

March Quarterly Activities Report

Quarter Ended 31 March 2019

Highlights

- **JORC resource (2012) at Superior Lake Zinc Project grows by 10% to 2.35 Mt @ 17.7 % Zn, 0.9% Cu, 0.38 g/t Au and 34 g/t Ag (Table 1 below¹)**
 - 88% of the Resource is classified in the Indicated category
 - Average zinc grade remains extremely high at 17.7% Zn
 - Increased resource follows first drilling campaign at the Project in over 20 years
 - The increased resource has the potential to improve the Project economics and extend the mine life when the Definitive Feasibility Study is released by mid-2019
- **Multiple anomalies identified through brownfields exploration program**
 - All anomalies are within close proximity to the significant existing underground infrastructure
- **Each anomaly identified through a FLTEM electromagnetic program**
- **The Definitive Feasibility Study remains on track for completion in mid-2019**

Superior Lake Resources Limited (ASX: SUP) ("Superior Lake" or the "Company") is pleased to provide its quarterly activities report for the Quarter ended 31 March 2019.

10% increase to the size of the resource at Superior Lake

The Superior Lake Zinc Project ("Project") is located around 200 kilometers east of Thunder Bay in the province of Ontario in Canada. The Project covers an area of 55km² and consists of two deposits – Winston Lake and Pick Lake. During the past Quarter, the Company reported an increase in the Mineral Resource at the Project to 2.35 Mt at 17.7 %Zn, 0.9% Cu (see Table 1 below).¹

Table 1: Superior Lake Mineral Resource at 3% Zn cut-off grade

Classification	Tonnage (Mt)	Zn%	Cu%	Au g/t	Ag g/t
Indicated	2.07	18.0	0.9	0.38	34
Inferred	0.28	16.2	1.0	0.31	37
Total	2.35	17.7	0.9	0.38	34

This represents a 10% increase compared to the previously reported resource on 3 July 2018. The additional 200,000 tonnes of resources was defined at the Mid-Pick area, which is expected to allow for further optimisation of the Project's economics in the upcoming DFS, as this area was previously not included in the mine plan. As Mid-Pick is located adjacent to the planned Pick Lake decline, it should be easily accessed without the requirement for changes to mine development, with potential for an extension of mine life and improved economics.

¹ ASX announcement 7 March 2019 "Increase in Superior Lake Mineral Resource". Superior Lake confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 7 March 2019 and that all material assumptions and technical parameters underpinning the Mineral Resource estimate in the announcement of 7 March 2019 continue to apply and have not materially changed.



Brownfields exploration program

The brownfields exploration program which commenced in 2018, has incorporated multiple modern exploration techniques, many used for the first time at the Project, and targeted only a small portion (9km²) of the total tenement area (175km²). This brownfields area, which is located adjacent to the significant existing infrastructure, was selected due to its high prospectivity as it hosts two known high-grade VMS deposits (Winston Lake and Pick Lake).

The program included the following three phases.

1. Structural and lithogeochemical program – seven targets identified
2. Drill program and Down the Hole Transient Electromagnetics (“DHTEM”) – Pick Lake deposit
3. High powered, Fixed Loop Transient Electromagnetics (“FLTEM”) geophysics program testing identified and unknown targets.

PHASE 1 – Structural and lithogeochemical program

Phase 1 comprised surface mapping to identify the alteration and mineralogy from rock chip sampling as part of a litho-geochemistry review.

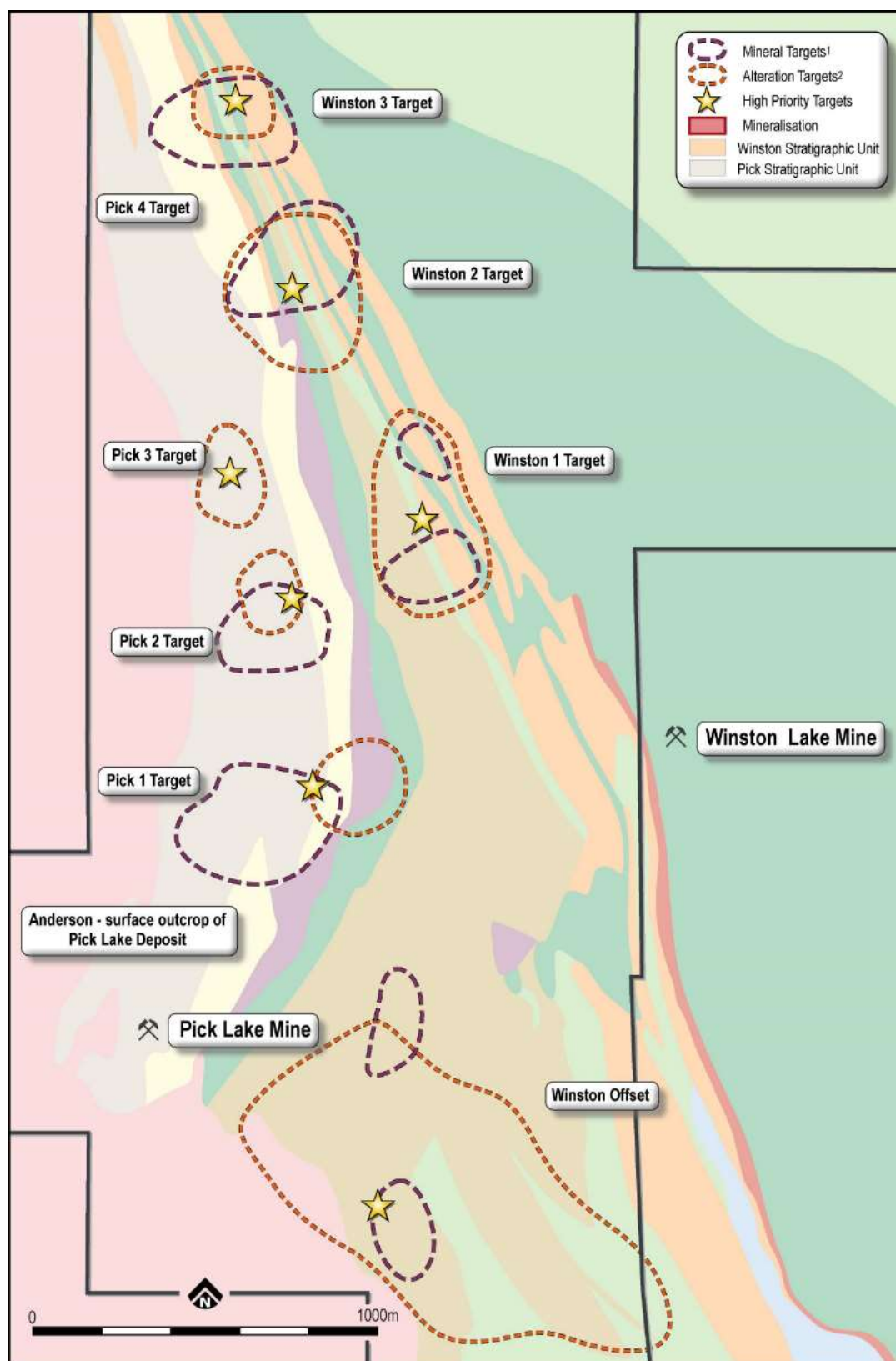
This program identified seven high priority targets (see Figure 1), which were ranked by alteration intensity and mineralisation showing, with the results reported on 30 January 2019.

This work confirmed two distinct mineralised stratigraphic intervals that host the Pick Lake and Winston Lake Deposits. Versatile time domain electromagnetic (“VTEM”) anomalies were used as a lead indicator to the possible location of alteration. Field inspection of these VTEM anomalies, observation of mineralogy and litho-geochemical assays of rock samples, confirmed the alteration as VMS style.

Confirmation of the two trends of anomalies along the same stratigraphy, and that anomalies are uniformly distributed (a key feature of VMS deposits), provided the Company with significant confidence to complete a major high-powered FLTEM program.²

² ASX announcement 30 January 2019 “Multiple near-mine zinc targets identified”. Superior Lake confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 30 January 2019.

Figure 1: High Priority Targets Identified at Superior Lake



Notes:

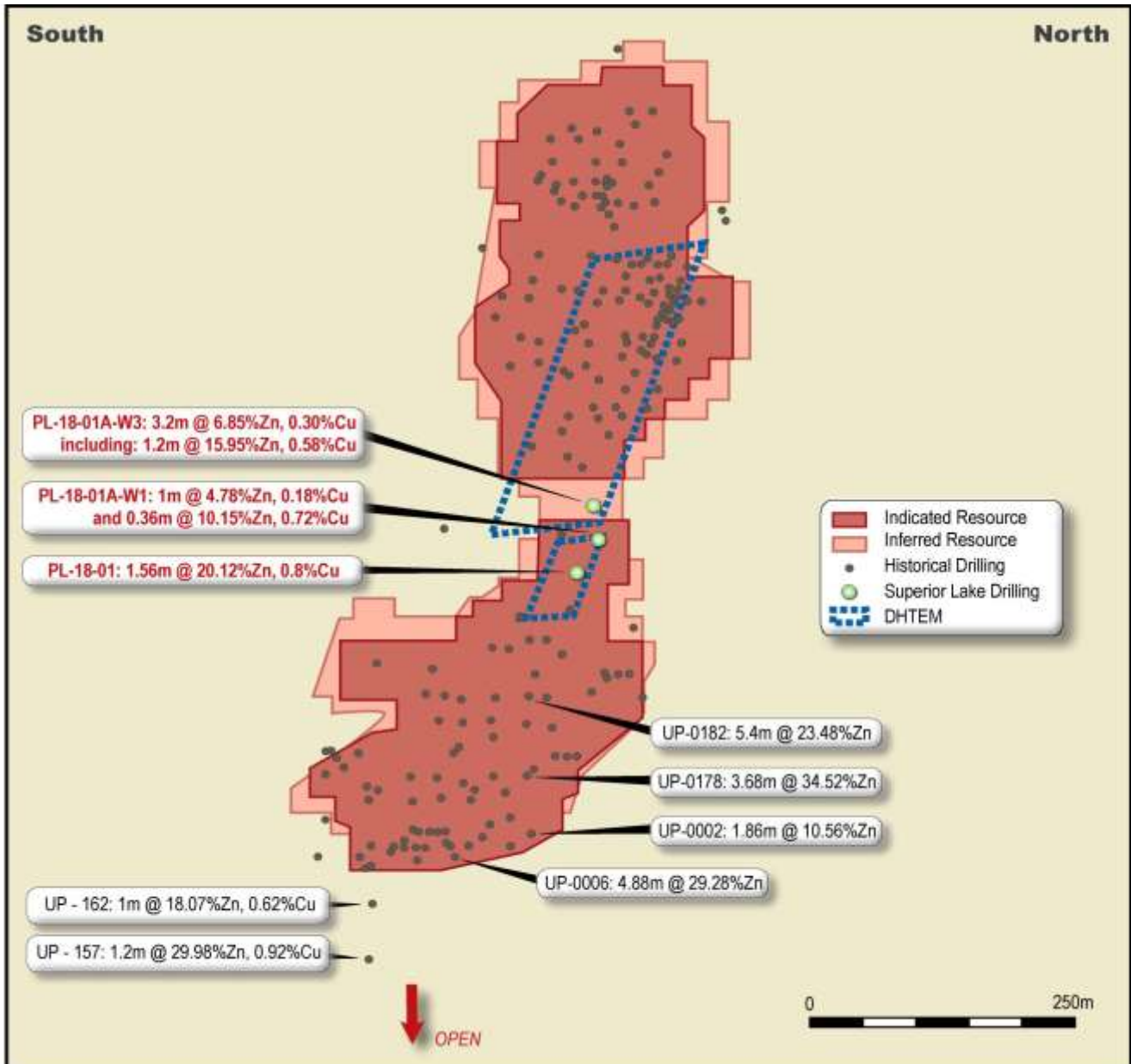
- A. Mineral Targets – Identifies potential VMS Alteration – defining zones of iron enrichment, sodium depletion and potassium and magnesium enrichment
- B. Whole Rock Alteration – Identifies potential VMS Alteration –Alteration Index (AI), Chlorite Carbonate Pyrite Index (CCP) and Sericite Index (ratio of AI to CCP)



PHASE 2 – Drill program and Down the Hole Transient Electromagnetics

Phase 2 involved drilling of the Mid-Pick area targeting additional resources that have the potential to further enhance the project economics. This was the first drill program at Superior Lake in more than 20 years. The aim of the program was to confirm the continuity and grade of mineralisation through Mid-Pick as this area was previously outside of the JORC resource.

Figure 2: Drilling at the Superior Lake Project



This program was successful as the drill results were in line with expectations, confirmed high-grade zinc mineralisation through the Mid-Pick area and led to the increase in the Mineral Resource as highlighted in Table 1 above. Intersections from the drill program included the following:!

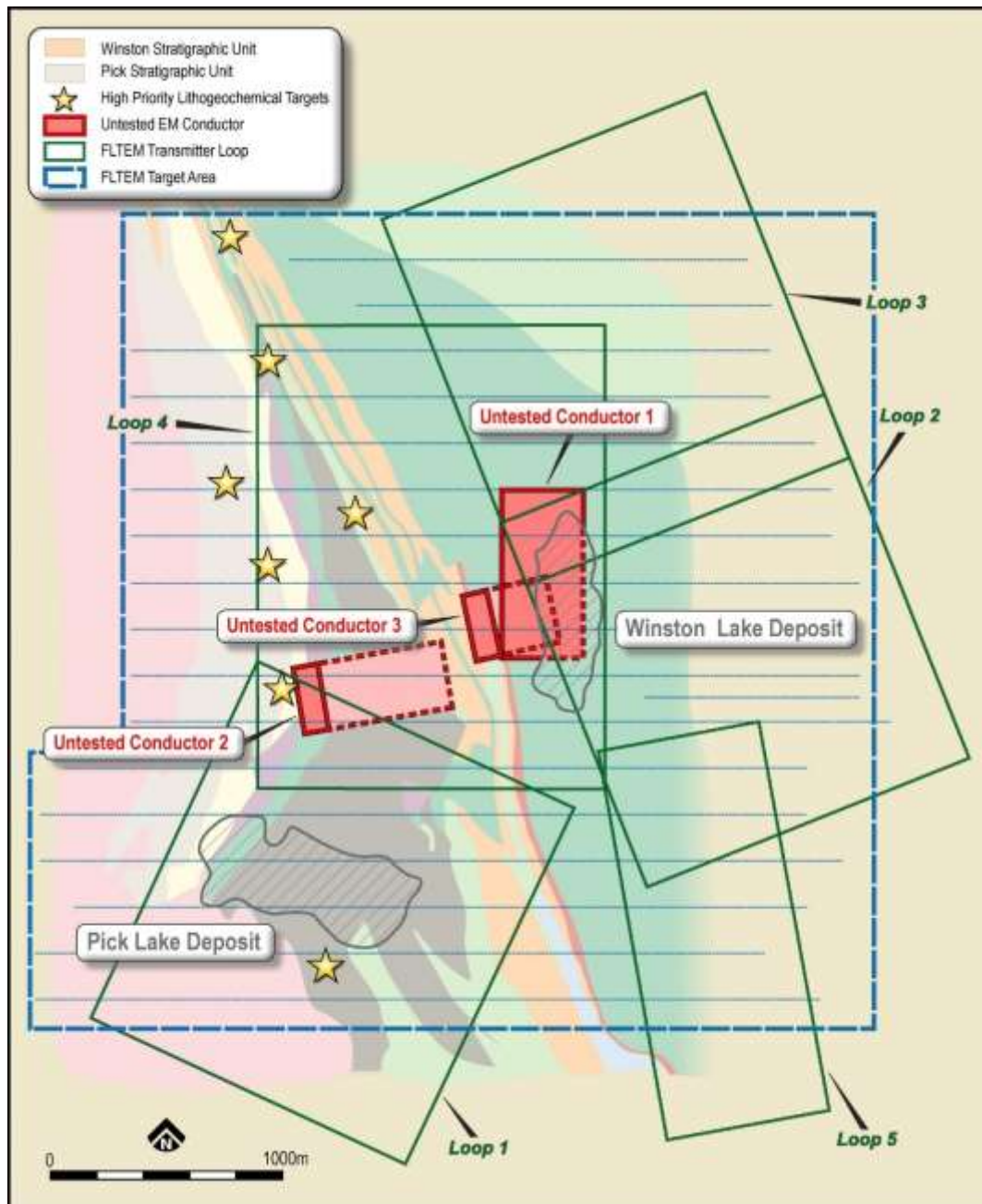
- PL-18-01 1.56m @ 20.12% Zn and 0.80% Cu
- PL-18-01A-W1 1.0m @ 4.78% Zn and 0.18% Cu
- PL-18-01A-W2 dislodged wedge resulting in lost hole
- PL-18-01A-W3 3.7m @ 5.95% Zn and 0.28% Cu, inclusive of 1.0m 15.95% Zn and 0.58% Cu

Following the drill program, a DHTEM program was completed at Pick Lake. As Pick Lake is a known deposit, this was a “test case” to confirm if EM could successfully detect and define potential mineralisation. If the DHTEM was successful, it would provide the Company with further confidence regarding the use of modern EM technology across the brownfields target area. The results were positive as Pick Lake was clearly identified, thereby increasing the Company's confidence that electromagnetics is the correct technique for identifying new anomalies at Superior Lake.

PHASES 3 – Fixed Loop Electromagnetics geophysics program

Following the success of the DHTEM program a high-powered FLTEM surveying was undertaken across the brownfields exploration area. This program was targeting the high priority targets identified through Phase 1 of the Brownfields exploration program. Figure 3 below highlights the target areas from the five loop FLTEM program.

Figure 3: Map of the FLTEM target areas and identified anomalies

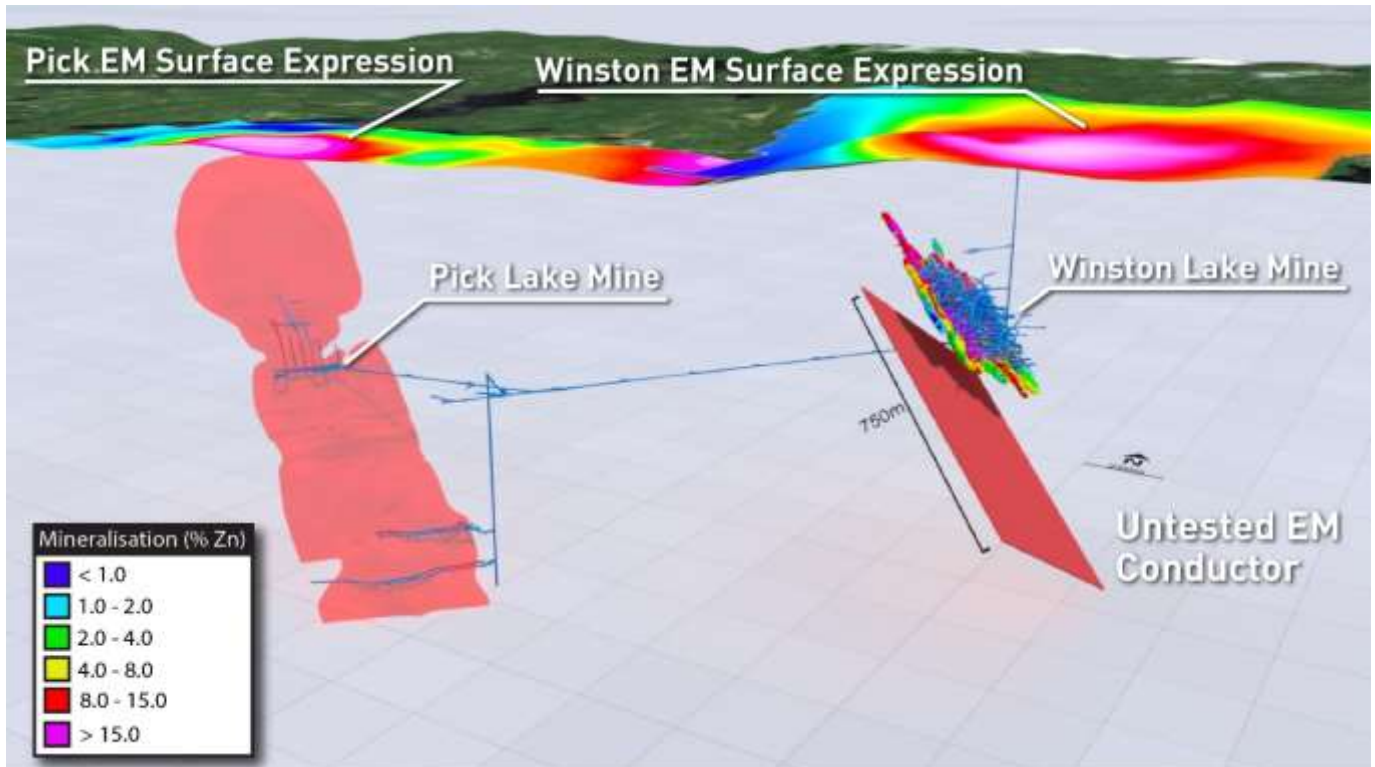




Loop 1 of the program targeted the Pick Lake area. The Pick Lake deposit was again clearly identifiable, which provided further confidence in electromagnetics as a highly appropriate exploration technique to assist in detecting new mineralisation.

Loop 2 of the program identified a new major conductive anomaly adjacent to the Winston Lake deposit in the footwall. This anomaly is significant as it measures 750m x 500m. The location of the anomaly in relation to both Winston and Pick Lake is highlighted in Figure 4 below.³

Figure 4. Comparison between untested EM conductor and known Pick Lake deposit



Loop 4 survey results highlight two additional targets: a shallow conductor in the footwall to the Winston Lake orebody, which appears to be co-planar with the deep conductor detected by Loop 2, and a conductor located to the north of the Pick Lake orebody that is supported by the “Pick 1” alteration/lithogeochemical target described in the ASX release dated 30 January, 2019 (“Multiple near mine zinc targets identified”). Identification of a strong conductor within a geological environment confirmed as favorable for VMS mineralisation by geochemistry and alteration mapping is a significant development.

Loop 3 and Loop 5 surveys did not detect any new significant conductors.

Given the depth of each anomaly and their respective proximity to existing underground mine infrastructure, the Company will not drill test these targets until the underground mine has been re-entered. Subject to securing the required finance, the Company plans to recommence development of the Project during 2020. This approach significantly reduces the cost and time and allows for more efficient access to enable testing of each anomaly.

With the brownfields exploration program having concluded, the Company’s primary focus is on the DFS, which is on track for completion by mid-2019.

³ ASX announcement 20 March 2019 “Geophysics program identifies major anomaly”. Superior Lake confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 20 March 2019.

Corporate

Cash

The Company had approximately \$2.6 million cash at bank at the end of the March Quarter.

Definitive Feasibility Study

The DFS is progressing in accordance with the timetable and is expected to be completed in mid-2019. The DFS will form an important part of the Company's efforts to secure finance for development of the Project. The Company has received significant interest from financiers and expects to shortly make an announcement on the appointment of advisors to arrange project finance.

General meeting

An extraordinary general meeting was held on 6 March 2019. Six resolutions were put to shareholders, all of which were approved. The resolutions included ratification of prior issues to refresh the Company's placement capacity under Listing Rules 7.1 and 7.1A and the issue of securities to two of the Company's directors – Mr Keong Chan and Mr Grant Davey.

Corporate changes

During the Quarter, Stuart McKenzie was appointed as Company Secretary to replace Mathew O'Hara.

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

Office address: Level 1, Emerald House, 1202 Hay Street, West Perth, WA 6005

Mailing address: PO Box 749, West Perth, WA 6872, Australia

Telephone No: 08 6117 0479

About the Company

Superior Lake Resources Limited

Superior Lake Resources Limited (ASX: SUP) is focused on the redevelopment of the Superior Lake Project in North Western Ontario, Canada. The Project hosts a JORC resource of 2.35 Mt at 17% Zn, 0.9% Cu, 0.4 g/t Au and 34 g/t Ag (see footnote 1, page 1). A Restart Study completed in 2018, forecast the Project to produce approximately 46,000tpa Zn metal, with an AISC of US\$0.51.⁴ The Company is currently working towards the release of a Definitive Feasibility Study in mid-2019.

Table 2: Superior Lake Mineral Resource at 3% Zn cut-off grade

Classification	Tonnage (Mt)	Zn%	Cu%	Au g/t	Ag g/t
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To learn more about the Company, please visit www.superiorlake.com.au, or contact:

David Woodall Chief Executive Officer +61 8 6143 6740

Information required under ASX Listing Rule 5.3.3

List of current mining and exploration tenements (as at 31 March 2019):

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

⁴ See ASX announcement "Outstanding study confirms Superior Lake as low-cost project" dated 10 October 2018. The Company confirms that it is not aware of any new information or data that materially affects the information in that announcement (save for the 200,000 tonnes increase in the Mineral Resource estimate announced on 7 March 2019), and that all material assumptions and technical parameters underpinning the production targets and forecast financial information based on production targets in that announcement continue to apply and have not materially changed. The inclusion of the 200,000 tonnes will not materially affect the throughput set out in the Restart Study.



Country	Tenement	Interest	Status
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
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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

Country	Tenement	Interest	Status
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
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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.