

51-102F3 MATERIAL CHANGE REPORT

Item 1 Name and Address of Company

QUATERRA RESOURCES INC. (the "Company")
1100 – 1199 West Hastings Street
Vancouver, BC V6E 3T5

Item 2 Date of Material Change

May 23, 2012

Item 3 News Release

A news release was issued in Vancouver, British Columbia on May 23, 2012 and distributed through Marketwire.

Item 4 Summary of Material Change

Quaterra Resources Inc. today announced that an independent preliminary economic assessment has concluded that its MacArthur property, which forms part of its suite of assets in the Yerington Copper District, Nevada, has potential for development as a large-scale copper oxide heap leach operation that would provide long-term cash flows for a relatively modest capital outlay.

Item 5 Full Description of Material Change

See attached News Release dated May 23, 2012.

Item 6 Reliance on subsection 7.1(2) of National Instrument 51-102

This report is not being filed on a confidential basis in reliance on subsection 7.1(2) of National Instrument 51-102.

Item 7 Omitted Information

No information has been omitted on the basis that it is confidential information.

Item 8 Executive Officer

The following officer of the Company is knowledgeable about the material change disclosed in this report: Dr. Thomas Patton, President. Tel: (604) 681-9805.

Item 9 Date of Report

May 23, 2012



May 23, 2012

**QMM: NYSE AMEX
QMM: NYSE MKT
QTA: TSX
VENTURE
NR-10-12**

QUATERRA RELEASES FAVORABLE PRELIMINARY ECONOMIC ASSESSMENT ON MACARTHUR OXIDE RESOURCE SHOWING POTENTIAL FOR LARGE-SCALE COPPER MINE WITH LONG-TERM CASH FLOWS

Opportunities identified for significant expansion and optimization

VANCOUVER, B.C. — Quaterra Resources Inc. today announced that an independent preliminary economic assessment has concluded that its MacArthur property, which forms part of its suite of assets in the Yerington Copper District, Nevada, has potential for development as a large-scale copper oxide heap leach operation that would provide long-term cash flows for a relatively modest capital outlay.

The preliminary economic assessment (PEA), undertaken by M3 Engineering & Technology Corp. (M3) of Tucson, Arizona, sets out the following key project parameters:

- An open pit mine based on an acid soluble measured and indicated copper resource model of 159 million tons at 0.212% copper and an inferred resource of 243 million tons at 0.201% copper.
- Recovery of 747 million pounds of copper over the 18-year mine life at an average mining rate of 15 million tons per year.
- Initial capital expenditure of US\$232.7 million (U.S. dollars are used in this press release throughout unless otherwise stated).
- Average life-of-mine operating costs of \$1.89 per pound.
- An after tax net present value (NPV) of \$201.6 million at an 8% discount rate and a base case copper price according to SEC guidelines of \$3.48 per pound. The project breaks even at a copper price of \$2.56 per pound and at \$2.23 after the first three years when the capital is paid off.
- An after tax internal rate of return (IRR) of 24.2% with a 3.1-year pay back.

“We see MacArthur as the first step in creating a much larger Yerington District copper project,” says Quaterra President and CEO Thomas Patton. “Consequently, we are very pleased with the results of the PEA which was thorough and used realistic assumptions based on historic and recent data.

“So far at MacArthur, we have a project design that envisions the production of 747 million pounds of copper over an 18-year mine life, averaging over 41 million pounds of copper per year. And that is without processing the oxide residuals at the Yerington mine site, which could expand the project significantly.

“In fact, the many assets we have in the Yerington District provide a number of options that could both optimize and expand the MacArthur project. This project looks good now, and we expect that it will get better,” says Mr. Patton.

Some of the options being considered to add additional value to the project include:

- Processing the Yerington site oxide residuals as part of a District-wide oxide project.
- Additional drilling particularly at the north end of the MacArthur site to investigate integrating both deeper acid-soluble and primary sulfide copper into an expanded MacArthur mine plan.
- Pit studies to raise grades, lower the strip ratio and optimize production rates.
- Inclusion of other smaller oxide deposits on the Company’s land position in the Yerington Copper District.

The MacArthur project is located in Lyon County, Nevada, a mining-friendly area with excellent infrastructure. The project has strong local and state support and a relatively short time frame to production. It is five miles north of the Yerington mine that was operated by Anaconda for 25 years until 1978, producing 1.7 billion pounds of copper from 104.8 million tons of oxide ore and 58.6 million tons of sulfide ore. Quaterra has a 40-square mile land position in the Yerington Copper District that includes the former Yerington mine site, the large Bear porphyry deposit, other oxide and sulfide deposits, as well as MacArthur. In January this year, Singatse Peak Services (SPS), a wholly-owned subsidiary of Quaterra, released a NI43-101-compliant resource estimate for mineralization in and around the Yerington pit. (Please see news release of January 5, 2012).

Updated Mineral Resource

At a 0.12% cutoff, the tonnage of the **measured and indicated oxide and chalcocite resource** has increased 10.7% to 159 million tons at 0.212% copper compared with the previous resource estimate released in December 2010, adding 123.9 million pounds of copper. The **inferred oxide and chalcocite resource** of 243.4 million tons at 0.201% copper has increased 13.2% from December 2010, adding 132.6 million pounds of copper.

MacArthur's **measured and indicated sulfide resource** at a 0.15% cutoff is 1.1 million tons of 0.292% copper containing 6.4 million pounds of copper. Although the pounds of copper in the measured and indicated sulfide resource grew by just 1% (a 24% decrease in tons offset by a 34% increase in grade), the **inferred sulfide** resource grew by 82% to 134.9 million tons of 0.283% copper, adding an additional 385 million pounds compared to the December 2010 estimate.

TABLE 1				
MACARTHUR COPPER PROJECT –YERINGTON, NEVADA				
MEASURED+INDICATED COPPER RESOURCES				
May 2012				
	Cutoff Grade %TCu	Tons (x1000)	Average Grade %TCu	Contained Copper (lbs x 1000)
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	3,401	0.720	48,974
	0.40	6,730	0.583	78,485
	0.35	10,092	0.513	103,544
	0.30	16,251	0.441	143,171
	0.25	29,859	0.364	217,075
	0.20	65,421	0.286	374,601
	0.18	89,306	0.260	465,106
	0.15	125,659	0.233	585,822
	0.12	159,094	0.212	675,513
Primary Material (MinZone 30)	0.50	98	0.720	1,411
	0.40	193	0.586	2,263
	0.35	273	0.523	2,857
	0.30	354	0.478	3,382
	0.25	507	0.416	4,216
	0.20	670	0.369	4,938
	0.18	796	0.340	5,414
	0.15	1,098	0.292	6,408

TABLE 2
MACARTHUR COPPER PROJECT –YERINGTON, NEVADA
INFERRED COPPER RESOURCES
May 2012

	Cutoff Grade %TCu	Tons (x1000)	Average Grade %TCu	Contained Copper (lbs x 1000)
Oxide and Chalcocite Material (MinZone 10 and 20)	0.50	4,294	0.657	56,423
	0.40	9,656	0.538	103,899
	0.35	15,357	0.477	146,444
	0.30	25,851	0.414	213,788
	0.25	43,695	0.356	311,108
	0.20	82,610	0.293	483,929
	0.18	109,920	0.267	587,412
	0.15	166,930	0.232	774,889
	0.12	243,417	0.201	979,510
Primary Material (MinZone 30)	0.50	10,644	0.819	174,413
	0.40	18,442	0.653	240,742
	0.35	23,316	0.594	277,181
	0.30	33,831	0.511	345,415
	0.25	53,060	0.423	449,312
	0.20	89,350	0.341	609,188
	0.18	101,375	0.323	654,680
	0.15	134,900	0.283	764,074

Mine Plan

The sequence of mining commences in the existing MacArthur pit, progresses to the North Area, then to Gallagher and finishes back in MacArthur in the peripheral lower grade zones.

In general, the historic MacArthur pit area has the lowest operating cost per pound because of its low waste to ore ratio and higher copper recovery in comparison to other areas. The North Area has higher grades with higher waste to ore ratios resulting in a higher operating cost per pound than in the early MacArthur pit phase. Gallagher has both lower grades and lower waste to ore ratio compared to the North Area, thus it has approximately the same cost per pound.

The plan envisions a mining rate of approximately 41,000 tons per day. Run-of-mine ore will be delivered to the heap leach pad. The waste to ore stripping ratio will be low, averaging 0.90.

The project financials were enhanced by including a sulfuric acid plant at the site compared to purchasing and transporting acid to the site. An on-site acid plant provides more long term certainty for the highest operating cost item (sulfuric acid), reduces the requirement for purchased electric power, and would leverage future consolidation and development of other oxide deposits in the District.

Capital Costs

The SX/EW capital cost estimate was prepared based on recent M3 in-house information of similar SX/EW facilities. It includes the heap leach pads, SX/EW facility and tank farm based on a design flow rate of 10,400 gal/min.

A capital cost estimate was also prepared for a sulfuric acid plant and power plant. The power plant will use waste heat from the acid plant to produce excess power as a by-product that will be used by the SX/EW plant and process operations, thereby lowering external power requirements for the project.

Additional upfront capital costs were included for mining equipment and infrastructure improvements (power, water, roads) needed at the site. Capital costs are considered accurate to -20% to +25%.

The sustaining capital cost includes a seven-phase expansion of the heap leach pad, replacement of mine and SX/EW mobile equipment, and reclamation costs. The reclamation costs include a credit for the salvage value of equipment and materials.

Initial capital and sustaining capital costs are summarized in Table 3.

TABLE 3 MACARTHUR COPPER PROJECT –YERINGTON, NEVADA INITIAL & SUSTAINING CAPITAL May 2012		
	INITIAL CAPITAL	SUSTAINING CAPITAL
Mine	\$ 48,000,000	\$ 83,600,000
SX/EW	\$ 114,310,000	\$ 63,968,000
Acid Plant	\$ 65,439,000	\$ 0
Owner’s Cost	\$ 5,000,000	\$ 0
Reclamation & Closure	\$ 0	\$ 82,963,000
TOTAL	\$ 232,749,000	\$ 230,531,000

Operating costs

The operating cost for the SX/EW facility was based on a site-specific staffing plan and average wage rates in the region. Reagent costs were determined by estimating consumption quantities and recent reagent pricing. Sulfuric acid is the largest component of the reagent cost. Acid generated on site will cost approximately \$62 per ton of acid compared to an imported acid cost of \$140 per ton. The cost of power was based on estimated consumption and a cost of purchased power of \$0.065 per kWh. Maintenance parts and services and operating supplies and services were factored as a percent of the equipment capital cost.

The operating cost for the sulfuric acid plant was based on similar criteria as those used in estimating the SX/EW facility. The largest component of the reagent cost is the purchased sulfur. The price of molten sulfur delivered to MacArthur used to prepare the estimates was \$125 per ton. The sulfuric acid plant will generate power in excess of the acid plant needs. The excess power will be used to offset the power requirements of the SX/EW facility. The power credit was based on the same cost of power for the facilities (\$0.065 per kWh).

The operating costs are summarized in Table 4 below. Mine operating costs were provided by Independent Mining Consultants Inc. (IMC) of Tucson, Arizona, based on an average 41,000 tpd mine plan.

TABLE 4 MACARTHUR COPPER PROJECT –YERINGTON, NEVADA OPERATING COSTS May 2012		
	COST/LB Cu	COST/TON ORE
Mine	\$ 0.99	\$ 2.74
SX/EW	\$ 0.38	\$ 1.04
Acid Plant	\$ 0.35	\$ 0.96
G & A	\$ 0.12	\$ 0.34
Transportation	\$ 0.05	\$ 0.14
TOTAL	\$ 1.89	\$ 5.22

Metallurgy

The copper recovery and acid consumption for the financial analysis were determined by Tetra Tech Inc. of Golden, Colorado, after review of the metallurgical test data from 32 recent column tests performed by Metcon Research of Tucson, Arizona, and historical operating data from previous operations at the site. The mine plan was developed to provide a mining schedule with ore grades and acid consumptions for three types of ore: MacArthur main pit oxide, remainder of the project oxides, and mixed oxide/chalcocite.

Estimates of copper extraction and acid consumption for each ore type were based on recent column tests and historical operating data. A summary of these for each ore type is shown below:

MacArthur pit oxide ore	70% recovery	30 lbs acid / ton ore
Remainder of oxide ore	65% recovery	35 lbs acid / ton ore
Mixed ore	60% recovery	30 lbs acid / ton ore

Other design parameters include a 90-day leach cycle, an irrigation rate of 0.0035 gpm/sq. ft., and leach pad lift heights of 20 ft.

Financial Analysis

A financial analysis is based on a copper price of \$3.48 per pound, which was calculated based on the three-year historical price using the end of April 2012 LME historical price in accordance with the SEC Industry Guide 7.

The before and after tax NPV, internal rate of return and payback period for the base case is summarized in Table 5 below:

TABLE 5 MACARTHUR COPPER PROJECT –YERINGTON, NEVADA ECONOMIC INDICATORS May 2012		
	BEFORE TAX	AFTER TAX
NVP @ 8%, \$	\$ 284,138,000	\$ 201,576,000
IRR, %	29.3 %	24.2 %
Pay Back, years	2.7	3.1

Sensitivities were run for the price of copper, operating costs, and initial capital cost. Table 6 below summarizes the NVP, IRR, and payback with variances of +/- 20%.

TABLE 6				
MACARTHUR COPPER PROJECT –YERINGTON, NEVADA				
SENSITIVITY TABLE				
May 2012				
Copper Price	\$/lb Cu	NVP@8% \$000	IRR	Payback
Base	\$ 3.48	\$ 201,576	24.2 %	3.1
+20%	\$ 4.18	\$ 377,172	35.2 %	2.3
-20%	\$ 2.78	\$ 9,797	9.0 %	8.4
Operating Cost	\$/lb Cu	NVP@8% \$000	IRR	Payback
Base	\$ 1.89	\$ 201,576	24.2 %	3.1
+20%	\$ 2.26	\$ 107,289	17.8 %	3.5
-20%	\$ 1.52	\$ 286,955	29.1 %	2.8
Initial Capital	\$000	NVP@8% \$000	IRR	Payback
Base	\$ 232,749	\$ 201,576	24.2 %	3.1
+20%	\$ 279,299	\$ 167,445	19.4 %	3.6
-20%	\$ 186,199	\$ 234,567	31.0 %	2.5

A PEA should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too geologically speculative at this time to have the economic considerations applied to them to be categorized as Mineral Reserves. Thus, there is no certainty that the production profile concluded in the PEA will be realized. Actual results may vary, perhaps materially.

Steven Dischler, P.E. is the Qualified Person with Quaterra responsible for this news release. The Qualified Person for the updated MacArthur project resource estimate in this release is Dr. Rex Bryan with Tetra Tech Inc. of Golden, Colorado. The Qualified Person for the preliminary economic assessment portion of this release is Mr. Rex Henderson with M3 Engineering and Technology Corp., of Tucson, Arizona. The Qualified Person for the mining portion of this release is Herb Welhener of Independent Mining Consultants Inc., of Tucson, Arizona. The Qualified Person for the metallurgical portion of this release is Dr. Richard Jolk of Tetra Tech Inc., Golden, Colorado.

Details of Resource Estimate

The NI43-101-compliant Technical Report for the MacArthur PEA, including a description of the project resources, mine plan, metallurgy, capital costs, operating costs and financial analysis, will be filed within 45 days of the date of this release. This report will be available at www.sedar.com.

Quaterra Resources Inc. (NYSE Amex: QMM; TSX-V: QTA) is a junior exploration company focused on making significant mineral discoveries in North America. The Company uses in-house expertise and its network of consultants, prospectors and industry contacts to identify, acquire and evaluate prospects in mining-friendly jurisdictions with the potential to host large and/or high-grade base and precious metal deposits.

On behalf of the Board of Directors,
“Thomas Patton”

Dr. Thomas Patton, President and CEO, Quaterra Resources Inc.

For more information please contact:

<i>Thomas Patton, President and CEO</i>	<i>or</i>	<i>Lauren Stope, Manager Communications</i>
<i>Quaterra Resources Inc.</i>		<i>Quaterra Resources Inc.</i>
<i>604-641-2758</i>		<i>604-641-2746</i>

Should you wish to receive news releases by fax please provide your contact details to Quaterra at 604-681-9059 (direct), 1-855-681-9059 (toll free) or email info@quaterra.com.

Disclosure note

The mining terms “indicated resource” and “inferred resource” are used in this news release in accordance with Canadian regulations but are not recognized by the United States Securities and Exchange Commission. For clarification, the Company has no properties that contain “reserves” as defined by the SEC and is providing the forgoing, in part, in order to meet its requirements under National Instrument 43-101 adopted by the BC Securities Commission and the Canadian Securities Administrators.

A PEA should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too geologically speculative at this time to have the economic considerations applied to them to be categorized as Mineral Reserves. Thus, there is no certainty that the production profile concluded in the PEA will be realized. Actual results may vary, perhaps materially.

Some statements contained in this news release are forward-looking statements within the safe harbor of the Private Securities Litigation Reform Act of 1995. These statements generally are identified by words such as the Company “believes”, “expects”, and

similar language, or convey estimates and statements that describe the Company's future plans, objectives or goals. Since forward-looking statements are based on assumptions and address future events and conditions, by their very nature they involve inherent risks and uncertainties. Further information regarding risks and uncertainties which may cause results to differ materially from those projected in forward-looking statements, are included in filings by the Company with securities regulatory authorities. Readers are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date thereof. The Company does not undertake to update any forward-looking statement that may be made from time to time except in accordance with applicable securities laws. References may be made in this press release to historic mineral resource estimates. None of these are NI 43-101 compliant and a qualified person has not done sufficient work to classify these historic estimates as a current mineral resource. They should not be relied upon and Quaterra does not treat them as current mineral resources.

Expanded information on the Company's projects is described on our website at www.quaterra.com or contact Lauren Stope at 604-641-2746 or email: info@quaterra.com

The TSX Venture Exchange and the American Stock Exchange have not reviewed and do not accept responsibility for the adequacy or accuracy of the contents of this news release, which has been prepared by management.