



## NEWS RELEASE

# Largo Reports Fourth Quarter and Full Year 2022 Operational and Sales Results; Provides 2023 Guidance

1/24/2023

All amounts expressed are in U.S. dollars, denominated by "\$".

## Q4 and FY 2022 Highlights

- Quarterly V2O5 production of 2,004 tonnes (4.4 million lbs1) in Q4 2022 vs. 2,003 tonnes in Q4 2021; Annual V2O5 production of 10,436 tonnes (23.0 million lbs1) in 2022 vs. 10,319 tonnes in 2021
- Quarterly global V2O5 recovery of 74.7% in Q4 2022 vs. 76.0% in Q4 2021; Annual global V2O5 recovery of 79.1% in 2022 vs. 79.7% in 2021
- V2O5 production in Q4 2022 was largely impacted by a lower quantity of mined material available due in part to the Company's mining contractor transition in September 2022; As a result, the low availability of mined material stockpiles was insufficient to effectively mitigate the impacts of corrective maintenance in November 2022 and heavy rain in December 2022 at Maracás Menchen Mine
- Quarterly sales of 2,774 tonnes of V2O5 equivalent (inclusive of 118 tonnes of purchased material) in Q4 2022 vs. 2,899 tonnes in Q4 2021; Annual V2O5 equivalent sales of 11,091 (inclusive of 1,057 tonnes of purchased material) tonnes in 2022 vs. 11,393 tonnes in 2021 and within sales guidance of 11,000 – 12,000 tonnes
- In Q4 2022, vanadium demand remained steady in the steel and chemical sectors, while the aerospace and vanadium redox flow battery ("VRFB") sectors saw considerable growth; In Europe, average V2O5 prices increased approximately 18% to \$9.44 per lb at the end of the quarter, and have risen to \$10.08 as of January 20, 2023
- Largo Clean Energy ("LCE") and Ansaldo Green Tech ("Ansaldo") continued their negotiations to form a joint venture for the manufacture and commercial deployment of vanadium redox flow batteries ("VRFB") in the

European, African and Middle East power generation markets; The exclusivity agreement between LCE and Ansaldo in accordance with the previously announced non-binding MOU has been extended to March 31, 2023 to allow for the completion of ongoing negotiations

- The Company progressed with the construction of its ilmenite concentration plant at its Maracás Menchen Mine in Q4 2022; Received all required flotation structures and is finalizing the building of its desliming, flotation, filtration, warehouse and pipe rack structures; Commissioning to be completed in Q2 2023
- The Company received 'Company of the Year in the Mineral Sector' for its work in Social Governance from Brasil Mineral magazine and 'Company of the Year' from Companhia Baiana de Pesquisa Mineral ("CBPM"); These recognitions are the result of the Company's dedication to executing on our on going Environment, Social and Governance ("ESG") initiatives with the goal of progressing sustainable development at Largo

TORONTO--(BUSINESS WIRE)-- Largo Inc. ("Largo" or the "Company") (TSX: LGO) (NASDAQ: LGO) today announces annual production of 10,436 tonnes (23.0 million lbs<sup>1</sup>) of vanadium pentoxide ("V2O5") equivalent and sales of 11,091 tonnes of V2O5 equivalent from its Maracás Menchen Mine in 2022.

Largo Reports Fourth Quarter and Full Year 2022 Operational and Sales Results; Provides 2023 Guidance (Photo: Business Wire)

Paulo Misk, President and CEO of Largo, stated: "Despite operational challenges faced in

2022, we continue to prioritize and focus on the steady state operation of our Maracás Menchen Mine in Brazil. To ensure normal operating performance throughout 2023, our operational team performed mitigation efforts to rectify rain-related impacts and preventive maintenance measures during the operational downtime in December 2022 and January 2023."

He continued: "In the coming year, we expect to meet our planned objectives to fully realize the value of our tier one vanadium company, including annual guidance for 2023, the completion of our ilmenite concentration plant, and the delivery of our inaugural VRFB for Enel in the second quarter of 2023." He concluded: "While our negotiation with Ansaldo continues, LCE's senior management continue to maintain their efforts on core development and system improvements required to support the current and future needs of the long duration energy storage sector. We are pleased to see a strengthening in vanadium demand, driven by strong high purity aerospace inquiries and new VRFB deployments, which has led to price increases in recent months."

## Maracás Menchen Mine Operational and Sales Results

	Q4 2022	Q4 2021	2022	2021
Total Ore Mined (tonnes)	326,552	277,783	1,359,927	1,248,967

Ore Grade Mined - Effective Grade (%) <sup>2</sup>	0.96	1.00	1.11	1.12
Concentrate Produced (tonnes)	90,797	86,129	406,951	398,847
Grade of Concentrate (%)	2.94	3.13	3.18	3.23
Global Recovery (%) <sup>3</sup>	74.7	76.0	79.1	79.7
V2O5 produced (Flake + Powder) (tonnes)	2,004	2,003	10,436	10,319
V2O5 produced (equivalent pounds) <sup>1</sup>	4,420,263	4,415,854	23,007,414	22,749,473
Total V2O5 equivalent sold (tonnes)	2,774	2,899	11,091	11,393
Produced V2O5 equivalent sold (tonnes)	2,656	2,843	10,034	10,864
Purchased V2O5 equivalent sold (tonnes)	118	56	1,057	529

## Q4, FY 2022 and Other Highlights

- Quarterly Operational Results Impacted by a Mining Contractor Change, Mine Sequencing and Heavy Rainfall: In Q4 2022, V2O5 production from the Maracás Menchen Mine of 2,004 tonnes was in line with the 2,003 tonnes produced in Q4 2021. As a result of the Company's mining contractor transition and corrective maintenance at the leaching and deammoniator areas, 804 tonnes of V2O5 were produced in October 2022. Production of 605 tonnes in November 2022 was affected by changes in mining sequence and 596 tonnes in December 2022 was affected by heavy rains at the Company's operations. Annual V2O5 production was 10,436 tonnes in 2022, being largely in line with the 10,319 tonnes produced in 2021. Lower annual production was due to preventative and corrective maintenance at Company's plant facility in Maracás in Q1 2022, a planned kiln and cooler refractory refurbishment in Q3 2022 and heavy rainfall in December. In Q4 2022, global recoveries<sup>3</sup> averaged 74.7% as compared to the 76.0% averaged in Q4 2021. The Company achieved an annual average global V2O5 recovery<sup>3</sup> rate of 79.1% in 2022. The Company mined 1,359,927 tonnes of ore with an effective V2O5 grade<sup>2</sup> of 1.11% in 2022 compared to 1,248,967 tonnes with an effective V2O5 grade<sup>2</sup> of 1.12% in 2021. The impact on the Company's global recovery<sup>3</sup> and mined ore in 2022 is primarily due to the reasons mentioned above.
- Rainfall Impact and Mitigation Efforts – Impacts to January 2023 Production and Sales Expected: Despite rain-related mitigation efforts implemented at the end of 2021, the Company's Maracás Menchen Mine experienced approximately 36% more rainfall in December 2022 compared to December 2021, and more than 76% more rainfall on a single day during the same comparative month. This resulted in approximately 16 days of operational downtime in December 2022 and January 2023, during which time the Company performed preventative maintenance measure such as kiln refractory and electrostatic precipitator ("ESP") repairs, previously planned for February 2023. In 2021, the Company constructed a diversion channel surrounding the Campbell Pit and upgraded its pumping system capacity to mitigate rainwater accumulation inside the pit. In December 2022, the diversion channel successfully mitigated rain from entering the pit downstream, however, unexpected levels of heavy rainfall caused significant rainfall accumulation inside the pit. The Company plans to further upgrade its pumping system capacity and expects to build additional mined material stockpiles in 2023 to mitigate impacts to mining operations going forward. As a result of these rain-related impacts in December 2022 and January 2023, the Company expects Q1 2023 production and sales

ranges of 1,900 – 2,200 tonnes and 2,300 – 2,500 tonnes, respectively.

- **Annual Sales Results Within Guidance – Vanadium Prices Reflect Increase in Demand:** In Q4 2022, V2O5 equivalent sales were 2,774 tonnes (inclusive of 118 tonnes of purchased material), representing a 4% decrease over Q4 2021. Total V2O5 equivalent sales were 11,091 tonnes (inclusive of 1,057 tonnes of purchased material) in 2022, representing a 3% decrease over 2021. Lower sales in Q4 were impacted by the effects of lower production. Stronger vanadium prices exiting the quarter reflected an increase in demand from the high purity aerospace sector and continued growth in VRFB deployments, particularly in China. The average benchmark price per lb of V2O5 in Europe was \$9.44 exiting the quarter, representing an increase of approximately 20% from the lows of 2022. As of January 20, 2023, the benchmark price per lb of V2O5 in Europe was \$10.08.
- **Inaugural VRFB Deployment Progress:** During Q4 2022, LCE continued to make additional progress on the delivery of the Enel Green Power España (“EGPE”) contract. Substantially all of the hardware is either in transit or ready for installation at the deployment site in Spain. The remaining items to be shipped are six of the twelve electrolyte storage containers, which will be shipped in February 2023 and installed in March 2023. Additionally, the Company expects the installation and interconnection of the AC and DC power systems to be completed in Q1 2023. The hot commissioning of the VRFB system as well as provisional acceptance, which requires the completion of as-build drawings, manuals, final punch-list items, and operational testing by EGPE is expected to be completed in Q2 2023.
- **New Debt Facilities Secured in Brazil:** In December 2022, the Company secured an additional debt facility of \$20.0 million with a bank in Brazil. The facility is for three years, with a 360-day grace period and equal principal repayments due every six months until maturity following the grace period. In addition to a fee of 0.7%, accrued interest at a rate of 8.20% p.a. is to be paid every six months until maturity. In January 2023, the Company secured two additional debt facilities with banks in Brazil. The first facility of \$15.0 million is for two years, with a 180-day grace period and equal principal repayments due every three months until maturity following the grace period. In addition, accrued interest at a rate of 6.85% p.a. is to be paid every three months. The second facility of \$10.0 million is for three years, with a 360-day grace period and equal principal repayments due every six months until maturity following the grace period. In addition to a fee of 0.7%, accrued interest at a rate of 8.36% p.a. is to be paid every six months. A portion of the December 2022 debt facility was used in December 2022 to repay the Company's existing \$15.0 million debt facility secured in April 2022 and due for repayment in April 2023, with the remaining debt facilities primarily being used to address working capital pressures caused by ongoing capex projects in the first six months of 2023.

## 2023 Production, Sales and Cost Guidance

Tables summarizing the Company's 2023 production, sales and cost guidance is provided below. It is expected that the Company will incur higher cash operating costs excluding royalties<sup>4</sup> in the first half of 2023 as a result of lower

sales in H1 2023, a result of previously noted rain-related operational impacts in Q4 2022 and Q1 2023. In H1 2023, the Company anticipates cash operating costs excluding royalties<sup>4</sup> to be above the average cost guidance provided for 2023 with H2 2023 being closer to the lower end.

Tonnes V2O5	Q1		Q2		Q3		Q4		2023	
	Low	High	Low	High	Low	High	Low	High	Low	High
Production	1,900	2,200	3,000	3,200	3,050	3,300	3,050	3,300	11,000	12,000
Sales	2,300	2,500	2,300	2,500	2,850	3,150	2,850	3,150	10,300	11,300

i. The annual 2023 sales guidance does not include purchased material.

Cash Operating Cost Excluding Royalties (\$/lb sold) <sup>4</sup>	\$4.85 – 5.25
Vanadium Distribution Costs	\$9.0 – 10.0 million
Corporate and Sales & Trading, General and Administrative Expenses	\$9.0 – 10.0 million
Largo Clean Energy General and Administrative Expenses	\$13.5 – 14.5 million

## 2023 Capital Expenditures Guidance

In 2023, the Company plans to invest approximately \$50.5 million on capital expenditures of which approximately \$4.0 million has been carried over from the 2022 capital expenditures budget. The \$48.0 million capital expenditure budget includes approximately \$12.5 million for sustaining capital requirements, \$12.5 million for capitalized stripping, \$18.0 million to finalize the construction of the Company's ilmenite concentration plant and \$2.5 million for the installation of an additional dry magnetic separator to assist with the Company's mining operations in Brazil.

Sustaining Capital Expenditures	\$13.0 – 14.0 million
Capitalized Stripping Capital Expenditures	\$12.0 – 13.0 million
Ilmenite Concentration Plant Capital Expenditures	\$17.5 – 18.5 million
Dry Magnetic Separator Capital Expenditure	\$2.0 – 3.0 million
Carry-Over Capital Expenditures	\$3.5 – 4.5 million

Management has made the decision to postpone the Company's existing plans to further develop its titanium dioxide ("TiO<sub>2</sub>") pigment plant until additional funds are made available, either internally or externally. At this time, the Company is exploring alternative debt financing or strategic association options with advisors and will provide an update as things progress.

## About Largo

Largo has a long and successful history as one of the world's preferred vanadium companies through the supply of its VPURE™ and VPURE+™ products, which are sourced from one of the world's highest-grade vanadium deposits at

the Company's Maracás Menchen Mine in Brazil. Aiming to enhance value creation at Largo, the Company is in the process of implementing a titanium dioxide pigment plant using feedstock sourced from its existing operations in addition to advancing its U.S.-based clean energy division with its VCHARGE vanadium batteries. Largo's VCHARGE vanadium batteries contain a variety of innovations, enabling an efficient, safe and ESG-aligned long duration solution that is fully recyclable at the end of its 25+ year lifespan. Producing some of the world's highest quality vanadium, Largo's strategic business plan is based on two pillars: 1.) leading vanadium supplier with an outlined growth plan and 2.) U.S.-based energy storage business support a low carbon future.

Largo's common shares trade on the Nasdaq Stock Market and on the Toronto Stock Exchange under the symbol "LGO". For more information on the Company, please visit [www.largoinc.com](http://www.largoinc.com).

### Cautionary Statement Regarding Forward-looking Information:

This press release contains "forward-looking information" and "forward-looking statements" within the meaning of applicable Canadian and United States securities legislation. Forward - looking information in this press release includes, but is not limited to, statements with respect to the timing and amount of estimated future production and sales; the future price of commodities; costs of future activities and operations, including, without limitation, the effect of inflation and exchange rates; the effect of unforeseen equipment maintenance or repairs on production; timing and cost related to the build-out of the ilmenite plant; the ability to produce vanadium trioxide according to customer specifications; the extent of capital and operating expenditures; the impact of global delays and related price increases on the Company's global supply chain and future sales of vanadium products. Forward - looking information in this press release also includes, but is not limited to, statements with respect to our ability to build, finance and successfully operate a VRFB business, the projected timing and cost of the completion of the EGPE project; our ability to protect and develop our technology, our ability to maintain our IP, the competitiveness of our product in an evolving market, our ability to market, sell and deliver our VCHARGE batteries on specification and at a competitive price, our ability to successfully deploy our VCHARGE batteries in foreign jurisdictions; our ability to negotiate and enter into a joint venture with Ansaldo Green Tech on terms satisfactory to the Company and the success of such joint venture; the receipt of necessary governmental permits and approvals on a timely basis, our ability to secure the required resources to build and deploy our VCHARGE batteries, and the adoption of VRFB technology generally in the market.

The following are some of the assumptions upon which forward-looking information is based: that general business and economic conditions will not change in a material adverse manner; demand for, and stable or improving price of V2O5 and other vanadium commodities; receipt of regulatory and governmental approvals, permits and renewals in a timely manner; that the Company will not experience any material accident, labour dispute or failure of plant or equipment or other material disruption in the Company's operations at the Maracás Menchen Mine or

relating to Largo Clean Energy; the availability of financing for operations and development; the ability to mitigate the impact of continuing heavy rainfall; the Company's ability to procure equipment and operating supplies in sufficient quantities and on a timely basis; that the estimates of the resources and reserves at the Maracás Menchen Mine are within reasonable bounds of accuracy (including with respect to size, grade and recovery and the operational and price assumptions on which such estimates are based); the competitiveness of the Company's VRFB technology; that the Company's current plans for ilmenite and VRFBs can be achieved; the Company's "two-pillar" business strategy will be successful; the Company's sales and trading arrangements will not be affected by the evolving sanctions against Russia; and the Company's ability to attract and retain skilled personnel and directors; the ability of management to execute strategic goals.

Forward-looking statements 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". All information contained in this news release, other than statements of current and historical fact, is forward looking information. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Largo or Largo Clean Energy to be materially different from those expressed or implied by such forward-looking statements, including but not limited to those risks described in the annual information form of Largo and in its public documents filed on [www.sedar.com](http://www.sedar.com) and available on [www.sec.gov](http://www.sec.gov) from time to time. Forward-looking statements are based on the opinions and estimates of management as of the date such statements are made. Although management of Largo has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. Largo does not undertake to update any forward-looking statements, except in accordance with applicable securities laws. Readers should also review the risks and uncertainties sections of Largo's annual and interim MD&As which also apply.

Trademarks are owned by Largo Inc.

## Future Oriented Financial Information:

Any financial outlook or future oriented financial information contained in this press release, as such term is defined by applicable securities laws, has been approved by management of Largo as of the date hereof and is provided for the purpose of providing information about management's current expectations and plans relating to

the Company's 2023 guidance. Readers are cautioned that any such future oriented financial information contained herein should not be used for purposes other than those for which it is disclosed herein. The Company and its management believe that the prospective financial information as to the Company's anticipated 2023 guidance has been prepared on a reasonable basis, reflecting management's best estimates and judgments. However, because this information is highly subjective, it should not be relied on as necessarily indicative of future results.

## Non-GAAP 5 Measures

The Company uses certain non-GAAP financial performance measures in this press release, which are described in the following section.

### Cash Operating Costs

The Company's press release refers to cash operating costs per pound, a non-GAAP performance measure, in order to provide investors with information about a key measure used by management to monitor performance. This information is used to assess how well the Maracás Menchen Mine is performing compared to plan and prior periods, and also to assess its overall effectiveness and efficiency. Cash operating costs includes mine site operating costs such as mining costs, plant and maintenance costs, sustainability costs, mine and plant administration costs, royalties and sales, general and administrative costs (all for the Mine properties segment), but excludes depreciation and amortization, share-based payments, foreign exchange gains or losses, commissions, reclamation, capital expenditures and exploration and evaluation costs. Operating costs not attributable to the Mine properties segment are also excluded, including conversion costs, product acquisition costs, distribution costs and inventory write-downs. These costs are then divided by the pounds of vanadium sold that were produced by the Maracás Menchen Mine to arrive at the cash operating costs per pound. This measure differs to the new total cash costs non-GAAP measure the Company uses to measure its overall performance (see Company's latest Management Discussion and Analysis). These measures, along with revenues, are considered to be one of the key indicators of the Company's ability to generate operating earnings and cash flow from its Maracás Menchen Mine. These cash operating costs measures do not have any standardized meaning prescribed by IFRS and differ from measures determined in accordance with IFRS. These measures are intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS. These measures are not necessarily indicative of net earnings or cash flow from operating activities as determined under IFRS.

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

2 Effective grade represents the percentage of magnetic material mined multiplied by the percentage of V2O5 in the magnetic concentrate.



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

4 Cash operating costs excluding royalties per pound reported are on a non-GAAP basis. Refer to the “Non-GAAP Measures” section of this press release.

5 GAAP – Generally Accepted Accounting Principles

## Investor Relations

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Source: Largo Inc.