**ASX ANNOUNCEMENT**
**ASX: GSC**
**2 May 2017**

# Exceptional Leach Results and Exercise of Option for 100% Ownership

## Highlights

- **Leach results provide an economic pathway for Rhyolite Ridge to become a significant near-term producer of lithium and boron through a 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 of 296kg per tonne of ore for both metals, well below the pre-test target range of 350-450kg.**
- **Work has commenced to optimise the processing flowsheet.**
- **Pre-Feasibility Study due for completion in late 2017.**
- **Global has exercised its option to acquire 100% ownership of the Rhyolite Ridge Project with no residual interest or royalties to the previous owners.**

**Global Geoscience Limited** ("**Global**" or "**the Company**") is pleased to provide the latest results from its recently completed acid-leach metallurgical test work at the Rhyolite Ridge Lithium-Boron Project. The latest results confirm the potential for a simple, low-cost acid-leach process to produce lithium carbonate and boric acid at Rhyolite Ridge. Global's Rhyolite Ridge is a large, shallow sedimentary lithium-boron deposit located in southern Nevada, USA.

Global's Managing Director, Bernard Rowe commented: "The acid-leach 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 commented "Our processing team, headed by Silvio Bertolli and Peter Ehren, working with Hazen Research and SGS Minerals, have made significant progress in uncovering and understanding the unique properties of this deposit, and then applying this knowledge to design what is a simple processing flowsheet. These latest results confirm our view that we have an economic pathway to make the Rhyolite Ridge resource into a significant, near-term producer of lithium and boron in America."

## Work Program

The current work program is evaluating a simple process route involving crushing, grinding and flotation followed by acid leaching to extract lithium and boron from the high-grade Li-B (Searlesite) Indicated and Inferred Resource at South Basin (65Mt at 1.0% $Li_2CO_3$ and 9.1% $H_3BO_3$). The process will allow for the on-site production of lithium carbonate/hydroxide and boric acid. Testwork is being undertaken by Hazen Research in Colorado, USA and SGS Minerals in Ontario, Canada under the supervision of Silvio Bertolli and Peter Ehren.

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 the economics of the deposit.

Key findings from the program 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 rocks are dominated by the minerals searlesite (B-bearing), sepiolite (Li-bearing), K-feldspar and calcite/dolomite.
- Calcite and dolomite (acid consuming carbonate minerals) can be removed prior to leaching via reverse flotation with recoveries for lithium and boron above 95%.
- Lithium and boron can be leached using sulphuric acid with high recoveries (98% for Li and 99% for B) and low acid consumption (296kg per tonne of ore).

## Acid Leach Results

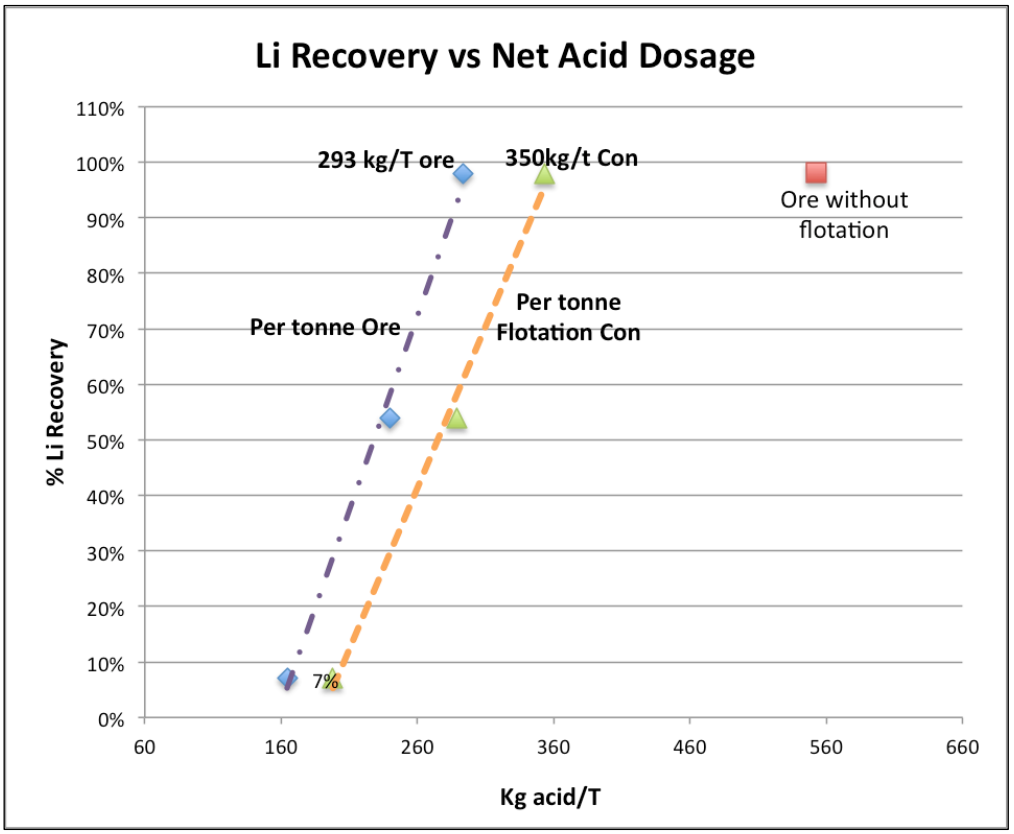
The acid leach testwork was conducted on samples collected from outcrop and diamond drill hole SBHC12 from within the South Basin Mineral Resource and considered to be representative of the high-grade Li-B searlesite mineralisation across the Resource. Carbonate minerals were removed from the de-slimed samples by reverse flotation prior to acid leaching.

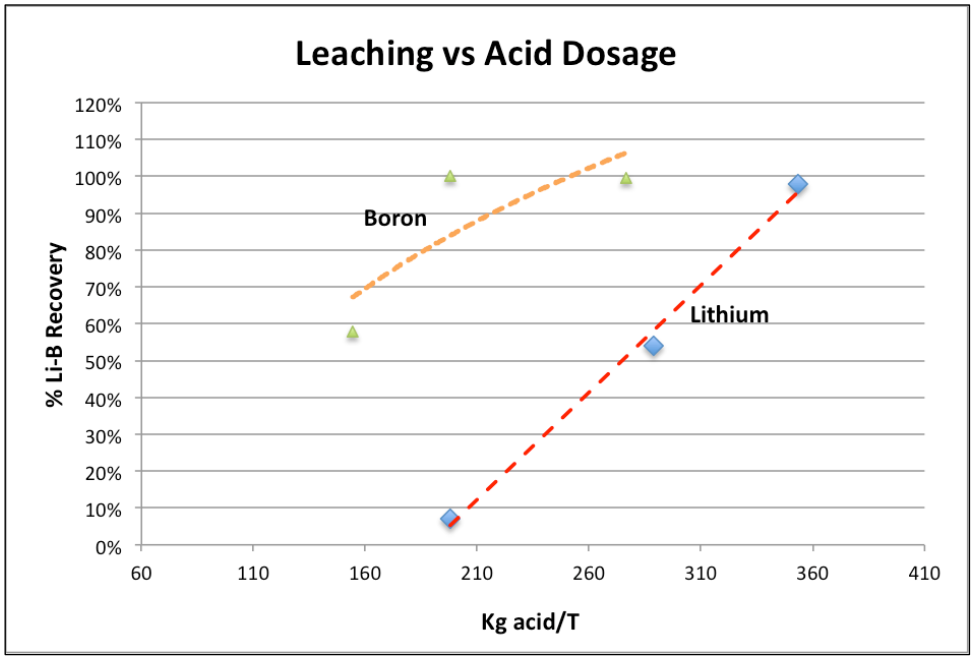
Concentrates from flotation (containing 5% $CO_3$) were leached with sulphuric acid at a controlled and maintained acidity and temperature, and 25% solids over a 4-hour period. Results show recoveries of up to 98% for lithium and 99% for boron. Acid consumed during the test was measured at up to 353kg per tonne of feed (flotation concentrate) which equates to 296kg per tonne of raw ore.

A comparative leach test performed on whole ore (no flotation, containing 17% $CO_3$) showed a 57% greater acid consumption for similar recoveries (98% Li, 93% B).

Test results have confirmed that boron is easily and completely leached at low acid levels and ambient temperatures, while lithium requires higher temperatures (50-80$^{o}$C) and increased acidity. This should readily allow for separation of boron from lithium early in the process. The results also confirm the viability of using a reverse-flotation technique for decreasing the

cost of acid during leaching. This circuit will be optimized to achieve the highest carbonate rejection at acceptable lithium and boron recoveries.




*Figures 1&2. Graphs showing the relationship between lithium/boron recoveries and acid consumption. The top graph shows two trend lines: the orange dashed line shows acid consumption per tonne of flotation concentrate feed, the blue dashed line shows the same data back-calculated to per tonne of ore (using a mass pull from flotation of 83%).*

| Sample ID | Lithium Recovery (%) | Boron Recovery (%) | Acid Consumption (kg/t feed) | Temperature (degrees C) | Acidity (pH/Free Acid) |
|---|---|---|---|---|---|
| 3776-45 | 1 | 58 | 154 | 25 | 3 |
| 3776-43 | 4 | 99 | 193 | 25 | 1 |
| 3776-46 | 7 | 99 | 198 | 25 | 20g/l |
| 3776-47 | 56 | 93 | 289 | 80 | 36 g/l |
| 3776-48 | 98 | 93 | 353 | 80 | 75g/l |

*Table 1. Results from acid leach tests performed on flotation concentrate (carbonate content after flotation of 5%* $CO_3$*).*

## Conceptual Flow Sheet

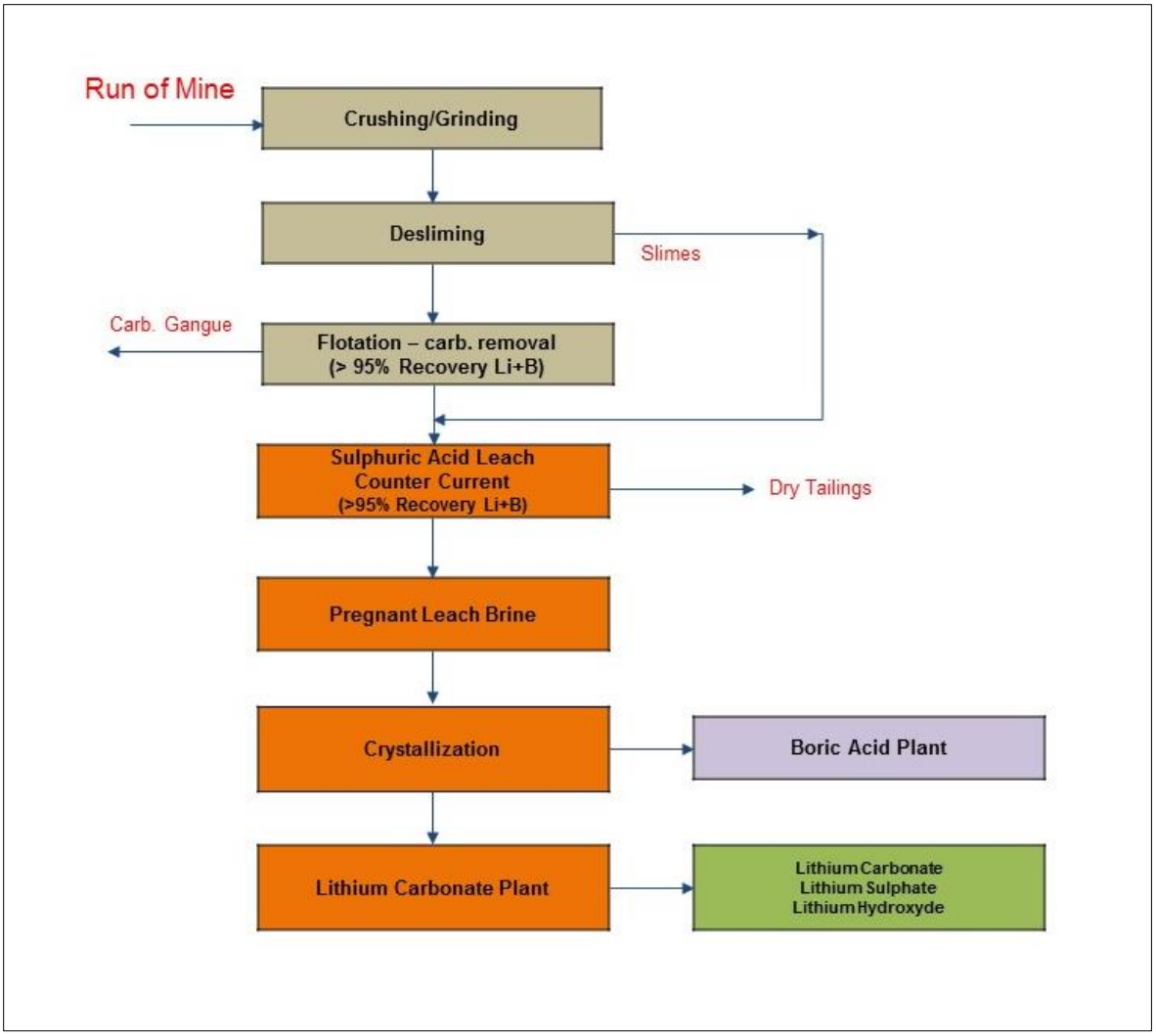



*Figure 3. Rhyolite Ridge simplified conceptual flowsheet*

## Future Work Program

With the results obtained, the Company will focus on optimizing the front-end process conditions. Future work will include additional carbonate flotation and leaching tests in order to arrive at optimal design conditions for these process steps. Additionally, future tests will involve work in brine concentration and crystallization of boric acid, brine purification, and lithium carbonate precipitation tests. The work will provide the preliminary design criteria for the design of the process facility at Rhyolite Ridge and the basis for a pre-feasibility study to be completed late 2017.

1. Optimisation of the flotation and acid leach process steps
2. Leaching lock-cycle tests to provide design data
3. Production of brine for crystallisation testwork
4. Production of boric acid, lithium sulphate, lithium carbonate or lithium hydroxide

## Exercise of Option for 100% of Rhyolite Ridge

Global Geoscience has exercised the option to purchase 100% ownership interest in the Rhyolite Ridge Project. Under the terms of the agreement, upon exercise of the option Global must pay the owner US$200,000 cash and US$1,500,000 in Global shares (subject to a 6-month voluntary escrow period). The number of Global shares to be issued will be determined using the 30-trading day VWAP for Global shares (15 trading days on either side of the notice date) and an exchange rate of A$1:US$0.75.

## About Rhyolite Ridge Lithium-Boron Project

Rhyolite Ridge is a lithium-boron deposit located in southern Nevada and is 100% owned by Global Geoscience. The project consists of two sedimentary basins located four kilometres apart: South Basin (9 $km^2$) and North Basin (20 $km^2$). South Basin includes an Indicated and Inferred Resource of 3.4 million tonnes of lithium carbonate and 11.3 million tonnes of boric acid, 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. North Basin hosts thick, shallow lithium-boron mineralisation drilled by wide-spaced holes that are not yet sufficient to estimate a Resource.

The South Basin Indicated and Inferred Resource contains a high-grade Li-B zone referred to as the Searlesite Zone and comprising 65Mt at 1.0% $Li_2CO_3$ and 9.1% $H_3BO_3$ for a total of 650,000 tonnes of lithium carbonate and 5.9 million tonnes of boric acid.

The mineralisation is hosted within shallow, flat-lying sedimentary rocks, representing a potential third source of lithium. Lithium-boron mineralisation occurs with the mineral searlesite – an acid-leachable sodium boro-silicate mineral.

Rhyolite Ridge is located close to existing infrastructure and is 25km west of Albermarle's Silver Peak lithium mine and 340km by paved road from the Tesla Gigafactory. It has the potential to be a strategic, long-life, low-cost and reliable source of lithium and boron.

## Compliance Statement

The information in this report that relates to Exploration Results is based on information compiled by Bernard Rowe, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Rowe is a full-time employee and Managing Director of the company and he holds shares and options in the company. Mr Rowe has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Rowe consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Information in this report that relates to Mineral Resources is extracted from the report entitled "Maiden Resource for South Basin at Nevada Lithium-Boron Project" created on 10/10/2016 and is available to view on the Global Geoscience website. 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.

## Contacts

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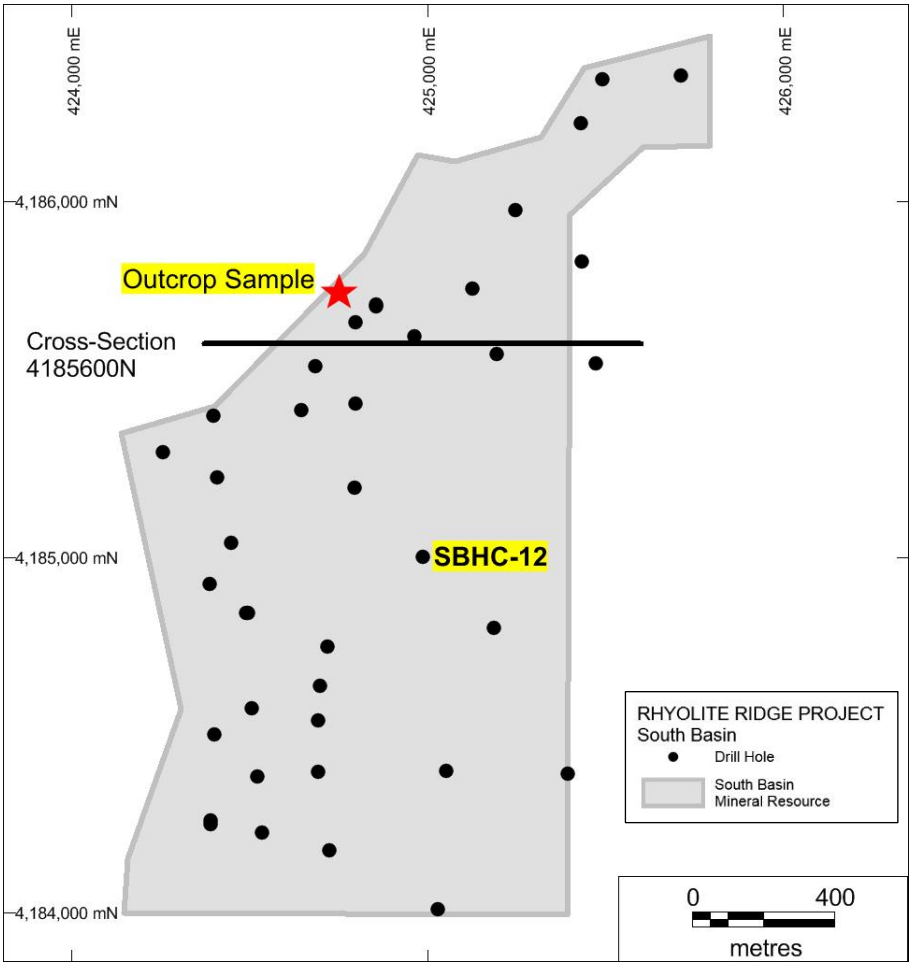


*Figure 4. South Basin Resource area showing location of metallurgical samples from outcrop and diamond core hole SBHC-12.*

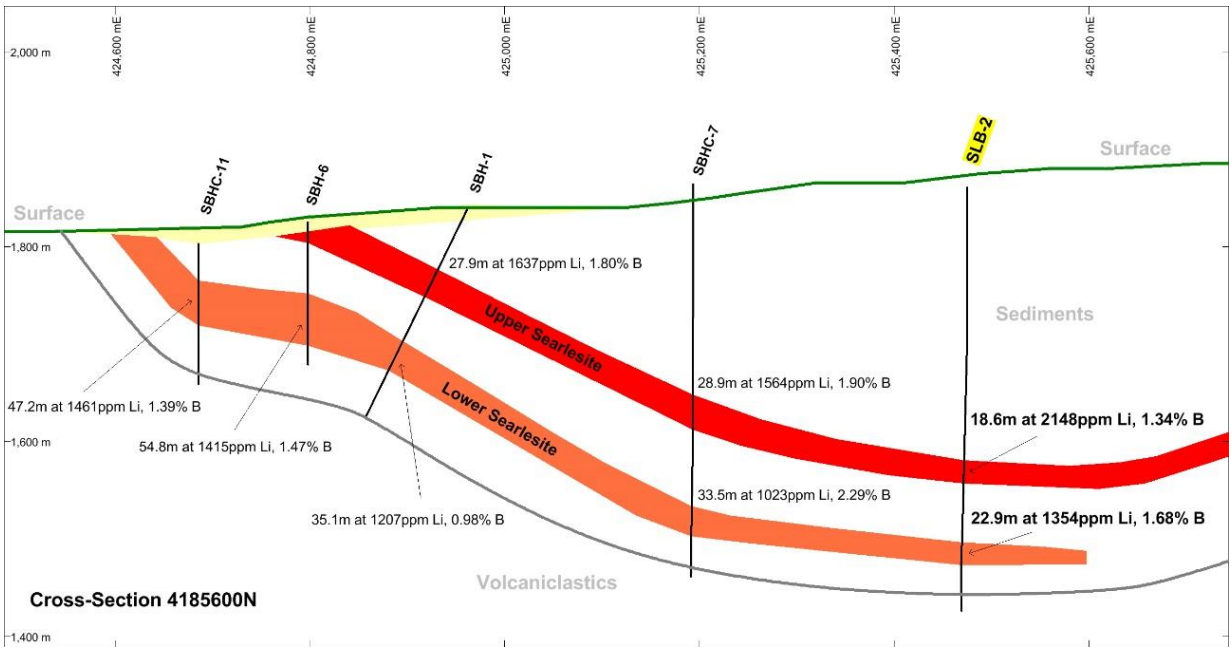


*Figure 5. South Basin cross-section 4185600N showing the upper and lower searlesite (Li-B) zones. The upper searlesite zone contains the 63Mt of the 65Mt high-grade Resource.*