

# Quarterly Activities Report

## June Quarter, 2017

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### Highlights

- **Three new Directors provide key expertise to develop 100%-owned Rhyolite Ridge Lithium-Boron Project.**
- **Metallurgical results confirm potential for Rhyolite Ridge to become a significant near-term producer of lithium and boron through low-cost acid-leach flowsheet using established technologies and processes:**
  - **Recoveries of 98% for lithium and 99% for boron from acid-leach testwork.**
  - **Acid consumption well below the pre-test target range.**
  - **Work has commenced to optimise the processing flowsheet.**
- **Drill program has commenced to upgrade and extend Rhyolite Ridge Mineral Resource.**
- **Pre-Feasibility study underway.**
- **100% ownership interest of the Rhyolite Ridge Project attained.**

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Global's Managing Director, Bernard Rowe commented: "The metallurgical results exceed our expectations and demonstrate that Rhyolite Ridge mineralisation is amenable to low-cost acid-leaching to extract lithium and boron. The combination of high recoveries and low acid consumption from the testwork indicates the likelihood of favourable economics."

Company Chairman, James D. Calaway added "We welcome Alan Davies and John Hofmeister to the Board of our exciting lithium-boron growth company. It is critical for emerging companies to have strong, experienced and demanding boards to help them navigate the challenging waters associated with taking a development stage company with a great resource, and efficiently converting it into a profitable producer. The addition of these two extraordinary directors to our young company provides immense value to management and shareholders. Both men have led major companies and have experience and judgement that will greatly assist me as the new company Chairman."

# Exploration Activities

## Rhyolite Ridge Lithium-Boron Project, Nevada

Global Geoscience's 100%-owned Rhyolite Ridge project is a large, shallow lithium-boron deposit located close to existing infrastructure in southern Nevada. The project lies 25km west of Albermarle's Silver Peak lithium mine and 340km from the Tesla Gigafactory near Reno. Rhyolite Ridge is one of the largest lithium and boron deposits in North America and has the potential to become a strategic, long-life and low-cost source of lithium and boron.

Lithium-boron mineralisation is hosted within two sedimentary basins located four kilometres apart: South Basin (9 km<sup>2</sup>) and North Basin (20 km<sup>2</sup>). At South Basin, high-grade lithium-boron mineralisation occurs in 20m to 50m thick, sub-horizontal sedimentary layers. The upper-most layer is 20 to 30m thick and outcrops along the western margin of South Basin over a strike length of approximately 3km.

Drilling at South Basin has defined an Indicated and Inferred Resource of 3.4 million tonnes of lithium carbonate and 11.3 million tonnes of boric acid (393Mt at 0.9% Li<sub>2</sub>CO<sub>3</sub> and 2.9% H<sub>3</sub>BO<sub>3</sub>) making it one of the largest lithium and boron deposits in North America. The Resource is open in most directions and is likely to increase in size with additional drilling.

The South Basin Resource has a high-grade Li-B zone of 65Mt at 1.0% Li<sub>2</sub>CO<sub>3</sub> and 9.1% H<sub>3</sub>BO<sub>3</sub> containing a total of 650,000 tonnes of lithium carbonate and 5.9 million tonnes of boric acid.

The deposit is amenable to low-cost open pit mining methods and simple acid leaching with low acid consumption. A simple and low-cost flow-sheet is proposed to produce lithium carbonate and boric acid on-site.



*High-grade lithium-boron mineralisation in outcrop (white hill) at South Basin. The 30m high hill represents the 20-30m thick upper Li-B layer that outcrops along the western margin of South Basin.*

## Metallurgical Testwork

The results of acid-leach metallurgical test work announced during the quarter confirmed the potential for a simple, low-cost acid-leach process to produce lithium carbonate and boric acid at Rhyolite Ridge.

The simple process route being evaluated is crushing, grinding and flotation followed by acid leaching. The process will allow for the on-site production of lithium carbonate/hydroxide and boric acid.

Acid is a major cost in the proposed flowsheet and the reduction in acid consumption has been a major focus of the work. Low acid consumption will have a significant positive effect on project economics.

Key findings from the recent testwork are:

- High grade Li-B rich mineralisation occurs in thick (20-30m), consistent and flat lying sedimentary layers within the deposit. Mineralogical and geochemical continuity is very high across the deposit including between outcrop and at depth in drill core.
- The host rocks are dominated by the minerals searlesite (B-bearing), sepiolite (Li-bearing), K-feldspar, calcite and dolomite.
- Calcite and dolomite (carbonate minerals which would otherwise consume large amounts of acid during the leaching process) can be removed via flotation prior to leaching. The carbonate minerals are floated off while the boron and lithium bearing minerals sink and report to the flotation tailings. Flotation recoveries for lithium and boron are above 95%.
- Lithium and boron can be leached using sulphuric acid with high leach recoveries (98% for Li and 99% for B) and low acid consumption (296kg per tonne of ore).

For further information regarding metallurgical testwork, refer to the following reports that are available to view on [www.globalgeo.com.au](http://www.globalgeo.com.au):

“Exceptional Leach Results and Exercise of Option for 100% Ownership” dated 2 May 2017

“Metallurgy Update Nevada Lithium-Boron Project” dated 9 March 2017

“Metallurgy and Drilling Update Nevada Lithium-Boron Project” dated 23 January 2017

## Drilling Program

A 5,000 metre drilling program commenced late in the quarter. The program is designed to upgrade the existing resource to Indicated Resource category as part of the PFS. The drill program will also test for extensions to shallow, high-grade lithium-boron mineralisation outside of the current resource.

## September Quarter Work Program

The September quarter work program will continue to focus on work required for the Rhyolite Ridge PFS including:

- Optimisation of flotation and acid-leach process steps;
- Production of a lithium-boron brine for crystallisation testwork;
- Production of boric acid, lithium sulphate and lithium carbonate;
- Drilling to upgrade the high-grade Li-B Resource to Indicated Resource category;
- Updated Resource estimate;
- Preliminary mining study including pit design; and
- Progress environmental, ground water and geotechnical studies.

## Corporate Activities

### Key Additions to Board of Directors

Three new Directors with deep expertise relevant to developing the Rhyolite Ridge Lithium-Boron Project were appointed to the Company's Board during the quarter.

James D Calaway (Non-Executive Chairman) has considerable experience and success in building junior companies into successful commercial enterprises. He has played major roles in the development of both public and private companies engaged in lithium operations, oil and gas exploration and production, enterprise software and solar farm development. He served for eight years as non-executive Chairman of the Board of Orocobre Ltd, (ASX:ORE; TSX:ORL), helping lead the company from its earliest development to becoming a significant producer of lithium carbonate. With Orocobre being the only other lithium company with a significant exposure to boron, his Orocobre experience ideally suits him to help lead Global Geoscience to become a leader in the lithium and borates businesses.

Alan Davies (Non-Executive Director) is a natural resources and industrial executive with a 20-year career with Rio Tinto culminating in being CEO responsible for Energy and Industrial Minerals, that includes the industry leading borax division and the Jadar lithium/borates development in Serbia. From 2012 until 2016, Alan served as a member of Rio Tinto's Executive Committee. Alan has led and run mining operations and development projects across the globe, including USA, Canada, South America, India, Africa, China, Europe and Australia, and across commodities, including in iron ore and energy, and a full suite of industrial minerals including borax, trona, salt, titanium dioxide, ilmenite, metal powders, and zircon, and a lithium/boron development project in Serbia.

John Hofmeister (Non-Executive Director) brings many years of executive experience at General Electric, Northern Telecom, AlliedSignal/Honeywell International and Royal Dutch Shell, where he retired as Shell Oil President in 2008. Shell Oil Company is the US-based wholly owned subsidiary of Royal Dutch Shell. He currently teaches at Arizona State University, University of Houston and Kansas State University and is the Founder and CEO of Citizens for Affordable Energy, a not-for-profit NGO headquartered in Washington, D.C.

Gabriel Chiappini and Barnaby Egerton-Warburton stepped down from the Board during the quarter.

## Expenditure

Global Geoscience exercised the option to purchase 100% ownership interest in the Rhyolite Ridge Project during the quarter. Under the terms of the agreement, Global paid the owner US\$200,000 cash and US\$1,500,000 in Global shares (subject to a 6-month voluntary escrow period).

During the June quarter, the Company:

- spent \$0.64 million on exploration;
- spent \$0.35 million on corporate/administration/salaries; and
- raised \$5.3 million via a private share placement at \$0.12 per share.

Cash on hand was \$7.4 million at 30 June 2017.

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## Compliance Statement

Information in this report that relates to Mineral Resources is extracted from the announcement titled “Maiden Resource for South Basin at Nevada Lithium-Boron Project” released to the ASX on 10 October 2016. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcement.

## Forward Looking Statements

Various statements in this report constitute statements relating to intentions, future acts and events which are generally classified as “forward looking statements”. These forward looking statements are not guarantees or predictions of future performance and involve known and unknown risks, uncertainties and other important factors (many of which are beyond the Company’s control) that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed in this presentation. Words such as “anticipates”, “expects”, “intends”, “plans”, “believes”, “seeks”, “estimates”, “potential” and similar expressions are intended to identify forward-looking statements.

Global cautions security holders and prospective security holders to not place undue reliance on these forward-looking statements, which reflect the view of Global only as of the date of this report. The forward-looking statements made in this report relate only to events as of the date on which the statements are made. Except as required by applicable regulations or by law, Global does not undertake any obligation to publicly update or review any forward-looking statements, whether as a result of new information or future events. Past performance cannot be relied on as a guide to future performance.



Figure 1. Project location map.

## Schedule of Tenements

Country	Project	Tenement ID	Tenement Name	Area (km2)	Interest at beginning of quarter	Interest at end of quarter	Note
USA	Rhyolite Ridge	NMC1118666	NLB claims (160)	13	0%, option to purchase 100%	100%	Exercise of option
USA	Rhyolite Ridge	NMC1117360	SLB claims (109)	9	0%, option to purchase 100%	100%	Exercise of option
USA	Rhyolite Ridge	NMC 1129523	BH claims (81)	7	0%	0%, option to purchase 100%	No change
USA	New Morenci	AMC393550	MP claims (2)	0.12	100%	100%	No change
USA	Tokop	NMC883619	TK claims (73)	4.82	100%	100%	No change
USA	Tokop	NMC285234	Path Patents (11)	0.74	0%, option to purchase 100%	0%, option to purchase 100%	No change
USA	Tokop	NMC814692	Path Unpatented (5)	0.40	0%, option to purchase 100%	0%, option to purchase 100%	No change
USA	Bartlett	NMC938020	PEARL claims (8)	0.67	0%, option to purchase 100%	0%, option to purchase 100%	No change
USA	Lone Mt	NMC913404	NAMMCO claims (71)	5.43	0%, earning 100%	0%, earning 100%	No change
USA	Lone Mt	NMC1071591	LMG claims (37)	2.80	100%	100%	No change
USA	Lone Mt	NMC1094601	SW claims (24)	2.0	100%	100%	No change
USA	Towers Mt	AMC426407	CK claims (32)	2.54	100%	100%	No change