**ASX ANNOUNCEMENT**
**ASX: GSC**
**16 November 2016**

Global Geoscience

# Discovery of Searlesite Zone Enhances Potential for Low-Cost Processing

## Highlights

- **Rhyolite Ridge lithium-boron mineralisation found to contain abundant searlesite, a silicate mineral.**
- **The high-grade Searlesite Zone**
  - **accounts for 97% of the high-grade component of the South Basin Resource[1] - 65 million tonnes at 2.0% lithium carbonate equivalent grade and containing 650Kt of lithium carbonate, 5.9Mt boric acid and 1.4Mt of potassium sulphate**
  - **averages 20 metres thickness over the South Basin Resource area (1x1.8km)**
  - **outcrops and is open in three directions**
  - **is large enough to support a 20-year mining operation at a rate of 3Mt per annum**
  - **is leachable with dilute acid and has a low clay content**
- **The metallurgical team headed by Bertolli and Ehren is evaluating a simple process route involving crushing, screening and flotation followed by dilute acid leaching to liberate lithium and boron.**
- **The relatively simple process route is expected to compare favourably to other sources of lithium such as the capital intensive brines and opex intensive spodumene deposits.**
- **The markets for lithium and boron are strong both in the USA and globally, further enhancing the attractiveness of the Rhyolite Ridge Li-B project.**

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**Global Geoscience Limited** ("**Global**" or "**the Company**") is pleased to announce the discovery of the Searlesite Zone at South Basin, Rhyolite Ridge Lithium-Boron Project in Nevada, USA. During a recent site visit attended by Bertolli and Ehren, a 20 metre thick zone of lithium-boron mineralisation associated with the mineral searlesite was identified ("Searlesite Zone"). The Searlesite Zone has low clay content and is coarser-grained which enhances its ability to be processed relative to other zones within the deposit.

Global's Managing Director, Bernard Rowe commented: "This is a potential game changer for the Rhyolite Ridge project. The fact that the highest value mineralisation occurs in a part of the deposit that contains abundant, relatively coarse searlesite is very favourable for processing and significantly enhances the potential for low-cost production of lithium carbonate and boric acid."

1. Further information regarding the Resource estimate can be found in the public report titled "Maiden Resource for South Basin at Nevada Lithium-Boron Project" dated 10/10/2016 and released by the Company on the ASX.

## Large Tonnage, High Grade

The Searlesite mineralisation is the highest value mineralisation within the South Basin Resource and constitutes 97% of the high-grade component. It occurs in the Upper Lens of the deposit and is open in three directions.

- 65 million tonnes at 1,900 ppm Li (1.0% Lithium Carbonate), 1.6% B (9.1% Boric Acid) and 1.0% K (2.2% Potassium Sulphate) (1.8% LCE cut-off)
- Lithium Carbonate Equivalent grade of 2.0%
- Containing 650Kt of lithium carbonate, 5.9Mt of boric acid and 1.4Mt of potassium sulphate

## Open Pit Mining

The Searlesite zone in the Upper Lens is likely to be amenable to low-cost open pit mining. It averages approximately 20 metres in thickness and extends from surface to a depth of 250m. The zone is flat lying to gently dipping and outcrops along the western margin of the basin.

## Low-Cost Processing

Due to its low-clay content and relatively coarse grain size, the searlesite mineralisation is likely to be readily treatable and upgradable. Clay and other acid consuming minerals are likely to be removed using low-cost methods including screening and flotation. The resultant concentrate could then be leached using dilute sulphuric acid, minimising acid consumption.

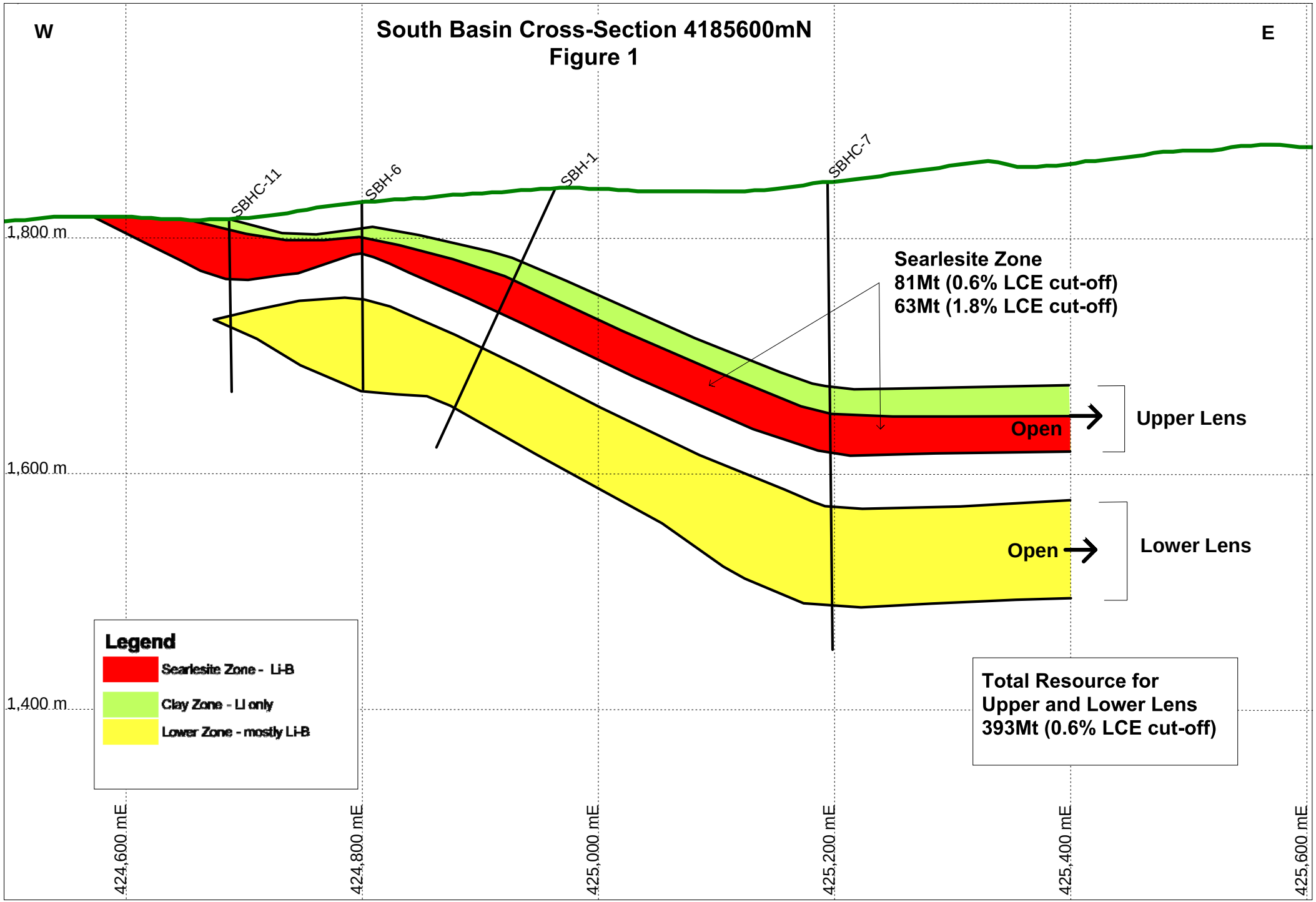
## Acid Leachable

Previous test work has demonstrated that lithium and boron can be leached from the searlesite mineralisation using dilute sulphuric acid and high recoveries have been achieved. Acid consuming minerals such as calcite, dolomite and clay have a significant impact on the economics of acid leaching and hence it is important to remove as much of these minerals as possible prior to leaching.

## Metallurgical Test Work

A program of metallurgical test work is underway with staged results expected over the next six to eight weeks. The test work includes:

1. Crushing and screening to determine if clay material can be separated without significant loss of Li and B
2. Flotation and other methods to determine if Li- and B-bearing minerals can be separated from gangue minerals including acid consuming minerals such as calcite and clays
3. Acid leaching of the Li-B concentrate to determine B/Li recoveries and acid consumption




Further information regarding the Resource estimate can be found in the public report titled "Maiden Resource for South Basin at Nevada Lithium-Boron Project" dated 10/10/2016

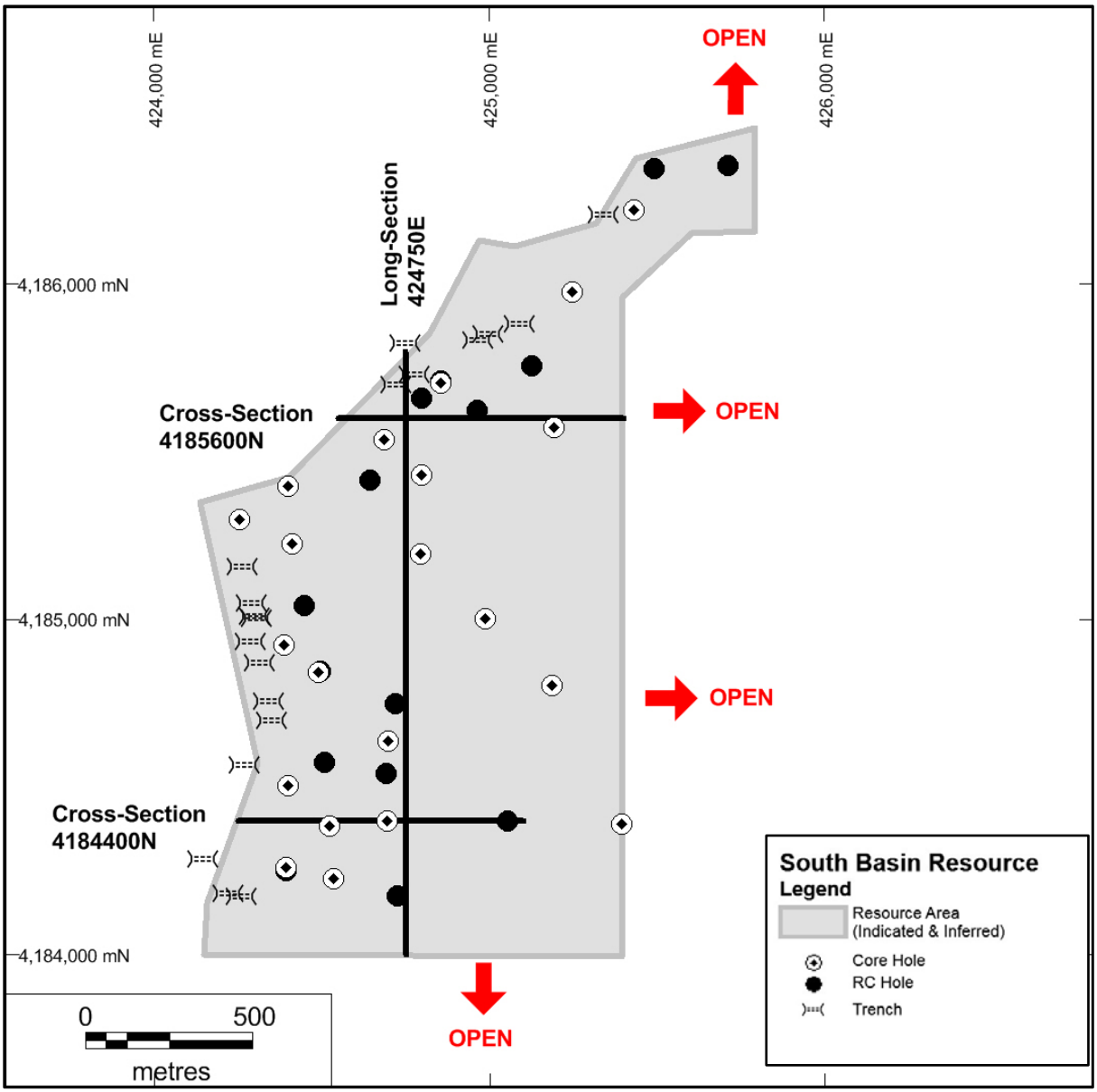



*Figure 2. South Basin Resource area showing drill hole and trench locations. The Resource remains open to the north, south and east.*

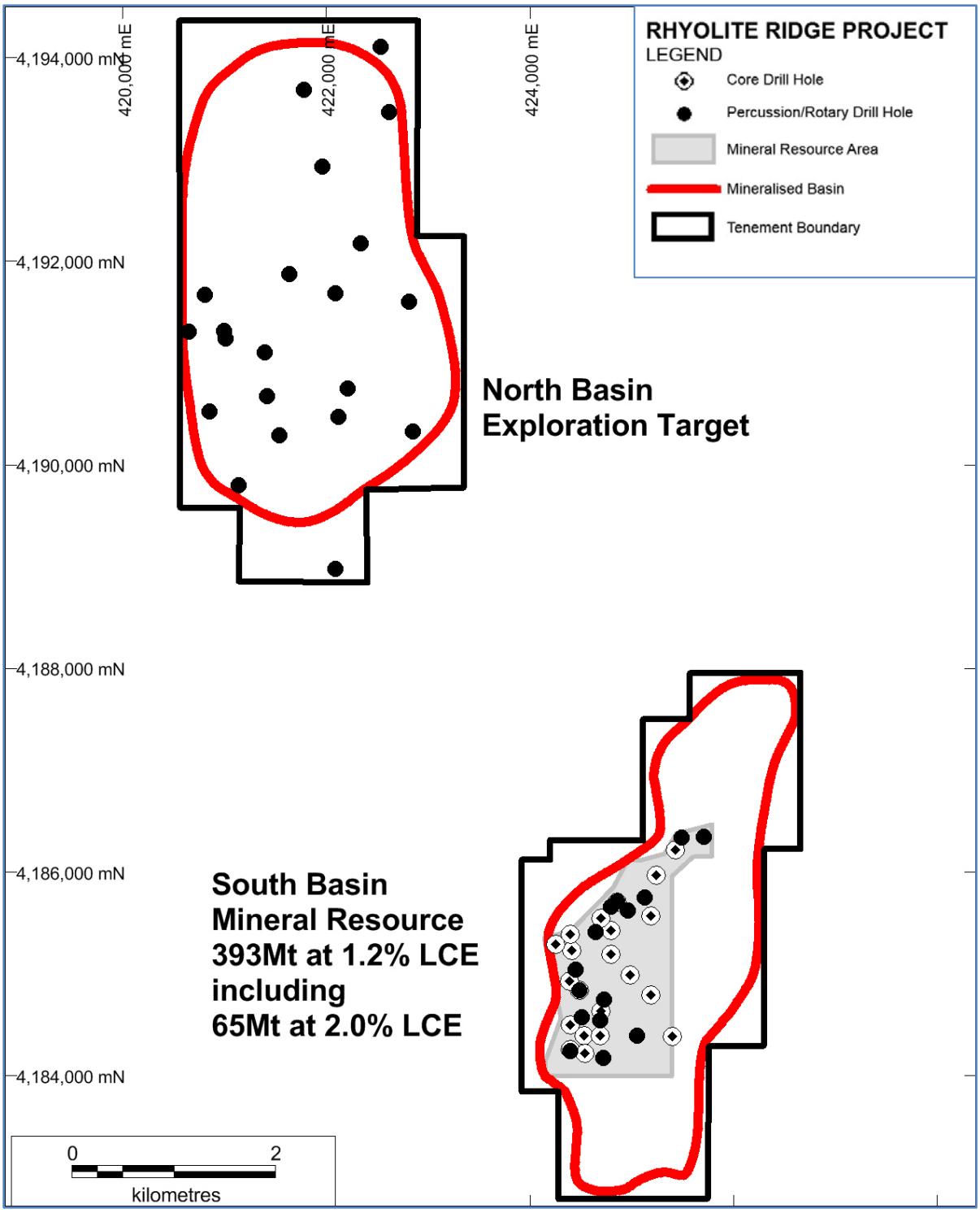



*Figure 3. Location of North Basin and South Basin that together make up the Rhyolite Ridge Lithium-Boron Project in Nevada. South Basin Indicated and Inferred Mineral Resource is shown.* *(Map Projection UTM Zone 11, NAD27)*

## Metallurgical Mapping at South Basin

The South Basin deposit at Rhyolite Ridge Project has a Resource of 393 million tonnes at 1,600ppm Li (0.9% Lithium Carbonate), 0.5% B (2.9% Boric Acid) and 0.76% K (1.7% Potassium Sulphate) totalling 1.2% Lithium Carbonate Equivalent (LCE) using a 0.6% LCE cut-off. Included in this are high-grade zones totalling 65 million tonnes at 1,900 ppm Li (1.0% Lithium Carbonate), 1.6% B (9.1% Boric Acid) and 1.0% K (2.2% Potassium Sulphate) totalling 2.0% Lithium Carbonate Equivalent estimated using a 1.8% LCE cut-off (Global Geoscience Ltd, 2016).

The deposit consists of at least two distinct types of mineralisation: "Clay" and "Searlesite" types. Clay-type mineralisation typically contains over 2000ppm lithium, less than 0.1% boron, is higher in calcium and magnesium, lower in silica, sodium and potassium and occurs in clay-rich sediments. Most of the mineral grains in the clay type are less than 20 microns (0.02mm) in diameter.

Searlesite-type mineralisation typically contains 1500-2000ppm lithium and greater than 1% boron, is higher in silica, sodium and potassium and lower in calcium and magnesium. Most of the mineral grains in the searlesite-type are greater than 100 microns (0.1mm).

The difference in chemistry is reflected in the mineralogy of the two types:

- Searlesite type – averages about 35% searlesite, 20% calcite, 15% sepiolite and 25% acid insoluble minerals including mainly silicates
- Clay-type – averages about 5% searlesite, 35% calcite, 25% sepiolite and 30% acid insoluble minerals including clays and other silicates

Searlesite is a B-Na bearing silicate mineral ($NaBSi_2O_5(OH)_2$) containing up to 5% boron (by weight) and is the only acid soluble boron mineral identified to date at South Basin. It is therefore assumed that all boron at South Basin is probably contained within searlesite. Laser ablation measurements indicate that searlesite may also contain significant amounts of lithium in parts of the deposit. Searlesite grains are generally over 250 microns (0.25mm) in diameter.

Sepiolite is a Mg-bearing silicate which is also acid soluble. Laser ablation measurements indicates that sepiolite at Rhyolite Ridge contains significant lithium concentrations. Sepiolite grains are generally over 100 microns (0.1mm) in diameter.

The Upper Lens of the deposit hosts both types of mineralisation. An uppermost 10 to 20 metre thick Clay zone is underlain by a 15 to 30 metre thick Searlesite zone. The Searlesite zone within the Upper Lens accounts for 97% of the high-grade component of the Resource.

## About Rhyolite Ridge Lithium-Boron Project

The Rhyolite Ridge lithium-boron project (22km2) is located close to existing road and power infrastructure in southern Nevada. The project has potential as a strategic, long-life, low-cost and reliable source of lithium, boron and potassium. Two sedimentary basins (North and South) contain thick, shallow, flat-lying zones of lithium-boron-potassium mineralisation. The mineralisation is hosted within fine-grained, carbonate-rich sediments (marl). Global has the exclusive right to purchase 100% interest in the project from the owner, a private Nevada company.

## References

Global Geoscience Ltd, 2016. Maiden Resource for South Basin at Nevada Lithium-Boron Project. Unpublished company report dated 10/10/2016.

SGS Canada Inc., 2011, An Investigation by High Definition Mineralogy into the Mineralogical Characteristics of B-bearing Samples from Nevada, USA. Unpublished report prepared for American Lithium

## Competent Persons and 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. Bernard Rowe is an employee and Managing Director of Global Geoscience Ltd. Bernard 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'. Bernard Rowe consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

In respect of Mineral Resources referred to in this report and previously reported by the Company in accordance with JORC Code 2012, the Company confirms that it is not aware of any new information or data that materially affects the information included in the public report titled "Maiden Resource for South Basin at Nevada Lithium-Boron Project" dated 10/10/16 and released by the Company on ASX. Further information regarding the Mineral Resource estimate can be found in that report. All material assumptions and technical parameters underpinning the estimates in the report continue to apply and have not materially changed.

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