



Management's Discussion and Analysis ("MD&A")

For the year ended December 31, 2020

Dated: March 29, 2021

(In U.S. dollars)

Quaterra Resources Inc.
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This Management's Discussion and Analysis ("**MD&A**") of Quaterra Resources Inc. and its wholly-owned subsidiaries (collectively, "**Quaterra**" or the "**Company**"), dated March 29, 2021, should be read in conjunction with the consolidated financial statements for the year ended December 31, 2020, 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 Quaterra, 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 www.sedar.com or the United States Securities Exchange Commission at www.sec.gov/edgar. 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.

2020 PERFORMANCE HIGHLIGHTS

- **Completion of further water rights sales for \$1,880,000**

On December 19, 2019, the Company announced its wholly-owned subsidiary, Singatse Peak Services LLC ("**SPS**"), had entered into a second purchase and sale agreements to sell certain primary groundwater rights associated with its Yerington, Nevada, copper project to Desert Pearl Farms LLC ("**Desert Pearl**") and Desert Hills Dairy, LLC, for combined gross proceeds \$1,880,000.

In July 2020, the Company closed the water rights sales and received the net proceeds of \$1,868,000.

On February 24, 2021, the Company announced a third water rights sale to Desert Pearl for \$2,910,000. \$1,000,000 was received on March 5, 2021, and the balance of \$1,910,000 will be received upon closing, expected in August 2021.

Funds from the sale will be used to advance the Company's MacArthur copper project, assess exploration opportunities, and for general corporate purposes.

- **Conversion of convertible notes**

On August 31, 2020, the Company announced the settlement of the remaining convertible notes by issuing 1,000,000 units and Canadian dollar ("**CAD**") 499,233 cash payments, including accrued interest. No convertible notes remain outstanding.

- **Filing of a technical report on the Groundhog copper-gold project**

On May 26, 2020, the Company filed a Technical Report on the Groundhog Project prepared under National Instrument 43-101. The report supports the Company's assessment of the Groundhog as a possible copper-gold porphyry system hosting mineralization similar to the Pebble project owned by Northern Dynasty Minerals Ltd. It provides the path for exploration in the future.

ABOUT QUATERRA

Quaterra was incorporated in British Columbia, Canada, under the Business Corporation Act (British Columbia) on May 11, 1993. The Company's common shares are listed on the TSX Venture Exchange ("TSX-V") under the symbol "QTA" and on the OTCQB Markets under the symbol "QTRRF."

Quaterra is a copper exploration company currently focused on exploring and advancing its copper properties in Nevada and Alaska, United States. The Company also looks for opportunities to acquire copper projects on reasonable terms that can host large mineral deposits attractive to major mining companies.

The Company's 51-square-mile Yerington District, Nevada land package is located in a mining-friendly jurisdiction with a history of copper production and excellent infrastructure. The Yerington Assets include the MacArthur, Yerington, Bear projects and several untested exploration targets. As of December 31, 2020, the Company had about 6,000 acre-feet of primary groundwater rights permitted for mining worth approximately \$18,000,000 based on previous sales.

The Company has a recently amended seven-year lease agreement dated April 24, 2017, with Chuchuna Minerals Company ("**Chuchuna**") providing it with an option to acquire a 90% interest in the Groundhog project, a 54,880-acre property situated on an established copper porphyry belt 300 kilometers southwest of Anchorage, Alaska. \$5,000,000 exploration funding is required over the lease period (\$2,522,000 funded), and an additional lump sum of \$3,000,000 is payable to Chuchuna by the end of the final year. Quaterra can terminate the lease agreement at its discretion annually without penalties.

The Company also has the right to earn a 100% interest in the large, partially explored Butte Valley copper-gold prospect in eastern Nevada. Butte Valley has not been explored since the mid-1970s and is prospective for primary and secondary copper deposits as well as skarn mineralization. Most of the historical exploration data has been recovered and will be important in attracting a joint venture partner.

CORPORATE STRATEGY

Quaterra is currently focused on advancing its MacArthur oxide copper deposit in the Yerington District of Nevada. The Company continues to identify and evaluate projects capable of becoming world-class assets. Where possible, the Company tries to partner with local teams and experts who have demonstrated exploration success and good relationships with surrounding communities and government authorities.

OUTLOOK

The demand for copper is growing. Several long-term trends are driving copper demand growth and are expected to do so over the coming decades. These trends include increased consumption in electronics, accelerating growth of electric vehicles and the ongoing drive towards renewable sources of energy - all of which require a significant amount of copper to function.

The fundamentals of copper supply have remained unchanged with declining copper grades. In 2021, the copper price has risen to over \$4.00 per pound on low inventories and an anticipated rebound of the global economy combined with worldwide attention on decarbonization.

Quaterra continues to perform work required to complete MacArthur's pre-feasibility study, currently focusing on further understanding the deposit geology, mine plan design, metallurgical recoveries, acid usage and the path to permitting. The Company plans to maintain its extensive Yerington land position, including water rights, and meet its minimum exploration funding obligations at the Groundhog property.

Up to December 31, 2020, the Company had sold 3,584 acre-feet water rights for total gross proceeds of \$10,802,920.

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These funds were used to maintain mineral properties, progress MacArthur's pre-feasibility, conduct Groundhog's geophysical surveys, assess exploration opportunities, and for general corporate purposes. In 2021, it expects to raise an additional \$2,910,000 upon closing the third sale of water rights, \$1,000,000 of which has already been received.

After the third sale announced on February 24, 2021, the Company retains about 5,000 acre-feet per year of primary ground water permitted for mining on its 51-square-mile Yerington property. In addition, the Company also has decree, supplemental and storage water rights associated with options it holds on private land over the property's Bear deposit.

REVIEW OF OPERATIONS AND FINANCIAL RESULTS

Mineral Properties

The Company has built a strategic copper property portfolio and invested approximately \$47,655,000 in the Yerington District, Nevada. From early 2018, the Company has engaged independent technical consulting firms to update the MacArthur mineral resource estimate, re-evaluate the 2012 Preliminary Economic Assessment's assumptions, and identify additional opportunities to enhance the mine plan. The Company is currently preparing a plan to complete MacArthur's pre-feasibility study.

In 2020, the Company paid \$942,000 for mineral claims and options, \$167,000 in Yerington environmental-related legal and consulting fees and \$158,000 in relation to MacArthur's pre-feasibility study. The Company also completed a geophysical survey on Groundhog and funded \$202,000 in exploration. With the excess expenditures carried forward from prior years, the Company has met the minimum work commitment and maintained Groundhog project good standing on December 31, 2020.

In July 2020, the Company closed its second water rights sale and received net proceeds of \$1,868,000. Quaterra has never recorded the fair value of its water rights. As per the Company's accounting policy, proceeds from the water rights sale are recorded to reduce the carrying value of the related mineral properties.

As of December 31, 2020, the Company had recorded \$28,236,000 for its mineral properties. These amounts represent accumulated net acquisition and exploration costs and do not necessarily represent present or future values. The Company assesses for any indication of impairment at each reporting date or upon a triggering event that may identify impairment of a property's value. With the remaining water rights and anticipated high copper price, the Company believes it will recover its mineral properties' carrying value.

General Administrative and Other Expenses

For the year ended December 31, 2020, the Company incurred a loss of \$983,000 compared to \$1,711,000 for the prior year. Significant differences in the comparative amounts were mainly caused by the changes in interest and accretion expense on convertible notes, the non-cash share-based compensation, and an unrealized gain (loss) on the marketable securities.

General administrative costs mainly comprise salaries, rent, investor relations, insurance, regulatory and general office costs required to maintain a publicly listed company in Canada. The scale and nature of the Company's corporate and administrative activity have remained relatively consistent over the periods presented.

The Company also spent \$167,000 on the preliminary evaluation of several exploration prospects.

Interest expense was primarily related to the convertible notes in 2020 and 2019.

The Company holds 1,942,795 common shares of Grande Portage Resources Ltd. (trading symbol "GPG" at TSX-V). These shares are revalued at each reporting date based on the market closing price. The Company recorded an unrealized gain of \$476,000 in 2020 compared to a \$9,000 gain in 2019. Subsequent to year-end, these shares have been traded lower compared to the CAD 0.42 at year-end 2020.

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In August 2020, the Company settled CAD 500,000 (2019 - \$550,000 and CAD 50,000) of the convertible notes by issuing 1,000,000 units (2019 - 11,769,300 units) and by making a CAD 499,233 cash payment, including interest. Each unit consisted of one common share and one share purchase warrants exercisable at CAD 0.065 until August 28, 2022. A \$26,000 loss (2019 - \$13,000 loss), resulting from the difference between the market price of the shares issued and the conversion rate, was recorded in the consolidated statements of loss and comprehensive loss.

Three months ended December 31, 2020

On September 23, 2020, the Company announced a non-brokered private placement at CAD 0.10 per unit for gross proceeds of up to CAD 3,000,000. Each unit consisted of one common share and one-half share purchase warrant exercisable at CAD 0.15 for three years. On November 9, 2020, the Company extended the private placement and amended the unit price at CAD 0.08. On December 23, 2020, the Company cancelled the private placement due to the market conditions at that time.

Selected Annual Information

(In thousands of U.S. dollars except for per share amounts)	Year ended December 31,		
	2020	2019	2018
Financial performance			
Total income	\$ -	\$ -	\$ -
Net loss for the year	(983)	(1,711)	(1,419)
Basic and diluted loss per share	(0.00)	(0.01)	(0.01)
Financial position			
Working capital (deficiency)	1,128	1,320	(671)
Total assets	29,620	30,697	32,804
Non-current liabilities	51	26	1,293
Cash dividends declared	-	-	-

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)	Q4'20	Q3'20	Q2'20	Q1'20	Q4'19	Q3'19	Q2'19	Q1'19
	\$	\$	\$	\$	\$	\$	\$	\$
General administration	(298)	(326)	(216)	(303)	(302)	(364)	(379)	(457)
Fair value gain (loss) on derivative liabilities	11	(1)	28	52	(50)	135	341	(321)
Foreign exchange (loss) gain	(2)	24	-	(2)	(20)	(9)	(4)	(10)
Other expenses	(51)	(127)	(31)	(16)	(12)	(14)	(44)	(80)
Loss on settlement of convertible notes	-	(26)	-	-	(15)	2	-	-
Share-based compensation	-	(3)	(168)	(4)	-	(7)	(110)	-
Gain (loss) on marketable securities	(87)	222	273	68	(77)	64	62	(40)
Net loss	(427)	(237)	(114)	(205)	(476)	(193)	(134)	(908)
Basic loss per share	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

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Quarterly Information Trends

The Company's results have been primarily driven by non-cash fair value gains or losses on derivative liabilities and share-based compensation subject to the timing, amount and tenure of options granted.

General administration comprises personnel, rent, professional fees, and regulatory expenses to maintain the Company's publicly listed status in Canada. The annual costs are consistent with quarterly fluctuation based on the timing of individual transactions incurred, such as the exchange listing fees, insurance renewals and investor relations conferences.

Interest expenses and financing costs vary based on the timing, type and amount of debt and equity placements and resultant fluctuations in cash.

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 in the last few years without diluting shareholders' value.

The Company had cash and cash equivalents of \$701,000 on December 31, 2020 (2019 - \$1,812,000). The \$1,111,000 decrease was mainly due to the \$1,411,000 cash invested in mineral properties, \$1,181,000 spent on general administration costs and \$381,000 to repay the convertible notes, net of \$1,868,000 received from the water rights sale announced on December 19, 2019, and closed during 2020.

In 2020, the Company made mineral property option payments and paid all mineral claim fees, focused on the MacArthur pre-feasibility study and Groundhog geophysical survey plus ongoing environmental monitoring at Yerington. The Company is required to pay a combined \$753,000 in mineral property options and work commitment in 2021 (Bear \$193,000, Wassuk \$300,000, Butte Valley \$100,000, and Groundhog \$160,000), plus mineral claim fees, to maintain its mineral properties in good standing.

During the first quarter of 2020, 500,000 stock options were exercised at CAD 0.05, and after year-end, a further 2,310,000 options were exercised at an average price of CAD 0.068 for proceeds of CAD 157,500.

On February 24, 2021, the Company announced a third water rights sale for expected gross proceeds of \$2,910,000, of which \$1,000,000 was received on March 5, 2021. Proceeds from the sale will be used to advance the MacArthur project and for general corporate purposes.

As of March 29, 2021, the Company has cash and cash equivalents of \$1,320,000 and no outstanding debt. With existing working capital and expected additional proceeds from the third water rights sale, the Company believes it can sustain its operations for the next 12 months.

RELATED PARTY TRANSACTIONS

According to a 2007 service agreement, amended, with Manex Resources Group ("**Manex**"), a private company controlled by the Company's Corporate Secretary, the Company paid \$67,071 (CAD 90,000) to Manex for the Vancouver office premises in 2020. Either party can terminate the service agreement at any time with 60-days written notice.

On June 1, 2019, The Company entered into an investor communication service agreement with Advocate Services Ltd. ("**Advocate**"), another private company controlled by the Corporate Secretary. The monthly rate was CAD 4,000 for the first three months and CAD 5,000 thereafter. The Company paid \$44,726 (CAD 60,000) for such services in 2020. Either party can terminate this service agreement at any time with 30-days written notice.

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On February 2, 2021, the Company announced the resignation of Gerald Prosalendis as President, CEO and Director. Thomas Patton, Chairman and Founder of the Company, has assumed the role of interim President and CEO.

OUTSTANDING SHARE DATA

As of March 29, 2021, 221,025,610 common shares are issued and outstanding; 12,769,230 warrants are outstanding at a weighted exercise price of \$0.05 until August/September 2022; 12,380,000 stock options are outstanding with exercise prices ranging from CAD 0.06 to CAD 0.13.

OFF-BALANCE SHEET ARRANGEMENTS

The Company has no off-balance arrangements, no lease agreements and no long-term obligations. The Company does have property option commitments as described in note 4, Mineral Properties in the consolidated financial statements for the year ended December 31, 2020.

DISCLOSURE ON INTERNAL CONTROLS

Management is responsible for designing, establishing, and maintaining a system of internal control over financial reporting ("ICFR") to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in Canada.

Because of its inherent limitations, ICFR may not prevent or detect all misstatements. Furthermore, projections of any evaluation of effectiveness to future years are subject to the risk that may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate.

The Chief Executive Officer and the Chief Financial Officer assessed the effectiveness of the Company's ICFR as of December 31, 2020. In making this assessment, the Company's management used the Committee of Sponsoring Organizations of the Treadway Commission's criteria in its 2013 Internal Control-Integrated Framework. Based on its assessment, management has concluded that, as of December 31, 2020, the Company's internal control over financial reporting was effective.

The Audit Committee of the Company has reviewed this MD&A and the audited consolidated financial statements for the period ended December 31, 2020. The Board of Directors approved these documents before their release.

CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements, and the reported amounts of revenues and expenditures during the reporting period.

Significant estimates and assumptions about the future and other sources of estimation uncertainty that management has made could result in a material adjustment to the carrying amounts of assets and liabilities in the event actual results differ from assumptions made. These assumptions relate to but are not limited to: the recoverability of the carrying value of the mineral properties and the successful completion of the third water rights sale.

FINANCIAL INSTRUMENTS

The Company's cash and cash equivalents, marketable securities, accounts payable and accrued liabilities, and derivative liabilities are financial instruments. The cash and cash equivalents and accounts payable, and accrued liabilities are measured at amortized cost.

The marketable securities are measured at fair value and categorized in Level 1 of the fair value hierarchy. The derivative liability is measured at fair value and categorized in Level 2. The fair value of the derivative liability is based on the Black-Scholes option pricing model, as determined at the reporting date. The Company's other financial instruments approximate their fair values due to their short-term nature.

The carrying values of the reclamation bonds approximate their fair values, as these balances are redeemable on demand.

Unless otherwise noted, it is management's opinion that the Company is not exposed to significant interest, currency or credit risks arising from its financial instruments.

RISKS 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.

The Company's securities should be considered a highly speculative investment, and investors should carefully consider all of the information disclosed in the Company's regulatory filings before investing in the Company. 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, which is available on the Sedar website at www.sedar.com and SEC website at www.sec.gov.

FORWARD-LOOKING STATEMENTS

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

All statements, other than statements of historical fact, 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.

These Forward-Looking Statements include, but are not limited to:

- planned exploration drilling and geological and geophysical related activities;
- the potential impact of future exploration results on copper projects in Yerington district;
- mineral resource estimates;
- preliminary economic assessments of mineral projects including assumptions and estimates used therein;
- future metal prices and foreign exchange rates;
- the Company's ability to obtain additional financing on satisfactory terms;
- the future source of liquidity, cash flows and their uses; and
- potential changes in the ownership structures of the Company's projects.

Forward-looking statements are subject to risks and uncertainties which could cause actual events or results, such as, among other things, results of exploration, reclamation, capital costs, and the Company's financial condition and prospects to differ from those reflected in Forward-Looking Statements. These risks and uncertainties include without limitation:

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- the Company's ability to finance the continued exploration of mineral properties;
- the Company's history of losses and ability to continue as a going concern;
- the lack of proven mineral reserves or probable mineral reserves;
- the uncertainty that there will be any production at the Company's mineral exploration properties;
- decreases in resource estimates and preliminary economic assessments resulting from updated testing; changes in methodology in modelling resources, and technical analysis;
- failure of the Company or its joint venture partners to fund their pro-rata share of funding obligations;
- the impact of governmental regulations, including environmental regulations; and
- commodity price fluctuations.

This list is not exhaustive of the factors that may affect the Company's Forward-Looking Statements.

Although the Company has attempted to identify risks and uncertainties that may cause actual actions, events or results to differ materially from those described in Forward-Looking Statements, there may be other factors that cause actual results, performances, achievements or events to not be as anticipated, estimated or intended. Also, many factors are beyond the Company's control. As actual results and future events could differ materially from those anticipated in Forward-Looking Statements, readers should not place undue reliance on such statements.

The forward-looking statements contained in this MD&A are based on the beliefs, expectations, and opinions of management on the date the statements are made. The Company undertakes no obligation to update any forward-looking statement should circumstances or estimates or opinions change, except following applicable securities laws.

NOTE TO U.S. READERS

The Company uses the Canadian Institute of Mining, Metallurgy and Petroleum definitions for the terms "measured resources," "indicated resources," and "inferred resources." U.S. investors are advised that while the terms "measured resources," "indicated resources" and "inferred resources" are recognized and required by Canadian regulations, including National Instrument 43-101 ("NI43-101"), the SEC does not recognize these terms. Accordingly, the information contained in this MD&A contains descriptions of mineral deposits that may not be comparable to similar information made public by U.S. companies that are not required to comply with NI43-101 and that are subject to the reporting requirements under the U.S. federal securities laws and the rules and regulations thereunder. The SEC permits U.S. companies, in their filings with the SEC, to disclose only those mineral deposits that a company can economically and legally extract or produce. U.S. readers are cautioned not to assume that any part or all of the material in these categories will be converted into reserves. It should not be assumed that any part of an inferred mineral resource will ever be upgraded to a higher category.

TECHNICAL INFORMATION

The technical information contained in this MD&A has been reviewed and approved by Thomas Patton, Ph.D., President and CEO of the Company, and a non-independent "qualified person" as defined in NI 43-101.