



# Media Release

## Silver Spruce contracts MPX Geophysics for Mag/Radiometrics/VLF Airborne Survey on Melchett Lake VMS Project, Ontario

**October 14, 2021 - Bedford, NS - (TSXV:SSE)** - Silver Spruce Resources Inc. (the “Company”) is pleased to announce a technical services agreement signed with MPX Geophysics Ltd. (“MPX”) to carry out an airborne survey of the Melchett Lake Zn-Cu-Au-Ag volcanogenic massive sulphide project (“Melchett” or the “Property”). Melchett is an advanced precious and base metal property located in the Thunder Bay Mining District, northern Ontario, Canada (the “Property”). The Property lies 110 km north of Geraldton and 60 km north of Nakina.

“With the ratification of a collaborative exploration agreement with Ginoogaming First Nation and a comparable agreement achieved earlier in 2021 with Aroland First Nation, we are excited to re-launch our exploration program at Melchett Lake. The MPX airborne survey will start this week and require only 3-5 flight days, weather permitting, to complete data collection over the entire Property,” said Greg Davison, Vice-President Exploration and Director of Silver Spruce. “The 2021 Melchett field program was subject to several periods of inactivity related to the early spring with unseasonably high temperatures, poor lake ice conditions and advanced break-up, successful negotiation of multiple land use, environmental management and planning agreements with First Nations, COVID logistical constraints, forest fire access restrictions and regulatory requirements for ENDM exploration permitting.”

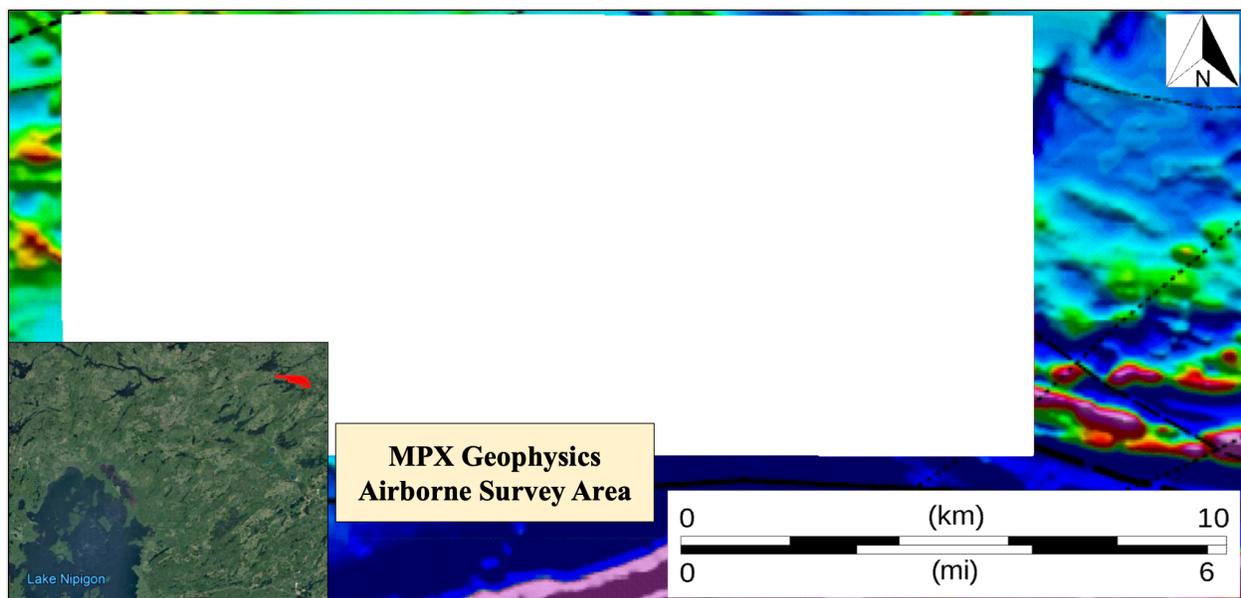
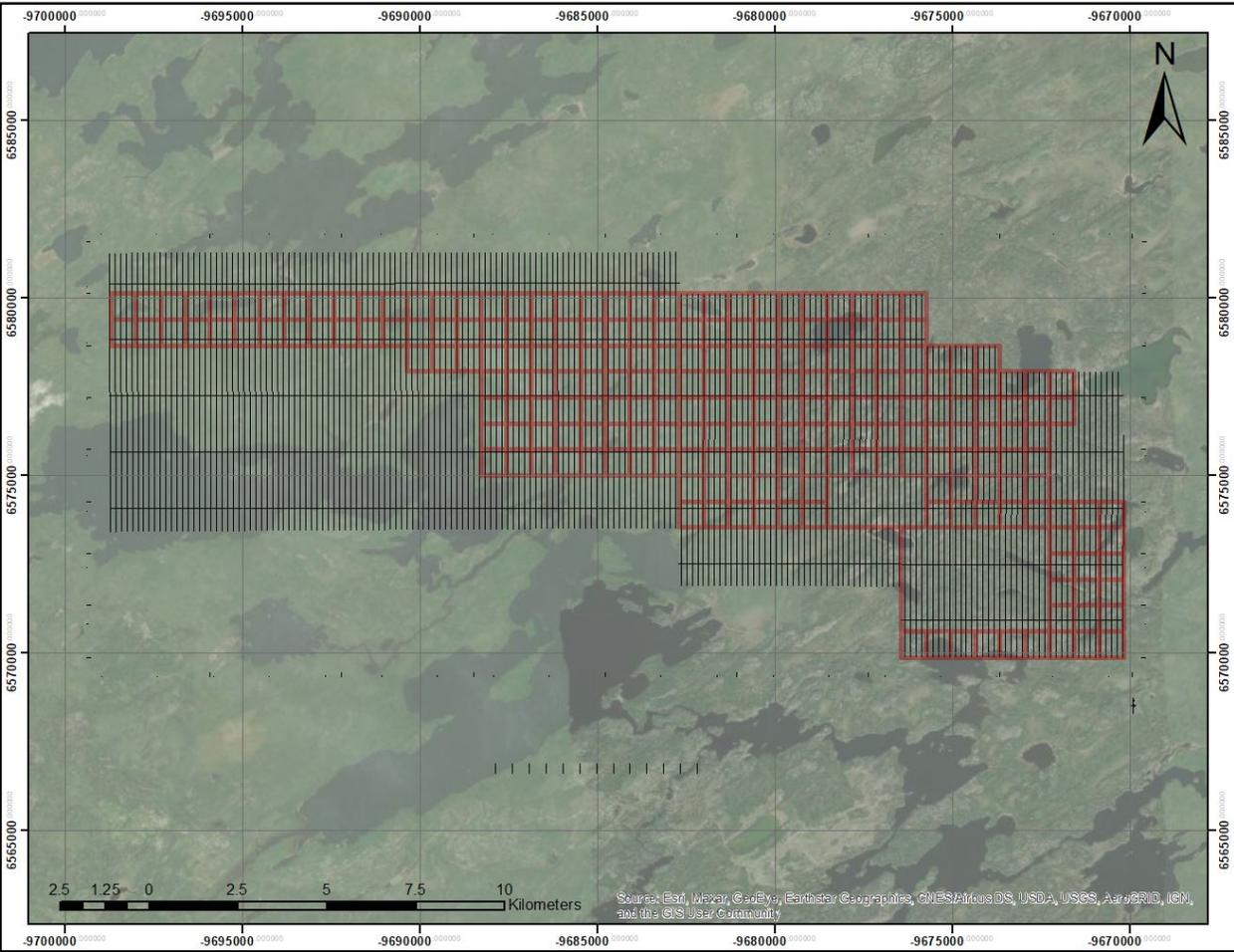


Figure 1. Melchett Lake Claims on 2010 Regional Magnetic Survey showing location of MPX Geophysics airborne survey area. Inset map to left indicates property location northeast of Lake Nipigon, Ontario.

“The principal target area for the program has extensive soil and rock geochemical anomalies, known VMS style mineralization from surface to >500 metres depth, highly favorable alteration type and intensity, increasing Cu to Zn with depth, and deep Maxwell modelled plates off-hole from borehole EM surveys. The MPX survey will complement our project ArcGIS database with state of the art, high resolution magnetic, radiometric and VLF data over these promising targets and extend through several historical gold, silver and base metal showings and geochemical anomalies identified on the eastern and western claims. Pending completion of ENDM permitting for ground activities and contractor scheduling, the Relf Lake camp construction and line-cutting by Pleson Geoscience is deferred to January 2022 with the Quantec Geoscience (“Quantec”) deep-penetrating SPARTAN Magnetotelluric (“MT”) survey booked for February 2022.”

**MPX Geophysical Survey**

The airborne survey will comprise a 927 line-km along N-S flight lines with 100 metre nominal line spacing, and 91 line-km of E-W oriented tie lines with 1,000 metre nominal line spacing (Figure 2). The Property grid will cover a total area of approximately 18 km E-W along the general strike of the VMS mineralization and 5km N-S with three 1 km steps to encompass the claim location. The Piper Aztek aircraft will fly daily from Thunder Bay 310 km SW of the Property.



*Figure 2. Melchett Lake Claims showing location of MPX Geophysics airborne survey (UTM WGS 84) using 100m N-S flight lines and 1000m E-W tie lines. Base map - World Imagery.*

The survey will collect magnetic, radiometric and VLF EM data supported by leading-edge positioning and processing equipment, both in the aircraft cabin and on the ground with the GEM Systems GSM-19 Base Station Magnetometer and a field data processing workstation.

The aircraft airspeed will be approximately 130-150 knots. Optimum terrain clearances for the aircraft and instrumentation (magnetometer, spectrometer, VLF) during normal survey flying are 70 metres. Vertical position along flight lines will be established using a pressure altimeter, a radar altimeter and GPS height. Final horizontal survey positions will be computed from differentially corrected GPS to a precision of  $\pm 1\text{m}$ .

The attitude and motion of the aircraft in flight, with respect to the Earth's magnetic field vector, will be monitored/recorded by a three-component fluxgate magnetometer (Billingsley TFM 100G2 Triaxial Fluxgate Magnetometer), which is very sensitive to attitude changes.

The magnetic sensors utilized for the survey are Geometrics 822A or Scintrex CS3 high resolution cesium split-beam total-field magnetometer which will be installed in a tail stinger. Magnetic compensation of the acquired "raw" magnetometer data will be collected in real-time using the RMS Instruments DAARC500/ARC510 Data Acquisition and Aeromagnetic Real-Time Compensator ("RMS"), together with comprehensive and flexible data acquisition and recording. The RMS offers the ultimate in aeromagnetic compensation.

Radiation Solutions RS-500 multi-channel gamma-ray spectrometer with 33.6 liters "downward looking" NaI sensor, and 8.4 litres "upward looking" NaI sensor will be installed on the aircraft for the survey. The RS-500 supersedes all other airborne systems given its advanced DSP / FPGA technologies. The RS-500 is a fully integrated system that includes an individual Advanced Digital Spectrometer (ADS) for each crystal within the detector box.

The Totem VLF sensor utilized for the survey will be a RMSVLF system. This device contains three orthogonal coils, a signal amplifier and it has eight different frequency bands for different VLF transmitters. The VLF system is sampled in the 15-25 kHz. The VLF system employed is configured to simultaneously measure five transmitting stations.

MPX crews will carry out all field activities in Ontario under strictly adhered to corporate and client COVID safety protocols.

### **Property Highlights**

The Property covers 4,716 hectares (230 single cell mineral claims and two multi-cell mineral claims) with VMS and Au targets located in east to southeast-striking, subvertical to moderately north-dipping quartz-sericite schists. These units exhibit steep down-dip to southeast raking or plunging lineations. The tightly folded nature of the Archean metavolcanics is evident as re-interpreted from historical mapping and geological logs, and 2002 Helicopter TEM and MAG survey and 2010 regional airborne magnetic survey, the latter shown on Figure 1. The Melchett

Lake belt contains occurrences of polymetallic Zn-Pb-Cu-Ag-Au VMS mineralization similar in several respects to deposits exploited at Geco, Mattabi, and Winston Lake, among others.

The claims to the east and west of the core Relf and Nakina targets cover 11 kilometres of known extensions of the Melchett Lake mineralized horizons and include high potential VMS and Au targets located along sub-parallel isoclinal fold limbs and/or oblique structural breaks interpreted from recently acquired exploration magnetic and GEOTEM data (see Press Release December 4, 2019). These targets exhibit either chargeable, weakly magnetic trends or coincident EM and magnetic responses with the latter related to variable oxide and sulphide content, including pyrrhotite and pyrite, with base metal sulphides and gold. Only limited and shallow exploration diamond drilling was conducted in both the Key Lake area to the west and Iron Lake area to the east.

Highlights of the prospective geology, alteration and mineralization include a strike extent of more than 20 km, multiple folded or stacked horizons of coincident alteration and metal mineralization, high Zn/Cu, Zn/Pb and Ag/Au ratios, increasing Cu/Zn at depth, extensive remobilization of major and trace elements with defined enrichment (Fe, Mg, Co, Cr, Cd) and depletion (Na, Sr, Ca) zones.

Surface samples, as shown in Figure 3, with Fe-sphalerite (blackjack or marmatite), contain locally high-grade lenses of Zn & Ag with variable Cu, Au and Pb, and historical gold grades to 28.8 g/t Au, silver grades to 560 g/t Ag and zinc grades to 19.1%.



*Figure 3. Zinc (Fe-sphalerite) mineralization in quartz-sericite-pyrite schist collected by Project QP from the main trench in the Relf Lake Zone.*

Other than the two DDH SB drill holes, only limited and shallow historical exploration drilling was conducted in the Relf, Nakina, Half Moon, Key Lake and Iron Lake areas on the Property.

Increased alteration and anomalous metal values reported over large core intervals (up to 245 metres in DDH SB-07-01 from 345-590 metres) are accompanied by strong electromagnetic (BHTEM) off-hole responses in the deepest intervals of the last drill holes tested during 2007 (DDH SB-07-01) and 2012 (DDH SB-08-02).

The richest Zn mineralization in core was reported from DDH SB-08-02 and chalcopyrite occurred in stockwork-style veinlets. The deepest BHTEM Maxwell modelled plate, associated with these heavily altered and mineralized quartz-sericite schists and adjacent silica-rich metavolcanics in the Relf Zone, and which appears to plunge or rake to the east-southeast, remains undrilled to date.

### **Qualified Person**

Greg Davison, PGeo, Silver Spruce VP Exploration and Director, is the Company's internal Qualified Person for the Melchett Lake Project and is responsible for approval of the technical content of this press release within the meaning of National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"), under TSX guidelines.

### **About MPX Geophysics Ltd.**

MPX Geophysics is an international leader in airborne and remote sensing for the mining, O&G, civil and environmental engineering sectors. MPX operational and HSE procedures are industry-leading. MPX has undertaken more than 500,000 line-km of airborne geophysical surveys worldwide operating from both helicopter and fixed-wing platforms, including numerous projects in northern Canada, in remote and difficult locations. Survey technologies include magnetics, radiometrics, electromagnetics, gravity, MT, LiDAR, data processing and interpretation. The MPX Group of Companies is headquartered in Toronto, Ontario, Canada.

### **About Silver Spruce Resources Inc.**

Silver Spruce Resources Inc. is a Canadian junior exploration company which has signed Definitive Agreements to acquire 100% of the Melchett Lake Zn-Au-Ag project in northern Ontario, and with Colibri Resource Corp. in Sonora, Mexico, to acquire 50% interest in Yaque Minerales S.A de C.V. holding the El Mezquite Au project, a drill-ready precious metal project, and up to 50% interest in each of Colibri's early stage Jackie Au and Diamante Au-Ag projects, with the three properties located from 5 kilometres to 15 kilometres northwest from Minera Alamos's Nicho deposit, respectively. The Company is acquiring 100% interest in the drill-ready and fully permitted Pino de Plata Ag project, located 15 kilometres west of Coeur Mining's Palmarejo Mine, in western Chihuahua, Mexico. Silver Spruce recently signed a Definitive Agreement to acquire 100% interest in three exploration properties in the Exploits Subzone Gold

Belt, located 15-40 kilometres from recent discoveries by Sokoman Minerals Corp. and New Found Gold Corp., central Newfoundland. Silver Spruce Resources Inc. continues to investigate opportunities that Management has identified or that have been presented to the Company for consideration.

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*Notice Regarding Forward-Looking Statements*

*This news release contains "forward-looking statements," Statements in this press release which are not purely historical are forward-looking statements and include any statements regarding beliefs, plans, expectations or intentions regarding the future, including but not limited to, statements regarding the private placement.*

*Actual results could differ from those projected in any forward-looking statements due to numerous factors. Such factors include, among others, the inherent uncertainties associated with mineral exploration and difficulties associated with obtaining financing on acceptable terms. We are not in control of metals prices and these could vary to make development uneconomic. These forward-looking statements are made as of the date of this news release, and we assume no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those projected in the forward-looking statements. Although we believe that the beliefs, plans, expectations and intentions contained in this press release are reasonable, there can be no assurance that such beliefs, plans, expectations or intentions will prove to be accurate.*