ASX Announcement
ASX: SUP
12 September 2019
superiorlake.com.au

SUPERIOR LAKE
RESOURCES

Mobilizing for Drilling at Superior Lake

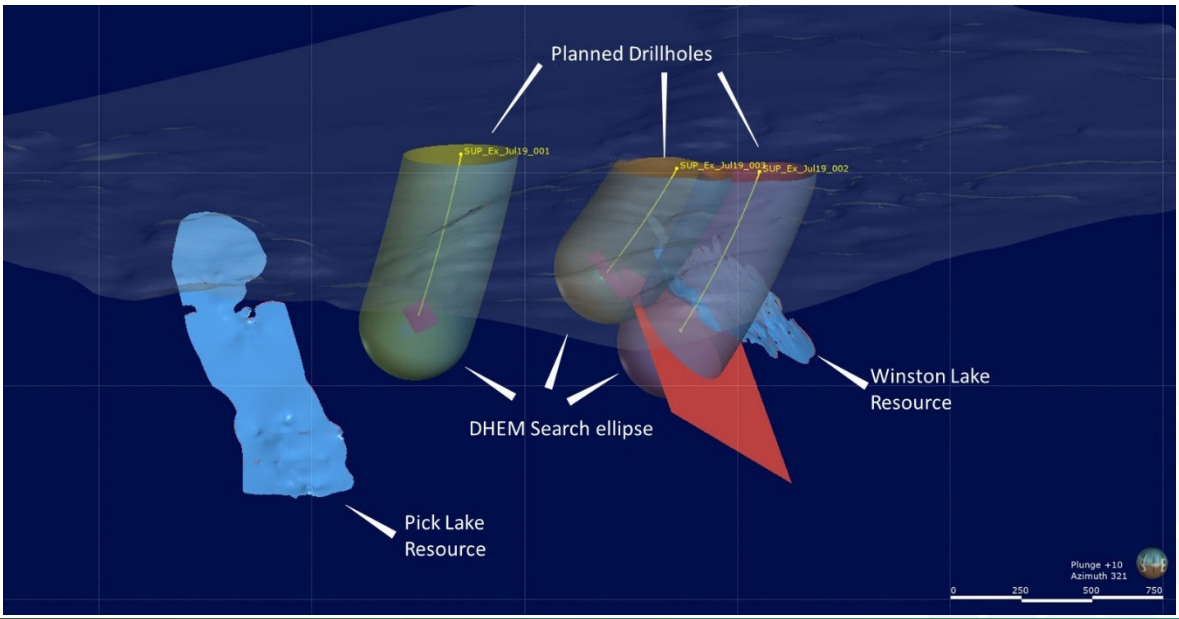
Highlights

- **The Company is mobilizing to commence drilling early next week – a 1,900m drill program and Down Hole Transient Electromagnetic (DHTEM) survey will test each of the three significant near mine geophysical anomalies identified earlier this year**
- **Each anomaly is located within a 9km² area surrounding the mineral resource and existing mine infrastructure (Image 2).**
    - This area was selected as any new discovery could quickly, effectively and economically be added to the production profile
- **Each anomaly was identified through a Fixed Loop Transient Electromagnetic (FLTEM) survey completed during 1Q19**
- **Drilling is expected to be completed during October 2019 with the DHTEM program to be completed in November 2019**

Superior Lake Resources Limited (ASX: SUP) ("Superior Lake" or the "Company") is pleased to announce that drilling will shortly commence at the Company's Superior Lake Zinc Project ("**Project**") in Ontario, Canada.

The 1,900m drill program and the subsequent DHTEM survey is targeting three major near mine geophysical anomalies identified by the Company through a Fixed Loop Transient Electromagnetic (FLTEM) survey carried out in 1Q19 (ASX announcement 28th March 2019). Image 1 below highlights the planned drill holes and the targeted area of the DHTEM program.

Image 1: Planned DHTEM Testing significant Geophysical Anomalies



This area was selected as any new discovery could be accessed more efficiently and economically through the existing mine development, thereby allowing for a potential increase in future production and / or extension of mine life.

As part of the 2019 exploration program, the Company completed the first DHTEM survey at the Project, specifically targeting Pick Lake. Pick Lake was selected as a "test case", given significant mineralisation was already known to exist. As a result, if EM could successfully detect and define the known mineralisation, it would confirm this was an appropriate exploration tool to use and detect unknown mineralisation at the Project.

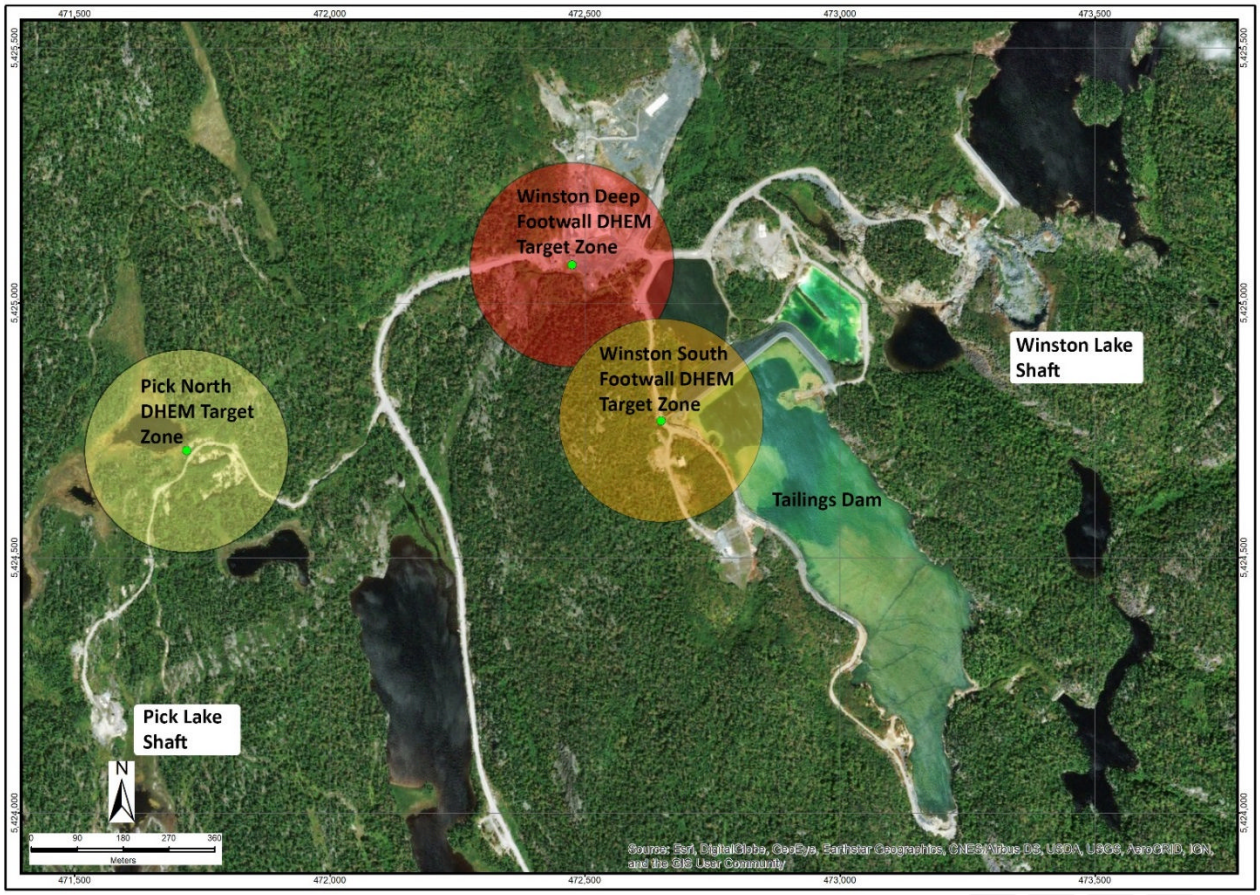
The result was positive as Pick Lake was clearly identified, thereby increasing the Company's confidence that electromagnetics is a highly suitable technique for identifying new anomalies at Superior Lake.

Chief Executive Officer Dave Woodall commented:

"The recently completed BFS (ASX announcement 28 August 2019) demonstrated that the Superior Lake Project is a robust, low cost (life of mine all in sustaining costs of US$0.47/lb), which, if brought into production, would rank the Project in the lowest quartile of producers globally. The exploration upside has the potential to significantly improve the Project's parameters, both in terms of mine life and increased future yearly production.

"Our measured approach to this exploration program utilizing multiple contemporary modern-day exploration techniques, the suitability of which has been systematically demonstrated at the Project, gives us confidence that we are on the right path to identifying additional deposits in the region."

Image 2: Plan view of the Superior Lake Project and the geophysical targets

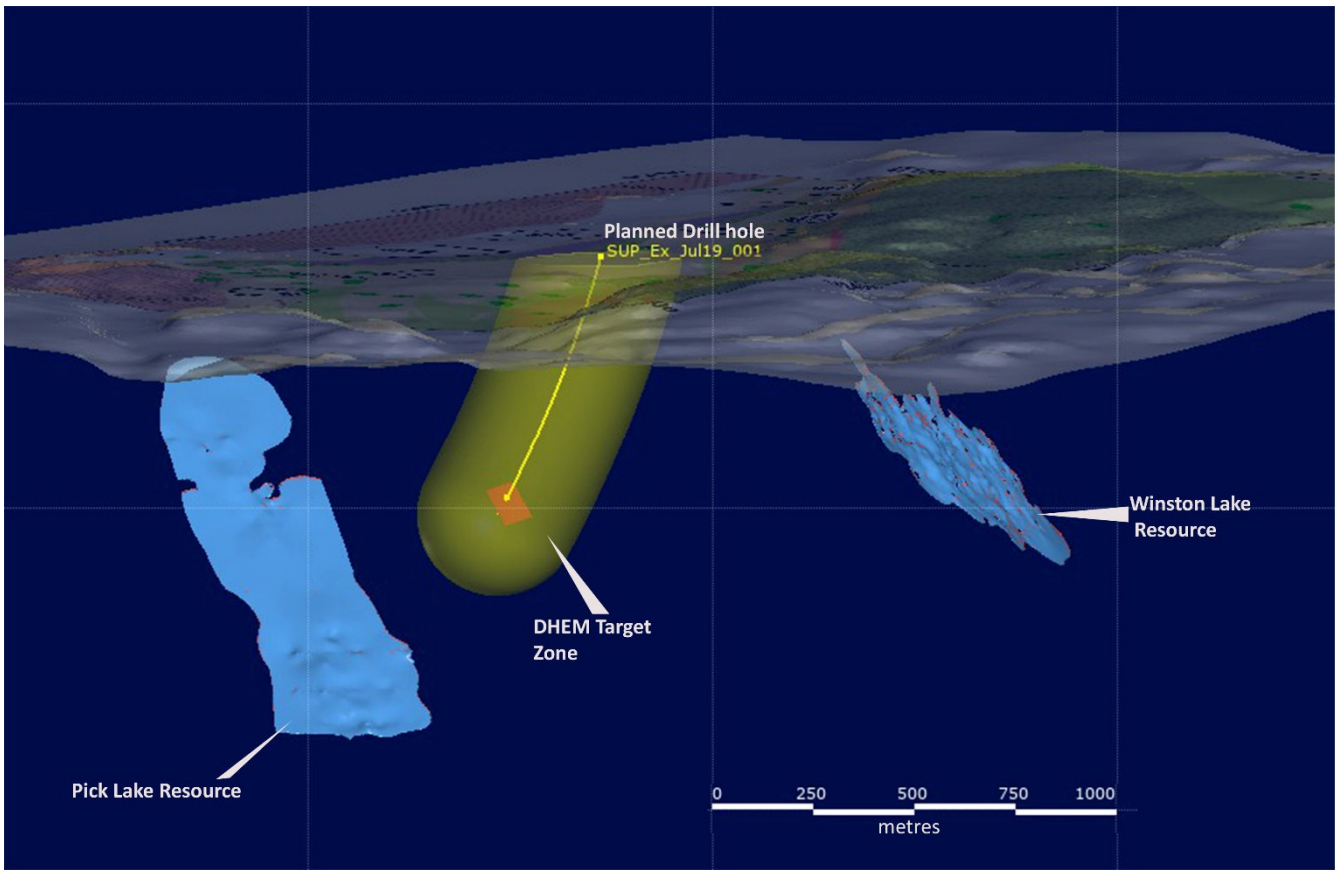


Pick North EM Anomaly

The Pick North conductor (previously Conductor 3), is a chargeable anomaly 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 30th January 2019 ("*Multiple near mine zinc targets identified*"). The identification of a strong conductor along strike from known economic VMS mineralization, supported by geochemistry and alteration mapping, is a significant development and gives strong support to the target.

This anomaly is modelled at approximately 650m in depth and will be tested with a single 700m drillhole followed by DHTEM. The DHTEM will search an area with a radius of approximately 200m. Image 3 below highlights the location of the planned hole, the targeted coverage volume of the DHTEM as well as its proximity to the Winston and Pick deposits.

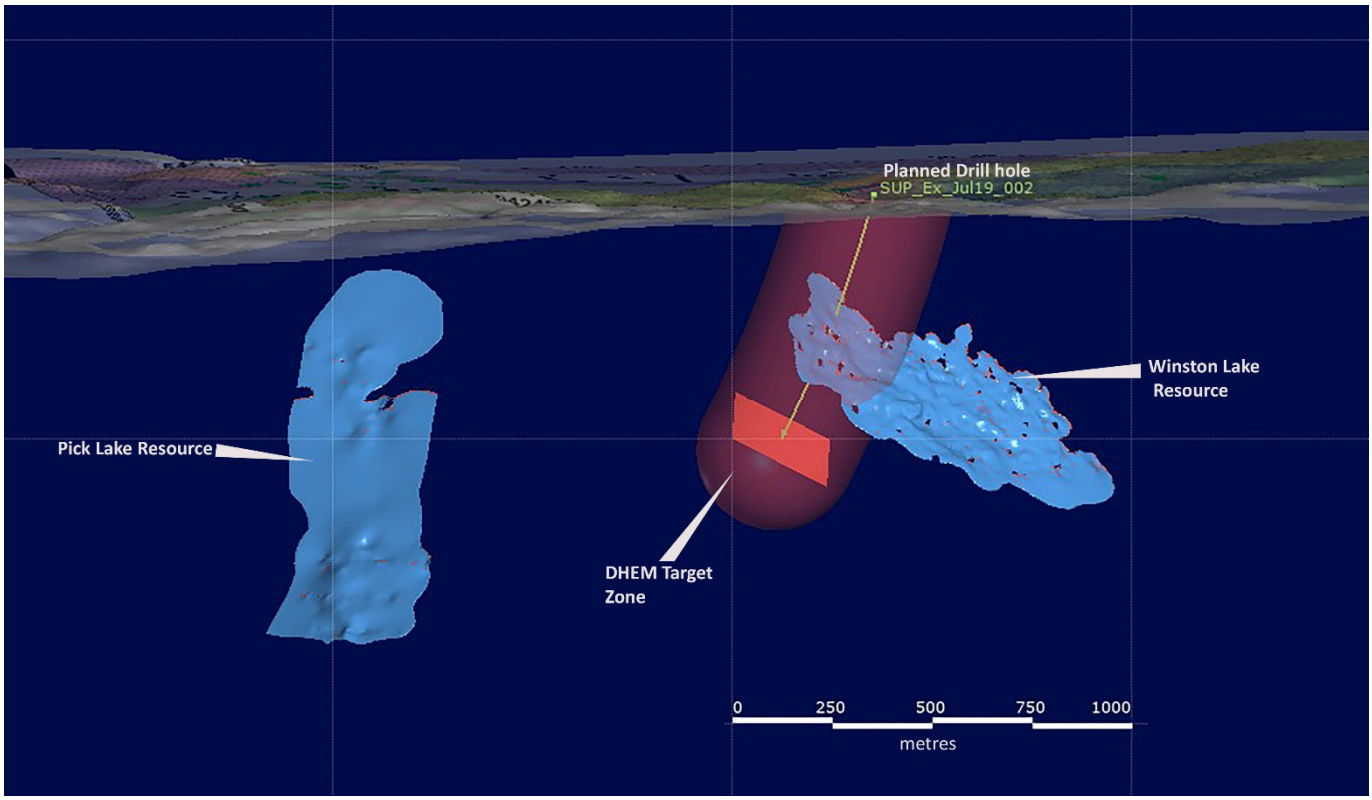
Image 3 – Pick North DHTEM target area and planned drill hole



Winston Deep EM Anomaly

Winston Deep (previously referred to as Conductor 2) is a shallow conductor in the footwall to the Winston Lake orebody with modelled dimensions of 200m x 120m. This anomaly, which is modelled at a depth of approximately 475m, will be tested with a single drillhole to a depth of 500m followed by DHTEM. The DHTEM will search an area with a radius of approximately 200m. Image 4 below highlights the location of the planned hole, the targeted area of the DHTEM as well as its proximity to the Winston Lake deposit.

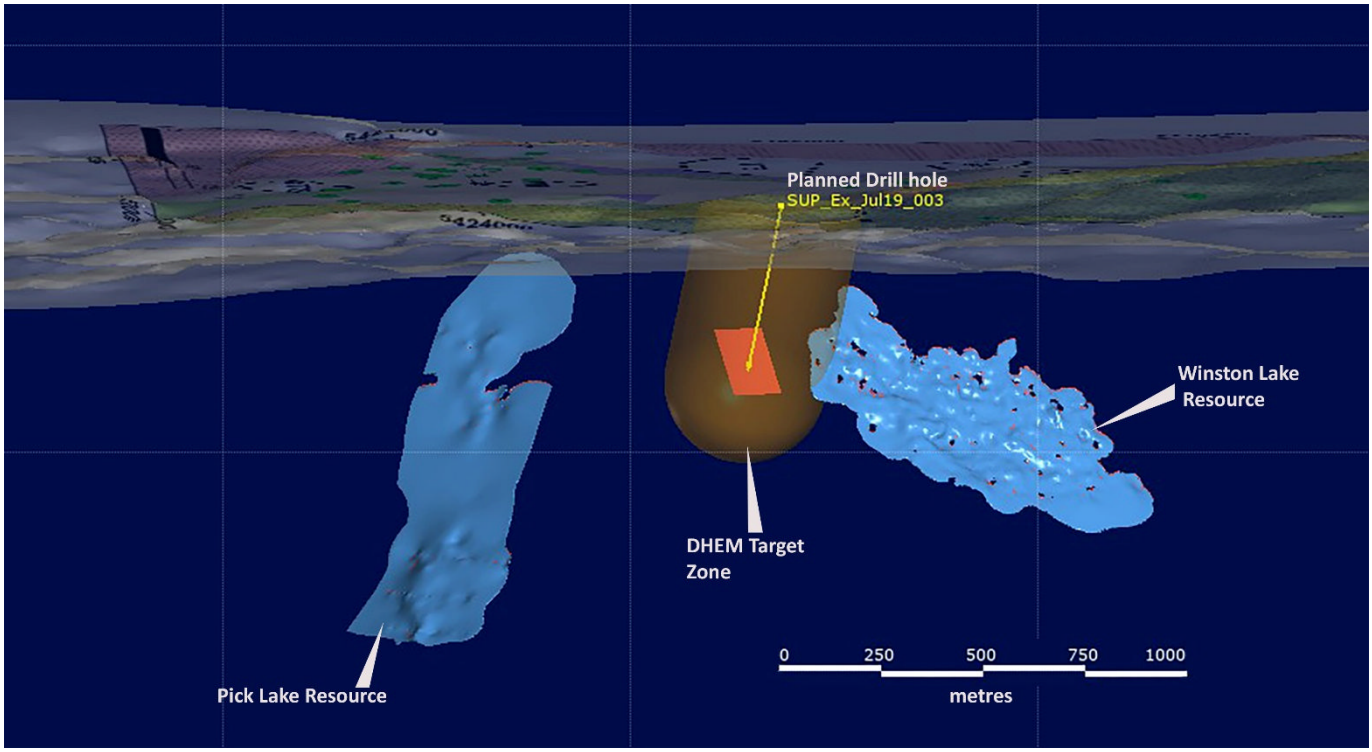
Image 4 – Winston Footwall DHTEM target area and planned drill hole



Winston Footwall South EM Anomaly

Winston Footwall South (previously referred to as Conductor 1), is a new major conductive anomaly located adjacent to the Winston Lake deposit in the footwall. This anomaly is significant as it measures 300m x 150m, has not been tested by historical drilling and is very proximal to existing underground infrastructure. The anomaly is modelled around 650m in depth and will be tested with a single 700m drillhole followed by DHTEM. The DHTEM will search an area with a radius of approximately 200m. Image 5 below highlights the location of the planned hole, the targeted area of the DHTEM as well as its proximity to the Winston Lake deposit.

Image 5 – Winston Footwall DHTEM target area and planned drill hole



About the Company

Superior Lake Resources Limited

Superior Lake Resources Limited is focused on the redevelopment of the Superior Lake Zinc Project in North Western Ontario, Canada. The Project is a high-grade zinc deposit with a JORC resource of 2.35 Mt at 17.7% Zn, 0.9% Cu, 0.38 g/t Au and 34 g/t Ag (ASX announcement 7th March 2019) and a Probable Ore Reserve of 1.96Mt at 13.9% Zn, 0.6%Cu, 0.2g/t Au and 26.2g/t Ag (ASX announcement 28th August 2019).

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**
Superior Lake Ore Reserve at 5.2% Zn cut-off grade					
Classification	**Tonnage Mt**	**Zn%**	**Cu%**	**Au g/t**	**Ag g/t**
Probable	1.96	13.9	0.6	0.2	26.2
Total	**1.96**	**13.9**	**0.6**	**0.2**	**26.2**

To learn more about the Company, please visit www.superiorlake.com.au, or contact:

David Woodall Chief Executive Officer +61 8 6117 0479

Reference to previous ASX announcements

In relation to prior exploration results reported in this announcement, Superior Lake confirms that it is not aware of any new information or data that materially affects the information included in those announcements.

In relation to the Mineral Resource estimate previously reported on 7th March 2019, Superior Lake confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 7th March 2019 and that all material assumptions and technical parameters underpinning the Mineral Resource estimate in the announcement of 7th March 2019 continue to apply and have not materially changed.

In relation to the Ore Reserve estimate previously reported on 28th August 2019, Superior Lake confirms that it is not aware of any new information or data that materially affects the information included in the announcement of 28th August 2019 and that all material assumptions and technical parameters underpinning the Mineral Resource estimate in the announcement of 28th August 2019 continue to apply and have not materially changed.

In relation to the results of the Bankable Feasibility Study previously reported on 28th August 2019, the Company confirms that it is not aware of any new information or data that materially affects the information in that announcement 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.