ASX Announcement
ASX: SUP
26th November 2019
superiorlake.com.au

SUPERIOR LAKE RESOURCES

Drilling Hits Zinc Mineralisation approximately 500m north of Pick Lake

Highlights

- **Assay results from recently completed drilling north of Pick Lake confirm the intersection of zinc sulphides – hole PL19-01, 0.35m @ 3.4% Zn and 0.25% Cu from 608m within a broader 29m wide zone hosting narrow bands of massive and semi-massive pyrrhotite and pyrite (Figure 1).**
- **This broad sulphide zone with zinc mineralisation is a priority exploration target (Figure 2):**
  - **It is located along the same stratigraphic horizon that hosts the Pick Lake deposit**
  - **Open for at least 1.5km along the mineralised trend and is in a corridor of ~1.5km x 1.8km deep that has been sparsely tested by drilling - only four drill holes have been drilled in this region with three having hit sulphide mineralisation**
  - **Down-Hole Transient Electromagnetic ("DHTEM") indicates a conductive plate associated with the new sulphide intercepts**
- **Assays and geochemical analysis confirm the existence of typical VMS systems markers being iron, zinc, and copper bearing sulphide minerals**

Superior Lake Resources Limited (ASX: SUP) ("Superior Lake" or the "**Company**") is pleased to provide an update following the completion of its exploration program at the Superior Lake Project ("**Project**") in Ontario, Canada. The results of the 50 element assays and analysis of the whole-rock geochemistry confirm the existence of key geochemical markers associated with VMS systems. The Pick North drilling intercepted zinc mineralisation, 0.35m @ 3.5% Zn and 0.25% Cu from 608m within a broader 29m wide zone containing narrow bands of massive and semi-massive pyrrhotite and pyrite. The Pick North target is approximately 500m north-east of the Pick Lake deposit and encouragingly appears to lie in the same interpreted stratigraphic unit, providing a high priority exploration target.

Executive Director Grant Davey commented:

"VMS deposits are known to occur in clusters and Pick Lake North is a high-priority target area for additional mineralisation. The new results from PL19-01 strongly suggest the possibility of mineralisation approximately 500 metres to the north of Pick Lake. This hole has hit thicker sulphide mineralisation than any of the historical holes drilled to the north of Pick Lake. This drill hole, having intersected zinc mineralisation, together with the information from the DHTEM survey and the multi-element geochemistry program sets an interesting drill target to test for another possible mineralised orebody in this region."

Superior Lake Exploration Outcomes

Having now received the assay results of its recently completed drilling and DHTEM program exploration, field work for 2019 has now concluded. The key findings of the 2019 exploration program include:

- The Pick drilling program, which added 10% to the JORC 2012 resource between the upper and lower lens (ASX announcement 7th March 2019).
- A review of litho-geochemistry of surface rock chip samples which defined seven targets (ASX announcement 30th January 2019).
- A Fixed Loop Transient Electromagnetic ("**FLTEM**") geophysics survey which defined a number of near mine targets, three of which were selected for drill testing (ASX announcements 20th March 2019 and 28th March 2019).
- Completion of three diamond drill holes to test the FLTEM Targets defined above.
- DHTEM on the three completed diamond drill holes which confirmed four additional off-hole targets (ASX announcements 9th October 2019, 22nd October 2019 and 29th October 2019).
- Finally, multi-element geochemical results from the recent drilling have been received confirming that the four targets are within the proximal alteration halo of the VMS system; with zinc mineralisation successfully encountered at Pick Lake in PL19-01 (0.35m @ 3.4% Zn and 0.25% Cu from 608m) within a broader 29m wide zone hosting narrow bands of massive and semi-massive pyrrhotite and pyrite (Figures 1 and 2).

Pick North Target

The mineralisation encountered in hole PL19-01 is interpreted to occur on the same prospective horizon that hosts the Pick Lake deposit. Analysis of historical drilling in the region indicates that only 3 drill holes have intersected this prospective horizon, with a target region of approximately 1800m x 1500m now established (Figures 1 and 2). The PL19-01 hole intersected a 29m thick zone from 608m hosting several narrow bands of pyrrhotite and pyrite along with minor sphalerite. The tenor and thickness of the sulphide mineralisation in hole PL19-01 is significantly higher than any of the historical drill holes in the area and the region presents a top priority for future exploration.

Figure 1: Rotated-Plan view of Pick North DHTEM target

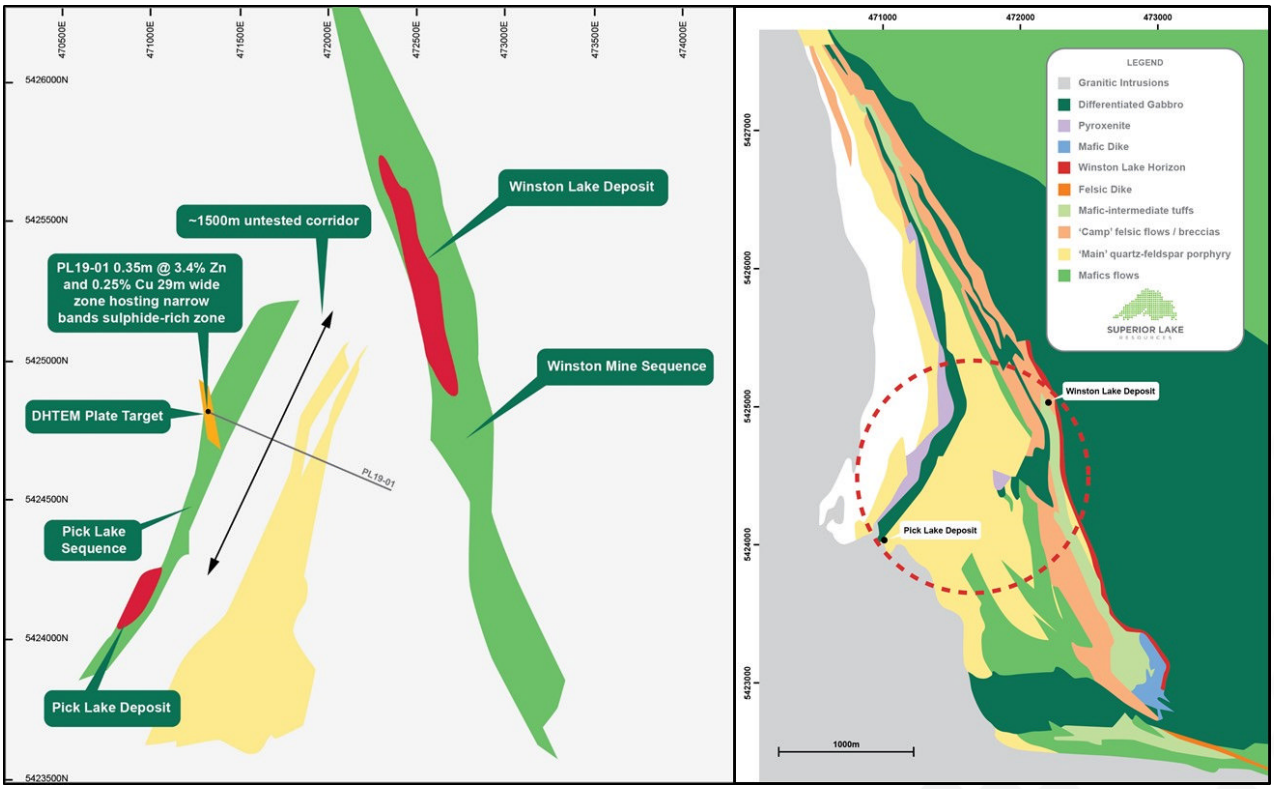
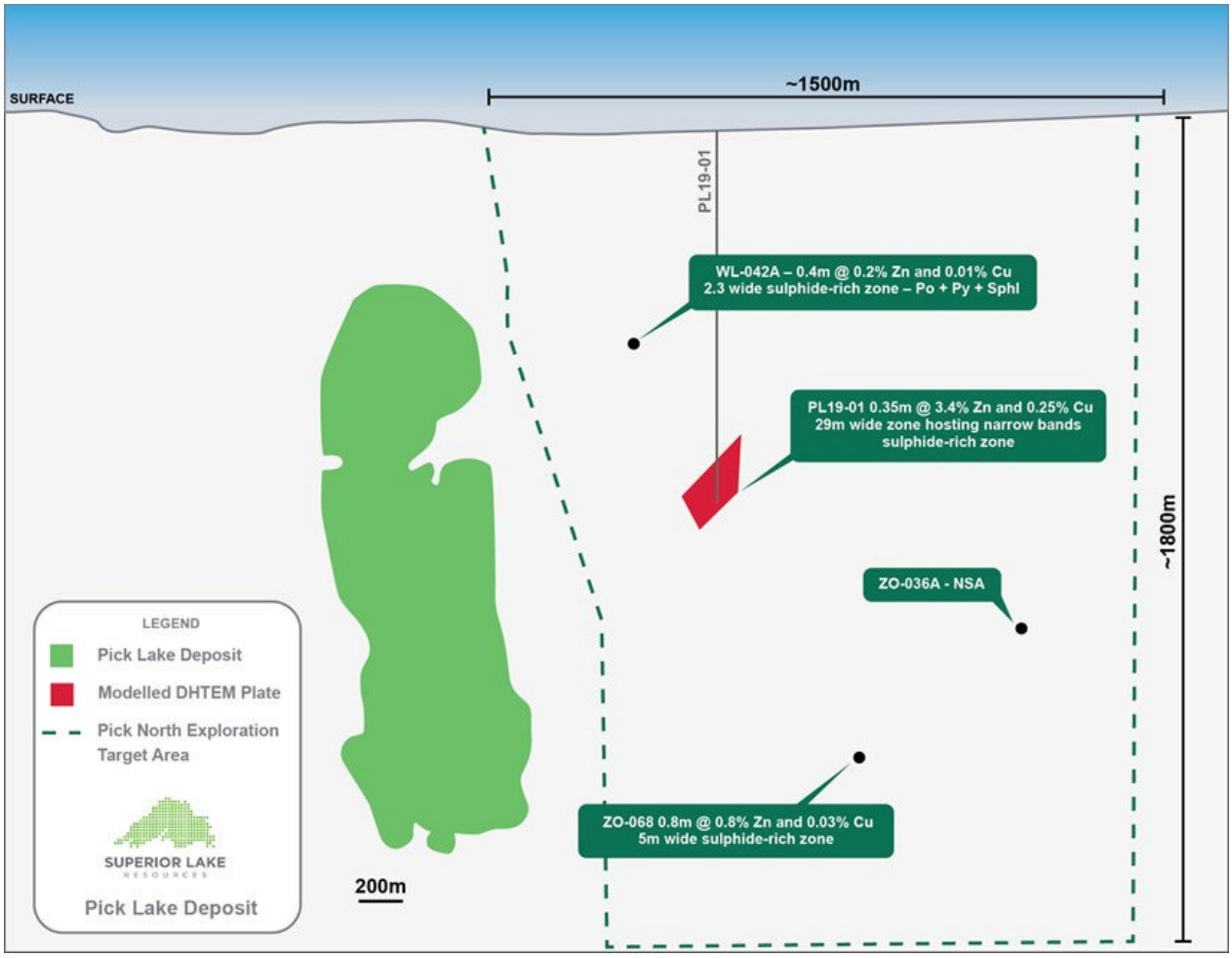


Figure 2: Pick Lake long section showing exploration target area – only tested by 4 drill holes



The 2019 broader exploration program commenced with reviewing, mapping and logging of the mineralogy of the surface outcrops and core to determine lithology and alteration mineralogy in the near-mine environment.

Whole rock multi-element geochemistry using a near total digest was employed on both surface outcrop and drill core samples. This method determines the concentrations of both mobile and immobile elements within the rock mass and can used in several ways:

- Immobile elements can be used to characterise the stratigraphy and 'see through' the overprinting alteration;
- Alteration geochemistry can be used to quantify the intensity and nature of alteration and provide an insight into the hydrothermal fluid pathway; and
- Metal enrichment or depletion signatures can give an insight into the fertility of the system and relative proximity to the ore zone.

From the analysis of the Superior Lake results, three geochemical indicators have been defined:

- The quartz-feldspar porphyry unit mapped on surface shows the geochemical characteristics of a highly fractionated rhyolite. The degree of fractionation is a proximity indicator with the most fractionated units being the most proximal to the ore bearing fluid and the top contact being the preferred position.
- The intensity of footwall alteration can be mapped geochemically and can be used to navigate within the system.

- The mineralogy of footwall alteration is an indicator of proximity to the ore system with potassium rich minerals (K feldspar or biotite mica) indicating proximal positions and sodium-rich minerals (albite) indicating more distal positions.

The three holes drilled in the current program are all within the fractionated rhyolite package and the proximal alteration system typical for a VMS system. Geophysical targets within this geochemical domain are the highest priority targets and these results have confirmed that the Company's exploration strategy is successful in locating mineralisation. The results also reaffirm the potential for further discovery in the near-mine environment.

The FLTEM survey employed at Superior Lake allows for a search below the earth's surface to detect and define significant electromagnetic conductors to depths of 1,000 meters. In this case, pyrite and chalcopyrite mineralisation responds to the transient electro-magnetic (TEM) technique and these minerals usually form a halo around high grade zinc mineralisation. Pure sphalerite (zinc sulphide) does not respond strongly to TEM, but rarely occurs without pyrrhotite and pyrite. A number of conductors were defined from surface using this technique and these positions, combined with the surface geochemical and mapping data were ranked and the top 3 targets prioritized for drilling.

Three diamond drill holes were completed and surveyed using DHTEM. DHTEM is downhole geophysical technique which allows for the identification and position of electromagnetic conductors in 3D space within a significantly larger given radius around the drillhole. Related to the above surface technique, DHTEM is used to refine the electromagnetic model derived from the surface measurements and to vector towards ore positions with follow-up drilling.

As previously reported (ASX announcement 29th October 2019) all three drill holes encountered sulphide mineralisation and 4 downhole electromagnetic conductors have been identified through the completion of the 2019 drilling.

The Company believes that the exploration program completed in 2019 has been an important success in that it has successfully demonstrated the applicability of both surface FLTEM and subsurface DHTEM in locating massive sulphides positions and that the use of multi-element geochemistry can discriminate the stratigraphic units and alteration present within the ore system.

Finally, the first three drill holes targeted using the combination of these techniques have successfully hit sulphide mineralisation and demonstrated that a combination of exploration techniques can be used to vector towards mineralisation within the large volumes of rock that remain untested in the near-mine environment.

Reference to previous ASX 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 previous announcements containing exploration results referred to 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.

Competent Person's Statement

Drilling Results

The information contained in this announcement that relates to drilling exploration results is based on, and fairly reflects, information compiled by Mr. Avrom E. Howard, MSc, PGeo Principal Consultant at Nebu Consulting LLC, who is a Practicing Member of the Professional Geoscientists of Ontario (a Recognised Professional Organisation included in a list that is posted on the website of the Australian Securities Exchange). Mr. Howard managed the program, logged the core and selected samples subsequently sent for multi-element and whole-rock analysis. Mr. Howard retains sufficient experience relevant to VMS systems and exploration drilling programs to qualify as a Competent Person. Mr. Howard has consented to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Geophysics Results

The information contained in this announcement that relates to geophysics exploration results is based on, and fairly reflects, information compiled by Mr. David Johnson, an independent consultant, employed by Zion Geophysics and reviewed by Mr. Peter Williams, a Fellow and Chartered Professional of the Australian Institute of Mining and Metallurgy and a Director of Superior Lake Resources Limited, to complete the geophysical survey and the analysis of the results. Mr. Williams has sufficient experience which is relevant to the geophysics technology, 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. Williams consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

Geological Results and Interpretation

The information in this announcement that relates to geological review of the exploration results is based upon information compiled by Mr Neil Inwood, an independent consultant to Matador Capital Limited. Mr Inwood is a Fellow of the Australasian Institute of Mining and Metallurgy and 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 Inwood consents to the inclusion in the announcement of the matters based upon the information in the form and context in which it appears.

Appendix 1. Drill hole information

Hole ID	Northing	Easting	Elevation	Final depth (m)	Dip (degree)	Azimuth (degree)	Depth from (m)	Interval (m)	Zn%	Cu %
PL-19-01	5424727.00	471758.00	10426.00	702	-74.87	286.55	608	0.35	3.42	0.25
WL-19-02	5424770.00	472650.00	10471.44	549	-59.87	270.48			NSA	NSA
WL-19-03	5424975.00	472860.00	10456.44	693	-70	235.8			NSA	NSA
ZO-068	5424833.10	472635.10	9694.30	1351	-74	250	1260.5	0.8	0.5	0.03
ZO-036A	5425218	472656	10450	1153	-75	250			NSA	
WL-042	5424701.70	471221.40	10040.00	430.4	-87.00	250.00	325.70	0.4	0.2	0.01

Appendix 2 JORC 2012 Table 1 Reporting

Section 1. Sampling Techniques and Data

Criteria	Explanation	Commentary
Sampling Techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Not applicable, no sampling or assaying conducted. Exploration results have been reviewed and verified.
	Aspects of the determination of mineralisation that are Material to the Public Report.	• The determination of mineralisation has been by a combination of geological observations (logging and mapping) in conjunction with assay results from the surface and underground database. • Information from mine level plans and cross-sections along with reports and studies was used to compile a 3D geological model (wireframes) of the VMS system at Pick and Winston. This was used as the framework for the mineralisation models.
Drilling Techniques	Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc.).	All drilling completed in this program at both Pick Lake and Winston Lake was diamond drilling from the surface, a total of m of drilling in 3 holes. • Core size NQ a diameter of 75.7mm.
Drilling Sample Recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample	Not applicable, no sampling or assaying conducted. Exploration results have been reviewed and verified.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged.	Drill core has been geologically logged to a high standard and includes lithology descriptions, texture, structure, alteration, sulphide percentages, colour, and grainsize.
Sub-sampling techniques and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample	Not applicable, no sampling or assaying conducted

Criteria	Explanation	Commentary
	preparation technique. Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second- half sampling.	
Quality of Assay Data and Laboratory Tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Down-hole EM (DHEM) survey undertaken by Superior Lake has confirmed geophysics targets shown in images in the announcement. The survey details are as follows: • Digital down-hole EM system: Volterra-BH proprietary to SJ Geophysics, consisting of digital recording unit, 3-component fluxgate magnetometer (as used in DigiAtlantis) and axial component B-field coil sensor. • Transmitter: Volterra transmitter proprietary to SJ Geophysics • Transmitter energized loop with 100% duty cycle square wave current (i.e. on-time EM measurements taken) The transmitter energized a loop measuring roughly 300m x 300m that was surveyed using handheld GPS. Data were modelled using the program Maxwell distributed by Electromagnetic Imaging Technology which implements a variant of the current ribbon approximation for the EM response of a plate-like conductor devised by Lamontagne et al (1998). Lamontagne, Y., Macnae, J., Polzer, B., 1998. Multiple conductor modelling using program Multiloop. 58th Ann. Mtg. of Soc. Exploration Geophysics, Expanded Abstracts.
Verification of Sampling and Assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data.	Not applicable, no sampling or assaying conducted. Exploration results have been reviewed and verified.
Location of Data Points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used.	• DHTEM transmitter loops were surveyed utilising GPS. • Down-hole measurement depths were recorded using a digital counter at the hole collar

Criteria	Explanation	Commentary
	Quality and adequacy of topographic control.	
Data Spacing and Distribution	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied.	Not applicable, no sampling or assaying conducted. Exploration results have been reviewed and verified.
Orientation of Data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Not applicable, no drilling or sampling conducted
Sample Security	The measures taken to ensure sample security.	Not applicable, no sampling or assaying conducted
Audits or Reviews	The results of any audits or reviews of sampling techniques and data.	No independent audits have been conducted on this data. Data has been reviewed and accepted in in its raw form independently by Zion Geophysics

Section 2 Reporting of Exploration Results

Criteria	Explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Pick Lake Project comprises 297 claim units (each claim unit is 400mx400m or 16Ha in area) totaling 47.5km2. The claims are made up of a number of claims acquired in August 2016 and claims recently staked and registered in October 2017. The total of all claim areas is >17,000Ha. Superior is the legal and beneficial owner of 70% of the issue capital of Ophiolite Holdings Pty Ltd (ACN 617 182 966) (Ophiolite). Ophiolite is a proprietary exploration company and is the legal and beneficial owner of the zinc and copper prospective "Pick Lake Project", located in Ontario. Please see ASX announcement dated 6 December 2017. Superior Lake currently has an option over the Winston Lake project claims. These claims are owned by FQM. For further details please refer to ASX announcement dated 21st February 2018.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.	The claims are in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The Pick Lake deposit was discovered in 1983 and the Winston Lake deposit was discovered in 1982. The Pick Lake and Winston Lake project areas have been the subject of a variety of exploration campaigns. Some of the previous explorers include Zenamc Metal Mines Limited, Falconbridge Copper Corporation, Minnova, Inmet Mining, Noranda, and Silvore Fox. Please refer report filed on SEDAR for further details - Independent Technical Report on the Pick Lake Property, Pays Plat Lake and Rope Lake Area, Ontario, Canada, dated June 19, 2013 prepared by Bruno Turcotte, MSc, P. Geo and Remi Verschelden, BSc, P. Geo (filed June 21, 2013 on SEDAR). This report can be accessed via the url: http://www.sedar.com under the company name "Silvore Fox".
Geology	Deposit type, geological setting and style of mineralisation	The Pick Lake deposit occurs at the extreme western edge of the Winston-Big Duck Lake sequence of volcanic rocks, approximately 35 metres above a granitic contact. Aeromagnetics within the Project area depicts a distinctive V shaped sequence of magnetic and non-magnetic units converging to a northern "V" apex and appears remarkably similar to the aeromagnetic character of the older Archean Warriedar Fold Belt in Western Australia which hosts the Golden Grove VMS deposits. The Pick Lake deposit occurs as a large sheet like zone of massive sulphides within a series of bedded pyroclastic rocks. Hydrothermal alteration exists in both footwall and hangingwall rocks resulting in varying assemblages of quartz, cordierite, biotite, anthophyllite, garnet, chlorite and sericite with minor disseminated sulphides. The hydrothermal alteration zone appears to be spatially related to the Winston Lake deposit; recent structural mapping provides evidence that Pick Lake and Winston Lake are hosted within the same stratigraphic horizon. The Anderson showing, located near the southeast shore of Winston Lake, appears to be the surface expression of the Pick Lake deposit. This is a rusty pyritic weakly altered series of bimodal volcanics. Massive sulphides of the Pick Lake deposit occur from approximately 300m to 1200m vertically and over a strike length averaging 250 metres. The lower portion of the deposit appears to increase in strike length to approximately 500 metres. The deposit strikes at 20 degrees and dips to the east at 50 degrees. The thickness of the deposit is generally between 2 and 4m, however, locally it is up to 14 metres in width. Sulphide mineralisation is generally very consistent, composed of a fine-grained mixture of sphalerite (50-80%) and pyrrhotite (5-35%) with minor chalcopyrite (0-5%) and pyrite (0-3%). Commonly contained within the sulphides is up to 5% transparent rounded quartz inclusions up to 3mm in size as well as rare (1-3%) sub-rounded biotitic volcanic inclusions. The contacts to the deposit are typically knife sharp and commonly show the presence of minor amounts of silica.

<table>
<tr><th>Criteria</th><th>Explanation</th><th>Commentary</th></tr>
<tr><td></td><td></td><td>The Winston Lake deposit lies at the top of the Winston Lake sequence within cherty exhalite and altered felsic-to-intermediate laminated ash tuff. In places, gabbro forms the hanging wall for the deposit. The footwall consists of altered mafic flow rocks and felsic-to-intermediate volcaniclastic rocks which are underlain by altered quartz and feldspar porphyritic rhyolite and feldspar pyritic basalt with intercalated sulphide-rich, bedded, tuffaceous rocks which, in turn, are underlain by the "Main" quartz fledspar porphyry which is intruded by gabbro and pyroxenite. Hydrothermal alteration, confined to the Winston Lake sequence, and later metamorphism of altered rock have resulted in spectacular assemblages of cordierite, anthophyllite, biotite, garnet, sillimanite, staurolite, muscovite and quartz coincident with an increase in iron, magnesium, and potassium and a decrease in sodium and calcium. Zinc content is directly proportional to the intensity of alteration. High copper values occur at the flanks and top of the alteration "pipe" with the core of the pipe containing relatively depleted copper values. The most common forms of ore are finely banded sphalerite and pyrrhotite and massive-to-coarsely banded sphalerite and pyrrhotite with minor pyrite and chalcopyrite and up to 45% of sub-angular mafic and felsic fragments averaging 3cm in diameter. The north-striking and 50 degrees eastwardly dipping deposit has a strike length of 750m and width of 350m. It has an average true thickness of 6m and is open to depth.</td></tr>
<tr><td>Drill hole Information</td><td>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all material drill holes:

easting and northing of the drill hole collar, elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar, dip and azimuth of the hole down hole length and interception.</td><td>
<table>
<tr><th>Drillhole Name</th><th>Easting</th><th>Northing</th><th>Elevation</th><th>Azimuth</th><th>Dip</th></tr>
<tr><td>Pick North</td><td>471720</td><td>5424710</td><td>10426</td><td>275</td><td>75</td></tr>
<tr><td>Winston Footwall</td><td>472860</td><td>5424975</td><td>10456.44</td><td>240</td><td>70</td></tr>
<tr><td>Winston South</td><td>472650</td><td>5424770</td><td>10471.44</td><td>250</td><td>60</td></tr>
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</td></tr>
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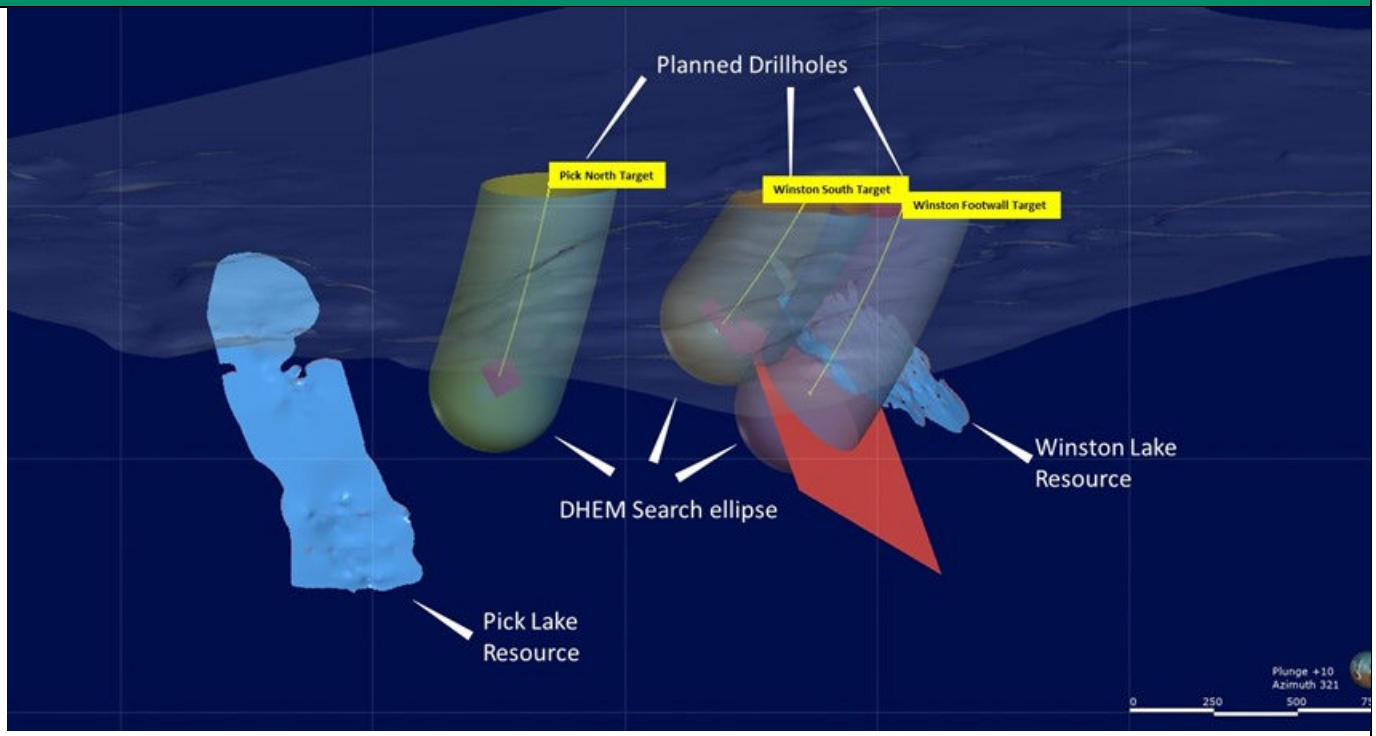
Criteria	Explanation	Commentary
		
Data aggregation methods	In reporting Exploration results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated	Not applicable, no assaying conducted

Criteria	Explanation	Commentary
Relationship between mineralisation widths and intercept lengths	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	Not applicable, no assaying conducted
Diagrams	Inclusion of appropriate maps and sections and tabulations of significant intercepts.	Refer to body of announcement for figures.
Balanced Reporting	Where comprehensive reporting of all exploration results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	All geophysical results obtained and modelling completed are reported in this announcement
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): Geological observations; Geophysical survey results; Geochemical survey results; bulk samples – size and method	Exploration activities carried out by other parties include surface geochemistry, drilling, surface geology mapping, VTEM, structural mapping. Refer to the report filed on SEDAR for further details - Independent Technical Report on the Pick Lake Property, Pays Plat Lake and Rope Lake Area, Ontario, Canada, dated June 19, 2013 prepared by Bruno Turcotte, MSc, P. Geo and Remi Verschelden, BSc, P. Geo (filed June 21, 2013 on SEDAR). This report can be accessed via the url: http://www.sedar.com under the company name "Silvore Fox". Superior has completed both DHTEM and FLTEM geophysical surveys DHTEM

Criteria	Explanation	Commentary
	of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock; characteristics; potential; and deleterious or contaminating substances.	Hole PL-18-01-W1 was surveyed using a DigiAtlantis 3-component fluxgate magnetometer probe from 30m to 850m down-hole. A 1500m x 1200m transmitter loop was energized by a TerraScope PRO5U transmitter with a bipolar 50% duty cycle square waveform with base frequency 1 Hz and peak current 20 A. Results were interpreted by David Johnson, MSc, MAIG of Zion Geophysics, Inc. using the Maxwell modeling software distributed by Electromagnetic Imaging Technology Pty Ltd. FLTEM A total of five overlapping fixed-loop transient electromagnetic (FLTEM) surveys were read using transmitter loops that varied in dimension but were typically 1500m x 1700m. Readings were taken using a SMARTem24 receiver and ARMIT B-field sensor, proprietary to Abitibi Geophysics and developed by Prof. James Macnae at RMIT University, at 100m intervals along 200m spaced east-west survey lines, with infill to 50m spacing where the crew leader judged it necessary to properly sample the response. A TerraScope transmitter operating at base frequency of 5 Hz with peak transmitter current typically 23 A was used. The surveys were designed to extend the maximum depth of investigation below that of the VTEM survey to a minimum of 600m below surface. The survey over the Pick Lake mineralization confirmed that this survey configuration resulted in detection of mineralization at least 400m below surface. The surveys covered the prospective stratigraphy containing the Pick Lake and Winston Lake VMS deposits, extending north from Pick Lake and both north and south from Winston Lake.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	The following work is planned for the Superior Lake Project: • Assays and analysis • Completion of the geophysics modelling of the DHTEM program • Completion of Optimisation study review of the BFS