

# Quarterly Activities Report - 30 September 2018

## Highlights

- 
- **Restart Study confirms Superior Lake as a low-cost zinc project**
    - Project mine life of 6.5 years, producing high-value, high-grade zinc and copper concentrates based on a greater than 95% indicated resource
    - Superior Lake Project potentially in the lowest-cost quartile zinc producers globally
    - Low initial capital cost – leverage historical mine development and infrastructure
  - **Funding secured to complete the Superior Lake Project Definitive Feasibility Study**
    - Completion of \$5 million Placement at \$0.035 per share
    - Tribeca cornerstone investor in the Placement and mandated to arrange Project Finance facilities of up to US\$60 million
    - Fully funded Definitive Feasibility Study commenced, completion expected Q2, 2019
  - **Brownfield exploration study defines near-mine Exploration Target**
    - Study focused on near-resource areas which can potentially be quickly added to the near term mine life
    - Exploration Target excludes untested greenfield exploration potential
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**Superior Lake Resources Limited (ASX: SUP)** ("Superior Lake" or the "Company") is pleased to provide shareholders with a report on its activities for the quarter ending 30 September 2018.

Following completion of a Superior Lake Zinc Project Restart Study, which confirmed the robust forecast economics of the project and its potential to be in the lowest-cost quartile of zinc producers globally, the Company has commenced a fully funded Definitive Feasibility Study ("DFS"). The DFS is expected to be delivered at the end of Q2, 2019.

## Restart Study

During the September quarter, the Company successfully completed the first phase of project redevelopment with a Restart Study ("Study") for its Superior Lake Zinc Project in Ontario, Canada, which confirmed the Superior Lake Project has the potential to be one of the lowest cost zinc producers globally.



**Table 1: Restart Study Summary**

| Description <sup>1</sup>         | Units               | Value (approx.)                  |
|----------------------------------|---------------------|----------------------------------|
| Mining tonnage                   | tonnes              | 2,000,000                        |
| Plant throughput                 | tpd                 | 1,000                            |
| Plant head grade                 | % Zn                | 14.1%                            |
| Plant head grade                 | % Cu                | 0.66%                            |
| Zn Con production (steady state) | tpa                 | 88,000                           |
| Cu Con production (steady state) | tpa                 | 6,700                            |
| Life of mine                     | years               | 6.5                              |
| Start-up capital <sup>2</sup>    | US\$                | 75 million                       |
| LOM opex                         | US\$/lb Zn          | 0.51                             |
| NPV at 10% - pre-tax             | USD \$164.8 million | AUD \$219.7 million <sup>3</sup> |
| NPV at 10% - post tax            | USD \$118.9 million | AUD \$158.5 million <sup>3</sup> |
| IRR at 10% - pre-tax             | 56%                 |                                  |
| IRR at 10% - post tax            | 48%                 |                                  |

<sup>1</sup> Please refer Restart Study announcement titled "Outstanding study confirms Superior Lake as low-cost zinc project" dated 10 October 2018. The Restart Study uses a portion of Inferred Resources (5%) over the life of mine, there is a low level of geological confidence associated with inferred resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.

<sup>2</sup> Estimate is accurate to +/- 35% and includes a 25% contingency

<sup>3</sup> Exchange rate of US\$:A\$0.75

<sup>4</sup> The Company confirms that all the material assumptions underpinning the production targets, or the forecast financial information derived from the production target, continue to apply and have not materially changed.

The Study scope included the following key programs:

- Maiden JORC-compliant Mineral Resource Estimate based on historical information
- A mining scoping study
- A preliminary engineering study consisting of:
  - A dewatering strategy for the mines including cost and schedule estimates
  - A high-level cost estimate to re-equip the mine in preparation for start-up
  - A high-level cost estimate for the installation of a new mill / concentrator and associated infrastructure
- A review of the permitting and licensing requirements for mine development and restart.

The outstanding results of the Study, being the exceptional low estimated operating costs driven by the high-grade ore, as well as the low estimated initial capital costs give the Board confidence to advance the project towards a Definitive Feasibility Study, expected to be completed Q2, 2019.

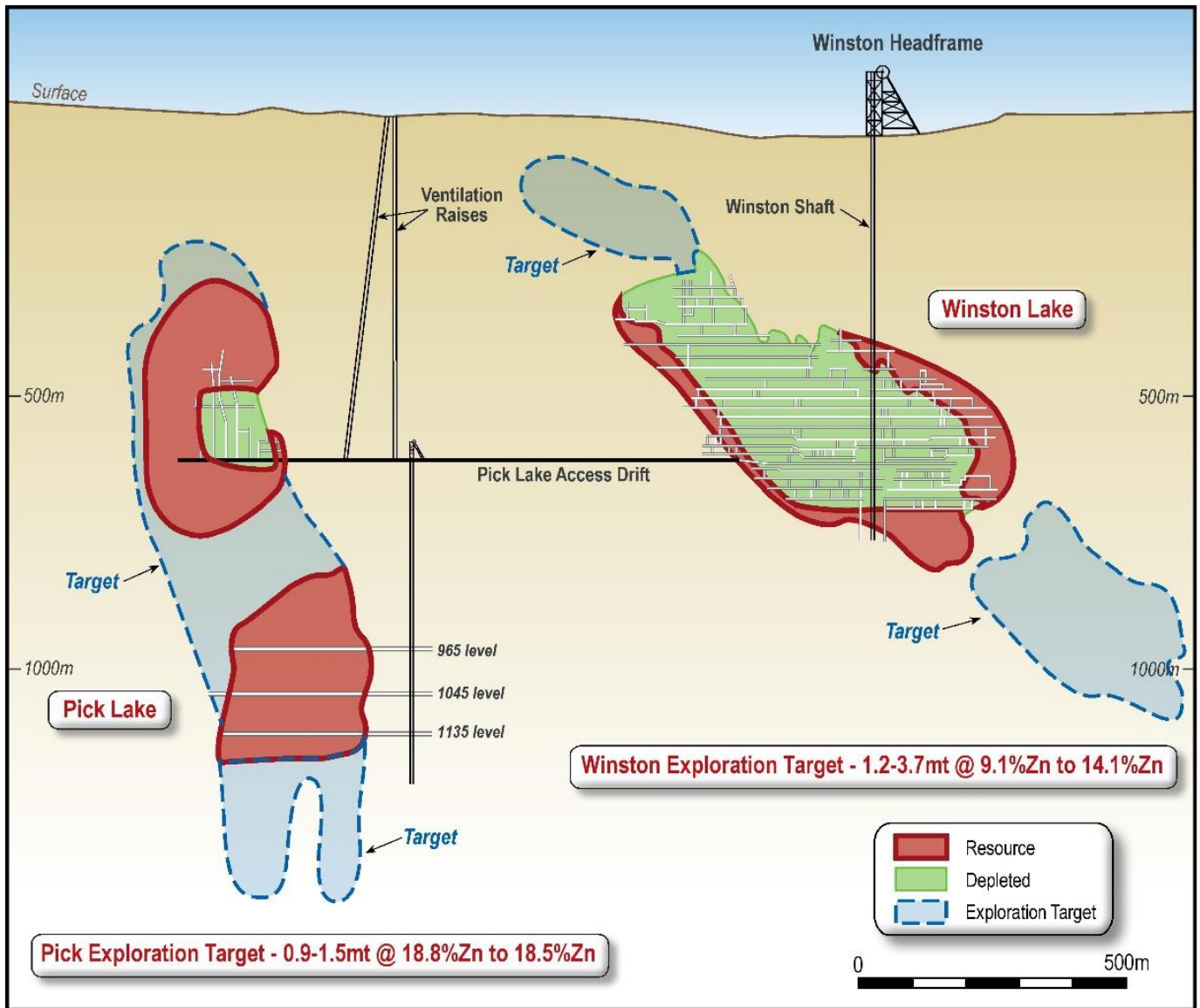
## Exploration Target

During the September quarter, the Company defined an initial brownfields Exploration Target of between 2.1 to 5.2 million tonnes at a grade ranging between 13.3% to 15.4% Zn for its Superior Lake Zinc Project (see ASX Announcement dated 26 September 2018). The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.



The Exploration Target is in the immediate vicinity of the existing JORC resource and excludes the significant greenfields potential which exists at the Superior Lake Zinc Project. Limited exploration has been completed across the Superior Lake Zinc Project in the past 20 years, and we consider that this exploration potential holds significant value for shareholders.

**Figure 1: Significant Brownfields exploration potential**





**Table 2: Superior Lake Exploration Target**

| <b>PICK LAKE</b> |           |      |     |          |          |                       |
|------------------|-----------|------|-----|----------|----------|-----------------------|
| Range            | Tonnes    | Zn%  | Cu% | Au (g/t) | Ag (g/t) | Reporting Cut Off Zn% |
| Upper Bound      | 1,500,000 | 18.5 | 0.9 | 0.4      | 35       | 6                     |
| Lower Bound      | 900,000   | 18.8 | 0.7 | 0.3      | 34       | 3                     |

| <b>WINSTON LAKE</b> |           |       |     |          |          |                       |
|---------------------|-----------|-------|-----|----------|----------|-----------------------|
| Range               | Tonnes    | Zn%   | Cu% | Au (g/t) | Ag (g/t) | Reporting Cut Off Zn% |
| Upper Bound         | 3,700,000 | 14.1* | 0.7 | 1.0      | 18       | 6                     |
| Lower Bound         | 1,200,000 | 9.1   | 0.6 | 0.8      | 15       | 3                     |

| <b>TOTAL</b> |           |      |     |          |          |                       |
|--------------|-----------|------|-----|----------|----------|-----------------------|
| Range        | Tonnes    | Zn%  | Cu% | Au (g/t) | Ag (g/t) | Reporting Cut Off Zn% |
| Upper Bound  | 5,200,000 | 15.4 | 0.9 | 0.4      | 35       | 6                     |
| Lower Bound  | 2,100,000 | 13.3 | 0.7 | 0.3      | 34       | 3                     |

\*average mined grade

The Exploration Target is based on the current geological understanding of the mineralised geometry, sub-surface geochemistry provided an extensive historic drill hole database and detailed underground mapping provided by historic mining activity coupled with understanding of the host stratigraphic sequence.

The Exploration Target, being conceptual in nature, takes no account of geological complexity, possible mining method or metallurgical recovery factors. The Exploration Target was estimated in order to provide the market with an assessment of the potential scale of the Superior Lake Zinc Project.

The Company intends to test the Exploration Target, based on the outcomes of further geophysical surveys and potentially with drilling. These activities are expected to extend over approximately 18 months.

## Next Steps for Superior Lake Zinc Project

The next steps proposed for the Superior Lake Zinc Project include:

- Exploration Activities
  - Complete drilling program on the mid-Pick area by Q1 2019;
  - Commence a surface geophysics program on the near-surface areas of both Pick Lake and Winston Lake deposits in Q1 2019; and
  - Complete a litho-geochemical and structural survey in Q4 2018.
- Studies
  - Select service providers for completion of a Definitive Feasibility Study, targeting completion by end of Q2 2019.
- Environmental & Permitting
  - Commence the permitting process in Q4 2018.



## Corporate

### Completion of Placement

During the quarter, the Company successfully completed a placement of 142,857,143 new ordinary shares to institutional and sophisticated investors to raise \$5 million at \$0.035 per share (including costs) ("Placement"). The Placement was completed at a premium to the last closing share price prior to announcement.

Funds from the Placement will be used to complete a Definitive Feasibility Study and for general working capital. Tribeca Investment Partners Pty Ltd ('Tribeca') acted as a cornerstone investor under the Placement.

Executive Director, Mr Grant Davey, subscribed for 8,571,428 shares under the Placement, with his participation being subject to Shareholder approval at a General Meeting of shareholders expected to be held as soon as possible.

The Company had approximately \$5.2 million cash at bank at the end of the September quarter.

### Tribeca mandate

During the quarter, Superior Lake announced the appointment of Tribeca to arrange Project Finance facilities of up to US\$60 million to assist in funding the development and restart of the Superior Lake Zinc Project.

### Board changes

During the quarter, Mr Keong Chan, a Non-Executive Director, was appointed Non-Executive Chairman and Mr Yunde Li resigned as Non-Executive Director. Mr Grant Davey and Mr Peter Williams remain in their current capacities as Executive Director and Non-Executive Director respectively.

Mr Mathew O'Hara was appointed as Superior Lake's new Company Secretary, replacing Mr Keong Chan who remains on the Board as Non-Executive Chairman.

The Company also advised that its registered office and principal place of business changed to:

|                          |                 |
|--------------------------|-----------------|
| Office address:          | Postal address: |
| Suite 23, 513 Hay Street | PO Box 1311     |
| Subiaco WA 6008          | Subiaco WA 6904 |

Telephone: +61 8 6143 6740

Facsimile: + 61 8 9388 8824



## About the Company

### Superior Lake Resources Limited

Superior Lake Resources Limited (ASX: SUP) is focused on the redevelopment of the Superior Lake Project, which incorporates the Winston and Pick Lake Mines in North Western Ontario, Canada. The Project is one of the highest-grade zinc deposits globally with a combined JORC resource of 2.15 Mt at 17.7% Zn, 0.9% Cu, 0.4 g/t Au and 33.5 g/t Ag. Ontario is rated one of the best mining jurisdictions in the world and has significant infrastructure in place which includes power, road, rail and underground mine development. Following the release of a successful Restart Study, the Company is working towards the release of a Definitive Feasibility Study by mid-2019.

#### Superior Lake Project - Total Mineral Resource at 3% Zn cut-off grade

| Classification | Tonnage   | Zn%   | Cu%  | Au g/t  | Ag g/t   |
|----------------|-----------|-------|------|---------|----------|
| Indicated      | 1,992,000 | 17.8% | 0.9% | 0.4 g/t | 33.7 g/t |
| Inferred       | 152,000   | 15.4% | 0.9% | 0.4 g/t | 31.2 g/t |
| Total          | 2,145,000 | 17.7% | 0.9% | 0.4 g/t | 33.5 g/t |

To learn more about the Company, please visit [www.superiorlake.com.au](http://www.superiorlake.com.au), or contact:

David Woodall      Chief Executive Officer      +61 8 6143 6740

## Competent Person Statement

### Exploration Results and Mineral Resources

The information in this announcement that relates to Exploration Results was first reported by the Company to ASX on May 1st, 2018. The information in this announcement that relates to the Mineral Resources on the Superior Lake Project was first reported by the Company to ASX on July 3rd, 2018. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements, and in the case of estimates of Mineral Resources, 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.

### Exploration Target

The information contained in this announcement that relates to the exploration target is based on, and fairly reflects, information compiled by Mr. Alfred Gillman, an independent consultant Superior Lake Resources Limited. Mr. Alfred Gillman is a Fellow and Chartered Professional of the Australian Institute of Mining and Metallurgy and was engaged as a consultant to Superior Lake Resources to complete the JORC (2012) resource. Mr. Gillman has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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. Gillman consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.



## Information required under ASX Listing Rule 5.3.3

List of current mining and exploration tenements (as at 30 September 2018):

| Country         | Tenement | Interest | Status  |
|-----------------|----------|----------|---------|
| Ontario, Canada | 4287909  | 70%      | Granted |
| Ontario, Canada | 4287910  | 70%      | Granted |
| Ontario, Canada | 4287911  | 70%      | Granted |
| Ontario, Canada | 4274196  | 70%      | Granted |
| Ontario, Canada | 4274197  | 70%      | Granted |
| Ontario, Canada | 4244161  | 70%      | Granted |
| Ontario, Canada | 4244162  | 70%      | Granted |
| Ontario, Canada | 4244163  | 70%      | Granted |
| Ontario, Canada | 4244751  | 70%      | Granted |
| Ontario, Canada | 4274195  | 70%      | Granted |
| Ontario, Canada | 3001231  | 70%      | Granted |
| Ontario, Canada | 4284603  | 70%      | Granted |
| Ontario, Canada | 4287912  | 70%      | Granted |
| Ontario, Canada | 4287913  | 70%      | Granted |
| Ontario, Canada | 4287914  | 70%      | Granted |
| Ontario, Canada | 4287915  | 70%      | Granted |
| Ontario, Canada | 4287916  | 70%      | Granted |
| Ontario, Canada | 4287917  | 70%      | Granted |
| Ontario, Canada | 4287918  | 70%      | Granted |
| Ontario, Canada | 4287919  | 70%      | Granted |
| Ontario, Canada | 4287920  | 70%      | Granted |
| Ontario, Canada | 4287921  | 70%      | Granted |
| Ontario, Canada | 4287922  | 70%      | Granted |
| Ontario, Canada | 4287923  | 70%      | Granted |
| Ontario, Canada | 4287924  | 70%      | Granted |
| Ontario, Canada | 4287925  | 70%      | Granted |
| Ontario, Canada | 4284634  | 70%      | Granted |
| Ontario, Canada | 4284639  | 70%      | Granted |
| Ontario, Canada | 4284644  | 70%      | Granted |
| Ontario, Canada | 4284628  | 70%      | Granted |
| Ontario, Canada | 4284629  | 70%      | Granted |
| Ontario, Canada | 4284630  | 70%      | Granted |
| Ontario, Canada | 4284631  | 70%      | Granted |
| Ontario, Canada | 4284632  | 70%      | Granted |



|                 |         |     |         |
|-----------------|---------|-----|---------|
| Ontario, Canada | 4284633 | 70% | Granted |
| Ontario, Canada | 4284635 | 70% | Granted |
| Ontario, Canada | 4284636 | 70% | Granted |
| Ontario, Canada | 4284637 | 70% | Granted |
| Ontario, Canada | 4284638 | 70% | Granted |
| Ontario, Canada | 4284640 | 70% | Granted |
| Ontario, Canada | 4284641 | 70% | Granted |
| Ontario, Canada | 4284642 | 70% | Granted |
| Ontario, Canada | 4284643 | 70% | Granted |
| Ontario, Canada | 4284648 | 70% | Granted |
| Ontario, Canada | 4284680 | 70% | Granted |
| Ontario, Canada | 4284684 | 70% | Granted |
| Ontario, Canada | 4284601 | 70% | Granted |
| Ontario, Canada | 4284606 | 70% | Granted |
| Ontario, Canada | 4284602 | 70% | Granted |
| Ontario, Canada | 4284604 | 70% | Granted |
| Ontario, Canada | 4284605 | 70% | Granted |
| Ontario, Canada | 4284607 | 70% | Granted |
| Ontario, Canada | 4284608 | 70% | Granted |
| Ontario, Canada | 4284609 | 70% | Granted |
| Ontario, Canada | 4284610 | 70% | Granted |
| Ontario, Canada | 4284617 | 70% | Granted |
| Ontario, Canada | 4284645 | 70% | Granted |
| Ontario, Canada | 4284646 | 70% | Granted |
| Ontario, Canada | 4284647 | 70% | Granted |
| Ontario, Canada | 4284649 | 70% | Granted |
| Ontario, Canada | 4284650 | 70% | Granted |
| Ontario, Canada | 4284679 | 70% | Granted |
| Ontario, Canada | 4284681 | 70% | Granted |
| Ontario, Canada | 4284682 | 70% | Granted |
| Ontario, Canada | 4284683 | 70% | Granted |
| Ontario, Canada | 4284611 | 70% | Granted |
| Ontario, Canada | 4284612 | 70% | Granted |
| Ontario, Canada | 4284613 | 70% | Granted |
| Ontario, Canada | 4284614 | 70% | Granted |
| Ontario, Canada | 4284615 | 70% | Granted |
| Ontario, Canada | 4284616 | 70% | Granted |
| Ontario, Canada | 4284618 | 70% | Granted |





|                              |         |      |         |
|------------------------------|---------|------|---------|
| Ontario, Canada              | 4284619 | 70%  | Granted |
| Ontario, Canada              | 4284620 | 70%  | Granted |
| Ontario, Canada              | 4284621 | 70%  | Granted |
| Ontario, Canada              | 4284622 | 70%  | Granted |
| Ontario, Canada              | 4284623 | 70%  | Granted |
| Ontario, Canada              | 4284624 | 70%  | Granted |
| Ontario, Canada              | 4284625 | 70%  | Granted |
| Ontario, Canada              | 4284626 | 70%  | Granted |
| Ontario, Canada              | 4284627 | 70%  | Granted |
| Western Australia, Australia | E33/477 | 100% | Granted |

No tenements were acquired or disposed of during the quarter.