

(Formerly Quaterra Resources Inc.)

Management's Discussion and Analysis

For the three months ended March 31, 2022

Dated: May 30, 2022

(In U.S. dollars)

For the year ended December 31, 2021

This Management's Discussion and Analysis ("MD&A") of Lion Copper and Gold Corp. and its wholly owned subsidiaries (collectively, "Lion CG" or the "Company"), dated May 30, 2022, should be read in conjunction with the consolidated financial statements for the year ended December 31, 2021, and related notes thereto which have been prepared under International Financial Reporting Standards issued by the International Accounting Standards Board ("IFRS"). All dollar amounts in this MD&A are United States dollars unless otherwise noted.

Additional information about the Company, including the Company's press releases, quarterly and annual reports, and Form 20-F, is available through the Company's filings with the securities regulatory authorities in Canada at <a href="https://www.sedar.com">www.sedar.com</a> or the United States Securities Exchange Commission at <a href="https://www.sec.gov/edgar">www.sec.gov/edgar</a>. Information about mineral resources, as well as risks associated with investing in the Company's securities is contained in the Company's most recently filed 20-F.

On November 22, 2021, the Company changed its name from Quaterra Resources Inc. to Lion Copper and Gold Corp. The shares of the Company commenced trading under the new name at the open of trading on November 23, 2021. The Company's common shares are listed on the TSX Venture Exchange ("TSXV") under the symbol "LEO" and traded on the OTCQB Market under the symbol "LCGMF".

#### **Forward-Looking Statements**

Certain statements made and information contain "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 and "forward-looking information" within the meaning of applicable Canadian securities legislation (collectively, "Forward-Looking Statements").

Other than statements of historical fact, all statements that address activities, events, or developments that the Company believes, expects or anticipates will, may, could or might occur in the future are Forward-Looking Statements. The words such as "believe", "anticipate", "expect", "estimate", "strategy", "plan", "intend", "may", "could", "would", "should", or similar expressions are intended to identify Forward-Looking Statements.

The Forward-Looking Statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance, or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the Forward-Looking Statements. Such factors include, but are not limited to, general business and economic uncertainties; exploration and resource extraction risks; uncertainties relating to surface rights; the actual results of current exploration activities; the outcome of negotiations; conclusions of economic evaluations and studies; future prices of natural resource based commodities; increased competition in the natural resource industry for properties, equipment and qualified personnel; risks associated with environmental compliance and permitting, including those created by changes in environmental legislation and regulation; the risk of arbitrary changes in law; title risks; and the risk of loss of key personnel.

The foregoing lists of factors and assumptions are not exhaustive. The reader should also consider carefully the matters discussed under the heading "Risks Factors and Uncertainties" elsewhere in this MD&A. Forward-Looking Statements contained herein are made as of the date hereof (or as of the date of a document incorporated herein by reference, as applicable). No obligation is undertaken to update publicly or otherwise revise any Forward-Looking Statements or the foregoing lists of factors and assumptions, whether as a result of new information, future events or results or otherwise, except as required by law. Because Forward-Looking Statements are inherently uncertain, readers should not place undue reliance on them. The Forward-Looking Statements contained herein are expressly qualified in their entirety by this cautionary statement.

#### **Company Profile and Business Overview**

Lion Copper and Gold Corp. is a Canadian-based company advancing its flagship MacArthur Copper Project in Mason Valley, Nevada, in addition to advancing its exploration projects including the Chaco Bear and Ashton properties in highly prospective regions in British Columbia, Canada, and the Blue Copper Prospect in Montana, USA.

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The Company also looks for opportunities to acquire projects on reasonable terms that have the potential to host large mineral deposits attractive to major mining companies. The Company is incorporated in British Columbia, Canada. Its registered and records offices are located at 1200 - 750 West Pender Street, Vancouver, British Columbia, Canada, V6C 2T8.

#### MacArthur Copper Project and Yerington Mine Property, Nevada

Located in the historic copper district of Yerington, Nevada, the Company's Yerington Copper Projects include the MacArthur Copper Project and Yerington Mine Property, which are 100% owned by Singatse Peak Services LLC, a whollyowned subsidiary of Lion CG.

The MacArthur Property consists of 897 unpatented lode claims totaling approximately 18,500 acres on lands administered by the U.S. Department of Interior - Bureau of Land Management (BLM).

Lion CG has a National Instrument 43-101 compliant resource and has released a preliminary economic assessment for the MacArthur Project.

The MacArthur Project is subject to a 2% net smelter return royalty (the "NSR") upon commencing commercial production, which can be reduced to a 1% NSR in consideration of \$1,000,000.

The Yerington Mine Property covers approximately 11 square miles centered on the former Anaconda open pit copper mine. This includes 2,768 acres of fee simple parcels and patented mining claims as well as 208 unpatented lode and placer claims totaling approximately 4.300 acres on lands administered by the BLM.

Lion CG has a National Instrument 43-101 compliant resource for the Yerington Mine Property and believes that the project has potential for additional copper resources. Historic and current drilling data indicate that horizontal and vertical limits to the mineralization at the Yerington Mine Property have not yet been found.

The Yerington Mine Property is subject to a 2% NSR upon commencing commercial production. The total lifetime royalty is capped at \$7,500,000.

#### Bear Deposit, Nevada

The Bear deposit consists of approximately 2,300 acres of private land located to the northeast of the Yerington Mine Property.

The Company has five option agreements, entered from March 2013 to May 2015, to acquire a 100% interest in private land in Yerington, Nevada, known as the Bear deposit. Under the terms of these option agreements, as amended, the Company is required to make \$5,673,290 in cash payments over 15 years (\$5,029,290 paid) to maintain the exclusive right to purchase the land, mineral rights, and certain water rights and to conduct mineral exploration on these properties. Two of the properties are subject to a 2% NSR upon commencing commercial production, which can be reduced to a 1% NSR in consideration of \$1,250,000 total.

Outstanding payments due under the five option agreements by year are as follows:

- \$193,000 due in 2021 (paid);
- \$193,000 due 2022;
- \$201,000 due in 2023;
- \$50,000 due in years 2024 to 2028.

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#### Wassuk, Nevada

The Wassuk property consists of 310 unpatented lode claims totaling approximately 6,400 acres on lands administered by the BLM.

On December 19, 2007, the Company entered into a Mining Lease with Option to Purchase, as further amended, to earn a 100% interest in certain unpatented mining claims in Lyon County, Nevada, and was required to make \$1,405,000 in cash payments (paid) and incur a work commitment of \$50,000 by December 31, 2021 (completed). During 2021 two final option payments of \$125,000 due by August 1, 2021, and the final \$125,000 due by October 10, 2021, were both paid and form part of the total payments of \$1,405,000. The Company has now satisfied all conditions required to execute the option to purchase.

The property is subject to a 3% NSR royalty upon commencing commercial production, which can be reduced to a 2% NSR in consideration of \$1,500,000.

#### **Groundhog Project, Alaska**

On April 20, 2017, the Company signed an agreement (the "**Agreement**") with Chuchuna Minerals Company, an Alaska corporation, giving it an option to purchase a 90% interest in the Groundhog copper prospect, a 40,000-acre property located on an established copper porphyry belt, two hundred miles southwest of Anchorage, Alaska.

The Groundhog claims cover the northern extension of a structural zone that hosts a number of porphyry copper-gold prospects, including the large Pebble porphyry copper, gold and molybdenum project, which is three miles south of the Groundhog claim boundary. To earn the 90% interest, the Company must fund a total of \$5,000,000 (\$2,688,000 funded) of exploration expenditures and make a lump sum payment to Chuchuna of \$3,000,000 by the end of April 20, 2024. During the year ended December 31, 2021, the lease agreement was further extended from six to seven years, providing the Company more time to make the required exploration expenditures and lump sum payment. The Company can terminate the Agreement at its discretion.

#### **Butte Valley Prospect, Nevada**

The Company entered into an option agreement dated August 22, 2019, as amended on December 6, 2019 and July 30, 2021, with North Exploration, LLC ("North Exploration"), to purchase a 100% interest in six hundred unpatented mining claims in White Pine County, Nevada, for \$600,000 over five years. North Exploration will retain a 2.5% NSR, of which 1% can be purchased for \$1,000,000. A further 0.5% NSR can be purchased within the first ten years after the option is exercised for \$5,000,000.

On December 3, 2019, the Company entered into an option agreement with Nevada Select Royalty, Inc. ("**Nevada Select**"), to purchase a 100% interest in seventy-eight unpatented claims in White Pine Country, Nevada associated with the Butte Valley project for \$250,000 over five years. Nevada Select will retain a 2% NSR, of which 1% can be purchased by the Company during the ten-year term of the option for \$10,000,000.

Aggregate payments to maintaining the two option agreements by year are as follows:

- \$20,000 due 2019 (paid);
- \$80,000 due in 2020 (paid);
- \$100,000 due in 2021 (paid);
- \$150,000 due in 2022; and
- \$250,000 each due in 2023 and 2024.

On January 26, 2022, the Company entered into a property acquisition agreement to assign its options to acquire the Butte Valley property to 1301666 B.C. Ltd ("BC Co.") which is a private British Columbia company established to acquire mineral resource properties.

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Pursuant to the agreement, Lion CG's 100% owned subsidiary Quaterra Alaska will be granted an equity position in BC Co. In addition, Quaterra Alaska will maintain a 1.5% NSR on each of the Butte Valley optioned properties, which is subject to a buy-down to a 1.0% NSR in exchange for a payment of \$7,500 per property.

On April 5, 2022, the Company completed the assignment of the two option agreements for the Butte Valley Property.

#### Chaco Bear and Ashton Properties, British Columbia

On August 25, 2021, the Company entered into a non-binding letter of intent (the "**LOI**") with Houston Minerals Ltd. ("**Houston**") setting forth the terms of an option whereby the Company may acquire a 100% interest in the Chaco Bear Property located directly east of the Golden Triangle of British Columbia, and the Ashton Property located near Lytton, British Columbia (Collectively, the "**Properties**").

Under the terms of the LOI, the Company and Houston propose to enter into a definitive agreement whereby the Company can earn up to a 100% interest in the Properties by making the following share issuances and cash payments over a four-year period:

- issuing 8,000,000 common shares of the Company on closing (issued on March 17, 2022);
- making annual lease payments on the Properties after 2021;
- incurring CAD\$150,000 of exploration expenditures on the Chaco Bear Property and CAD\$50,000 of exploration expenditures on the Ashton Property before the end of 2021;
- incurring exploration expenditures of at least the value of the annual assessment multiplied by 1.5 for periods after 2021;
- paying CAD\$1,500,000 for the Chaco Bear Property and CAD\$1,000,000 for the Ashton Property on or before 4 years from the closing, which amounts are payable in cash or common shares of the Company; and
- making annual advance royalty payments in the fourth and fifth year from the closing in the amounts of CAD\$250,000 on the Chaco Bear Property and CAD\$150,000 on the Ashton Property.

On September 17, 2021, the parties agreed to an amendment to the LOI to include a 2.5% NSR on each property. Prior to feasibility, the Company may reduce the NSR to 1.0% on the Chaco Bear Property in consideration for a payment of CAD\$6,000,000 and 1.0% on the Ashton Property for a payment of CAD\$3,000,000. Post feasibility, the Company may purchase the remaining 1.0% NSR on the Chaco Bear Property for CAD\$12,000,000 and the remaining 1.0% NSR on the Ashton Property for CAD\$6,000,000.

On January 26, 2022, the Company entered into an option agreement with Houston to replace the LOI. The consideration terms under the LOI are unchanged except that the term of the option has changed from a four year period to a ten year period and annual advance royalty payments in the amounts of CAD\$250,000 on the Chaco Bear Property and CAD\$150,000 on the Ashton Property are to be paid starting on the fifth year from closing through to the ninth year from closing instead of only in the fourth and fifth years from the closing. All other consideration terms remain unchanged.

In addition, commencing on January 31, 2022, and on January 31 of each year thereafter during the Option Period, Lion CG shall pay the following option maintenance fees to Houston: (a) CAD\$60,000 in respect of the Chaco Bear Property; and (b) CAD\$40,000 in respect of the Ashton Property.

On March 16, 2022, Lion CG funded an initial work program of CAD\$200,000 on the Properties in consideration for the grant of the Option. The Company may exercise the Option for a period of up to ten years to acquire (i) the Chaco Bear property by paying CAD\$1,500,000 to Houston, in cash or in common shares of the Company at the Company's option; and/or (ii) the Ashton Property by paying CAD\$1,000,000 to Houston in cash or in common shares of the Company at the Company's option, and in either case common shares will be valued using the volume weighted average trading price of the Company's common shares for the twenty trading day period ending three trading days prior to the date of issuance of such Lion CG shares, with such cash payments being subject to a discount of between 5% and 15% based on

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the timing of exercise and cumulative exploration expenditures incurred as at the time of exercise. Houston will retain a 2.5% net smelter returns royalty on any of the Properties for which an Option has been exercised by the Company.

#### **Blue Copper Prospect, Montana**

During the year ended as of December 31, 2021, Blue Copper LLC (the Company's 100% owned subsidiary) acquired and staked a district scale exploration and resource discovery opportunity (the "Blue Copper Prospect"), comprising more than 7,430 acres in Powell County and Lewis & Clark County in Montana, USA. The area is prospective for high grade copper-gold skarns and porphyry copper-gold mineralization. The claim block encompasses a group of more than 14 historic small mines that produced high grade gold, copper and tungsten.

The Blue Copper Prospect, located approximately 25 miles WNW of Helena, Montana, is centered on the Late Cretaceous Blackfoot City Stock (the "BCS"), which was intruded into the Black Mountain syncline, composed primarily of a Paleozoic sequence of limestone, dolomite, shale and sandstone. The BCS crystallized at the same time as the nearby Boulder batholith, which is host to the world-famous Butte copper mines. The area is prospective for high grade copper-gold skarns and porphyry copper-gold mineralization.

The claim block encompasses a group of more than 14 historic small mines that produced high grade gold, copper and tungsten. Importantly, the streams draining the BCS have a recorded production of almost 200,000 ounces of placer gold through 1959, although the actual production was most likely much higher. Despite the extensive placer production, only one lode gold mine operated historically and produced less than 10,000 ounces. Several major companies conducted exploration programs in the area during the late 1980s and early 1990s. The Company is currently acquiring, compiling and interpreting historic data to develop a 2022 work plan which will be provided when available.

As a part of the Blue Copper Prospect, Blue Copper LLC entered into a purchase agreement with Four O Six Mining & Exploration LLC to acquire certain existing and additional unpatented mining claims. In exchange for the unpatented mining claims, as part of the closing of the transaction, the Company issued 1,500,000 common shares of the capital of the Company provided a NSR of 2% with a buy-down of 1% NSR for \$1,500,000.

Blue Copper LLC has staked an additional 131 claims to expand the Blue Copper Prospect. The Company has provided a NSR of 2% with a buy-down of 1% NSR for \$600,000 to Four O Six Mining & Exploration LLC for these claims.

On February 14, 2022, as a part of the Blue Copper Prospect transaction, the Company issued 1,500,000 common shares as part of the closing of the transaction.

### Option to Earn-in Agreement with Rio Tinto

On March 18, 2022, the Company entered into an Option to Earn-in Agreement with Rio Tinto America Inc. ("Rio Tinto") to advance studies and exploration at Lion CG's copper assets in Mason Valley, Nevada. Under the agreement, Rio Tinto has the option to earn a 65% interest in the assets, comprising 34,494 acres of land, including the historic Yerington mine, greenfield MacArthur Project, Wassuk property, the Bear deposit, and associated water rights (the "Mining Assets"). In addition, Rio Tinto will evaluate the potential commercial deployment of its Nuton™ technologies at the site. Nuton™ offers copper heap leaching technologies developed by Rio Tinto to deliver greater copper recovery from mined ore and access new sources of copper such as low-grade sulphide resources and reprocessing of stockpiles and mineralised waste. The technologies have the potential to deliver leading environmental performance through more efficient water usage, lower carbon emission, and the ability to reclaim mine sites by reprocessing waste.

The stages of the Agreement are set out below.

#### Stage 1

Rio Tinto will pay up to four million U.S. dollars (\$4,000) for an exclusive earn-in option and agreed-upon Mason Valley study and evaluation works to be completed by Lion CG no later than December 31, 2022.

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#### Stage 2

Within forty-five (45) days of the completion of Stage 1, Rio Tinto will provide notice to Lion CG whether Rio Tinto elects to proceed with Stage 2, upon which Rio Tinto will pay up to five million U.S. dollars (\$5,000) for agreed-upon Mason Valley study and evaluation works to be completed by Lion CG within 12 months from the date that the parties agree upon the scope of Stage 2 work.

Stages 1 and 2 may be accelerated at Rio Tinto's option.

#### Stage 3 - Feasibility Study

Within sixty (60) days of the completion of Stage 2, Rio Tinto shall provide notice to Lion CG whether Rio Tinto will exercise its Option and fund a Feasibility Study based on the results of the Stage 1 and Stage 2 work programs. Rio Tinto will fully-fund the Feasibility Study and ancillary work completed by Lion CG in amount not to exceed fifty million U.S. dollars (\$50,000).

#### **Investment Decision**

Upon completion of the Feasibility Study, Rio Tinto and Lion CG will decide whether to create an investment vehicle into which the Mining Assets will be transferred, with Rio Tinto holding not less than a 65% interest in the investment vehicle.

- If Rio Tinto elects to not to create the investment vehicle, then Lion CG shall grant to Rio Tinto a 1.5% NSR on the Mining
- If Rio Tinto elects to create the investment vehicle but Lion CG elects not to create the investment vehicle, then, at Rio Tinto's option, Lion CG shall create the investment vehicle and Rio Tinto will purchase Lion CG's interest in the investment vehicle for fair market value.

#### **Project Financing**

- Following the formation of the investment vehicle, any project financing costs incurred will be funded by Rio Tinto and Lion CG in proportion to their respective ownership interest in the investment vehicle.
- Rio Tinto may elect to fund up to sixty million U.S. dollars (\$60,000) of Lion CG 's project financing costs in exchange for a 10% increase in Rio Tinto's ownership percentage. In addition, upon mutual agreement of Rio Tinto and Lion CG, Rio Tinto may fund an additional forty million U.S. dollars (\$40,000) of Lion CG's project financing costs in exchange for an additional 5% increase in Rio Tinto's ownership percentage.
- If Lion CG's ownership percentage in the investment vehicle is diluted to 10% or less, then Lion CG's ownership interest will be converted into a 1% uncapped NSR.

On April 27, 2022, the Company TSX Venture Exchange approved the Company's Option to Earn-in Agreement with Rio Tinto America Inc.

#### **Performance Highlights**

#### Drilling at MacArthur Copper Project

On August 5, 2021, the Company completed a core drilling program of approximately 5,147 feet (1,569 meters) at its MacArthur Copper Project in the Yerington District, Nevada. On October 6, 2021, the Company announced the assay results from the drilling program. From this same drilling program, an 11-tonne representative metallurgical sample was generated for ongoing metallurgical testing in support of the pre-feasibility study.

On February 25, 2022, the Company, announced the results of an updated mineral resource estimate for the MacArthur Copper Project located in Mason Valley, Nevada. The mineral resource estimate was prepared pursuant to NI 43-101 by Independent Mining Consultants of Tucson, Arizona.

The resource estimate includes total contained copper within a pit shell using a variable recovery of four relevant oxidation material types.

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#### Highlights:

- a) Measured and Indicated Resource: 300,290,000 tons, grading 0.167% TCu containing 1,000,383,000 pounds of total copper.
- b) Inferred Resource: 154,792,000 tons, grading 0.151% TCu containing 466,350,000 pounds of total copper
- c) The updated mineral resource estimate results in an increase of over 55% of the Measured and Indicated Resource compared to the prior resource estimate as constrained within the 2014 PEA pit design (MacArthur Copper Project Amended NI 43-101 Technical Report Preliminary Economic Assessment, January 17, 2014).
- d) The oxide and transition mineralized envelope of the deposit is confirmed to be open to the south-southeast. Additional sulfide mineralization remains open to the north and east.

#### Mineral Resource Estimate

The updated Measured and Indicated and Inferred Resources for the MacArthur Copper Project are reported in Table 1 as set out below. The changes to the mineral resource are based on the 2021 infill drill and assay program, updated geology shapes, and updated metallurgical review and analyses.

Table 1: Mineral Resource Estimate

Measured + indicated resources

February 25, 2022

Material True	Cutoff Grade	Ktons	Average Grade	<b>Contained Copper</b>
Material Type			% TCu	(lbs x 1000)
Leach Cap	0.06	15,610	0.12	37,482
Oxide	0.06	226,524	0.159	718,692
Transition	0.06	43,382	0.213	185,049
Sulphide	0.06/0.08	14,815	0.2	59,185
Total		300,331	0.167	1,000,408

Inferred resources February 25, 2022

Material True	Cutoff Grade	Ktons	Average Grade	Contained Copper	
Material Type			% TCu	(lbs x 1000)	
Leach Cap	0.06	18,579	0.085	31,486	
Oxide	0.06	105,525	0.146	309,149	
Transition	0.06	23,283	0.202	94,137	
Sulphide	0.06/0.08	9,063	0.204	36,942	
Total		156,450	0.151	471,714	

(%) = percent, TCu = total copper, lbs = pounds, Ktons = short tons x 1000

- 1. The cutoff grades used for reporting the mineral resources are at or above the internal cutoff grades of between 0.03% and 0.06% TCu for the Leach Cap, Oxide and Transition zones. The sulphide zone internal cutoff grades are 0.06% TCu for the MacArthur and North zones and 0.08% TCu for Gallagher because of a higher acid consumption.
- 2. Mr. Herbert E. Welhener, MMSA-QPM, an employee of Independent Mining Consultants, Inc. is the Qualified Person for the Mineral Resource estimate.
- 3. The "reasonable prospects for eventual economic extraction" shape has been created based on a copper price of US\$3.75/lb, employment of heap leach extraction methods, processing costs of US\$1.56 or \$2.20 per

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- short ton, and mining costs of \$1.92/short ton for rock and \$1.46/short ton alluvium, a variable copper recovery, and tonnage factor of 12.5 cubic feet per short ton for in situ rock.
- 4. Rounding as required by Best Practices established by the CIM reporting guidelines may result in slight apparent differences between tonnes, grade and contained metal content.

#### **Cautionary Note to Investors**

While the terms "measured (mineral) resource," "indicated (mineral) resource" and "inferred (mineral) resource" are recognized and required by National Instrument 43-101 – Standards of Disclosure for Mineral Projects, investors are cautioned that except for that portion of mineral resources classified as mineral reserves, mineral resources do not have demonstrated economic viability. Investors are cautioned not to assume that all or any part of measured or indicated mineral resources will ever be upgraded into mineral reserves. Additionally, investors are cautioned that inferred mineral resources have a high degree of uncertainty as to their existence, as to whether they can be economically or legally mined or will ever be upgraded to a higher category.

#### Resource Estimate Methodology

#### **Drill Hole Database**

The resource estimate was completed using data from 747 drill holes for a total of 299,045 feet drilled. These holes include 23 holes drilled in 2021; 10 as infill holes and 13 holes drilled for metallurgical samples. The total of core drilling is 64,681 ft in 102 holes and the total rotary drilling is 234,360 ft in 636 holes.

#### Geologic Model

The MacArthur Project is an oxidized portion of a porphyry copper system that has been subjected to several weathering, oxidization and enrichment cycles. The copper mineralization is hosted in altered and weathered Middle Jurassic granodiorite and quartz monzonite intruded by west-northwesterly-trending, moderate to steeply north-dipping quartz porphyry dike swarms.

The geology of the deposit has been interpreted on forty-one north-south sections and on thirty-three east-west sections. The deposit was interpreted into four mineral type zones and definition completed as three-dimensional digital models.

Both lithology and oxidization states have been incorporated into the block model based upon geologic domains developed from the drill hole geologic logs. The oxidization zones of leach cap, oxide, transition, and sulphide have been incorporated into the block model and are used as boundaries for the estimation of total copper grades using an inverse distance cubed estimation method. Surfaces of the oxidation zones have been used to create domain boundaries and used to code the assay, composite, and block model. The block model has been created to encompass all of the drill holes available, within 25ft x 25ft (vertical) blocks. In plan view, the resource block model covers an area of 14,500 ft in the north-south direction and 18,100 ft in the east-west direction. The block model encompasses three copper mineralization deposits: MacArthur, North Area and Gallagher.

The mineral resource is tabulated within a defined open pit shell based on economic inputs developed from the metallurgical test work and engineering completed on the project to date. The pit shell economics are based on the premise that the Project will employ a heap leach, SX-EW recovery process. The shapes created by open pit optimization software used the following parameters:

- Copper price = US\$3.75/lb
- Leach Cap recovery of total copper grade = 60%
- Oxide zone recovery of total copper grade = 71%
- Transition zone recovery of total copper grade = 65%

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Sulphide zone – recovery of total copper grade = 40%

**Block Model Validation** 

The model was validated through comparisons of grades, grade distribution and tonnage-grade curves of the ID grades with the distribution of drill hole composited grades.

#### Water Rights Sale

On February 24, 2021, the Company announced a purchase and sale agreement to sell certain primary groundwater rights to Desert Pearl Farms LLC ("Desert Pearl"), a Yerington-based company involved in agriculture, for \$2,910,000 (the "Purchase and Sale Agreement"). In early March, 2021, the Company filed an application with the State of Nevada Division of Water Resources ("NDWR") to change the manner of use of the water rights from mining to agriculture and their place of use ("Change Application"). Under the terms of the Purchase and Sale Agreement, Desert Pearl made a \$1,000,000 initial payment to the Company on March 5, 2021. The Purchase and Sale Agreement was subject to the NDWR's final approval of the Change Application. The primary water rights covered under the Purchase and Sale Agreement are one of the water rights that are the subject of forfeiture, as discussed in the next paragraph.

On July 23, 2021, the Company received a notice from the State of Nevada that three water rights permits had been forfeited. Further, that the application for an extension of time to prevent forfeiture of a fourth certificate was denied. The permits affected are components of the Purchase and Sale Agreement announced on February 24, 2021.

On August 20, 2021, the Company filed a Petition for Judicial Review of the Forfeiture Notice and has retained legal counsel to initiate and vigorously undertake the appeal process. Should the appeal be unsuccessful or Desert Pearl elects to terminate the Purchase and Sale Agreement, the Company will be obligated to refund the \$1,000,000 initial payment to Desert Pearl (therefore, it has been treated as an accrued liability on the balance sheet) and the \$1,910,000 balance of the water rights proceeds would be forfeited.

#### **Proposed Transactions**

The Company has no proposed transactions other than as disclosed in this MD&A.

### **Summary of Quarterly Financial Information**

The scale and nature of the Company's corporate and administrative activity have remained consistent over the periods presented, except for Q3 and Q4 2021 in which the increase in general and administration expenses is due to the hiring of executives, consultants, and the increase of marketing activity. Quarterly fluctuation in losses, has also been caused by share-based compensation.

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The following table sets out the quarterly financial information for each of the last eight quarters:

(In thousands of U.S. dollars except for per								
share amount)	Q1'22	Q4'21	Q3'21	Q2'21	Q1'21	Q4'20	Q3'20	Q2'20
	\$	\$	\$	\$	\$	\$	\$	\$
General administration	(592)	(771)	(503)	(384)	(275)	(298)	(326)	(216)
Fair value (loss) gain on derivative liabilities	37	(31)	84	(38)	(19)	11	(1)	28
Foreign exchange gain (loss)	16	(38)	31	15	3	(2)	24	-
Other expenses	-	(97)	(101)	-	(12)	(51)	(127)	(31)
Loss on settlement of convertible notes	-	-	-	-	-	-	(26)	-
Share-based compensation	(286)	(172)	(173)	(732)	-	-	(3)	(168)
Gain (loss) on marketable securities	-	(9)	(70)	397	(129)	(87)	222	273
Netloss	(825)	(1,118)	(732)	(742)	(432)	(427)	(237)	(114)
Basic loss per share	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

#### **Liquidity and Capital Resources**

The Company is an exploration stage company that has not earned any production revenue. Its operations have been dependent mainly on proceeds from the sale of water rights and private placements in the last few years without diluting shareholders' value.

As of May 30, 2022, the Company had a cash balance of \$210,884.

The Company had cash and cash equivalents of \$199,000 on March 31, 2022 (842,000 at December 31, 2021) and no outstanding debt.

During the period ended March 31, 2022, the Company spent \$475,000 in operating activities.

As of March 31, 2022, the Company invested \$168,000 in investing activities.

Material increases or decreases in the Company's liquidity and capital resources will be determined by the outcome regarding the Petition for Judicial Review of the Forfeiture Notice filed on August 20, 2021 and obtaining equity or other sources of financing.

Please refer to Note 1, Nature of Operations and Going Concern, in the consolidated financial statements for the year ended December 31, 2021 for further details.

### **Related Party Information**

The Company's related parties include its directors and officers whose remuneration was as follows, subject to change of control provisions for officers:

	Three months ended March 31,				
		2022	2021		
Salaries	\$	113 \$	99.00		
Directors' fees		25	9		
Share-based compensation		166	-		
	\$	304 \$	108.00		

For the year ended December 31, 2021

a) On January 26, 2022, the Company entered into a property acquisition agreement to assign its options to acquire the Butte Valley property to BC Co. which is a private British Columbia company established to acquire mineral resource properties. BC Co. was founded by two individuals that are also directors and officers of Lion CG and as such the transaction is a non-arm's length transaction under TSXV rules.

On April 5, 2022, the Company completed the assignment of the two option agreements for the Butte Valley property. Pursuant to the assignment agreement, Lion CG received 16,049,444 common shares of BC Co. Concurrently with the completion of the assignment of the Butte Valley Property, BC Co. closed a private placement for gross proceeds of CAD\$3,106,000 through the issuance of 15,531,130 units at a price of CAD\$0.20 per unit. In addition, the Company received a payment of \$500,000 from BC Co. as a reimbursement of exploration expenditures and related costs incurred by the Company on the Butte Valley Property.

The transaction is a non-arm's length transaction under TSXV rules.

b) As per their agreements with the Company, the CEO and President/CFO are entitled to receive an annual grant of options under the Stock Option Plan of the Company on each Annual Review Date. The number of options will be determined by the Board based on a minimum of 50% and maximum of 150% of the annual base compensation. The exercise price per common share of the Company will be equal to the Market Price (as defined in the TSXV policies) of the Company's common shares as at the Annual Review Date, subject to a minimum exercise price per share of CAD\$0.05. The applicable percentage on the annual base salary will be determined by the Board based on an assessment of the performance of the CEO and President/CFO in achieving the Annual Objectives for the relevant Annual Review Period. The Board is yet to determine the percentage and number of bonus options to be granted between 50% and 150% of their base compensation to the CEO and President/CFO for 2021.

On May 25, the Board approved 3,300,000 of bonus options to be granted to the CEO and President/CFO.

c) As per their agreements with the Company, the CEO and President/ CFO were each granted 4 million Restricted Stock Units ("RSUs") on October 21, 2021, which were granted subject to vesting in three equal installments over three years. The grant of RSUs is subject to shareholder approval and further subject to Exchange approval of the RSU Plan and the aforementioned grant thereunder. Pursuant to Exchange policies, RSUs granted prior to shareholder approval of the RSU Plan must be specifically approved by a vote of shareholders excluding the votes of the holders of the Restricted Share Units. As a result of these pending approvals, the RSUs cannot commence vesting any earlier than on date of receipt of the same. If at any point the Company divests its interests, including the option to purchase, absent a merger, sale or similar transaction in a) one of either the Chaco Bear or Ashton projects, then 50% of the total RSUs that have not vested will be cancelled.

On May 18, 2022, at AGM the CEO and President/CFO were each granted 4 million RSUs.

### **Outstanding Share Information at Date of Report**

Authorized: Unlimited number of common shares Number of common shares issued and outstanding as of May 30, 2022: 304,106,611.

Stock options as of May 30, 2022, are:

For the year ended December 31, 2021

			Remaining	
	Exercise Price	<b>Number of Options</b>	contractual life in	<b>Number of Options</b>
Expiry Date	(CAD)	Outstanding	years	Exercisable
June 23, 2022	0.10	1,695,000	0.07	1,695,000
September 20, 2023	0.06	1,470,000	1.31	1,470,000
June 21, 2024	0.07	1,900,000	2.06	1,900,000
August 8, 2024	0.06	500,000	2.19	500,000
June 20, 2025	0.08	2,450,000	3.06	2,450,000
June 18, 2026	0.25	3,950,000	4.05	2,962,500
September 17, 2026	0.11	4,500,000	4.30	2,250,000
October 21, 2026	0.09	2,700,000	4.40	1,350,000
December 12, 2026	0.12	750,000	4.54	187,500
May 25, 2027	0.09	9,000,000	4.99	2,250,000
Outstanding May 30, 2022		28,915,000	-	17,015,000

Share purchase warrants outstanding as of May 30, 2022, are:

Expiry date	Currency	Exercise price	Granted	Remaining contractual life in years
August 28, 2022	\$	0.05	11,000,000	0.25
September 20, 2022	CAD	0.07	769,230	0.31
September 13, 2024	\$	0.10	26,488,733	2.29
September 27, 2024	\$	0.10	13,152,909	2.33
October 21, 2024	\$	0.10	31,672,632	2.40
Outstanding at the end of the year			83,083,504	

#### **Risks Factors and Uncertainties**

The Company is subject to many risks and uncertainties, each of which could have an adverse effect on the results, business prospects or financial position.

For a comprehensive list of the risks and uncertainties applicable to the Company, please refer to the section entitled "Risk Factors" in the Company's most recent Form 20-F, available on the SEC website at <a href="https://www.sec.gov">www.sec.gov</a>.

#### **Subsequent Events**

a) In 2019, the Company secured two separate option agreements to acquire 678 unpatented mining claims covering most of the known mineralization at the Butte Valley Property.

On April 5, 2022, the Company completed the assignment of the two option agreements for the Butte Valley Property. In addition, the Company received a payment of \$500 from BC Co. as a reimbursement of exploration expenditures and related costs incurred by the Company on the Butte Valley Property (See note 4).

The transaction is a non-arm's length transaction under TSXV rules.

- b) On April 13, 2022, Quaterra Alaska Inc. entered into a NSR buydown agreement for the Butte Valley property with BC Co., pursuant to which BC Co. will pay \$500 in exchange for a buy-down of the royalties to 0.5%. Closing of the transaction will be subject to the third party enter into an exploration and earn-in agreement with certain exploration Company. If the closing of the transaction does not occur by July 20, 2022, the NSR buydown agreement will be null and void.
- c) On April 21, 2022, the Company agreed to settle outstanding debt of \$63 (CAD\$80) with an arm's length creditor by issuing 800,000 common shares of the Company at a market price of CAD\$0.10 per share. The amount of

### **Management's Discussion and Analysis**

For the year ended December 31, 2021

indebtedness represents an outstanding account for services provided to the Company. The shares are subject to a four month hold period pursuant to TSXV policies. TSXV approval was granted on April 25, 2022 and the transaction was closed.

- d) On April 27, 2022, the Company TSX Venture Exchange approved the Company's Option to Earn-in Agreement with Rio Tinto America Inc. (note 4(h).
- e) On May 17, 2022, the Company has reached final agreement with Rio Tinto on the scope of the Stage 1 Program of Work referenced in the Parties' March 18, 2022 Option Agreement (See note 4(h)). Rio Tinto will provide funding to the Company in the amount of \$3,750,000 for Mason Valley project development, exploration efforts and other agreed-upon corporate.
- f) On May 18, 2022, at AGM the CEO and President/CFO were each granted 4 million RSUs.
- g) On May 25, 2022, the Company has reached an amicable agreement with Desert Pearl Farms to terminate the contract on the sale of the Company's water rights. In light of the Company's agreement with Rio Tinto, the return of these water rights to the Company are expected to play a critical role in the reclamation and development of the MacArthur and Yerington projects.
  - As a consequence of the termination, the Company will recover the water permit designated for mining and milling use and will return the \$1,000 deposit to Desert Pearl Farms. This water permit is currently subject to court proceedings and settlement discussions between the Company and the State of Nevada.
- h) On May 25, 2022, the Company agreed to settle \$61,366 of debt with a creditor by issuing 915,910 common shares of the Company at a deemed price of \$0.067 (CAD\$0.085) per share. The amount of indebtedness represents outstanding amounts owing for services provided to the Company. The issuance of the common shares in connection with the debt settlement is subject to the approval of the TSX Venture Exchange and will be subject to a four-month hold period.
- i) On May 25, 2022 the Company granted incentive stock options pursuant to its stock option plan to various directors, officers, employees and consultants of the Company, to purchase up to an aggregate of 5,700,000 common shares of the Company. The stock options are exercisable at a price of CAD\$0.085 (US\$0.067) per share and expire five years from the date of grant.
- j) On May 25, 2022 the Board approved 3,300,000 of bonus options to be granted to the CEO and President/CFO pursuant their agreement with the Company. The stock options are exercisable at a price of CAD\$0.085 (US\$0.067) per share and expire five years from the date of grant.

#### **Off - Balance Sheet Arrangements**

The Company has not entered any off-balance sheet arrangements.

### **Critical Accounting Judgements and Key Sources of Estimation Uncertainty**

Full disclosure of the Company's accounting policies and significant accounting estimates and judgements in accordance with IFRS can be found in note 3 of its audited consolidated financial statements as at December 31, 2021.

#### **Financial Instruments**

Financial instruments are recognized in the statement of financial position when the Company becomes a party to a contractual obligation. At initial recognition, the Company classifies and measures its financial instruments as one of the following:

For the year ended December 31, 2021

- at amortized cost, if they are held to collect contractual cash flows which solely represent payments of principal and interest;
- at fair value, through other comprehensive income ("**FVOCI**") if they are held to both collect contractual cash flows and to sell where those cash flows represent payments of principal and interest solely;
- otherwise, they are classified at fair value through profit or loss ("FVPL").

Financial assets are classified and measured at fair value with subsequent changes in fair value recognized in either profit and loss as they arise unless restrictive criteria are met for classifying and measuring the asset at either amortized cost or FVOCI. Financial liabilities are measured at amortized costs unless they are elected to be or required to be measured at fair value through profit and loss.

Financial assets are derecognized when the rights to receive cash flows from the assets have expired or have been transferred, and the Company has transferred all risks and rewards of ownership. Financial liabilities are derecognized when the obligations specified in the contract are discharged, cancelled, or expire.

The Company's accounts payable approximate fair value due to their short-term nature. The marketable securities are a Level 1 fair value measurement; the derivative warrants are a Level 2 fair value measurement.

The convertible note is classified as a liability at amortized cost, with the conversion feature classified as a derivative liability. The debt liability was initially recorded at fair value and is subsequently measured at amortized cost using the effective interest rate method and will be accreted to the face value over the term of the convertible debenture.

Financial instruments recorded at fair value on the consolidated statements of financial position are classified using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The three levels of the fair value hierarchy are:

- Level 1 Unadjusted quoted prices in active markets for identical assets or liabilities;
- Level 2 Inputs other than quoted prices that are observable for the asset or liability either directly or indirectly;
   and
- Level 3 Inputs that are not based on observable market data.

The Company's financial instruments are exposed to certain financial risks including, credit risk, liquidity risk, foreign currency risks, interest rate risk, commodity and equity price risk and capital risk management. Details of each risk are laid out in the notes to the Company's consolidated financial statements.

#### Changes in Accounting Policies and Accounting Standards Issued but Not Yet Effective

#### **Changes in Accounting Policies**

The Company has not made changes to its accounting policies.

#### **Accounting Standards Issued but Not Yet Effective**

IAS 12 Income Taxes

On May 7, 2021, IASB issued amendments to IAS 12 which require companies to recognize deferred tax on transactions that, on initial recognition, give rise to equal amounts of taxable and deductible temporary differences. The amendments are effective for annual reporting periods beginning on or after 1 January 2023. The impacts of the above amendments to IAS 12 on the Company's consolidated financial statements have not yet been evaluated.

### Disclosure controls and procedures and internal controls over financial reporting

Disclosure controls and procedures are intended to provide reasonable assurance that information required to be disclosed is recorded, processed, summarized, and reported within the time periods specified by securities regulations and that the information required to be disclosed is accumulated and communicated to management. Internal controls over financial reporting are intended to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with IFRS. In connection with National

For the year ended December 31, 2021

Instrument 52-109 (Certificate of Disclosure in Issuer's Annual and Interim Filings) ("NI 52-109"), the Chief Executive Officer and Chief Financial Officer of the Company have filed a Venture Issuer Basic Certificate with respect to the financial information contained in the unaudited condensed interim consolidated financial statements for the three months ended March 31, 2022 and 2021, and this accompanying MD&A (together, the "Interim Filings").

In contrast to the full certificate under NI 52-109, the Venture Issuer Basic Certificate does not include representations relating to the establishment and maintenance of disclosure controls and procedures and internal control over financial reporting, as defined in NI 52-109. For further information, the reader should refer to the Venture Issuer Basic Certificates filed by the Company on SEDAR at www.sedar.com.