various production records, including a new monthly production record of 730 tonnes of vanadium pentoxide and daily production records of 32 tonnes of  $V_2O_5$  on April 23<sup>rd</sup> and 33 tonnes of  $V_2O_5$  on April 24<sup>th</sup>.

In May 2016, the Company received approval for trading on the OTCQB® Venture Market ("OTCQB") and commenced trading under the symbol (OTCQB: LGORF) on May 10, 2016. In May 2016, the Company also announced a 40% increase in proven and probable mineral reserves for the Campbell Pit at the Maracás Mine and a new mine plan for the Maracás Mine. The updated mine plan increased the proven and probable mineral reserves for the Maracás Mine to 18.4 million tonnes from the 13.1 million tonnes established in the 2008 definitive feasibility study for the Maracás Mine, which was updated in 2009. The new mine plan resulted in an operating life of the Maracás Mine and process plant of 15 years at 9,600 tonnes  $V_2O_5$  per annum production rate and a retrospective 51% increase in aggregate tonnage when factoring in tonnage mined to date. The Company also surpassed all previous monthly, weekly, and daily production records in May, producing 780 tonnes of  $V_2O_5$  in May, 198 tonnes of  $V_2O_5$  during the week of May 24, 2016, and 24 tonnes of  $V_2O_5$  on May 23, 2016.

In June 2016, the Company received approval for the listing of its Common Shares on the TSX. The Common Shares commenced trading on the TSX on July 4, 2016 under the symbol "LGO" and no further trading of the Company's Common Shares on the TSX-V occurred after this date. The Company again surpassed its monthly production record in June, producing 801 tonnes of  $V_2O_5$ .

In July 2016, the Company entered into a non-binding memorandum of understanding ("**MOU**") with Vionx Energy Corporation ("**Vionx**"), a company which develops, produces, and sells Vanadium Redox Flow Batteries for utility grid applications.

The Company announced the closing of the first, second, and third tranches of a non-brokered private placement (the "September/October 2016 Financing") of units (the "**September 2016 Units**") of the Company on September 7<sup>th</sup>, September 12<sup>th</sup>, and October 4<sup>th</sup> respectively. The closing of the first, second, and third tranches resulted in gross proceeds of (i) \$3,359,499 from the sale of 7,465,555 September 2016 Units, (ii) \$1,092,800 from the sale of 2,428,442 September 2016 Units, and (iii) \$547,701 from the sale of 1,217,114 September/October Units respectively, resulting in aggregate gross proceeds of \$5,000,000 from the sale of 11,111,111 September/October Units. Each September/October 2016 Unit was sold at a price of \$0.45 and consists of one Common Share of the Company and one-half of one Common Share purchase warrant (a "**September/October 2016 Warrant**"). Each September/October 2016 Warrant is exercisable to acquire one Common Share at a price of \$0.65 per share for a period of three years from the date of issuance. As part of the September/October 2016 Financing, the ARC Funds purchased 6,228,232

September 2016 Units and Cranley Investments Holdings LCC (“CIH”) acquired 555,555 September 2016. During the month of September, the Company again surpassed its monthly production record, producing 806 tonnes of V<sub>2</sub>O<sub>5</sub>.

In December 2016, the Company announced that it had entered into definitive agreements with the Banks for a new debt facility (the “**2017 Facility**”) and the restructuring of its existing facilities with the Banks related to its Maracás Mine. The 2017 Facility provided the Company with a working capital facility of up to R\$140,000,000 to be used for the payment of principal and interest falling due during 2017 on the existing loan from the BNDES Facility as well as principal and interest falling due during 2017 on the existing debt facilities. The 2017 Facility was made conditional on the Company injecting an additional US\$15,000,000 for on-going working capital requirements at the Maracás Mine prior to January 10, 2017 (the “**January Injection**”) and injecting an additional \$5,000,000 prior to June 30, 2017. In order to fulfil this condition, the Company announced on December 28, 2016 a non-brokered private placement (the “**2017 Financing**”) of up to 52,400,000 units (the “**2017 Units**”) of the Company at a price of \$0.45 for aggregate gross proceeds of up to \$23,580,000. Each 2017 Unit consists of one Common Share and one Common Share purchase warrant (a “**2017 Warrant**”) exercisable into one Common Share at the price of \$0.65 per share for a period ending three years from the date of issuance.

In December 2016, the Company announced that it intended to produce, qualify, and sell its vanadium products at the specifications required for use in the aerospace alloy market sector via its offtake partner. The Company also set a new production record for the month of December, producing 828 tonnes V<sub>2</sub>O<sub>5</sub>.

Messrs. Michael Mutchler, former Chief Operating Officer of the Company, and John Ashburn, former Chief Legal Officer of the Company, departed the Company effective March 31, 2016 and April 8, 2016, respectively. Alberto Beek was elected to the Board of Directors on June 29, 2016, replacing Wayne Egan.

## 2017

In January 2017, the Company closed the first and second tranches of the 2017 Financing for gross proceeds to the Company of \$15,085,803 from the sale of 33,524,007 2017 Units on January 9, 2017, and \$997,250 from the sale of 2,216,112 2017 Units on January 24, 2017, for an aggregate gross proceeds to the Company of \$16,083,053 from the sale of 35,740,119 2017 Units. As part of the closing of the first tranche, CIH acquired 10,450,000 2017 Units and the ARC Funds purchased 14,395,675 2017 Units. The Banks also agreed to amend the payment terms of the January Injection to provide for an injection into the Company’s operating subsidiary of not less than US\$10 million prior to January 10, 2017, with the remaining US\$5 million being required by March 15, 2017 (the “**March Injection**”).

On February 24, 2017, the Company agreed to a new schedule of payments for its Short Term Loan and in connection therewith, the Company was required to pay a restructuring fee of US\$100 through the delivery of 263,157 common shares of the Company which was satisfied in March 2017.

In March 2017, the Company announced receipt of a temporary waiver from the Banks in respect of the March Injection while the Company and the Banks are in discussions in respect of the use of some of the cash flow generated by operations to fund certain payment obligations to the Banks which had previously been delayed.

In April 2017, the Company announced that it had completed a 20-day kiln shutdown at its Maracás Mine which was required to replace the kiln refractory. The Mine was able to stockpile sufficient intermediate feedstock such that production continued during the shutdown.

Also in April 2017, the Company announced that it had entered into a US\$2,000,000 six-month term loan with a shareholder of the Company (the “**Bridge Loan**”). Pursuant to the terms of the Bridge Loan, the Company issued 400,000 Common Share purchase warrants to the lender with each such warrant being exercisable to acquire one Common Share at a price of \$0.50 until December 31, 2020.

In July 2017, the Company announced that the Banks had agreed to terminate the March Injection and postpone the June Injection to December 31, 2017 (“**December Injection**”). The Banks further agreed to terminate the December Injection on December 31, 2017 if the Company and Vanádio comply with certain payment obligations. The December

Injection was subsequently deemed to be terminated as the Company and Vanádio complied with their required payment obligations.

On July 24, 2017, the Company announced that the Company and Vanádio had entered into a non-binding term sheet with Banco Pine (“**US Pine Facility**”) for restructuring and conversion of their existing debt facility as follows: (i) US\$4,425,475 credit facility of the Company to be converted into Common Shares, to be issued within 60 days of the date of the definitive agreement; and (ii) renegotiation of repayment schedule for the R\$89,127,631 credit facility of Vanádio (“**Vanádio Banco Pine Facility**”) (including accrued interest), guaranteed by the Company, restructuring of the Vanádio Banco Pine Facility to a long-term credit facility upon fulfillment of certain payment milestones.

In August 2017, the Company surpassed its 1000<sup>th</sup> shipment of vanadium.

In September 2017, the Company achieved a new monthly production record of 888 tonnes of vanadium pentoxide and a new weekly production record of 215 tonnes vanadium pentoxide.

In October 2017, the Company achieved a new quarterly record of 2513 tonnes of vanadium pentoxide.

In October 2017, the Company announced the result of the Technical Report containing a Life of Mine Plan for the Maracás Mine, a feasibility study for the Campbell Pit at the Maracás Mine and a preliminary economic assessment for Gulçari A Norte, Gulçari B, Novo Amparo, Novo Amparo Norte, Campbell in pit resources and São José satellite deposits (the “**Satellite Deposits**”) at the Maracás Mine. For more information see below “*Description of Mineral Properties – The Maracás Mine*”.

In December 2017, the Company announced the closing of the first and second tranches of a non-brokered private placement (“**December 2017 Financing**”) of units (the “**December 2017 Units**”) of the Company on December 1, 2017 and December 13, 2017, respectively. The closing of the first and second tranches resulted in aggregate gross proceeds of approximately \$29.5 million through the issuance and sale of 35,985,749 December 2017 Units (including the Banco Pine Debt Settlement, hereafter defined). Each December 2017 Unit was sold at a price of \$0.82 and consists of one Common Share and one-half of one Common Share purchase warrant, with each warrant exercisable to acquire one Common Share at a price of \$1.15 per share for a period of five years from the date of issuance. As part of the December 2017 Financing, the Company also entered into an agreement with Banco Pine as announced on July 24, 2017, to restructure the US Pine Facility and to convert its outstanding debt of \$5,991,687.51 into Common Shares (the “**Banco Pine Debt Settlement**”). Banco Pine received 7,306,934 December 2017 Units in full and final satisfaction of its debt.

Also in December 2017, the Company paid off the Bridge Loan with proceeds from the December 2017 Financing.

In December 2017, the Company achieved a new monthly production record of 903 tonnes of vanadium pentoxide and a new quarterly production record of 2,539 tonnes of vanadium pentoxide.

### **Recent Developments**

In February 2018, the Company delivered the final payment due under the GTP Settlement Agreement, in full and final satisfaction of all amounts and claims due thereunder, see “*Legal Proceedings and Regulatory Actions*”.

On March 8, 2018, the Company announced that it had entered into a binding term sheet for the restructuring and conversion of Vanádio’s existing debt facility with Banco Pine. Under the terms of the binding term sheet, the Company will acquire approximately U.S.\$9,000,000 (approximately R\$28,795,000) of face value of the outstanding amount (the “Initial Payment”) and the remaining amount will then be amended for, among others, the following terms:

- A maturity date seven years from the date of execution;
- A floating interest rate equal to 115% of CDI;

- Any interest accrued during the first 12 months from the Initial Payment shall be paid at the end of such first year. Thereafter, interest shall be paid on a semi-annual basis until December 2021. From January 2022 until the maturity date, interest shall be paid monthly;
- No outstanding principal shall be payable until 2021. At which time, 1% of the principal shall be repaid in 2021; 5% of the principal shall be repaid in 2022; 15% of the principal shall be repaid in 2023; all principal payments will be made in monthly instalments until December 2024; and
- The outstanding amount can be prepaid at any time.

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## NARRATIVE DESCRIPTION OF THE BUSINESS

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### **General**

Largo is a Canadian natural resource production company listed on the TSX and OTCQB. Largo remains focused on creating a world leading strategic metals company through its continued focus on production at the Maracás Mine and the development and advancement of its other projects in Brazil and Canada including the Currais Novos Project, the Campo Alegre Project and the Northern Dancer Project.

At present, the only material project of the Company for the purposes of NI 43-101 is the Maracás Mine and the primary focus of the Company is to continue to meet and exceed nameplate capacity at the Maracás Mine on a consistent and continued basis. First production at the Maracás Mine occurred in August of 2014. In 2016, the Mine reached its full design capacity rate. In the first half of 2017, the Company implemented improvement projects in the leaching and kiln sections of the chemical plant and further increased the recovery levels. Following the completion of the main improvements in July 2017, production volumes stabilized at approximately 5% above nameplate capacity on average, with 54% of the total 2017 production of 9,297 tonnes occurring in the second half of the year. Notable monthly production volumes in 2017 included 888 tonnes in August, 863 tonnes in November, and 903 tonnes in December. The Company also commenced sales of high-purity V<sub>2</sub>O<sub>5</sub> flakes to its offtake partner in 2017.

### **Maracás Menchen Mine**

The Maracás Menchen Mine (“**Maracás Mine**”) is a high grade vanadium mine located in Bahia, Brazil which began producing vanadium in the third quarter of 2014 (as announced in a news release dated August 5, 2014). Construction of the Maracás Mine began in June of 2012 under the management of Promon. All major construction activities were completed in April of 2014. Commissioning of the Maracás Mine was completed, including commissioning of electrical, mechanical, water, circuit control and operation of the systems in manual and automatic modes and warming of the kiln, following which material or “feed” will be fed through the system. In May of 2014, the Company also announced that a preliminary operating licence (“LPO”) had been received for production at the mine and officially inaugurated the facility in a ceremony which included officials from the federal, state and municipal Brazilian governments as well as investors, project partners and other stakeholders. The Company received its final operating licence (“LO”) in November 2014. The Company first produced V<sub>2</sub>O<sub>5</sub> in August of 2014 and by the beginning of December 2014, had shipped 1.6 million pounds of V<sub>2</sub>O<sub>5</sub>. By the end of August 2015, the Company marked a production milestone of 10 million pounds of V<sub>2</sub>O<sub>5</sub> produced since production began in August 2014. In November 2017, the Company announced the results of the Technical Report. Further information about the Maracás Mine can be found under the heading “*Description of the Mineral Properties – The Maracás Mine*”.

### **The Vanadium Industry**

Vanadium is a transition metal which is used principally in the steel industry in the production of high strength, low alloy (HSLA) steels, high alloy steels, high speed and tool steels, and engineering steels. Vanadium is also used in production of titanium alloys for aerospace applications as an oxidation catalyst in many pollution control and chemical production processes. More recently applications for vanadium in grid level and portable energy storage applications. Given that 90% of current demand is related to the steel industry, the global demand for vanadium is primarily driven by two variables: changes in global steel production levels, and changes in the specific vanadium consumption rate in

the steel industry. HSLA steels are an economically efficient substitute for lower strength carbon manganese steels in many applications and as a result the long term specific vanadium consumption rate has generally increased the past 15 years. Vanadium steel is also ideal for applications in structural steels where seismic activity is high, resulting in the implementation of policies in countries such as China seeking to increase the use of vanadium content in steel reinforcing bars used in concrete construction.

The price of V2O5 has materially increased in 2017. This increase is due primarily to the rationalization of production capacity during the period of low prices from 2014-2016. The demise of Highveld Steel in South Africa, Gulf Chemical and Metallurgical and Evraz Stratcor in the USA, and the shutdown of the IRC VTM mine in Russia resulted in a decrease in production capacity equal to 25% of the global supply base. Relatively high global inventory levels allowed vanadium prices to continue at low levels even after these rationalizations until early 2016 when prices began to rise on the back of tight global inventories.

In addition, on February 9, 2018 China announced a revision to the high strength rebar standard which will require significant increase in vanadium consumption in high strength rebar in China from Q3 2018 onward.

High vanadium prices may allow some idle shale based capacity in China to come back on line over the next 2 years. There are, however, hurdles regarding environmental and permitting issues that will take time to resolve. High vanadium prices also create an opportunity for niobium to temporarily replace vanadium in some applications. A significant amount of this substitution has already taken place as vanadium prices have risen over the past 2 years, so there is a question regarding how much more substitution may be possible.

Vanadium pentoxide prices in Rotterdam (as reported by Metal Bulletin) bottomed out at US\$2.30-US\$2.50/lb. V2O5 in mid-November 2015. By the end of 2016 vanadium prices had risen by to more than 100% to US\$4.85-\$5.20/lb. V2O5 from the bottom. During 2017 vanadium prices again moved up, ending the year at US\$9.60-\$9.90/lb. V2O5, an increase of roughly 95% over 2017 and an increase of roughly 300% from the bottom in late 2015. As of March 9, 2018 the price has reached US\$14.50-\$14.80/lb. V2O5, an increase of 50% from December 2017 and an increase of roughly 500% from the bottom. *(Note: Information in this section was obtained from, and is available in, the public domain.)*

### ***Specialized Skill and Knowledge***

All aspects of the business of the Company require specialized skill and knowledge. Such skill and knowledge include the areas of geology, drilling, logistical planning, engineering, construction, mine operations, metallurgical processing, environmental compliance and accounting. The Company employs or retains a number of technical personnel with relevant experience, education and professional designations, and constantly evaluates the need for additional employees and or consultants with particular expertise.

### ***Competitive Conditions***

The mineral exploration and mining business is a competitive business. The Company competes with numerous companies that have resources significantly in excess of the resources of the Company, in the search for (i) attractive mineral properties; (ii) qualified service providers and labour; (iii) equipment and suppliers; and (iv) purchasers for minerals produced. The pricing that the Company will receive for vanadium produced from its projects will be based on global prices and, ultimately, factors that are significantly out of its control. The ability of the Company to acquire additional mineral properties in the future will depend on its ability to develop and operate its present properties, and also on its ability to select and acquire suitable producing properties or prospects for mineral development or exploration. See "*Risks of the Business - Competition*".

### ***Off-take Arrangements and Supply Agreements***

#### *Vanadium*

The Company has entered into an off-take agreement with Glencore International AG regarding all vanadium products produced from the Maracás Mine. This off-take agreement has a six year term from production which runs until May 2020 and, absent notice to the contrary, is automatically renewed for an additional six year term.



## ***Environmental Protection and Licensing and Permits***

The current and future operations of the Company, including development and mining activities, are subject to extensive federal, provincial and local laws and regulations governing environmental protection, employee health and safety, exploration, development, tenure, production, taxes, labour standards, occupational health, wastes disposal, greenhouse gas emissions, protection and remediation of environment, reclamation, mine safety, toxic substances and other matters. Compliance with such laws and regulations increases the costs of and delays planning, designing, drilling and developing the Company's properties. The Company is subject to various reclamation-related conditions imposed under federal or provincial rules and permits in connection with its development and exploration.

Environmental licences associated with a mining project in Brazil involve the issuance of the relevant licences by a multidisciplinary technical review team appointed by the State Council for Environmental Matters ("CEPRAM") to review the project. This review team sets terms of reference for the environmental impact assessment ("EIA") and the Relatório de Impacto Ambiental ("RIMA"). The RIMA summarizes the full impact assessment so that it can be reviewed by the public.

### ***Maracás Mine***

The terms of reference for the Maracás Mine EIA/RIMA included a social impact, alternatives, and archaeological assessment, in addition to the basic physical and biological environmental impact assessment. Generally, the following licences are issued by CEPRAM in order to bring a mine into production in the State of Bahia:

- localization license ("LL")
- installation license ("LI")
- preliminary operating license ("LPO")
- operating license ("LO")

Issuance of the LL allows the rest of the licensing process to proceed and the EIA and RIMA are completed during this process. The LL involves the participation of the public and any non-government organization who wish to participate through public meetings. For the Maracás Mine, the Instituto do Meio Ambiente ("IMA"), the Bahia state environmental agency, hosted these meetings in February 2009 in Maracás and Porto Alegre, which are two towns located in the vicinity of the project site. Following this, IMA submitted the project to CEPRAM who at their April 2009 monthly meeting endorsed IMA's recommendation that the LL be granted. The LL is a very critical step in the environmental permitting process and concludes the active participation of the public.

The LI involves an approval process involving only Largo and the government agencies noted above. The process includes the submission of more detailed information regarding the project and a detailed description of the proposed environmental management system that was outlined in the LL documentation previously submitted.

The LO is granted during the final stages of commissioning and involves a site inspection by IMA, with the likely participation of CEPRAM, to confirm that the project has been constructed as planned and in accordance with the LI. For the Maracás Mine, Largo received its LL and LI, respectively, on May 13, 2009 and October 20, 2011. In May of 2014, Largo was granted its LPO for the Maracás Mine. The LPO is issued following completion of commissioning and prior to issuance of the LO for the project. The Company received the LO for the Maracás Mine in November 2014 which indicates that the plant was built, and was operating, according to its design specifications and environmental guidelines. The LO is valid for 2 years at which time it may be renewed for extension within 6 months of the LO's expiry date for an additional 2-5 years.

## ***Employees***

The Company and its material subsidiary have approximately 339 persons on staff, working full time as either employees or on a consulting basis, and has also retained a service provider in Brazil who deploys approximately 390 additional persons. The Company also retains geologists, engineers, and other consultants on a contract basis as required. The Company has not experienced, and does not expect to experience, significant difficulty in attracting and



retaining qualified personnel. However, no assurance can be given that a sufficient number of qualified employees can be retained by the Company when necessary. See “*Risks of the Business – Qualified Personnel*”.

### **Foreign Operations**

At present, the Company's operating facilities are all located in Brazil. Consequently, the Company is at the date of this AIF dependent on its foreign operations.

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## **RISK FACTORS**

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Investing in the Company involves risks that should be carefully considered. The operations of the Company are speculative due to the high-risk nature of its business. Investors should be aware that there are various risks, including those discussed below, that could have a material adverse effect on, among other things, the development of the Maracás Mine, and the operating results, earnings, business and condition (financial or otherwise) of the Company. See “*Cautionary Statement Regarding Forward-Looking Information*” at the beginning of this AIF.

### **Nature of Mining Operations, Mineral Exploration and Development Projects and Mining Businesses**

Mining operations generally involve a high degree of risk. The Company's operations and those of its subsidiaries are subject to the hazards and risks normally encountered in mineral exploration, development and production, including environmental hazards, explosions, unusual or unexpected geological formations or pressures and periodic interruptions in both production and transportation due to inclement or hazardous weather conditions. Such risks could result in damage to, or destruction of, mineral properties or producing facilities, personal injury, environmental damage, delays in mining, monetary losses and possible legal liability.

Development projects have no operating history upon which to base estimates of future cash operating costs. For development projects, resource and reserve estimates and estimates of cash operating costs are, to a large extent, based upon the interpretation of geological data obtained from drill holes and other sampling techniques, and feasibility studies, which derive estimates of cash operating costs based upon anticipated tonnage and grades of ore to be mined and processed, ground conditions, the configuration of the ore body, expected recovery rates of minerals from the ore, estimated operating costs, anticipated climatic conditions and other factors. As a result, actual production, cash operating costs and economic returns could differ significantly from those estimated. Indeed, current market conditions are forcing many mining operations to increase capital and operating cost estimates. It is not unusual for new mining operations to experience problems during the start-up phase, and delays in the commencement of production often can occur.

Mineral exploration is highly speculative in nature. There is no assurance that exploration efforts will be successful. Even when mineralization is discovered, it may take several years until production is possible, during which time the economic feasibility of production may change. Substantial expenditures are required to establish proven and probable mineral reserves through drilling. Because of these uncertainties, no assurance can be given that exploration programs will result in the establishment or expansion of mineral resources or mineral reserves. There is no certainty that the expenditures made by the Company towards the search and evaluation of mineral deposits will result in discoveries or development of commercial quantities of ore.

### **Capital and Operating Cost Estimates**

Capital and operating cost estimates made by management with respect to future projects or operations not yet in the production phase are estimates which are in turn based, among other things, on interpretation of geological data, feasibility studies, anticipated climatic conditions and other information. 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; change in commodity input costs and quantities); and communication issues including familiarity with language writing, between domestic and foreign employees, contractors, advisors, agents and government officials.

### **Revenues**

As of the date of this AIF, the Company has recorded revenues from only one of its operations, Maracás Mine. The Company is not producing material from any of its other remaining projects. There can be no assurance that losses (including significant losses) will not occur in the near future or that the Company will be profitable in the future. The Company's operating expenses and capital expenditures may increase in subsequent years for consultants, personnel and equipment associated with advancing exploration, development and commercial production of any of the Company's properties. The Company expects to continue to incur losses unless as it generates sufficient revenues to fund its continuing operations. The development of the Company's properties will require the commitment of substantial resources to conduct time-consuming development. There can be no assurance that the Company will generate revenues from all its projects or achieve profitability.

### **Liquidity**

The Company has incurred significant operating losses and negative cash flow from operations in recent years. However, the Company is currently generating sufficient revenue from operations to cover the Company's operating expenses. Failure by the Company to generate sufficient revenue to satisfy its debt servicing costs will result in defaults under the provisions of the various debt agreements, which could have a material adverse affect on the Company's operations and financial performance.

### **Foreign Exchange**

Mineral commodities are sold in U.S. dollars and consequently, the Company is subject to foreign exchange risks relating to the relative value of the Canadian dollar and Brazilian real as compared to the U.S. dollar. To the extent Largo generates revenue, it will be subject to foreign exchange risks as revenues will be received in US dollars while operating and capital costs will be incurred primarily in Brazilian reais and Canadian dollars. A decline in the U.S. dollar would result in a decrease in the real value of Largo's future revenues and adversely affect its financial performance.

### **Litigation, Arbitration and Disputes**

The Company has entered into legally binding agreements with various third parties under supply contracts and consulting agreements. The interpretation of the rights and obligations that arise from such agreements may be open to differing interpretations and Largo may disagree with the position taken by other parties to these agreements. This could result in a dispute which, if unresolved, might trigger a litigation or arbitration process, causing Largo to incur possible legal or similar costs in the future. Given the speculative and unpredictable nature of litigation or the arbitration process, the outcome of any such disputes might have a material adverse effect on Largo. Additional information can be found under the heading "*Legal Proceedings and Regulatory Actions*".

### **Mineral Resource and Mineral Reserve Estimates May be Inaccurate**

There are numerous uncertainties inherent in estimating mineral resources and mineral reserves, including many factors beyond the control of the Company. The accuracy of any mineral resource or mineral reserve estimate is a function of the quantity and quality of available data and of the assumptions made and judgments used in engineering and geological interpretation. These amounts are estimates only and the actual level of mineral recovery from such deposits may be different. Differences between management's assumptions, including economic assumptions such as

metal prices and market conditions, could have a material adverse effect on the Company's financial position and results of operations.

### ***Failure to Meet Production Targets and Cost Estimates***

The Company prepares future operating and capital cost 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 failures and other interruptions in production capabilities. Operating 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 has or will obtain debt financing, repayment terms associated with such financing will likely be based 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.

### ***Licences and Permits, Laws and Regulations***

The Company's exploration and development activities, including mines, mills, roads, and other facilities, require permits and approvals from various government authorities and cooperation in certain cases from certain aboriginal groups, and are subject to extensive federal, provincial, state and local laws and regulations governing prospecting, development, production, exports, taxes, labour standards, occupational health and safety, mine safety and other matters in Brazil, Canada and any other jurisdiction in which the Company operates in the future. Such laws and regulations are subject to change, can become more stringent and compliance can therefore become costlier. In addition, the Company may be required to compensate those suffering loss or damage due to its activities. There can be no guarantee that the Company will be able to maintain or obtain all necessary licences, permits and approvals that may be required to explore and develop its properties, commence construction or operation of mining facilities.

### ***Mineral Commodity Prices***

The profitability of the Company's operations will be dependent upon the market price of mineral commodities, specifically vanadium. Mineral prices fluctuate widely and are affected by numerous factors beyond the control of the Company. The level of global economic activity, interest rates, expectations for and the rate of inflation, speculative activities, the world supply of mineral commodities and the stability of exchange rates can all cause significant fluctuations in prices. Such external economic factors are in turn influenced by changes in international investment patterns, monetary systems, global and regional supply and demand and political developments. The price of mineral commodities has fluctuated widely in recent years, and future price declines could cause commercial production to be impracticable, thereby having a material adverse effect on the Company's business, financial condition and result of operations.

### ***Competing Properties and Minerals***

The price of  $V_2O_5$  has materially increased in 2017 over a short period. This increase is due in part to the limited supply of  $V_2O_5$ , the increase in demand for  $V_2O_5$  in part by global battery consumption and production, and the anticipated increase in  $V_2O_5$  demand stemming from the February 9, 2018 announcement of new rebar standards by the Standardization Administration for the People's Republic of China, which will require the use of higher quality steel in rebar which requires greater  $V_2O_5$  content. If the price of  $V_2O_5$  increases further or is maintained at existing levels, this may cause other  $V_2O_5$  projects that were otherwise not commercial viable to come online, and or cause industry to seek alternate competing minerals as a substitute to  $V_2O_5$ .

## ***Environmental***

The Company's activities are subject to extensive federal, provincial, state and local laws and regulations governing environmental protection and employee health and safety. Environmental legislation is evolving in a manner that is creating stricter standards, while enforcement, fines and penalties for non-compliance are also increasingly stringent. The cost of compliance with changes in governmental regulations has the potential to reduce the profitability of operations. Further, any failure by the Company to comply fully with all applicable laws and regulations could have significant adverse effects on the Company, including the suspension or cessation of operations.

## ***Title to Properties and Title Risks***

The acquisition and maintenance of titles to resource properties is a very detailed and time-consuming process. The Company holds its interests in certain of its properties through mining claims. Title to, and the area of, the mining claims may be disputed. There is no guarantee that such title will not be challenged or impaired. There may be challenges to the title of the properties in which the Company may have an interest which, if successful, could result in the loss or reduction of the Company's interest in those properties.

Although the nature and extent of the interests of the Company in the properties in which it holds an interest has been reviewed by or on behalf of the Company, and title opinions have been obtained by the Company with regard to certain of such properties, there may still be undetected title defects affecting such properties. Title insurance generally is not available in Canada or Brazil, and the ability of the Company to ensure that it has obtained secure claim to individual mineral properties or mining concessions may be constrained.

The properties in which the Company holds an interest may be subject to prior unregistered liens, agreements, transfers or claims, and title may be affected by, among other things, the structure through which the Company maintains its interest in its properties and undetected defects which could have a material adverse impact on the Company's operations. In addition, the Company may be unable to, effectively (if at all), conduct business at or operate on its properties as permitted or to enforce its rights with respect to those properties.

No assurances can be given that title defects to the properties in which the Company has an interest do not exist. The properties may be subject to prior unregistered agreements, interests or aboriginal land claims and title may be affected by undetected defects. If title defects do exist, it is possible that the Company may lose all or a portion of its right, title, estate and interest in and to the properties to which the title defect relates. There is no guarantee that title to the properties will not be challenged or impugned.

The Company does not maintain insurance against title. Title on mineral properties and mining rights involves certain inherent risks due to the difficulties of determining the validity of certain claims as well as the potential for problems arising from the frequently ambiguous conveyance history of many mining properties. The Company has investigated title to its mineral claims; however, this should not be construed as a guarantee of title. The Company cannot give any assurance that title to any of its properties will not be challenged or impugned and cannot guarantee that the Company will have or acquire valid title to these mining properties. For example, title to existing properties or future prospective properties may be lost due to an omission in the claim of title, prior activities of the property vendors or changes in Brazilian mining laws or the application thereof which affects the Company's title or the Company's rights and interests in its properties. The Company has obtained title reports from Canadian and Brazilian legal counsel with respect to its interest, respectively, in its Canadian and Brazilian properties, but this should not be construed as a guarantee of title or the Company's rights to these claims. Other parties may dispute the title of the Company or the joint venture to any of its mineral properties and any of such properties may be subject to prior unregistered agreements or transfers or aboriginal land claims and title may be affected by undetected encumbrances or defects or governmental actions.

## ***Uninsured Risks***

The Company maintains insurance to cover normal business risks. In the course of exploration, development and operation of mineral properties, certain risks, and in particular, unexpected or unusual geological operating conditions including explosions, rock bursts, cave-ins, fire and earthquakes may occur. It is not always possible to fully insure

against such risks because of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the Company's Common Shares.

### ***Competition***

The Company competes with many other mining companies that have substantially greater resources than the Company. Such competition may result in the Company being unable to acquire desired properties, recruit or retain qualified employees or acquire the capital necessary to fund its operations and develop its properties. The Company's inability to compete with other mining companies for these resources would have a material adverse effect on the Company's results of operation and business.

### ***Dependence on Third Parties***

The Company has relied upon external consultants, engineers and others and intends to rely on these parties for, among other things, the development, construction and operating expertise. Substantial expenditures are required to construct mines, to establish mineral reserves through drilling, to carry out environmental and social impact assessments, to develop metallurgical processes to extract the metal from the ore and, in the case of new properties, to develop the exploration and plant infrastructure at any particular site. If such parties' work is deficient or negligent or is not completed in a timely manner, it could have a material adverse effect on the Company.

### ***Qualified Personnel***

Recruiting and retaining qualified personnel in the future is critical to the Company's success. As the Company develops its properties toward commercial production, the need for skilled labour will increase. The number of persons skilled in the exploration, development of mining properties is limited and competition for this workforce is intense. The development of the Company's properties may be significantly delayed or otherwise adversely affected if the Company cannot recruit and retain qualified personnel as and when required.

### ***Availability of Reasonably Priced Raw Materials and Mining Equipment***

Largo will require a variety of raw materials in its business as well as a wide variety of mining equipment. To the extent these materials or equipment are unavailable or available only at significantly increased prices, the Company's production and financial performance could be adversely impacted.

### ***Costs of Transportation***

Operation of the Company's facilities, existing and future, will depend in part on the flow of materials, supplies, equipment, services and products. Due to the geographic location of the Company's operations, existing and future, it remains and will remain dependent on the provision by third parties of rail, port, marine, shipping or other transportation services. Potential issues including contractual disputes, demurrage charges, port or depot capacity handling issues, availability of vessels, rail cars or other modes of cargo transport, weather problems and labour disruptions could have a material adverse effect on the Company's ability to transport various materials necessary for the operation of one or more of its facilities in accordance with schedules or contractual requirements. This might result in a material adverse effect on the Company's business, results of operations and financial performance.

### ***Share Price Fluctuations***

The market price of securities of many companies, particularly development stage companies, experience wide fluctuations in price that are not necessarily related to the operating performance, underlying asset values or prospects of such companies. There can be no assurance that fluctuations in the Company's share price will not occur or continue to occur.

## ***Conflicts of Interest***

Certain of the Company's directors and officers serve or may agree to serve as directors or officers of other companies and, to the extent that such other companies may participate in ventures in which the Company may participate, the directors of the Company may have a conflict of interest in negotiating and concluding terms respecting such participation.

## ***Corporate Structure Risks***

Vanadio de Maracás S.A. ("**Vanadio**"), the material Brazilian subsidiary of the Company which holds a 100% interest in the Company's Maracás Menchen Mine, is a limited liability company, and as such does not require a Board of Directors and is controlled by its shareholders. The management of the Company has control over Vanadio by virtue of owning 99.84% of the shares of Vanadio. Therefore, the management of the Company can effectively (i) appoint and dismiss at any time any and all of the officers of Vanadio, (ii) instruct the officers of Vanadio to pursue Company's business activities, and (iii) has legal rights as a shareholder to require the officers of Vanadio to comply with their fiduciary obligations and can also enforce its rights by way of the shareholder remedies available to it. As a result, the management of the Company can effectively align the Issuer's business objectives and effect the implementation of same at the level of Vanadio.

The Company, as the holder of a 99.84% interest in Vanadio, can remove and appoint officers by way of simple communication that such officer is being removed from his/her position and the subsequent filing of same with the Board of Trade. The Board of Directors of the Company, through its corporate governance practices and in particular the activities of its board committees, regularly receives management and technical updates and progress reports in connection with Vanadio, and in so doing, maintains effective oversight of the operations and project development activities of Vanadio.

The Board of Directors of the Company has the ability to exert effective control over Vanadio as discussed herein. Accordingly, the Board of Directors of the Company will be able to cause Vanadio to transfer funds and accomplish the various operating aspects of the business when Vanadio is generating revenues.

Certain of the directors and officers of the Company have extensive experience doing business in both Canada and Brazil. In particular, Mark Smith, Alberto Arias, Sam Abraham and Daniel Tellechea are the directors of the Company that have experience in conducting business in Brazil and Les Ford (former Senior Vice President and Technical Director of Brazilian Operations and currently consultant to the Company) is an individual with experience in conducting business in Brazil. Moreover, Alberto Arias and Sam Abraham are fluent in Portuguese.

Knowledge of the local business, culture and practices is imparted by these individuals to other directors and officers of the Company, furthermore, several of the non-resident directors and officers visit Brazil on a regular basis in order to ensure effective control and management of the operations and as a result come into contact with other employees, personnel, government officials, business persons and customers who are locals in Brazil, which enable them to enhance their knowledge on these fronts. Mark Smith, Chief Executive Officer of the Company travels to Brazil and to the mine site regularly.

All directors and executive officers of the Company have some familiarity with the legal and regulatory requirements of Brazil. Brazilian legal counsel (both internal at Vanadio and external) and Brazilian management ensure that the Company's management is kept aware of relevant material legal developments in Brazil as they pertain to and affect the Company's business and operations. Any material developments are then discussed with the directors at the board level.

Other than as discussed herein, the Company does not currently have a formal communication plan or policy in place and has not, to date, experienced any communication-related issues due to the fact that the management team located in Brazil is proficient in the English language. The Company will, from time to time, re-evaluate whether a formal communication policy is necessary.



The Company hires and engages local experts and professionals (i.e. legal and tax consultants) to advise the Company with respect to current and new regulations in respect of banking, financial and tax matters. The Company utilizes large, established and well recognized financial institutions in both Canada and Brazil. Directors visit the Company's operations in Brazil several times per year and have regular board meetings by telephone which include the Company's Chief Executive Officer, Chief Financial Officer and at various times the President of Brazilian Operations and other relevant Vanadio officers and managers. The Company arranges for site visits to its projects as deemed appropriate. The Company hosted two site visits for members of the Board of Directors in 2017, three site visits in 2016, one site visit in 2015, two site visits in 2014, three site visits in 2013 and two site visits in 2012. The last visit by members of the Board of Directors was in December 2017.

The directors and officers also work closely with Brazilian counsel and Brazilian employees of the Company and its subsidiaries to understand and subsequently adjust firm strategies and practices relating to changes in Brazilian laws and regulatory regimes.

Each member of the management team located in Brazil speaks fluent Portuguese and all are proficient in English. Luciano Chaves, Vice President of Finance and Administration in Brazil, Paulo Misk, President of Brazilian Operations, Heitor Duarte, Production Manager and Mauricio Coletti, Mine Manager are each fluent in Portuguese and English.

Alberto Arias and Sam Abraham are the directors of the Company who are fluent in English and Portuguese. Of the management team located in Toronto, Robert Campbell speaks functional Portuguese. The primary language used in management and board meetings is English. The management team located in Brazil dealing with the operating staff and outside consultants communicate in Portuguese with such individuals as necessary. Both Vanadio and the Company have translators on staff to assist with all communication requirements, as needed.

Material documents relating to the Company that are provided to the board are in English. When original material documents are prepared in Portuguese, these are typically translated by the Company's Brazilian legal counsel, who are fluent in English and Portuguese. When required, the Company will sometimes use third party translation services.

### ***Operating and Investing in Foreign Countries***

The Company's principal properties are located in Brazil. As in any foreign country, mineral exploration and mining activities may be affected to varying degrees by changes in political, social and financial stability, and inflation. Any shifts in political, social or financial stability conditions are beyond the control of the Company and may adversely affect the Company's business. Brazil's status as a developing country may make it more difficult for the Company to obtain sufficient financing required for the exploration and development of its properties due to real or perceived increased investment risk.

The Company's operations may also be adversely affected by changes in foreign government policies and legislation and other factors which are not within the control of the Company, including, but not limited to, renegotiation or nullification of existing contracts, claims or licenses, changes in mining policies or the legislation or regulatory requirements affecting mining or the personnel administering them, currency fluctuations and devaluations, exchange controls, factors (including withholding taxes) affecting foreign subsidiaries' abilities to remit funds to the Company, economic sanctions and royalty and tax increases, risk of terrorist activities, revolution, border disputes, implementation of tariffs and other trade barriers and protectionist practices, taxation policies, including royalty and tax increases and retroactive tax claims, volatility of financial markets and fluctuations in foreign exchange rates, labour disputes and other risks arising out of foreign governmental sovereignty over the areas in which the Company's operations are conducted. The Company's operations may also be adversely affected by laws and policies of such foreign jurisdictions affecting foreign trade, taxation and investment. If the Company's operations are disrupted and/or the economic integrity of its contracts is threatened for unexpected reasons, there may be a corresponding material adverse effect on the Company's business or operations.

In the event of a dispute arising in connection with the Company's operations in a foreign jurisdiction where the Company conducts its business, the Company may be subject to the exclusive jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the jurisdictions of the courts of Canada or enforcing Canadian judgments

in such other jurisdictions. The Company may also be hindered or prevented from enforcing its rights with respect to a governmental instrumentality because of the doctrine of sovereign immunity. Accordingly, the Company's activities in foreign jurisdictions could be substantially affected by factors beyond the Company's control, any of which could have a material adverse effect on the Company.

The Company may in the future enter into agreements in order to expand its business and activities beyond the jurisdictions in which it currently does so. Such an expansion may present challenges and risks that the Company has not faced in the past, any of which could materially adversely affect the results of operations and/or financial condition of the Company.

### ***Mining Operations in Brazil***

The Company's operations are primarily conducted in Brazil and, as such, those operations are exposed to various levels of political, economic and other risks and uncertainties. These risks and uncertainties vary from time to time and include, but are not limited to: terrorism; hostage taking; military repression; extreme fluctuations in currency exchange rates; high rates of inflation; labour unrest; the risks of war or civil unrest; expropriation and nationalization; renegotiation or nullification of existing concessions, licences, permits and contracts; illegal mining; changes in mining taxation policies; restrictions on foreign exchange and repatriation; and changing political conditions, currency controls and governmental regulations that favour or require the awarding of contracts to local contractors or require foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction.

Changes, if any, in mining or investment policies or shifts in political attitude in Brazil or any other relevant jurisdiction in which the Company operates may adversely affect the Company's operations or profitability. Operations may be affected in varying degrees by government regulations with respect to, but not limited to, restrictions on production, price controls, export controls, currency remittance, income and other taxes, expropriation of property, foreign investment, maintenance of claims, environmental legislation, land use, land claims of local people, water use and mine safety. Failure to comply strictly with applicable laws, regulations and local practices relating to mineral rights applications and tenure could result in loss, reduction or expropriation of entitlements, or the imposition of additional local or foreign parties as joint venture partners with carried or other interests. The occurrence of these various factors and uncertainties cannot be accurately predicted and could have an adverse effect on the Company's operations or profitability.

### ***Changes in Rain Patterns and Other Climatic Effects May Adversely Impact the Company's Operations***

The effects of changes in rainfall patterns, water shortages and changing storm patterns and intensities have from time to time adversely impacted, and may in the future adversely impact, the cost, production levels and financial performance of the Company's operations. There is no guarantee that there will be sufficient future rainfall to support the Company's future demands in relation to its sites and operations, and this has and could adversely affect production or the Company's ability to develop or expand projects and operations in the future. In addition, there can be no assurance that the Company will be able to obtain alternative water sources on commercially reasonable terms or at all in the event of prolonged drought conditions. Conversely, some of the Company's sites and operations may in the future be, subject from time to time to severe storms and high rainfalls leading to flooding and associated damage, which may result in, delays to, or loss of production and development of some of its sites, projects or operations. Extreme rain and flood conditions may exceed site water storage capacity with the potential for involuntary release by way of overflow from tailings storage facilities.

### ***Control of the Company by ARC Funds***

The ARC Funds are capable of controlling the direction of the Company through the right to designate four of the seven persons to be nominated for election as directors of the Company. Unilateral control over a majority of the persons nominated for election as directors of the Company will enable the ARC Funds to determine the persons responsible for managing the direction of the Company.



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## DESCRIPTION OF MINERAL PROPERTIES

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The information in this section has been extracted from the most recent technical report summary applicable as of the date of the technical report. Readers should refer to the actual technical reports, each of which have been filed on SEDAR, for additional information on the properties.

### ***THE MARACÁS MINE***

A report entitled “An Updated Mine Plan, Mineral Reserve and Preliminary Economic Assessment of the Inferred Resources” and issued on October 26, 2017 and effective as of May 2, 2017 (the “**Technical Report**”) was prepared for the Company by GE21. The Technical Report is available under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com) and on the Company’s website at [www.largoresources.com](http://www.largoresources.com). The following disclosure relating to the Maracás Mine is an excerpt of the summary of the Technical Report, which has been updated only to conform defined terms to the AIF. The entire Technical Report is incorporated by reference herein, and readers are encouraged to review the complete text of the Technical Report available under Largo’s profile at [www.sedar.com](http://www.sedar.com). A full list of references cited by the authors are contained in the Technical Report. 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.

**The Technical Report is intended to be read as a whole, and sections should not be read or relied upon out of context. The Technical Report contains the expression of the professional opinions of a Qualified Person (as defined under NI 43-101) based upon information available at the time of preparation of the Technical Report. The following disclosure, which is extracted from the Technical Report, is subject to the assumptions and qualifications contained in the Technical Report.**

### **SUMMARY**

#### *Introduction*

The Company retained GE21 to review the pit optimization, life of mine plan and plant feed schedule for all of the deposits at the Maracás Menchen Vanadium Mine (the “**Maracás Mine**”) and to prepare a feasibility study level (“**FS**”) review of the Campbell deposit (“**Campbell**” or the “**Campbell Deposit**” which has also been referred to as “**Gulçari A**” in prior reports) and a Preliminary Economic Assessment (“**PEA**”) study level review for Gulçari A Norte, Gulçari B, Novo Amparo, Novo Amparo Norte and São José (collectively, the “**Satellite Deposits**”) and for the , remaining Campbell in pit resources. The Technical Report evaluates and assesses the Life of Mine Plan (“**LOMP**”) for the entire mineral project. The results of this 2017 LOMP are described in the Technical Report, the highlights of which are as follows:

- Both studies were a “Vanadium Only” study. No value was given for any by-products at this time, including iron, ilmenite (TiO<sub>2</sub>) and PGMs. GE21 strongly recommend immediate studies to give value to the project based on these by-products.
- This study used a long-term V<sub>2</sub>O<sub>5</sub> price of US\$6.34/lb for the life of mine except for 2018 and 2019, where US\$ 9.00/lb was used.
- Life of operation for the mineral reserves in the Campbell Deposit is 11 years.
- An additional mine life of 12 years is estimated if inferred resources in the Satellite Deposits and remaining Campbell in pit resources come to be converted to mineral reserves.
- GE21 recommended the Satellite Deposits and remaining Campbell in pit resources be developed sequentially as follows: Novo Amparo Norte, Gulçari A Norte & Gulçari B, Sao Jose, Campbell in pit resources and Novo Amparo.

- NPV(8%) post tax is US\$ 542 million for the reserves at the Campbell Deposit.
- NPV(8%) post tax is US\$ 140 million for the resources in the Satellite Deposits and remaining Campbell in pit resources.

The Maracás Mine operations, located in Bahia, Brazil are now fully operational and produce  $V_2O_5$  with annual name plate production of 9,600 tonnes of  $V_2O_5$  flake.

In 2017, Largo retained GE21 to review the optimized mine plan and plant feed schedule for the Maracás Mine based on the new pit slope and based on two proposed expansions that would increase the production rate to 11,520 tpa of  $V_2O_5$  in 2019 and to 13,200 per annum of  $V_2O_5$  for 2020 through to the end of life of the mine.

#### *Property Description and Location*

The Maracás Mine consists of eighteen (18) concessions totalling 17,690.45 ha (see Figure 1.2\_1). These exploration and mining permits are listed in Table 1.2\_1. Each of these permits, including the original two (DNPM 870134/82 and DNPM 870135/82) and are owned by Vanádio which is controlled 99.9% directly and indirectly by Largo.

Figure 1.2\_1  
Maracás Project Property Map

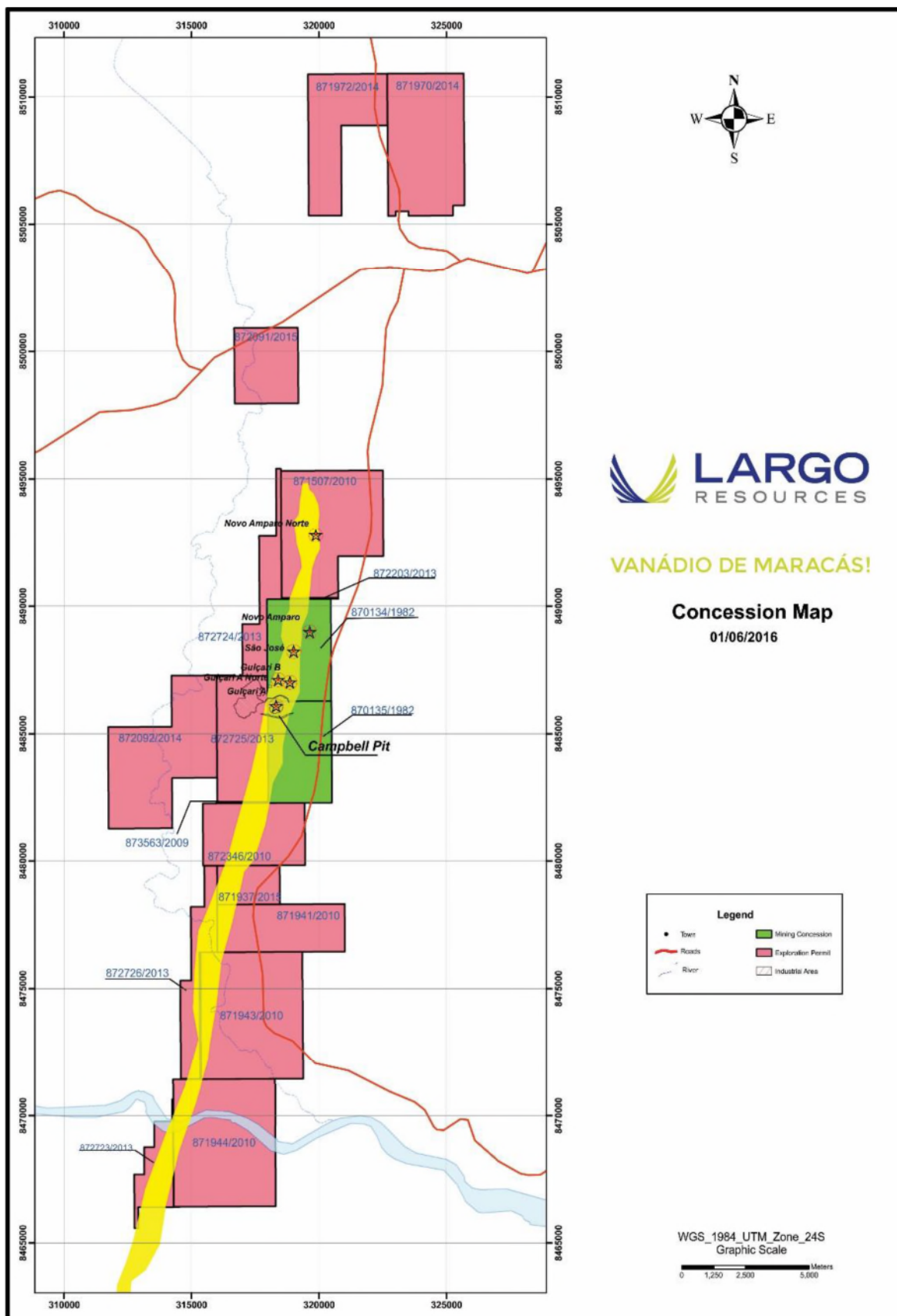


Table1.2_1 Maracás Property Exploration and Mining Permits					
DNPM	Substance	Status	Requested	Expiry Date	City
870.134/1982	V	Mining permit pending	1,000.00	not applicable	Maracás
870.135/1982	V	Mining permit granted	1,000.00	not applicable	Maracás
872.346/2010	V	Exploration permit	977.29	25/2/17	Maracás
872.203/2013	V	Exploration permit	6.42	29/10/18	Maracás
872.723/2013	V	Exploration permit	413.71	29/10/18	Iramaia/Manoel Vitorino
872.724/2013	V	Exploration permit	495.75	29/10/18	Maracás
872.725/2013	V	Exploration permit	988.46	29/10/18	Maracás
872.726/2013	V	Exploration permit	593.75	29/10/18	Iramaia/Maracás
873.563/2009	V	Exploration permit	11.11	10/10/16	Maracás
871.944/2010	Fe, V	Exploration permit	2,000.00	Extension	Iramaia/Maracás
871.943/2010	Fe, V	Exploration permit	1,999.87	Extension	Iramaia/Maracás
871.941/2010	Fe, V	Exploration permit	927.00	Extension	Maracás
871.507/2010	V	Mining permit application	1,713.88	not applicable	Maracás
871.970/2014	V	Exploration permit	1,649.21	8/12/18	Maracás
871.972/2014	V	Exploration permit	1,084.92	8/12/18	Maracás
872.092/2014	V	Exploration permit	1,709.51	8/12/18	Maracás
872.091/2015	Fe, V	Exploration permit	743.70	17/12/18	Iramaia/Maracás
871.937/2015	V	Exploration permit	375.87	15/3/19	Maracás
		Total	17,690.45		

Largo reports that all but two of the permits for the concessions are currently registered as exploration licenses and are in good standing. One of the concessions has been granted a mining licence and the other concession's mining licence is pending. The concession with the pending mining license already has a Localization License ("LL") and an Installation License ("LI"). While under application or pending there are no fees due on the exploration permits until the exploitation license has been granted.

Largo through VMSA, entered into an agreement with Vale S.A. ("Vale") and Odebrecht S.A. ("Odebrecht"), dated October 16, 2006 giving it an option to acquire a 90% interest in the Property from the two Brazilian companies for a purchase price of US\$10.0 million. Under this agreement, Largo was required to maintain the exploration permits in good standing. On December 22, 2012 Largo exercised the option and acquired the interests held by each of VALE and Odebrecht resulting in VMSA owning 100% of the Property.

Largo reports that, to its knowledge, there are no existing environmental liabilities relating to the Project.

The Property is located within the greater municipality of Maracás in eastern Bahia State, Brazil. Maracás lies about 250 km southwest of the City of Salvador, the capital of Bahia. The distance by road from Salvador to the Project is 405 km via a paved secondary road from the main coastal highway in Bahia, with the Project being accessed by about 50 km of secondary highway and gravel road west of the town of Maracás. Access to water, the electric power grid and a railroad is within a reasonable distance, and a trained workforce familiar with the mining and mineral exploration industries exists in the state of Bahia and also within in the country generally.

The Project has been the subject of extensive prior exploration and feasibility work by Companhia Baiana de Pesquisa Mineral ("CBPM"), CAEMI Mineração e Metalurgia S.A. ("CAEMI") and Odebrecht, since the discovery of vanadium there in 1980. According to reports by CBPM, CAEMI, Odebrecht and their consultants, the previous work had outlined

the existence of four vanadium deposits, including a large deposit of vanadium-rich titaniferous magnetite mineralization at Campbell and other smaller deposits known as Gulçari B, Novo Amparo and São José.

#### *Exploration and Drilling*

At the time of acquisition of the Property in the fall of 2006, Largo had performed no exploration on the Property, but had completed a due diligence review program which checked the logging of, and resampling of certain original diamond drill core from the 1980s, and checked the surveyed locations of various trenches and drill-hole collars. This work confirmed the previous sampling and interpretation at the Project and Largo used the data to complete an “in-house” mineral resource estimate for the Campbell Deposit formerly called Gulçari A deposit, at the Project.

Since the acquisition of the Project, Largo has completed three drill programs in 2007, 2008 and 2011-12. These programs have confirmed previous interpretations, increased the size of the deposit and created enough data to allow for an update of the previous mineral resource and an upgrade of their confidence category. The total drilling completed on the property has tested 7 zones with 209 holes totalling 35,286.59 m (Table 1.3\_1) of which Largo has drilled 140 holes totalling 29,371.29 m between 2007 and 2012.

There has been sufficient drilling in this area to demonstrate the continuity of the magnetite-rich horizons which is also supported by the ground magnetic survey that traces the known zones on surface. The ground magnetic survey also has identified a number of deposits that had not been previously tested.

<b>Table 1.3_1</b>			
<b>Total Maracás Drilling</b>			
<b>Area</b>	<b>Program</b>	<b>No of Holes</b>	<b>Total Metres</b>
Campbell	1981-87	53	5,152.57
	2007	45	11,195.94
	2011-12	11	3,117.61
<b>Total</b>		<b>109</b>	<b>19,466.12</b>
Gulçari B	1981-83	7	270.28
	2011-12	10	1,367.81
<b>Total</b>		<b>17</b>	<b>1,638.09</b>
Gulçari A Norte	2007	3	566.40
	2008	1	211.00
	2011-12	12	1,766.73
<b>Total</b>		<b>16</b>	<b>2,544.13</b>
Gulçari B Sul	2011-12	6	1,150.00
<b>Total</b>		<b>6</b>	<b>1,150.00</b>
São Jose	1983	2	115.15
	2008	9	2,209.50
	2011-12	14	2,389.75
<b>Total</b>		<b>25</b>	<b>4,714.40</b>
Novo Amparo	1983	7	377.30
	2007	9	1,502.10
	2008	1	285.00
	2011-12	2	357.95
<b>Total</b>		<b>19</b>	<b>2,522.35</b>
Novo Amparo Norte	2011-12	17	3,251.50
<b>Total</b>		<b>17</b>	<b>3,251.50</b>
<b>Grand Total</b>		<b>209</b>	<b>35,286.59</b>

### *Mineral Resource Estimates*

The Property is host to many mineralized zones, namely Campbell, Gulçari A Norte, Gulçari B, São José, Novo Amparo and Novo Amparo Norte. In this report, GE21 is using only the Measured and Indicated resources from the Campbell to update the reserves for their optimization study. The resources for Gulçari A Norte, Gulçari B, São José, Novo Amparo and Novo Amparo Norte are separate and have not changed since first being estimated for the 2013 technical report (Arsenault, 2013).

The Campbell, as outlined from the drill programs, extends 400 m along strike, and to a vertical depth of over 350 m with true widths ranging from 11 to 100 m and with an average width of about 40 m. This deposit is part of a mineralizing system that extends for 6.5 km along the length of the property. All the assays from this drill program are completed and results received.

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 modeling 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 vanadium deposit was undertaken using ordinary kriging (“OK”) as the principal estimation methodology for  $V_2O_5$ . The OK estimates were completed using Gemcom mining software.

The following list of variables are contained in the received block model data:

- Lithology code
- Bulk density assigned by lithology-type constant values (“t/m<sup>3</sup>”)
- Vanadium pentoxide in percent (“%V<sub>2</sub>O<sub>5</sub>”)
- Titanium dioxide in parts per million (“TiO<sub>2</sub> ppm”)
- Palladium grade in parts per million (“Pd ppm”)
- Platinum grade in parts per million (“Pt ppm”)
- A class code to distinguish Measured, Indicated, and Inferred resource blocks.

Largo has completed a block model and mineral resource estimate for the Campbell Deposit and five new Satellite Deposits incorporating the drilling from the 2011 program including 72 holes totaling 13,401 m. The five Satellite Deposits which extend north from Campbell 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 Jacaré River Intrusion.

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 herein. The new block model incorporates % magnetics (percent of magnetic minerals in the mineralized rock) and magnetite concentrate grade for  $V_2O_5$  and 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 Campbell is presented in Table 1.4\_1.



<b>Table 1.4_1</b> <b>Campbell Mineral Resources</b> <b>Maracás Vanadium Project –Campbell Mineral Resources</b> <b>Effective date: May 02<sup>nd</sup> 2017</b>					
<b>Category</b>	<b>Tonnes (Mt)</b>	<b>V2O5 Head Grade (%)</b>	<b>V2O5 Contained (kt)</b>	<b>V2O5 in Concentrate (%)</b>	<b>Magnetics (%)</b>
Measured (M)	18.08	1.19	215.0	3.19	30.55
Indicated (I)	1.70	1.28	21.7	3.12	34.64
M&I	19.78	1.20	236.7	3.19	30.90
Inferred	1.65	1.20	19.8	3.10	33.08

Resource within a pit shell using US\$34.20/t all in operating cost and reported at a 0.45% V2O5 cut-off, reviewed and confirmed by Fabio Valério Xavier (GE21).

The % magnetics number refers to the percent of magnetic minerals contained in the mineralized rock. It is used to help determine what portion of the mineralization in the mineral resources contains magnetite of sufficient vanadium content to be processed through the magnetic separators and concentrated, and, therefore, can be determined to be a mineral reserve.

Largo has completed a revised block model and updated mineral resource estimate for the Satellite Deposits incorporating the drilling from the 2011 program including 72 holes totaling 13,401 m. The Satellite Deposits 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 Jacaré River Intrusion.

No new drilling has been completed on the Satellite Deposits since 2012 and the mineral resources presented in Table 1.4\_2 are considered current.

<b>Table 1.4_2</b> <b>Satellite Deposits Mineral Resource</b> <b>Effective date: May 02<sup>nd</sup> 2017</b>				
<b>Deposits</b>	<b>Category</b>	<b>Tonnes (kt)</b>	<b>V2O5 (%)</b>	<b>Contained V2O5 (tonnes)</b>
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
Sao Jose**	Inferred	3,900	0.89	34,706
Satellite Deposits (Total)**	Inferred	27,820	0.83	232,114

\*\* Resource within a pit shell using US\$34.20/t all in operating cost and reported at a 0.45% V2O5 cut-off, reviewed and confirmed by Porfirio Cabaleiro Rodriguez (GE21)

### Mineral Reserve Estimates

Mineral reserves for the Project have been estimated for the Campbell Deposit with an effective date of May 02, 2017. The ultimate pit and mine plan was guided by GE21 to optimize kiln feed. The mine plan developed in this report is based on Measured and Indicated resources only as delineated in Section 14.

Reserves are reported using a sales price of \$6.34/lb of V<sub>2</sub>O<sub>5</sub>. The ultimate pit design and mine plan was done to optimize kiln feed. Details of the assumptions, parameters and methods used in the preparation of the reserve estimate and mining schedule are described in Section 16.

The mineral reserves presented in Table 1.5\_1 were estimated by Porfirio Cabaleiro Rodriguez of GE21, who is a qualified person under NI 43-101 and a Member of the Australian Institute of Geoscientists.

<p align="center"><b>Table 1.5_1</b></p> <p align="center"><b>Maracás Vanadium Project Mineral Reserves – Campbell pit</b></p> <p align="center"><b>Block dimensions 5x5x5 (m)</b></p> <p align="center"><b>Mine Recovery 100% and Dilution 5%</b></p> <p align="center"><b>(Effective May 02, 2017)</b></p>				
<b>Reserve Category</b>	<b>Tonnage (kt)</b>	<b>%V2O5 Head</b>	<b>%Magnetics</b>	<b>%V2O5 con</b>
Proven	17,570	1.14	29.66	3.21
Probable	1,440	1.26	33.89	3.20
<b>Total in pit Reserve</b>	<b>19,010</b>	<b>1.15</b>	<b>29.98</b>	<b>3.21</b>

### Recovery Methods

The process selected for the Maracás vanadium recovery plant was based on metallurgical test work compiled by SGS Lakefield Research Group Limited (SGS) in 2007, a study undertaken by IMS Processing plant in 1990, a feasibility study completed by Lurgi in 1986 and a detailed Technical study produced by Engenharia e Consultoria Mineral S.A. in 1990.

The Maracás vanadium recovery plant was commissioned in 2015 and has been in startup mode for much of that time ramping up to near design capacity. At the time of writing this report, the plant produces up to 800 t/ month, equivalent to a production rate of 9600 tpy of V<sub>2</sub>O<sub>5</sub>.

The current process flow sheet comprises the following: three stages of crushing, one stage of grinding, two stages of magnetic separation, magnetic concentrate roasting, vanadium leaching, ammonium meta-vanadate (“AMV”) precipitation, AMV filtration, AMV calcining, and fusing to V<sub>2</sub>O<sub>5</sub> flake as final product. A simplified process flow diagram for the production of vanadium pentoxide is presented in Figure 1.6\_1.



Originally sized to process 960,000 t/a run of mine (ROM) the plant will be capable, after due modification, to process 1,900,000 t/a of feed ore with an average grade of 1.14%  $V_2O_5$  and produce 13,200 t/y  $V_2O_5$  by 2020. The plant is designed to operate 365 days per year, 7 days/week, 24 hours/day with an on-stream factor of 87%.

Overall recovery from ore of  $V_2O_5$  has reached 76%.

**Figure 1.6\_1**  
**Conceptual Process Flow Sheet - Vanadium Pentoxide**

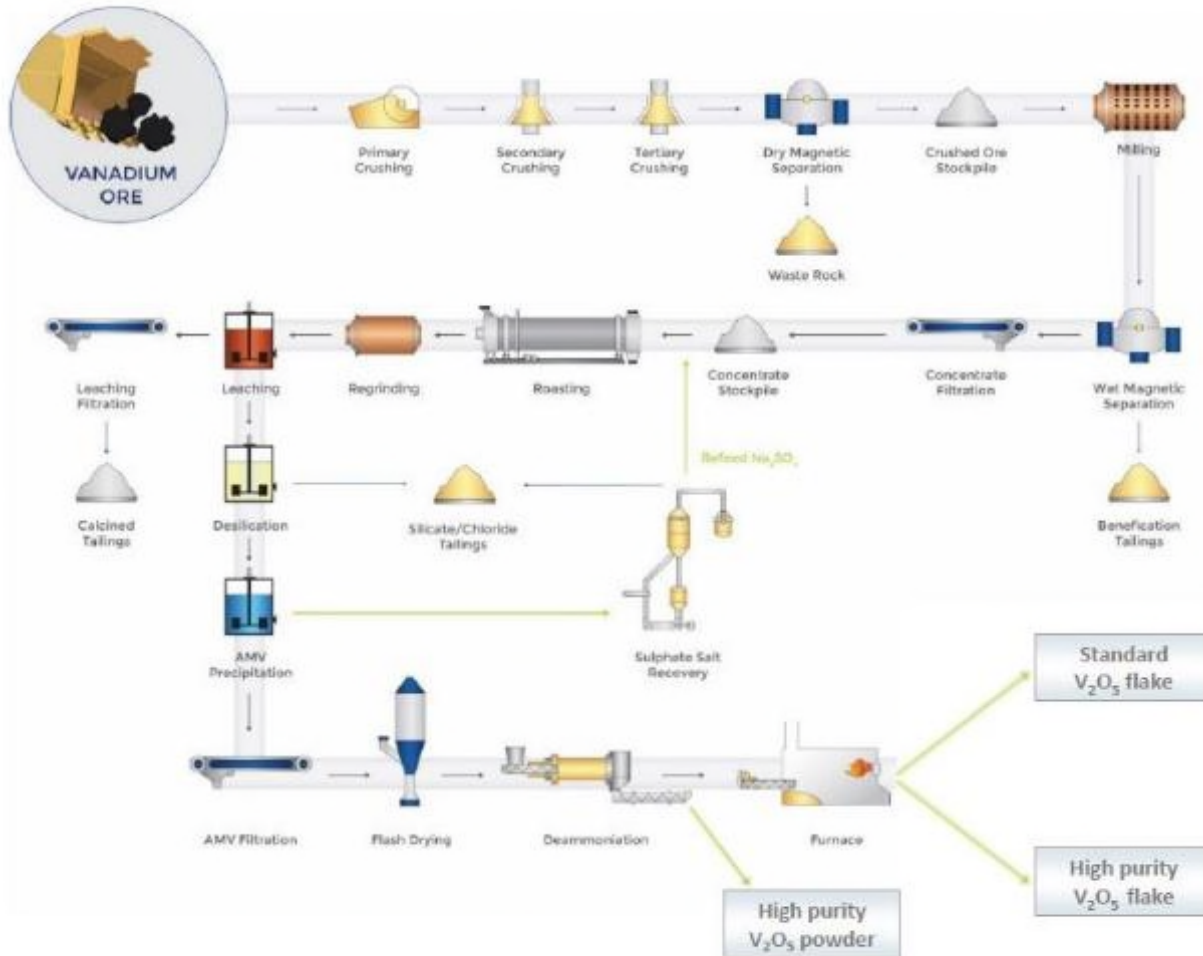


Table 1.6\_2 provides a summary of key process design parameters used for the process design as compared to actual data during the recent months. Estimated overall recoveries vary between the different ore deposits within a range of +3% and -8% from the base case. Blending of magnetite and magnetite-pyroxenite bearing material is planned to occur at the crusher.

The final magnetic concentrate is thickened and filtered. The filter cake is fed to the roasting section of the plant. The nonmagnetic tailings fraction from the beneficiation plant are thickened, filtered and conveyed to the tailings pond.

An off-gas control system collects any dust entrained in the gas from the roaster. To meet local environmental regulation, an electrostatic precipitator is installed to remove such particulates. The quantity of sodium sulphate added to the kiln is controlled and reduced in order to ensure compliance with the emission limits for  $SO_2$  (sulfur dioxide). Since the sodium sulphate dosage is already maximized for the base case, additional sodium carbonate will be added

to the kiln in the expanded case to ensure efficient extraction of vanadium and the excess sodium sulphate produced in the evaporator is stockpiled in a sealed area.

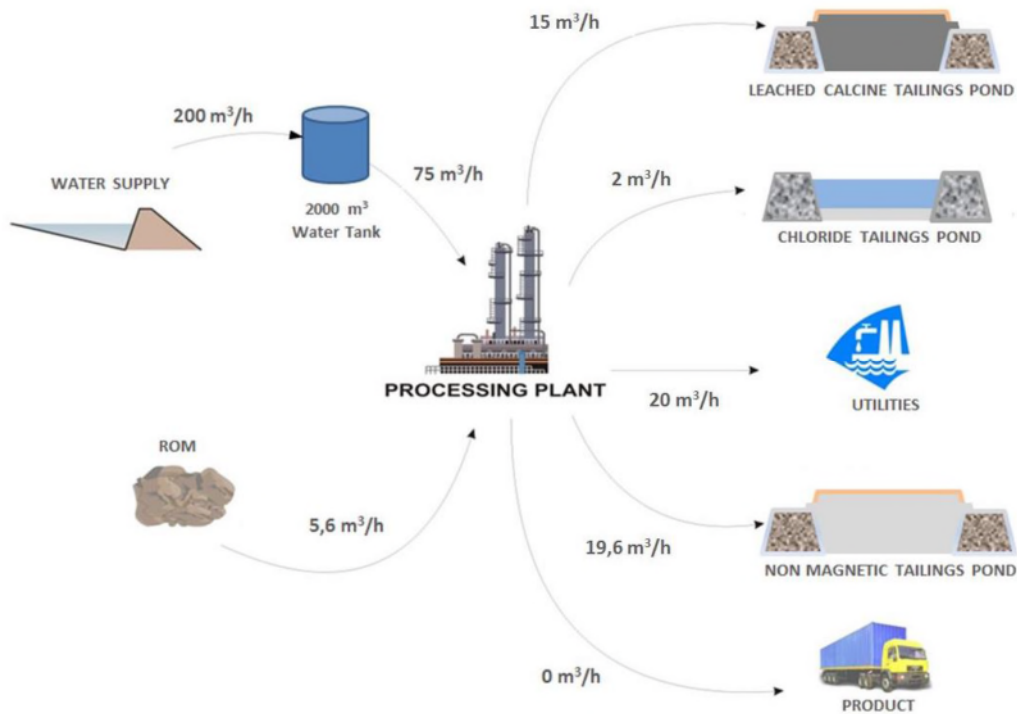
<b>Table 1.6_2</b>			
<b>Summary of Key Process Design Criteria</b>			
<b>Criterion</b>	<b>Units</b>	<b>2017/2018 Production</b>	<b>2020 onwards</b>
Average Ore Processing rate	t/a	1,415,000	1,900,000
V2O5 Production	t/a	9,600	13,200
Average V2O5 head grade	%	1.09	1.16
Plant availability	%	87%	87%
Plant Operating hours	h/y	7500	7500
Average plant daily ore throughput	t/d	3900	3900
Number of crushing stages	#	3	3
Crusher product size (80% passing)	mm	12	12
Number of grinding stages	#	1	1
Grind product size	microns	150	150
Magnetic Product solids yield	%	30	30
Average magnetic concentrate V2O5 content	%	3.21	3.21
Roasting reaction zone residence time	h	1	1
Leach retention time	h	2	2
Average roasting/leach V2O5 conversion	%	81%	81
AMV precipitation V2O5 recovery	%	98.8	98.8
Total average recovery to V2O5	%	76.0	76.0

*Environmental Studies, Permitting and Social or Community Impact*

The overall water balance of the Project was determined in order to quantify water availability and identify requirements for tailings disposal and storage. Figure 1.7\_1 shows a water balance flow chart involving the structures under consideration and their corresponding flow rates.

The processing plant requires 81.6 m<sup>3</sup>/hr water during operations, currently 75.0 m<sup>3</sup>/hr is provided from the Rio de Contas and 5.6 m<sup>3</sup>/hr is provided from the water content in the mined ore. VMSA's license provided by the federal water agency, Agência Nacional De Aguas, provides for a maximum water usage of 300 m<sup>3</sup>/hr from the Rio de Contas. The pumping system from the Rio de Contas was designed with a capacity of 200 m<sup>3</sup>/hr. There is a circulating water load within the plant with the net make-up being the 75 m<sup>3</sup>/hr.

**Figure 1.7\_1  
Water Balance Flow Chart**



Originally, as seen in previous technical reports, the plant design incorporated a conventional slurried tailings system with a tailings pond resulting in a greater demand for water. This water demand has been reduced with the introduction of ponds and reuse of the water to the plant. This change was driven by concerns amongst local stakeholders related to water scarcity.

A number of geological and geotechnical characterization activities were carried out to provide input data for the engineering design work associated with the open pit, the processing plant installations, waste and ore stock piles, tailings disposal and flood control systems.

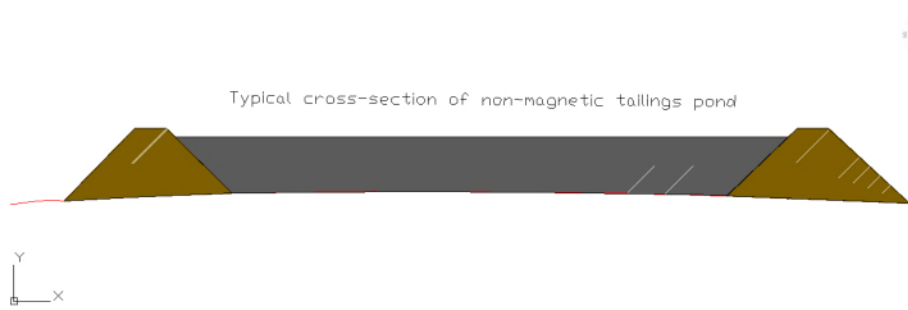
The processing plant was constructed to the northwest of Campbell where natural elevations range from 300m to 325m. The extraction process results in the need to provide several tailings storage facilities and waste piles as noted below. Tailings generated by the process include leached calcine from the processing kiln discharge, filter cake from the desilication process, chloride control purge from the evaporation circuit and primary inert tailings originating from magnetic separation.

The area designated for the disposal of the non-magnetic tailings in ponds is located south of the processing plant. The ponds will be partially surrounded by waste dump material as shown in Figures 1.7\_3 and 1.7\_4.

The first waste pile is located southwest of the processing plant. The Chloride Purge Tailings Pond is to be located south of the processing plant and the Leached Calcine Tailings Stack to the north.

The new Non-Magnetic Tailings Pond design consists of a series of ponds formed by rock-fill structures sealed by compacted clayey/saprolitic material, as illustrated in Figure 1.7\_2.

**Figure 1.7\_2  
Typical Cross-Section of the Non-Magnetic Tailings Pond**



The proposed arrangement will be applied to the construction of the various ponds outlined in Table 1.7\_2.

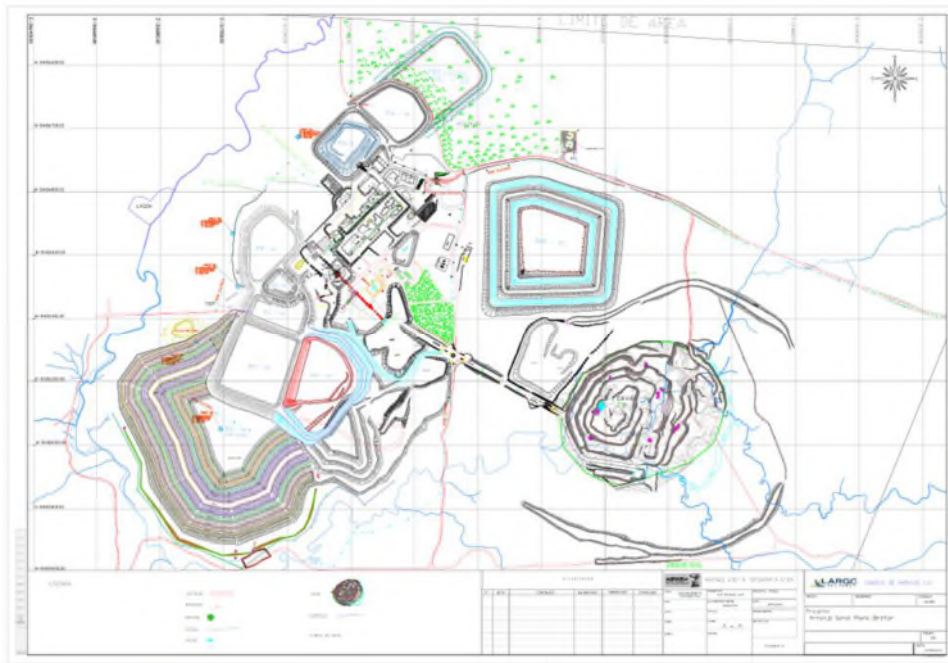
Table 1.7\_1 presents a summary of key tailings pond design characteristics.

<b>Design Aspect</b>	<b>Measurement</b>
Maximum height (m)	20
Length of stack structure (m)	300
Width of stack structure (m)	250
Maximum crest elevation (m)	325
Minimum downstream elevation (m)	305
Center road width (m)	10
Height of slopes between berms (m)	10
Tailings capacity - (m3)	600,000
Maximum area occupied (m2)	740,000

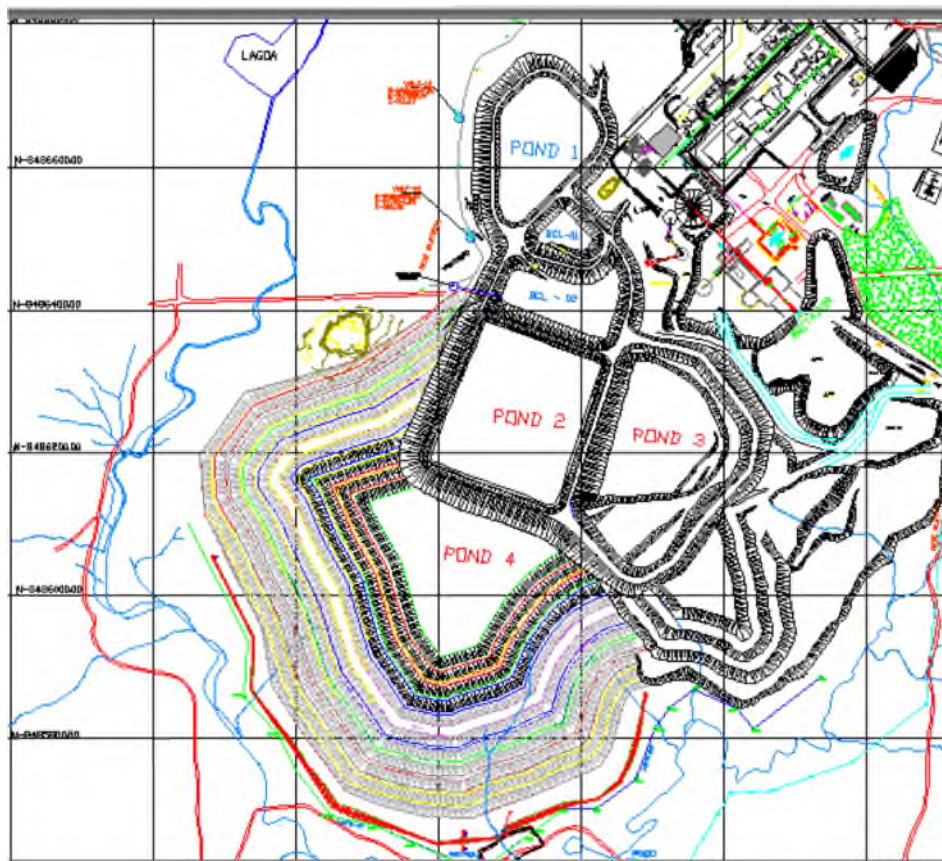
The layout of the Non-Magnetic Tailings Pond is shown in Figure 1.7\_3 and Figure 1.7\_4. The schedule of pond construction and usage is outlined in Table 1.7\_2. Further study is required to expand the tailings facilities to adequately meet the storage requirements of the remainder of the project life.



**Figure 1.7\_3**  
**Layout of Non-Magnetic Tailings Ponds**



**Figure 1.7\_4**  
**Close Up Layout of Non-Magnetic Tailings Ponds**



pond	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
1														
2														
3														
4														
5														
6														
	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 20px; height: 10px; background-color: #c6e0b4; border: 1px solid black;"></div> <span>in use for tailings disposal</span> </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 5px;"> <div style="width: 20px; height: 10px; background-color: #a6c9ec; border: 1px solid black;"></div> <span>in construction</span> </div>													

The leached calcine tailings are discharged into the Leached Calcine Tailings Stack. The de-silication reject and chloride control purge tailings will be deposited in the Chloride Control Purge Pond. The intended construction location for these ponds is northwest of the open pit, close to the processing plant.

The dikes were built using compacted earth and their base areas are leak-proofed using a double-layer geomembrane liner featuring a leak detection system. The construction consists of clearing vegetation from the areas to be occupied by the ponds, removal of organic material, and excavation of material inappropriate for foundations. The perimeter of each pond will be protected by rock-fill channels.

The area designed for the open pit intercepts of the João Creek and three direct tributaries. Consequently, this warrants the installation of a protection system to impede the influx of surface water runoff into the pit to enable mining activities to proceed.

For the initial phase, VOGBR, a Brazilian geotechnical consultant, envisaged the pit protection system to consist of dikes and channels. The reason for the selection of this alternative provided a good balance between the volume of the required cuts and landfills. However, following ensuing Project development Vanádio decided to use a system of protection ridges, because of the proximity and usage of material from within the open pit, which was considered to be more economic.

This system consists of a pair of ridges located around the open pit, denominated as the Northern Ridge and the Southern Ridge. The objective is to redirect the waters to points downstream from the open pit. The protection ridges form a barrier around the open pit to intercept the watercourses and to raise their water levels, so they can naturally surpass the topographical elevations variations and flow by gravity bearing the surface runoff downstream from the open pit.

The protection ridges will be installed pursuant to the mining activity plan defined for the open pit. The Northern Ridge should be completed by the close of Year 2 while the Southern Ridge will be required for mining activity development as of Year 3.

The use of overburden material from the open pit was considered as a premise when dimensioning the protection ridges. Accordingly, the ridge structures were conceived consisting of rock fill, transition material and compacted earth (residual soil/saprolitic material).

The borrow materials that will be used for the ridge construction are to be obtained from the open pit, the actual ridge location and the processing plant area. Rocky overburden (processed material) is envisaged for use as transition material within the ridges.

The material originating from the open pit, which will be placed on the waste pile or the ore stockpile, is predominantly rock consisting of boulders of varying sizes. The area designated for the waste pile covers approximately 47 ha.

In addition, Largo has retained Mineral Engenharia em Meio Ambiente Ltda. (Mineral) to complete an environmental audit incorporating the requirements of Equator Principle n° 04. This audit resulted in an Action Plan that incorporates the programs necessary for compliance with Brazilian laws and regulations and applicable environmental performance standards and Environment, Health and Safety (EHS) guidelines.

The results of this audit are presented in Section 20.8 Current Activities and Plans.

The Mine Closure and Reclamation Plan calculated for Campbell totalled US\$ 12.4 million and involved the following expenses: covering the mine site, plant, stockpile, tailing dams, waste disposal area, buildings and facilities.

<b>Mine Closure Costs</b>	<b>Costs in US\$</b>
1. Administration	\$829,531
2. Disassembly	\$7,880,029
3. Earth moving	\$56,426
4. Rehabilitation and revegetation of impacted areas	\$818,184
5. Environmental monitoring program	\$329,383
6. Communities communication program	\$90,939
7. Contingencies	\$ 2,400,000
<b>Total</b>	<b>12,404,495</b>

A review of the Brazilian permitting process is presented as follows:

When a Class II mineral extraction project (as defined by the Mining Code) is presented for development a multidisciplinary technical review team is appointed by the State Council for Environmental Matters (“CEPRAM”) to review the project. The team sets the Terms of Reference for the Environmental Impact Assessment (“EIA”) and the Relatório de Impacto Ambiental (“RIMA”). The RIMA is a document that summarizes the full impact assessment for review by the public.

The Terms of Reference for the EIM/RIMA include a social impact, alternatives and archaeological assessment for the Project, in addition to the basic physical and biological environmental impact assessment.

Environmental permitting in the State of Bahia is the responsibility of the Instituto do Meio Ambiente e Recursos Hídricos (“INEMA”), which is the institution that regulates, approves and issues the environmental permits or licenses. INEMA replaced the Instituto de Meio Ambiente (“IMA”) by state decree on May 4, 2011.

The permitting process in Bahia takes into consideration the nature and size of the projects and activities under consideration, the characteristics of the affected ecosystem and the supporting capacity of the area being impacted.

The following types of environmental licenses are necessary for the Project:

- Location License: The LL is granted in the preliminary planning phase of the project or operation, and it approves the location and the conceptual design of the project, attesting its environmental feasibility and determining the basic requirements and conditions to be observed in the subsequent permitting stages;
- Installation License: The LI is granted so that the project or operation can be installed (or constructed), in accordance with the specifications presented in the plans, programs and project specifications proposed by

the environmental studies that were approved, including the environmental control measures and other conditions;

- Operational License: The LO is granted for the project to commence the operational phase, after the fulfillment of all the requirements of the previous licenses have been confirmed and the conditions and procedures to be observed during the operation are defined.

At this time, the Project is fully licensed.

*Capital and Operating Costs*

**Capital Cost Estimate**

**Sustaining Capital Cost**

All capital expenditures (“**Capex**”) are treated as sustaining Capex for purposes of this report and the related cash flow analysis, and was estimated for the whole Project at US\$ 71 million, where US\$ 9 million is related to production expansion to 960 t/month in 2019 and US\$ 12 million is related to production expansion to 1,100 t/month in 2020. A constant value of US\$ 3 million per year was provided for plant maintenance, spare parts, calcine dams with exception of 2017, which costs were estimated at US\$ 5 million, since in 2017 Largo expects to invest an additional US\$ 2 million in plant improvement projects.

Additional sustaining Capex of US\$ 1.5 million was estimated for mine drainage, US\$ 4.3 million was estimated for exploration, and US\$ 8.8 million for non-magnetic dams and chloride ponds.

**Operating Cost Estimate**

GE21 summarized the operating and administrative costs, based on real costs that are regularly incurred by Largo.

Table 1.8.2\_1 shows the average operating costs projected after all investments.

<b>Operating Cost</b>	<b>US\$ /lb</b>
Mining (US\$/t)	2.45
Processing (US\$/lb)	1.78
General and Admin (US\$/lb)	0.18
Royalties and Commissions	0.34

**Mining Cost**

Unit mining costs are based on contract mining. Rates as currently negotiated with local drilling and blasting contractors US\$0.79/t. Loading and haulage operations are assigned to a separate contractor with rates expressed as a function of one-way haul distances as summarized in Table 1.8.2.1\_1.



<b>Haul Distance (m)</b>	<b>Load/Haul (\$)</b>
0000 - 0200	0.83
0201 - 0500	0.90
0501 - 1,000	0.97
1,001 - 1,500	1.03
1,501 - 2,000	1.10
2,001 - 2,500	1.18
2,501 - 3,000	1.28
3,000 - 4,000	1.49
4,000 - 5,000	1.72
5,000 - 6,000	1.98
6,000 - 7,000	2.28
7,000 - 8,000	2.63
8,000 - 9,000	3.03
9,000 - 10,000	3.49

### **Processing Cost**

Unit processing costs and recovery assumptions used in the net present value model are summarized in Table 1.8.2.2\_1.

<b>Item</b>	<b>Value US\$/lb</b>
Power	0.19
Rehandling	0.08
Production Inputs	1.23
Maintenance	0.11

### **General and Administration Cost**

The general and administrative costs (“**G&A**”) include all costs relating to administration, management wages, HR, Procurement, Technology, HSSE, Communication, restaurant, employee transportation and security.

The overall annual G&A costs are currently estimated in US\$ 4.8 million.

### *Economic Analysis*

#### **Economic Assumptions**

A cash flow scenario was developed to evaluate the Project based on economic-financial parameters, the results of the mine scheduling and on the operating expenditure (“**OPEX**”) estimate. The table 1.9.1\_1 shows the selling prices and taxes that were taken into account.

Table 1.9.1_1 Selling Prices and Taxes	
Selling Price	
Product	Sell Price (US\$/lb)
Product V <sub>2</sub> O <sub>5</sub>	9.00 (in 2018 and 2019)
	6.34 others years
Taxes	
CFEM	2.0%
INCOME TAX	25% (Discount of 75% until 2024)
INCOME TAX*	9%
Financial Parameters	
WACC	8.0% aa
NPV	Based on middle the year
Royalties	
Surface Royalties	2.0%

\* The total Income taxes has two components: (i) IRPJ: Regular rate is 25%, but VMSA has a tax incentive which results in a discount of 75% and (ii) CSLL : 9%. This results in an aggregate effective rate of 15.25%.

Discounted at 8% per year, the Project base case results in a net present value of US \$542 million.

Table 1.9.1_2 Base Case Life of Mine Annual Cash Flow													
Year	Campbell												
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
<b>Total Lavrado (Mt)</b>	5.0	6.8	8.8	9.8	10.9	9.7	9.3	8.9	4.1	3.8	2.2	0.6	-
High Grade	1.17	1.25	1.59	1.93	1.87	1.91	2.01	2.06	1.89	1.82	1.52	-	-
Low Grade	-	-	-	-	-	-	-	-	0.1	0.0	-	0.6	-
Waste	3.79	5.56	7.26	7.85	9.05	7.76	7.24	6.85	2.16	2.00	0.69	-	-
<b>VZ05 Product (t)</b>	<b>6 357.8</b>	<b>10 497.9</b>	<b>11 437.4</b>	<b>13 319.5</b>	<b>13 680.6</b>	<b>13 465.9</b>	<b>13 383.4</b>	<b>13 313.3</b>	<b>13 257.1</b>	<b>13 654.1</b>	<b>14 703.8</b>	<b>2 135.0</b>	-
<b>CAPEX (US\$ m)</b>	<b>(44.5)</b>	<b>(69.4)</b>	<b>(73.6)</b>	<b>(76.5)</b>	<b>(81.1)</b>	<b>(77.8)</b>	<b>(76.9)</b>	<b>(76.2)</b>	<b>(67.3)</b>	<b>(69.0)</b>	<b>(69.2)</b>	<b>(12.2)</b>	-
Mine (US\$)	(11.7)	(15.9)	(19.7)	(21.4)	(24.0)	(22.2)	(21.4)	(21.7)	(12.5)	(11.8)	(8.5)	(4.5)	-
Mine (US\$)	(5.9)	(8.1)	(10.5)	(11.6)	(14.0)	(12.4)	(11.9)	(12.4)	(6.1)	(5.7)	(3.8)	(0.6)	-
Drilling and Blast (Ore+Waste)	(3.3)	(4.5)	(5.8)	(6.5)	(7.2)	(6.4)	(6.2)	(6.0)	(3.0)	(2.8)	(1.7)	(0.5)	-
Costs (Payroll, Topography, Auxiliar Equipaments, etc)	(1.8)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	(2.6)	-
Drilling and Blast (Fixed Costs)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	(0.7)	-
Process	(29.6)	(48.8)	(49.1)	(50.4)	(51.8)	(51.0)	(50.7)	(50.4)	(50.2)	(52.5)	(55.7)	(8.1)	-
Plant	(29.6)	(48.8)	(49.1)	(50.4)	(51.8)	(51.0)	(50.7)	(50.4)	(50.2)	(52.5)	(55.7)	(8.1)	-
G&A	(3.1)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	-
<b>Gross Revenue (US\$ m)</b>	<b>81.5</b>	<b>191.1</b>	<b>209.3</b>	<b>175.1</b>	<b>182.1</b>	<b>179.2</b>	<b>178.1</b>	<b>177.2</b>	<b>176.5</b>	<b>184.4</b>	<b>195.7</b>	<b>28.4</b>	-
<b>EBITDA (US\$ m)</b>	<b>37.2</b>	<b>121.7</b>	<b>135.8</b>	<b>98.6</b>	<b>101.0</b>	<b>101.4</b>	<b>101.4</b>	<b>100.4</b>	<b>109.1</b>	<b>115.4</b>	<b>126.5</b>	<b>11.2</b>	-
<b>DEPRECIATION (US\$ m)</b>	<b>(29.0)</b>	<b>(30.5)</b>	<b>(34.7)</b>	<b>(39.0)</b>	<b>(39.9)</b>	<b>(40.8)</b>	<b>(40.4)</b>	<b>(38.4)</b>	<b>(25.4)</b>	<b>(24.6)</b>	<b>(13.5)</b>	-	-
<b>EBIT (US\$ m)</b>	<b>8.2</b>	<b>91.2</b>	<b>101.2</b>	<b>59.6</b>	<b>61.1</b>	<b>60.5</b>	<b>60.9</b>	<b>62.0</b>	<b>83.7</b>	<b>90.8</b>	<b>113.0</b>	<b>11.2</b>	-
IRPJ (25% in R\$ 0.24 mi/year)+75% Discount (SUDENE Incentive) until 2024	(0.015)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.011)	(0.011)	(0.011)	(0.011)	-
Operating Profit Discount (30%)	2.45	27.37	30.35	17.88	18.34	10.00	-	-	-	-	-	-	-
AIR (24% sobre Exe R\$ 0.24 mi/ano do EBIT) +75% +75% Discount (SUDENE Incentive until 2024)	(0.3)	(4.0)	(4.4)	(2.6)	(2.7)	(3.1)	(3.8)	(3.9)	(20.9)	(22.7)	(28.2)	(2.7)	-
CSLL (9% sobre EBIT)	(0.5)	(5.7)	(6.4)	(3.8)	(3.9)	(4.5)	(5.5)	(5.6)	(7.5)	(8.2)	(10.2)	(1.0)	-
CBPM (3% sales revenue)	(2.4)	(5.7)	(6.3)	(5.3)	(5.5)	(5.4)	(5.3)	(5.3)	(5.3)	(5.5)	(5.9)	-	-
CFEM (2% of MAG cost + 30%) (US\$ mi)	(0.5)	(0.7)	(0.7)	(0.8)	(0.8)	(0.8)	(0.8)	(0.8)	(0.6)	(0.6)	(0.6)	(0.1)	-
ROYALTIES FOR LAND OWNER	-	-	-	-	-	-	-	-	-	-	-	-	-
ROYALTIES (2%)	(1.6)	(3.8)	(4.2)	(3.5)	(3.6)	(3.6)	(3.6)	(3.5)	(3.5)	(3.7)	(3.9)	-	-
<b>Net Income (US\$ m)</b>	<b>2.7</b>	<b>71.3</b>	<b>79.2</b>	<b>43.7</b>	<b>44.7</b>	<b>43.1</b>	<b>41.9</b>	<b>42.9</b>	<b>45.8</b>	<b>50.1</b>	<b>64.3</b>	<b>7.2</b>	-
Depreciation (US\$ m)	29.0	30.5	34.7	39.0	39.9	40.8	40.4	38.4	25.4	24.6	13.5	-	-
Residual Value (US\$ m)	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Free Operating cash flow (US\$ m)</b>	<b>31.7</b>	<b>101.7</b>	<b>113.8</b>	<b>82.7</b>	<b>84.6</b>	<b>83.9</b>	<b>82.4</b>	<b>81.3</b>	<b>71.3</b>	<b>74.7</b>	<b>77.8</b>	<b>7.2</b>	-
<b>CAPEX (US\$ m)</b>	<b>(6.0)</b>	<b>(14.4)</b>	<b>(17.1)</b>	<b>(4.6)</b>	<b>(4.6)</b>	<b>(4.0)</b>	<b>(3.6)</b>	<b>(3.6)</b>	<b>(4.6)</b>	<b>(4.2)</b>	<b>(4.1)</b>	<b>(0.4)</b>	-
Mine	(0.9)	(0.4)	-	-	-	(0.1)	-	-	-	(0.1)	-	-	-
Plant	(5.0)	(12.1)	(15.2)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	(3.0)	-	-
DAM	-	(1.2)	(1.5)	(1.5)	(1.5)	(1.5)	(1.5)	(1.5)	(1.2)	(1.0)	(0.5)	-	-
Exploration	(0.11)	(0.63)	(0.40)	(0.09)	(0.58)	(0.40)	(0.09)	(0.58)	(0.40)	(0.09)	(0.58)	(0.40)	-
<b>Others Costs (US\$ m)</b>	-	-	-	-	-	-	-	-	-	-	-	(11.0)	(1.4)
Mine Closure	-	-	-	-	-	-	-	-	-	-	-	-	-
Working Capital	-	(3.0)	(1.6)	2.1	-	-	-	-	-	-	-	7.7	-
<b>Cash Flow (US\$ m)</b>	<b>25.7</b>	<b>84.4</b>	<b>95.1</b>	<b>80.1</b>	<b>80.0</b>	<b>79.9</b>	<b>78.8</b>	<b>77.7</b>	<b>66.6</b>	<b>70.6</b>	<b>73.7</b>	<b>3.6</b>	<b>(1.4)</b>
NPL (WACC = 8%) (US\$ m)	542	-	-	-	-	-	-	-	-	-	-	-	-

### Other Relevant Information

In addition to the reserve estimate for Campbell, a PEA of the impact of mining the additional inferred resources was made, see Section 24 of the Technical Report available on SEDAR.

The PEA does not update, add to or modify the FS, nor does it include more optimistic assumptions and parameters, and is not a PFS or FS in any respect.

GE21, based on the mineral resources for the Satellite Deposits and the remaining resources in the Campbell Pit, prepared a PEA to assess the economic potential of the remaining mineral resources at the Project.

The PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized. Table 1.10\_1 presents the summary of mineral inventory for additional resources in Satellite Deposits.

Table 10.1_1											
Summary of mineral inventory for additional resources in Satellite deposits											
Mine Recovery 100% - Dilution 5%											
(Effective May 2 <sup>nd</sup> 2017)											
Target	ROM			Waste	Total Mov.	SR	Magnetic Concentrate				Product
	Mass	V <sub>2</sub> O <sub>5</sub>	SiO <sub>2</sub>				Mag*	Mass	V <sub>2</sub> O <sub>5</sub>	SiO <sub>2</sub>	
	Kt	%		Kt	t/t	%	kt	%	Kt		
Gulçari A Norte e Gulçari B	7 851	0.67	26.82	95 115	102 965	12.12	25.7	2 014	2.63	2.97	40 37
Novo Amparo	1 171	0.71	14.18	4 056	5 227	3.46	38.9	456	1.58	1.44	5 48
Novo Amparo Norte	9 473	0.81	23.66	37 547	47 020	3.96	28.6	2 714	2.60	2.79	53 81
São José	3 860	0.85	23.35	25 340	29 200	6.57	28.8	1 113	2.67	2.29	22 64
Inferred Campbell	1 736	1.03	28.88	31 608	33 344	18.20	28.2	489	3.06	3.96	11 42
<b>Total</b>	<b>24 090</b>	<b>0.78</b>	<b>24.55</b>	<b>193 665</b>	<b>217 756</b>	<b>8.04</b>	<b>28.2%</b>	<b>6 785</b>	<b>2.60</b>	<b>2.79</b>	<b>134 73</b>

\*Numbers are rounded to one decimal place

The PEA for the Satellite Deposits and remaining inferred resources in the Campbell Pit demonstrated an additional mine life of 12 years if the inferred resources in the Satellite Deposits and remaining inferred resources in Campbell Pit come to be converted to mineral reserves with a potential Net Present Value (“NPV”) of US\$ 140 million at an 8% discount rate.

### Conclusion and Recommendations

#### Conclusion

The Project is an open pit operation utilizing a contract mining fleet of hydraulic excavators, front-end loaders and 36 tonne haul trucks. Largo provided GE21 with an internally percent model resource, updated to the end of April 2017. This “percent” model was transformed into a standardized block model. The mine planning model adopted is considered to be a “diluted” model, adding approximately 5 % dilution to the source model.

GE21 received from Largo, per the guidance of its geotechnical consultant, the definition of a single angle of 70° interramp for the final pit. For operational purposes GE21 considered the general angle of 60° for pit optimization exercises.

Due to its location in the arid region, there were no studies of groundwater interference in the pit optimization.

Reserves are reported using a sales price of \$ 6,34/lb of V<sub>2</sub>O<sub>5</sub>. Details of the assumptions, parameters and methods used in the preparation of the reserve estimate and mining schedule are presented in Tables 16.1 through 16.7, and as described in Section 16 (below).

The mineral reserves were estimated by Porfirio Cabaleiro Rodriguez of GE21, who is a qualified person under NI 43-101 and a Member of the Australian Institute of Geoscientists, and result in 17.57Mt of Proven Reserves, at 1.14% V<sub>2</sub>O<sub>5</sub>, with a magnetic recovery of 29.66% at a grade of 3.21% V<sub>2</sub>O<sub>5</sub>, and 1.44 Mt of Probable Reserves, at 1.26% V<sub>2</sub>O<sub>5</sub>,

with a magnetic recovery of 33.89% at a grade of 3.20% V<sub>2</sub>O<sub>5</sub>, totalling 19.01Mt of Proven Reserves, at 1.15% V<sub>2</sub>O<sub>5</sub>, with a magnetic recovery of 29.89% at a grade of 3.21% V<sub>2</sub>O<sub>5</sub>.

Currently, Largo has a mining fleet contract with Fagundes Construção e Mineração Ltda., which consists of 3 CAT 336 hydraulic excavators equipped with a 2.5 m<sup>3</sup> bucket and a total of 22 Mercedes Benz 36-tonne capacity trucks. The contract drilling fleet consists of three Sandvik Ranger DX800 rotary drill rigs. A fleet of ancillary equipment is also available for mine maintenance and eventual plant services.

The Maracás vanadium recovery plant was commissioned in 2015 and has been in startup mode for much of that time ramping up to near design capacity. At the time of writing this report, the plant produces up to 9,360 t of V<sub>2</sub>O<sub>5</sub> equivalent per year with a trend approaching design capacity. Except for unanticipated downtime, and subject to completion of the two expansions contemplated herein, production is expected to reach 13,200 t/a V<sub>2</sub>O<sub>5</sub> in 2020.

The current process flow sheet comprises three stages of crushing, one stage of grinding, two stages of magnetic separation, magnetic concentrate roasting, vanadium leaching, AMV precipitation, AMV filtration, AMV calcining, and fusing to V<sub>2</sub>O<sub>5</sub> flake as final product.

The base case vanadium pentoxide price used in the economic analysis of the Maracás Project is US\$9.00/lb V<sub>2</sub>O<sub>5</sub> for 2018 and 2019, and then US\$6.34/lb V<sub>2</sub>O<sub>5</sub> until the end of the mine life, GE21 also assessed two other scenarios where it used a flat price of US\$6.34/lb V<sub>2</sub>O<sub>5</sub> and US\$ 7.37/lb V<sub>2</sub>O<sub>5</sub>, respectively.

Based on an existing and ongoing operation, with no additional investments in new plant capacity, other than what has been discussed in the Sustaining Capital Costs. These will result in the anticipated increase in production as discussed above. All investments were considered as Sustaining Capital Costs.

The total sustaining cost was estimated at US\$ 70 million distributed over 10 years, which includes plant equipment repowering (milling, deammoniation, roasting, AMV precipitation), drilling, increased dam reservoir capacity and drainage pumps of the mine bottom.

GE21 summarized the operating and administrative costs, based on real costs that are regularly incurred by Largo, in summary, mining cost at US\$ 2.45\$/t, Processing cost at US\$1.78/lb, G&A at US\$ 0.18/lb, and Royalties and commissions at US\$ 0.34/lb

A Discounted Cash Flow – DCF - scenario was developed to assess the Project based on economic-financial parameters, on the results of the mine scheduling and on the Sustaining CAPEX and OPEX estimate.

The Project base case, using reserves only, estimates a Net Present Value of \$542 million, at a Discount Rate of 8% per year.

Finally, GE21 has concluded, based on the PEA-Level study in item 24 that the Satellite Deposits and remaining inferred resources in the Campbell pit demonstrate the technical and economic potential for viability. GE21 thinks the development of a study to evaluate production at the Campbell and the Satellite Deposits at the same time, including, assessing the benefits versus the scenario presented in this report is recommended.

GE21, based on this report, recommends that Largo should consider the following as it continues to advance the Project:

- Largo should proceed with a drilling program to upgrade the resources in the Satellite Deposits, with a view to converting the inferred resources to measured and indicated resources.
- Consider whether the continued use of a contracted fleet continues to make sense relative to increasing costs as the Project progresses.
- Further examine the possibility of selling its iron-rich calcine tailings. This would include considering what it would take to turn it into a more saleable product.

- In respect of the Satellite Deposits:
- Develop a technical and economic study for mine scheduling purposes in order to maintain grade, and to avoid any production decreases.
- Consider, whether two or more of the Satellite Deposits could be brought into production at same time, with an implicit CAPEX for a second mobile DMS unit, to ensure that production always stays at nameplate capacity.

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## **DIVIDENDS**

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The constating documents of the Company do not limit its ability to pay dividends on its Common Shares. However, the Company has not paid any dividends since incorporation and the Company does not expect to pay dividends in the foreseeable future. In addition, the payment of dividends in the future, if any, will be made at the discretion of the Board.

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## **DESCRIPTION OF CAPITAL STRUCTURE**

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The authorized capital of the Company consists of an unlimited number of Common Shares. As of December 31, 2017 there were 518,423,263 Common Shares issued and outstanding. As of the date of this AIF, the Company had Common Shares issued and outstanding. 11,639,813 Common Shares are reserved for issuance for stock options granted to directors, officers, employees and consultants and approximately 154,223,000 Common Shares are reserved for issuance upon the exercise of share purchase warrants. Please see the information above under the heading “*General Development of the Business – Three Year History*”.

### ***Common Shares***

Holders of Common Shares are entitled to receive notice of and to attend any meetings of shareholders and shall have one vote per share at all meetings, except meetings at which only holders of another class or series of shares are entitled to vote separately as such class or series. Holders of Common Shares are entitled to receive on a pro rata basis such dividends, if any, as and when declared by the Board and, upon liquidation, dissolution or winding up of the Company, are entitled to receive on a pro rata basis the net assets of the Company after payment of debts and other liabilities, in each case subject to the rights, privileges, restrictions and conditions attaching to any other series or class of shares ranking senior in priority to or on a pro rata basis with the holders of Common Shares. The Common Shares do not carry any pre-emptive, subscription, redemption or conversion rights, nor do they contain any sinking or purchase fund provisions.

### ***Incentive Options***

On June 29, 2017, shareholders adopted a 10% rolling share compensation plan under which the Company may issue restricted share units (“**RSUs**”), and options (“**Options**”) to purchase Common Shares. Unlike the Options, the RSUs do not require the payment of any monetary consideration to the Company. Instead, each RSU represents a right to receive one Common Share following the attainment of vesting criteria determined at the time of the award.

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## **MARKET FOR SECURITIES**

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### ***Trading Price and Volume***

The Common Shares trade on the TSX under the symbol “LGO”. The table below shows the price ranges and volume of trading for each month of the financial year ended December 31, 2017 and for each month of the current financial year up to the date of this AIF.

<b>Month</b>	<b>High (\$)</b>	<b>Low (\$)</b>	<b>Close (\$)</b>	<b>Volume (# of Shares)</b>
March 2018 (1- 21)	1.39	1.08	1.34	3,975,351
February, 2018	1.28	1.06	1.15	7,629,177
January, 2018	1.34	1.28	1.30	5,572,768
December, 2017	1.05	0.98	1.01	3,339,098
November, 2017	1.07	1.00	1.03	2,166,236
October, 2017	0.94	0.87	0.91	2,289,510
September, 2017	1.05	0.96	1.02	5,492,754
August, 2017	0.69	0.61	0.65	5,023,011
July, 2017	0.43	0.40	0.42	1,985,894
June, 2017	0.45	0.44	0.44	230,550
May, 2017	0.53	0.51	0.52	636,925
April, 2017	0.53	0.50	0.51	876,363
March, 2017	0.48	0.47	0.48	439,397
February 2017	0.51	0.49	0.50	666,765
January 2017	0.51	0.47	0.49	1,261,536

### **Prior Sales**

During the 12 months of the financial year ending December 31, 2017, the Company issued the following securities or securities convertible into Common Shares at the following prices:

<b>DATE</b>	<b>SECURITY</b>	<b>PRICE PER SECURITY/ EXERCISE PRICE</b>	<b>NUMBER OF SECURITIES</b>
January 9, 2017	Units <sup>(1)</sup>	\$0.45	33,524,007
January 24, 2017	Units <sup>(1)</sup>	\$0.45	2,216,112
March 10, 2017	Common Shares <sup>(2)</sup>	\$0.4901	263,157
April 12, 2017	Warrants <sup>(3)</sup>	\$0.50	400,000
November 30, 2017	Units <sup>(4)</sup>	\$0.82	9,868,012
December 13, 2017	Units <sup>(4)</sup>	\$0.82	26,117,737
December 13, 2017	Units <sup>(5)</sup>	\$0.82	7,306,934

### **Notes:**

- (1) Comprised of one Common Share and one-half of one Common Share purchase warrant, with each warrant exercisable for one Common Share for a period of 3 years at a price of \$0.65 per Common Share.
- (2) Common Shares issued in connection with the extension of the Short Term Loan on February 24, 2017.
- (3) Common Share purchase warrants issued in connection with the Bridge Loan. Each warrant is exercisable for one Common Share for a period of 3 years at a price of \$0.50 per Common Share.

- (4) Comprised of one Common Share and one-half of one Common Share purchase warrant, with each warrant exercisable for one Common Share for a period of 5 years at a price of \$1.15 per Common Share.
- (5) Units issued to Banco Pine in full and final settlement of its outstanding debt of \$5,991,687.51 under the US Pine Facility. Each unit is comprised of one Common Share and one-half of one Common Share purchase warrant, with each warrant exercisable for one Common Share for a period of 5 years at a price of \$1.15 per Common Share.

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## ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER

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To the knowledge of the Company, no securities of any class are held in escrow or are subject to any contractual restriction on transfer.

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## DIRECTORS AND OFFICERS

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The following table sets forth the name, province of residence and position held with the Company of each director and executive officer effective as of the date of this AIF. All directors hold office until the next annual meeting of shareholders of the Company or until their successors are elected or appointed.

<b>Name and Province of Residence</b>	<b>Position(s) with Company (and Period of Service as a Director if Applicable)</b>	<b>Principal Occupation</b>	<b>Number of Common Shares Beneficially Held</b>	<b>Percentage of Common Shares Beneficially Held<sup>(1)</sup></b>
Mark A. Smith Colorado, United States	Director, President and Chief Executive Officer Director since April 1, 2015	President and Chief Executive Officer of the Company	5,784,021	1.11%
Sam Abraham <sup>(4)</sup> New York, United States	Director since July 9, 2015	Director, Arias Resource Capital Management LP	Nil	N/A
Alberto Arias <sup>(2)(3)</sup> New York, United States	Director since April 2011	Founder and President, Arias Resources Capital Management LP	286,826,830 <sup>(7)</sup>	55.33%
David Brace <sup>(3)(4)(5)</sup> Ontario, Canada	Director since June 26, 2012	Chief Executive Officer of Karmin Explorations Inc.	42,727	0.00%
Alberto Beeck <sup>(2)(8)</sup> Ontario, Canada	Director since June 29, 2016	Managing Partner, VH Properties and VH Investments	55,276,489	10.66%
Daniel Tellechea <sup>(2)(4)(5)</sup> Arizona, United States	Director since July 9, 2015	Consultant	Nil	N/A



<b>Name and Province of Residence</b>	<b>Position(s) with Company (and Period of Service as a Director if Applicable)</b>	<b>Principal Occupation</b>	<b>Number of Common Shares Beneficially Held</b>	<b>Percentage of Common Shares Beneficially Held<sup>(1)</sup></b>
Koko Yamamoto <sup>(3)(5)</sup> Ontario, Canada	Director since July 9, 2015	Partner, UHY McGovern Hurley LLP	Nil	N/A
Robert A. Campbell Ontario, Canada	Vice President, Exploration	Vice President, Exploration	18,529	0.00%
Ernest Cleave Ontario, Canada	Chief Financial Officer	Chief Financial Officer	7,500	0.00%
Paulo Misk <sup>(6)</sup> Salvador, Brazil	President of Brazilian Operations at Vanádio	General Manager	Nil	N/A
Luciano Chaves <sup>(6)</sup> Salvador, Brazil	Vice President of Finance and Administration at Vanádio	Chief of Finance, Brazilian Operations	Nil	N/A

**Notes:**

- (1) The directors and officers of the Company, as a group, beneficially own, directly or indirectly, or exercise control over, 347,956,096 Common Shares, representing approximately 67.16% of the issued and outstanding Common Shares of the Company as of the date hereof. Each director is elected until the next annual meeting of the shareholders.
- (2) Member of the Corporate Governance Committee.
- (3) Member of the Compensation Committee.
- (4) Member of the Operations Committee.
- (5) Member of the Audit Committee.
- (6) Officers of a Brazilian subsidiary of the Company.
- (7) Mr. Arias is the sole director of each of the general partners of the ARC Funds and indirectly controls Arias Resources Capital Management LP, the investment manager of the ARC Funds, which collectively own 286,826,830 Common Shares.
- (8) Mr. Beeck manages and has the power to make investment and voting decisions in respect of The Cranley Trust and CIH which own an aggregate of 55,276,489 Common Shares.

**Principal Occupations, Businesses or Employment**

The principal occupations, businesses or employments of each of the Company's directors and executive officers within the past five years are disclosed in the following brief biographies:

*Directors*

*Mark Smith, director, CEO and President.* Mr. Smith has been President and CEO of the Company since April 1, 2015. He is Executive Chairman of NioCorp, and from 2008-2012 was the President and CEO of Molycorp, Inc., which he developed into the largest rare earth company in the world, outside of China. Prior to his time with Molycorp, Mr. Smith held various engineering, legal and executive positions for Chevron and Unocal. Mr. Smith received his engineering degree from Colorado State University and his Juris Doctor from Western State University. He is a registered professional engineer and an active member of the State Bars of California and Colorado.

*Sam Abraham, director.* Mr. Abraham is a Director with the private equity firm Arias Resource Capital Management LP. Prior to joining Arias Resource Capital Management, Mr. Abraham worked with the Latin America Investment Banking and M&A Advisory team at JP Morgan in New York, focused on the Metals and Mining industry. Mr. Abraham

graduated cum laude from the University of Pennsylvania with a BS in Computer Science & Engineering and earned an MBA in Entrepreneurial Management and Finance from the Wharton School of the University of Pennsylvania.

*Alberto Arias, director.* Mr. Arias is the founder and President of Arias Resource Capital Management LP and has over 22 years of experience in the field of international mining finance. Prior to founding Arias Resource Capital Management LP, Mr. Arias worked for eight years at Goldman, Sachs & Co., most recently acting as Managing Director and Head of Equity Research for metals and mining in the U.S., Canada and Latin America. Prior to Goldman Sachs, Mr. Arias worked for four years at UBS as Executive Director and Analyst covering the Latin American metals and mining sector. Mr. Arias has engineering degrees in mining and metallurgy and an MBA (B.Sc. from the Colorado School of Mines and three masters-level degrees from Columbia University) and mining industry operational experience.

*David Brace, director.* Mr. Brace is currently Chief Executive Officer and a director of Karmin Exploration Inc. Prior to this, and between January through September of 2011, Mr. Brace served as President of Lambton Capital Inc., a private investment firm focused on evaluating mining investments. Prior to this, Mr. Brace served as the CEO and a director of GlobeStar Mining Corporation until that company's acquisition by Perilya Limited in December of 2010. Prior to this, Mr. Brace served as Executive Vice-President of Business Development with Aur Resources until August of 2007. Mr. Brace obtained a B.Sc. in Geology from the University of Toronto and an MBA in finance and accounting from the University of British Columbia. Mr. Brace is a registered P.Geo in British Columbia.

*Alberto Beeck, director.* Mr Beeck is a Managing Partner of VH Properties and VH Investments. Mr. Beeck served as Executive Director of Strategy and Corporate Development of Hochschild Mining PLC until 2008 and served as its Head of Business Development/Corporate Development. He served as the president of Cementos Pacasmayo from 1998 to 2008. Mr. Beeck commenced working with Hochschild Mining Group in 1998. Prior to this, he served as the Managing Director and Head of Latin American Investment Banking for Barings Inc. in New York and Baring Brothers, in London. Mr Beeck received his BSc in Mechanical Engineering from Purdue University and an MBA in Finance and International Business from Columbia University.

*Daniel Tellechea, director.* Mr. Tellechea has business experience in Brazil and extensive experience in international mining, most recently serving as President & CEO of Sierra Metals, Inc. (2007-2014), a Toronto based mining company listed on both the Toronto (TSX) and Lima (BVL) Stock Exchanges with assets in Mexico and Peru. Prior to Sierra Metals, Mr. Tellechea was President and CEO of Asarco LLC (2003-2005), he served as the Managing Director of Finance and Administration for Asarco's parent, Grupo Mexico (1994-2003) and also served as Asarco's Chief Financial Officer and Vice-president of finance for Southern Copper Corporation, which was majority owned by Grupo Mexico (1999-2003). Mr. Tellechea earned a BSc in Accounting (1968) and a Master's Degree in Business Administration (1983) from Tecnologico de Monterrey (Mexico).

*Koko Yamamoto, director.* Ms. Yamamoto is a chartered professional accountant. She is a partner at UHY McGovern Hurley LLP, a CPAB registered firm, since 2003 and her practice includes a focus on assurance engagements for reporting issuers in the resource sector. Ms. Yamamoto is involved in initial public offerings and private placements, mergers and acquisitions. Ms. Yamamoto is also registered as a panel auditor with the Investment Industry Regulatory Organization of Canada (IIROC), which enables her to conduct audits of investment dealers. Prior to joining UHY McGovern Hurley LLP in 1998, Ms. Yamamoto worked for a start-up Japanese medical technology company, both in Tokyo and San Francisco. Ms. Yamamoto obtained her CPA CA designation in 2001. Ms. Yamamoto holds a Bachelor of Commerce from the University of British Columbia.

#### *Executive Officers*

*Robert A. Campbell, Vice President, Exploration.* Mr. Campbell is an exploration geologist with over 38 years' experience in mining and exploration industry through Canada, United States and Latin America. He has worked for several major mining companies, most notably Noranda and Lac Minerals. He became involved with Largo in November 2003 as Vice President, Exploration. He has also held other senior management positions such as Vice President of Exploration for Apogee Minerals Ltd. and Largo Resources Ltd. and as a Director of Ascendant Resources Inc. (formerly Morumbi Oil & Gas Inc.).

*Ernest Cleave, Chief Financial Officer.* Mr. Cleave is a financial professional with over 20 years' experience in finance strategy, compliance, financial reporting, internal control and strategic planning. Mr. Cleave has previously served as a director, CFO and corporate controller and in senior finance positions for large, multi-national companies in the mining, manufacturing and retail sectors, including Goldcorp Inc. and Falconbridge Limited. Mr. Cleave started his career with PricewaterhouseCoopers and holds a CA designation in both Australia and New Zealand, the CPA and CMA designations in Canada, the CPA and FIPA designations in Australia and the CIMA designation in the United Kingdom. Mr. Cleave has degrees in Commerce and Accounting Science and earned a MBA from Deakin University, Australia.

*Paulo Guimaraes Misk, President of Brazilian Operation at Vanádio.* Mr. Misk is a mining engineer with over 28 years' experience in operational management at mining facilities for various large multi-national mining companies across a wide range of commodities, including: niobium, chromite, iron, tin, gold, lithium and a range of other industrial minerals. Most recently, Mr. Misk ran Anglo American's Catalão Project from 2011 to 2014 where he was promoted to Head of Niobium Operations after serving as Niobium General Manager for one year. During his tenure at the Catalão Project he was responsible for implementing innovative policies and fostering a high-performance culture that greatly improved production rates and recoveries, as well as dramatically reduced unit costs resulting in a doubling of Niobium EBITDA. Mr. Misk's prior experience includes several years as Talc Operational Director and as Geology, Mining Operation Manager for GP Investments' Magnesita Refratórios project in Brazil between 2002 and 2010. Additionally, he served as Operational Director for AMG Group where he managed their tantalum, niobium, tin, feldspar and lithium operations between 2010 and 2011. Between 1994 and 2002, Mr. Misk spent his earlier career with AMG Group as Industrial Minerals Manager after being promoted from Tantalum and Niobium Division Manager.

*Nilson Luciano Chaves, Vice President of Finance and Administration at Vanádio.* Mr. Chaves has over 20 years of experience in financial management in a range of different industries. Prior to joining the Company, he led the finance department of multinational mining and services companies in Latin America, including Sibelco and Hewitt. Since joining the Company in 2011, his understanding of both domestic and international business environment has brought a differentiated contribution to the Maracás Mine. Mr. Chaves holds a Bachelor degree in finance, a post-graduate degree in business administration and an executive program from Stanford (USA).

### **Corporate Cease Trade Orders, Bankruptcies, Penalties or Sanctions**

Other than as set forth below, no director, executive officer or chief financial officer of the Company:

- (a) is, as at the date of this document, or has been, within ten years before the date of this AIF, a director, chief executive officer or chief financial officer of any company (including the Company) that, while that person was acting in that capacity: (i) was the subject of a cease trade or similar order or an order that denied the relevant company access to any exemption under the securities legislation, for a period of more than 30 consecutive days; (ii) was subject to an event that resulted, after the director, chief executive officer or chief financial officer ceased to be a director, chief executive officer or chief financial officer, in the company being the subject of a cease trade order or similar order or an order that denied the relevant company access to any exemption under securities legislation, for a period of more than 30 consecutive days; or (iii) within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets, or
- (b) has, within the ten years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the proposed director.

Except as set out below, no director or executive officer of the Company, or a shareholder holding sufficient number of securities of the Company to affect materially the control of the Company, has been subject to: (i) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into

a settlement agreement with a securities regulatory authority; or (ii) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

From March 28, 2013 until January 21, 2014, Mr. Arias served as a director on the board of Colossus Minerals Inc. (“Colossus”). On January 14, 2014, Colossus filed a notice of intention to make a proposal under the Canadian *Bankruptcy and Insolvency Act*. Colossus was delisted from the Toronto Stock Exchange effective February 21, 2014.

Mr. Tellechea was a director of Asarco LLC (“Asarco”), a Delaware limited liability company, when it filed for protection under chapter 11 of the United States Bankruptcy code on August 9, 2005. Asarco is a wholly-owned subsidiary of Grupo Mexico, a Mexican mining company. Mr. Tellechea resigned as a director of Asarco on November 14, 2005. As at the date hereof, Asarco is out of chapter 11. Mr. Tellechea was a director of Mercator Minerals, Ltd. (“Mercator”) until September 4, 2014. Mercator filed a notice of intention to make a proposal under the Canadian *Bankruptcy and Insolvency Act* on August 26, 2014.

### **Conflicts of Interest**

Certain of the Company’s directors and officers serve or may agree to serve as directors or officers of other reporting companies or have significant shareholdings in other reporting companies. For a list of the other reporting issuers in which directors of the Company also serve as directors, please see the most recent management information circular of the Company dated May 30, 2017. To the extent that such other companies may participate in ventures in which the Company may participate, the directors of the Company may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In the event that such a conflict of interest arises at a meeting of the Company’s directors, a director who has such a conflict will step out of the room during discussions and abstain from voting for or against the approval of such participation or such terms. From time to time, several companies may participate in the acquisition, exploration and development of natural resource properties thereby allowing for their participation in larger programs, permitting involvement in a greater number of programs and reducing financial exposure in respect of any one program. It may also occur that a particular company will assign all or a portion of its interest in a particular program to another of these companies due to the financial position of the company making the assignment. Under the laws of Canada, the directors of the Company are required to act honestly, in good faith and in the best interests of the Company. In determining whether or not the Company will participate in a particular program and the interest therein to be acquired by it, the directors will primarily consider the degree of risk to which the Company may be exposed and its financial position at that time.

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### **AUDIT COMMITTEE DISCLOSURE**

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The purposes of the audit committee of the Board of Directors (the “Audit Committee”) are to assist the Board of Directors’ oversight of: the integrity of the Company’s financial statements; the Company’s compliance with legal and regulatory requirements; the qualifications and independence of the Company’s independent auditors; and the performance of the independent auditors and the Company’s internal audit function.

National Instrument 52-110 – *Audit Committees* of the Canadian Securities Administrators (“NI 52-110”) governs composition and function of audit committees for every TSX listed company, including the Company. NI 52-110 requires the Company to have a written audit committee Charter and to make the disclosure required by Form 52-110F1, which includes disclosure of the text of the audit committee charter in the management information circular of the Company wherein management solicits proxies from the security holders of the Company for the purpose of electing directors to the Board.

### **Audit Committee Charter**

The Board of Directors has developed a written Audit Committee charter (the “Charter”). A copy of the Charter is attached hereto as **Schedule “A”**.

### **Composition of the Audit Committee**

The Audit Committee is comprised of three directors: Koko Yamamoto (Chair), David Brace and Daniel Tellechea. Each member of the Audit Committee is financially literate and Koko Yamamoto and Daniel Tellechea are independent, as such terms are defined in NI 52-110.

### **Relevant Education and Experience**

For a description of the education and experience of each Audit Committee member that is relevant to the performance of his responsibilities as a member of the Audit Committee, please see “*Directors and Officers - Principal Occupations, Businesses or Employment*”, above.

### **Reliance on Certain Exemptions**

At no time since the Company’s listing on the TSX in July, 2016 has the Company relied on either (a) an exemption in section 2.4 of NI 52-110 (*De Minimus Non-audit Services*); or (b) an exemption from NI 52-110, in whole or in part, granted under Part 8 (*Exemptions*) of NI 52-110. Prior to the Company’s listing on the TSX, it had relied on the exemption provided for in section 6.1 of NI 52-110, Part 5 (*Reporting Obligations*).

### **Audit Committee Oversight**

At no time since the commencement of the Company’s most recently completed financial year has there been a recommendation of the Audit Committee to nominate or compensate an external auditor which was not adopted by the Board of Directors.

### **Pre-Approval Policies and Procedures**

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

### **External Auditor Service Fees**

#### **Audit Fees**

The Company appointed PricewaterhouseCoopers LLP, Chartered Accountants, as its auditor for the year ended December 31, 2015. PricewaterhouseCoopers LLP billed the Company \$65,000 (excluding expenses) in the fiscal year ended December 31, 2017 for audit fees in respect of the audit of the financial year ended December 31, 2017, \$80,000 for audit fees in respect of the audit of the financial year-ended December 31, 2016, and \$88,000 for audit fees in respect of the audit of the financial year-ended December 31, 2015.

PricewaterhouseCoopers Brazil, the external auditors of Vanádio in Brazil, billed Vanádio R\$260,250 for the fiscal year ended December 31, 2017, R\$237,178 for the fiscal year ended December 31, 2016 and R\$181,440 for the fiscal year ended December 31, 2015 for audit fees.

#### **Audit-Related Fees**

PricewaterhouseCoopers LLP billed the Company \$30,000 in the fiscal year ending December 31, 2017 for assurance and related services related to the performance of the auditor’s review for the Company’s financial statements, which are not included in audit fees. PricewaterhouseCoopers LLP billed the Company \$45,000 in the fiscal year ending December 31, 2016 for assurance and related services related to the performance of the auditor’s review for the Company’s financial statements, which are not included in audit fees. PricewaterhouseCoopers LLP billed the Company \$54,000 in the fiscal year ending December 31, 2015 for assurance and related services related to the performance of the auditor’s review for the Company’s financial statements, which are not included in audit fees.

## **Tax Fees**

PricewaterhouseCoopers LLP billed the Company \$14,665 in the fiscal year ending December 31, 2017 for tax compliance, tax advice and tax planning. PricewaterhouseCoopers Brazil billed Vanádio R\$10,495.63 in the fiscal year ending December 31, 2017 for tax compliance in Brazil.

PricewaterhouseCoopers LLP billed the Company \$4,500 in the fiscal year ending December 31, 2016 for tax compliance, tax advice and tax planning. PricewaterhouseCoopers Brazil billed Vanádio R\$36,000 in the fiscal year ending December 31, 2016 for tax compliance in Brazil.

PricewaterhouseCoopers LLP billed the Company \$2,750 in the fiscal year ending December 31, 2015 for tax compliance, tax advice and tax planning.

## **All Other Fees**

PricewaterhouseCoopers LLP billed the Company \$25,000 in the fiscal year ended December 31, 2017 for fees related to other advisory services provided to the Company. PricewaterhouseCoopers LLP billed the Company \$Nil in the fiscal year ended December 31, 2016 for fees related to other advisory services provided to the Company. PricewaterhouseCoopers LLP billed the Company \$9,995 in the fiscal year ended December 31, 2015 for fees related to other advisory services provided to the Company.

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## **PROMOTERS**

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To the best of the Company's knowledge, no person or company has been within the three most recently completed fiscal years, or is during the current fiscal year, a promoter of the Company.

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## **LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

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Except as disclosed below, to the best of the Company's knowledge, there were no legal proceedings during the year ended December 31, 2017 to which the Company was a party or of which any of the Company's property was subject that would have had a material adverse effect on the Company, nor are there any such legal proceedings existing or contemplated to which the Company is a party or of which any of the Company's property is subject that would have a material adverse effect on the Company.

There have been no penalties or sanctions imposed against the Company by a court relating to securities legislation or by a securities regulatory authority during the fiscal year ended December 31, 2017, or any other time that would likely be considered important to a reasonable investor making an investment decision in the Company. The Company has not entered into any settlement agreements with a court relating to securities legislation or with a securities regulatory authority during the fiscal year ended December 31, 2017.

*Arbitration Under Provisions of Tungsten Supply Agreement.* On March 31, 2015, the Company reached a final settlement agreement with GTP relating to the Supply Agreement in respect of tungsten to be produced at its Currais Novos project, related to all claims not covered by the arbitration, as well as the terms of payment of the arbitration settlement itself. Pursuant to the terms of the settlement agreement the Company would be required to remit its first payment of US\$500,000 on January 15, 2016, and 11 subsequent monthly payments of US\$1,000,000 would follow beginning on February 15, 2016, for an aggregate settlement of US\$11,500,000.

On January 12, 2016, the Company reached an agreement to restructure the timing of amounts due under the arbitration settlement. Under the terms of the restructuring, the Company made a payment of US\$4,000,000 on January 29, 2016, with further payments deferred to commence on January 15, 2017. For the period from January 15, 2017 to November 15, 2017, the Company made payments of US\$409,000 per month, with payments of US\$1,000,000 per month in the period from December 15, 2017 to February 15, 2018. In June 2017 the Company deferred the monthly payment due in June 2017 to later in 2017 and subsequently made the deferred payment in December 2017. The

outstanding balance of the arbitration settlement at December 31, 2017 was US\$2,001,000. On January 12, 2018 and February 14, 2018, the Company made the final payments of US\$1,000,000 and US\$1,001,000, in full settlement of the total aggregate arbitration settlement.

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## **INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

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No director or executive officer of the Company or any person or company who or that beneficially owns, or controls or directs, directly or indirectly, more than 10% of the Company's Common Shares (or any associate or affiliate of that person or company) has had any direct or indirect material interest in any transaction involving the Company since January 1, 2015 to the date hereof, or in any proposed transaction which has materially affected or would materially affect the Company or its subsidiaries other than as disclosed herein and as referenced below:

- participation by the ARC Funds in the October 2014 Financing (see "*General Development of the Business – Three Year History – 2014*");
- the Bridge Loan by the ARC Funds to the Company (see "*General Development of the Business – Three Year History – 2015*");
- participation by the ARC Funds, Mr. Mark A. Smith and Mr. Michael Mutchler, former Chief Operating Officer of the Company, in the May 2015 Financing (see "*General Development of the Business – Three Year History – 2015*");
- the Smith Bridge Loan (see "*General Development of the Business – Three Year History – 2016*"); and
- participation by the ARC Funds, Mr. Mark A. Smith and Mr. Michael Mutchler, former Chief Operating Officer of the Company, in the January/March 2016 Financing (see "*General Development of the Business – Three Year History – 2016*");
- participation by the ARC Funds, Mr. Mark A. Smith and Mr. Alberto Beeck in the September/October 2016 Financing (see "*General Development of the Business – Three Year History – 2016*");
- participation by the Arc Funds and CIH in the 2017 Financing (see "*General Development of the Business – Three Year History – Recent Developments*"); and
- participation by the Arc Funds and CIH in the December 2017 Financing (see "*General Development of the Business – Three Year History – Recent Developments*").
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## **TRANSFER AGENTS AND REGISTRARS**

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The Company's transfer agent is TSX Trust Company which is located in Toronto, Ontario.

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## **MATERIAL CONTRACTS**

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Except for contracts entered into by the Company in the ordinary course of business or otherwise disclosed herein, the only material contracts entered into during the financial year ended December 31, 2016, or which remain in effect can reasonably be regarded as presently material are:

- Governance Agreement between the Company and the Lead Investors, dated April 11, 2011. Please see "*Glossary of Terms*";
- Director Nomination Agreement between the Company and the ARC Funds dated May 22, 2015 as amended and restated effective January 29, 2016. Please see "*General Development of the Business – Three Year History – 2015*" and "*General Development of the Business – Three Year History – 2016*"; and
- the off-take agreement with Glencore International AG. Please See "*Narrative Description of the Business – General – Off-take Arrangements*", above.

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## **INTERESTS OF EXPERTS**

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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, were the authors of the Technical Report – see “ *Description of Mineral Properties – The Maracás Mine*”.

To the knowledge of the Company, none of the aforementioned individuals had an interest in any securities or other properties of the Company, its associates or affiliates as at the date the individual prepared the applicable report or as at the date hereof, and none of the aforementioned individuals holds any other interest in the assets of the Company nor do they expect to receive such an interest.

PricewaterhouseCoopers LLP, Chartered Accountants, are the auditors of the Company and have performed the audit in respect of the audited annual consolidated financial statements of the Company for the years ended December 31, 2015, December 31, 2016 and December 31, 2017. PricewaterhouseCoopers LLP, Chartered Accountants were independent of the Company in accordance with the applicable rules of professional conduct.

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## **ADDITIONAL INFORMATION**

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Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities, and securities authorized for issuance under the Company's stock option plan is contained in the management information circular of the Company dated May 30, 2017.

Additional financial information is provided in the Company's annual consolidated financial statements and management's discussion and analysis for the year ended December 31, 2017. These documents and other information about the Company can be found on SEDAR under the Company's profile at [www.sedar.com](http://www.sedar.com).

## SCHEDULE "A"

### CHARTER OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

#### LARGO RESOURCES LTD.

#### AUDIT COMMITTEE CHARTER

This charter (the "**Charter**") sets forth the purpose, composition, responsibilities, duties, powers and authority of the Audit Committee (the "**Committee**") of the Board of Directors (the "**Board**") of Largo Resources Ltd. ("**Largo**").

#### 1. PURPOSE

- 1.1 The purpose of the Committee is to assist the Board in fulfilling its oversight responsibilities with respect to:
- financial reporting and disclosure requirements;
  - ensuring that an effective risk management and financial control framework has been implemented and tested by management of Largo; and
  - external and internal audit processes.

#### 2. COMPOSITION AND MEMBERSHIP

- 2.1 The Board will appoint the members ("**Members**") of the Committee after the annual general meeting of shareholders of Largo. The Members will be appointed to hold office until the next annual general meeting of shareholders of Largo or until their successors are appointed. The Board may remove a Member at any time and may fill any vacancy occurring on the Committee. A Member may resign at any time and a Member will cease to be a Member upon ceasing to be a director.
- 2.2 The Committee will consist of at least three directors, all of who meet the criteria for financial literacy and a majority of who meet the criteria for independence established by applicable laws and the rules of the stock exchange upon which Largo's securities are listed, including Multilateral Instrument 52-110 - Audit Committees. In addition, each director will be free of any relationship which could, in the view of the Board, reasonably interfere with the exercise of a member's independent judgment.
- 2.3 The Board will appoint one of the Members to act as the Chairperson of the Committee. The secretary of Largo (the "**Corporate Secretary**") will be the secretary of all meetings and will maintain minutes of all meetings and deliberations of the Committee. In the absence of the Corporate Secretary at any meeting, the Committee will appoint another person who may, but need not, be a Member to be the secretary of that meeting.

#### 3. MEETINGS

- 3.1 Meetings of the Committee will be held at such times and places as the Chairperson may determine, but in any event not less than four (4) times per year. Twenty-four (24) hours advance notice of each meeting will be given to each Member orally, by telephone, by facsimile or email, unless all Members are present and waive notice, or if those absent waive notice before or after a meeting. Members may attend all meetings either in person or by conference call.
- 3.2 At the request of the external auditors of Largo, the Chief Executive Officer or the Chief Financial Officer of Largo or any member of the Committee, the Chairperson will convene a meeting of the Committee. Any such request will set out in reasonable detail the business proposed to be conducted at the meeting so requested.
- 3.3 The Chairperson, if present, will act as the Chairperson of meetings of the Committee. If the Chairperson is not present at a meeting of the Committee, then the Members present may select one of their number to act as Chairperson of the meeting.

- 3.4 Two Members will constitute a quorum for a meeting of the Committee. Each Member will have one vote and decisions of the Committee will be made by an affirmative vote of the majority. The Chairperson will not have a deciding or casting vote in the case of an equality of votes. Powers of the Committee may also be exercised by written resolution signed by all Members.
- 3.5 The Committee may invite from time to time such persons as it sees fit to attend its meetings and to take part in the discussion and consideration of the affairs of the Committee. The Committee will meet in camera without management at each meeting of the Committee.
- 3.6 In advance of every regular meeting of the Committee, the Chairperson, with the assistance of the Corporate Secretary, will prepare and distribute to the Members and others, as deemed appropriate by the Chairperson, an agenda of matters to be addressed at the meeting together with appropriate briefing materials. The Committee may require officers and employees of Largo to produce such information and reports as the Committee may deem appropriate in order to fulfill its duties.

#### **4. DUTIES AND RESPONSIBILITIES**

- 4.1 The duties and responsibilities of the Committee as they relate to the following matters are to:

##### **Financial Reporting and Disclosure**

- 4.2 Review and recommend to the Board for approval, the audited annual financial statements, including the auditors' report thereon, the quarterly financial statements, management discussion and analysis, financial reports, guidance with respect to earnings per share, and any public release of financial information through press release or otherwise, with such documents to indicate whether such information has been reviewed by the Board or the Committee;
- 4.3 Review and recommend to the Board for approval, where appropriate, financial information contained in any prospectus, annual information form, annual report to shareholders, management proxy circular, material change disclosure of a financial nature, and similar disclosure documents;
- 4.4 Review with management of Largo and with external auditors significant accounting principles and disclosure issues and alternative treatments under International Financial Reporting Standards ("IFRS"), all with a view to gaining reasonable assurance that financial statements are accurate, complete and present fairly Largo's financial position and the results of its operations in accordance with IFRS, as applicable.
- 4.5 Annually review Largo's corporate disclosure policy and recommend any proposed changes to the Board for consideration.
- 4.6 Review the minutes from each meeting of the disclosure committee, established pursuant to Largo's corporate disclosure policy, since the last meeting of the Committee.

##### **Internal Controls and Audit**

- 4.7 Review and assess the adequacy and effectiveness of Largo's system of internal control and management information systems through discussions with management and the external auditor to ensure that Largo maintains:
- (a) the necessary books, records and accounts in sufficient detail to accurately and fairly reflect Largo's transactions;
  - (b) effective internal control systems; and
  - (c) adequate processes for assessing the risk of material misstatement of the financial statements and for detecting control weaknesses or fraud. From time to time the Committee will assess whether a formal internal audit department is necessary or desirable having regard to the size and stage of development of Largo at any particular time.
- 4.8 Satisfy itself that management has established adequate procedures for the review of Largo's disclosure of financial information extracted or derived from Largo's financial statements.
- 4.9 Satisfy itself that management has periodically assessed the adequacy of internal controls, systems and procedures in order to ensure compliance with regulatory requirements and recommendations.

- 4.10 Review and discuss Largo's major financial risk exposures and the steps taken to monitor and control such exposures, including the use of any financial derivatives and hedging activities.
- 4.11 Review and assess, and in the Committee's discretion make recommendations to the Board regarding, the adequacy of Largo's risk management policies and procedures with regard to identification of Largo's principal risks and implementation of appropriate systems to manage such risks, including an assessment of the adequacy of insurance coverage maintained by Largo.
- 4.12 Review and assess annually, and in the Committee's discretion make recommendations to the Board regarding Largo's investment policy.

#### **External Audit**

- 4.13 Recommend to the Board a firm of external auditors to be engaged by Largo.
- 4.14 Ensure the external auditors report directly to the Committee on a regular basis.
- 4.15 Review the independence of the external auditors, including a written report from the external auditors respecting their independence and consideration of applicable auditor independence standards.
- 4.16 Review and approve the fee, scope and timing of the audit and other related services rendered by the external auditors.
- 4.17 Review the audit plan of the external auditors prior to the commencement of the audit.
- 4.18 Establish and maintain a direct line of communication with Largo's external and internal auditors.
- 4.19 Meet in camera with only the auditors, with only management, and with only the members of the Committee.
- 4.20 Review the performance of the external auditors who are accountable to the Committee and the Board as representatives of the shareholders, including the lead partner of the independent auditor's team.
- 4.21 Oversee the work of the external auditors appointed by the shareholders of Largo with respect to preparing and issuing an audit report or performing other audit, review or attest services for Largo, including the resolution of issues between management of Largo and the external auditors regarding financial disclosure.
- 4.22 Review the results of the external audit and the report thereon including, without limitation, a discussion with the external auditors as to the quality of accounting principles used, any alternative treatments of financial information that have been discussed with management of Largo, and the ramifications of their use as well as any other material changes. Review a report describing all material written communication between management and the auditors such as management letters and schedule of unadjusted differences.
- 4.23 Discuss with the external auditors their perception of Largo's financial and accounting personnel, records and systems, the cooperation which the external auditors received during their course of their review, and availability of records, data and other requested information and any recommendations with respect thereto.
- 4.24 Review the reasons for any proposed change in the external auditors which is not initiated by the Committee or Board and any other significant issues related to the change, including the response of the incumbent auditors, and enquire as to the qualifications of the proposed auditors before making its recommendations to the Board.
- 4.25 Review annually a report from the external auditors in respect of their internal quality-control procedures, any material issues raised by the most recent internal quality-control review, or peer review of the external auditors, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, respecting one or more independent audits carried out by the external auditors, and any steps taken to deal with any such issues.

#### **Associated Responsibilities**

- 4.26 Monitor and periodically review the whistleblower policy and associated procedures for:
  - (a) the receipt, retention and treatment of complaints received by Largo regarding accounting, internal accounting controls or auditing matters;

- (b) the confidential, anonymous submission by directors, officers and employees of Largo of concerns regarding questionable accounting or auditing matters; and
  - (c) any violations of any applicable law, rule or regulation that relates to corporate reporting and disclosure, or violations of Largo's Code of Business Conduct & Ethics or governance policies.
- 4.27 Review and approve Largo's hiring policies regarding employees and partners, and former employees and partners, of the present and former external auditor of Largo.

#### **Non-Audit Services**

- 4.28 Pre-approve all non-audit services to be provided to Largo or any subsidiary entities by its external auditors or by the external auditors of such subsidiary entities. The Committee may delegate to one or more of its members the authority to pre-approve non-audit services but pre-approval by such member or members so delegated shall be presented to the full audit committee at its first scheduled meeting following such pre-approval.

#### **Oversight Function**

- 4.29 While the Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Committee to plan or conduct audits or to determine that Largo's financial statements are complete and accurate or are in accordance with IFRS and applicable rules and regulations. These are the responsibilities of Management and the external auditors. The Committee, the Chairperson and any Members identified as having accounting or related financial expertise are members of the Board, appointed to the Committee to provide broad oversight of the financial, risk and control related activities of Largo, and are specifically not accountable or responsible for the day to day operation or performance of such activities. Although the designation of a Member as having accounting or related financial expertise for disclosure purposes is based on that individual's education and experience, which that individual will bring to bear in carrying out his or her duties on the Committee, such designation does not impose on such person any duties, obligations or liability that are greater than the duties, obligations and liability imposed on such person as a member of the Committee and Board in the absence of such designation. Rather, the role of a Member who is identified as having accounting or related financial expertise, like the role of all Members, is to oversee the process, not to certify or guarantee the internal or external audit of Largo's financial information or public disclosure.

### **5. REPORTING**

- 5.1 The Chairperson will report to the Board at each Board meeting on the Committee's activities since the last Board meeting. The Committee will annually review and approve the Committee's report for inclusion in the management proxy circular. The Corporate Secretary will circulate the minutes of each meeting of the Committee to the members of the Board.

### **6. ACCESS TO INFORMATION AND AUTHORITY**

- 6.1 The Committee will be granted unrestricted access to all information regarding Largo and all directors, officers and employees will be directed to cooperate as requested by members of the Committee. The Committee has the authority to retain, at Largo's expense, independent legal, financial and other advisors, consultants and experts, to assist the Committee in fulfilling its duties and responsibilities. The Committee also has the authority to communicate directly with internal and external auditors.

### **7. REVIEW OF CHARTER**

- 7.1 The Committee will annually review and assess the adequacy of this Charter and recommend any proposed changes to the Board for consideration.