# **Media Release**



# Silver Spruce discovers new High-Grade Exploration Target on Jackie Au-Ag Property, Sonora, Mexico – Au to 9.65 g/t, Ag to 515 g/t

*May 20, 2021 - Bedford, NS -* (TSXV:SSE) - Silver Spruce Resources Inc. ("Silver Spruce" or the "Company") is pleased to announce the discovery of a pristine exploration target with promising Au-Ag assay results from its Phase 1 prospecting and rock sampling program conducted over three weeks on the 1,130-hectare Jackie Au-Ag property ("Jackie" or the "Property").

"Silver Spruce put the technical boots on the ground and our Hermosillo-based geological team has discovered a high quality, broadly-zoned geochemical anomaly with multiple mineralized surface rock samples ranging up to 9.65 g/t Au and 515 g/t Ag with intense oxide and silicate alteration, and presence of base metals and pathfinder elements," said Greg Davison, Silver Spruce VP Exploration. "Jackie had seen very little structured exploration and our first prospecting program successfully identified a previously untouched Au-Ag target ready for systematic sampling. The Phase 2 geological program scheduled for a late May startup will focus on grid sampling and mapping around our discovery and on ASTER targets noted at higher elevations."

The Company recently signed a Definitive Agreement (Press release November 30, 2020) with Colibri Resource Corp. to acquire 50% interest in Jackie, an early-stage precious metal project located 175 km east of Hermosillo, Sonora, Mexico. The large grassroots property (Figure 1) is located in a very productive region only one to two kilometres south from our El Mezquite and



Diamante properties and adjacent to the west of Minera Alamos' Santana project.

Figure 1. Jackie and Diamante 2 Concession Location Map. Access from Tepoca south on Highway #117 and local road to La Quema. Discovery area 3km north of La Quema is indicated by the white arrow.

The Company, with a four-person team (two senior geologists and two samplers) and all necessary logistical support, undertook a Phase 1 exploration program, including prospecting, rock, soil and stream silt/sand sampling, and preliminary geological mapping of areas exhibiting significant alteration or mineralization and collection of structural data. The team focused on identifying and sampling readily accessible areas of interest, confirming areas for future detailed mapping and providing a geochemical baseline map for vectoring toward potential Phase 2 targets.

All aspects of the exploration program will be conducted with strict adherence to COVID-19



protocols for personal safety.

Figure 2. Ridge showing intense oxidation and argillic alteration within large polymetallic anomaly as indicated in Figure 1 and located 3km north of La Quema.

Figure 2, identified as one of the early exploration targets from aerial photography and review of regional ASTER (Advanced Spaceborne Thermal Emission and Reflectance Radiometer) imagery, shows a distinctive andesite ridge with intense oxidation, silicification and argillic alteration, and a notable paucity of vegetation. Outcrop exposures, mapped on a reconnaisance1:5,000 scale, included mainly andesite in the central valley and rhyolite tuff on the west and southwest. The Property is characterized by 300 metres of elevation from the river valley to the cliff top plateaus.

A total of 123 rock samples, plus duplicates and QA/QC standards and blanks, were delivered to ALS for gold and hyperspectral analysis using the Terraspec 4 and aiSIRIS identification of the

principal alteration minerals and their relative intensity. Multi-element analysis was performed as results warranted from the gold values and coincident with visual alteration mapping.

The prospecting sample locations are shown on the Property map in Figure 3 and selected rock sample assays and analyses, sorted by Au g/t, are displayed in Table 1.

The extensive oxide and silicate alteration, verified by preliminary aiSIRIS results of hyperspectral analysis, and seen in Figure 2 represented bleached and oxidized argillic zones



with aluminous clay minerals and muscovite, and commonly low metal values. *Figure 3. Prospecting sample location map of Jackie Property* 

Sample #	Au	Ag	As	Cd	Cu	Fe	Hg	Pb	S	Sb	Zn
	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
221009	9.56	515	1110	12.8	429	3.7	101	32800	2.1	3930	710
221115	0.559	5	104	5	59	4.08	0.433	11	0.02	30	456
221008	0.245	37.5	156	0.25	39	0.96	7.58	1180	0.28	39	33
221112	0.169	0.9	85	0.25	8	1.62	70.7	8	0.07	13	9
221007	0.112	14.8	55	0.25	23	1.05	4.61	461	0.06	47	64
221208	0.102	1.7	632	0.25	19	4.05	0.687	4790	0.25	36	163
221111	0.066	0.8	66	0.25	15	1.06	1.29	85	0.32	21	33
221209	0.059	4.1	353	10.9	31	3.29	0.286	53	0.02	34	1715
221091	0.05	1.5	34	0.25	13	3.61	0.014	14	0.05	20	3
221012	0.029	2	160	0.25	127	4.69	2.4	109	0.02	80	81
221212	0.027	1.3	393	0.25	17	1.98	0.059	100	0.07	61	37

Table 1. Selected assays for rock samples, sorted by Au g/t, noting anomalous Ag g/t, base metals andpathfinder trace elements.

The current suite of samples was comprised of kaolinite, dickite, alunite, pyrophyllite, montmorillonite, saponite-nontronite, opaline silica and jarosite in variable proportions. Zeolite speciation to define temperature ranges was not confirmed. Samples collected from the northern area of the ridge as noted in Figure 4 also displayed intense replacement by zeolite, kaolinite, alunite, montmorillonite, opaline silica and muscovite though contained the bulk of the anomalous gold and silver values. Ubiquitous hematite with lesser jarosite and secondary oxyhydroxides was identified on steep vertical exposures (Figure 4) and in quartz vein assemblages.

Further interpretation of the hyperspectral minerals and potential epithermal alteration zones will be generated upon receipt of the final sample batch and raw files from ALS and comparison with



#### property-wide ASTER and LiDAR imagery.

Figure 4. Left- Vertical cliff exposure with pervasive oxidation to hematite and iron oxyhydroxides  $\pm$  jarosite. Right -Prospecting sample JK9 – 9.65 g/t Au, 515 g/t Ag – intense low temperature alteration including zeolite with lesser jarosite and muscovite confirmed by aiSIRIS hyperspectral analysis.

Geochemical analyses of precious metals clearly identified a strong Au-Ag anomaly, commonly though not exclusively, associated with elevated Hg, Pb, Zn, Cd, As, Sb and Cu. Gold-silver ratios are highly variable with Ag assays generally low and the highest silver values are linked to the best gold assays. Hg shows a strong positive link to Au-Ag as does Zn-Cd though each element displays a wide range down to background values. Copper, arsenic and antimony display a more diffuse spatial pattern with lateral extent and Ba-Sr exhibit an inverse relationship to precious metals with both trends similar to the multi-element data recorded for the nearby El Mezquite property.

Select maps illustrating the Phase 1 geochemical anomalies, based on 75<sup>th</sup>, 90<sup>th</sup>, 95<sup>th</sup> and 98<sup>th</sup> percentiles, are provided in Figure 5 for gold, arsenic and strontium. The additional geochemistry and geological maps and images from the field program will be provided on the updated Silver Spruce web site (www.silverspruceresources.com) shortly.



Figure 5. Geochemistry (Au, As, Sr ppm) for Phase 1 prospecting samples, Jackie property.

### **Project Background**

The Jackie Project is located within the western portion of the Sierra Madre Occidental Volcanic Complex within the prominent northwest-trending "Sonora Gold Belt" of northern Mexico and



parallel to the precious metals-rich Mojave-Sonora Megashear (Figure 6).

# Figure 6. Location Map of Jackie Property and Mines of the Sierra Madre Occidental

The Property is situated approximately six kilometres northwest of the Nicho deposit currently under mine development by Minera Alamos. Other nearby large operating mines include Alamos Gold's Los Mulatos gold mine and Agnico Eagle's La India gold mine located 50-60 km to the northeast, Agnico Eagle's Pinos Altos Mine, 95 km southeast and Argonaut's La Colorada Mine, 100 km to the west. Exploration is very active with adjacent and nearby properties reported to be held by Minera Alamos, Newmont, Garibaldi, Evrim, Kootenay Silver and Peñoles.

The 1,130-hectare Property is easily accessible from Hermosillo to the Tepoca area and heading south from Mexican Highway #16 or west from Highway #117, or from Ciudad Obregón travelling northeast on Hwy. #117 and west to the pueblo of La Quema with vehicles and then pack teams along dry river beds, dirt roads and trails. The southerly road from Hwy #16 traverses through the centre of the known gold mineralization at El Mezquite only 2 km north of Jackie. High voltage power lines are positioned on Highway #16.

# **Project Geology**

The Miocene-age lithologies are represented by the Baucarit Formation consisting of intercalated polymictic conglomerate, sandstone and 'limonite' overlying the Tepoca Formation represented by porphyritic andesite at the base, and basalt and basaltic andesite at the top of the section.

The Baucarit conglomerate unit is represented by unsorted pebbles to large cobbles of andesite and basalt of different sizes, from 1cm to 20cm in diameter, exhibited moderate to strong silicification. The Tepoca basalt underlying the conglomerate displayed a porphyritic texture with moderate silicification. Neither unit exhibited evidence of any mineralization.

Tepoca andesite is similar to the above unit though with light gray color when fresh and reddish color on exposure, displayed moderate to intense oxidation and alteration, with hematite and associated Fe oxide/oxyhydroxide, jarosite and Mn oxides. Silicate alteration comprised weak sericitization and moderate to strong silicification, weak to moderate argillization and veinlets of quartz and hematite. Transecting the andesite in a northeasterly strike were narrow 1 to 1.5 metre wide, lineaments of brecciated andesite with monolithic fragments, abundant hematite, jarosite, moderate to strong silicification, and traces of very finely disseminated pyrite.

Rhyolitic crystal tuff units, located to the west and southwest, presented moderate to strong silicification, moderate veinlets of chalcedonic silica, and narrow stringers of calcite with quartz crystals, weak oxidation to hematite and weak to moderate propylitic alteration (chlorite-carbonate). Precious metal values were very low to below detection limits.

# **Geochemical Analysis, Quality Assurance and Quality Control**

Rock samples were delivered to the ALS sample preparation facility in Hermosillo, Sonora, Mexico. ALS Global in North Vancouver, British Columbia, Canada, is a facility certified as ISO 9001:2008 and accredited to ISO/IEC 17025:2005 from the Standards Council of Canada.

The samples were crushed to 70% passing 2mm (PREP-31) and a split of up to 250 grams pulverized to 85% passing 75 micrometres (-200 mesh). The sample pulps and crushed splits were transferred internally to ALS Global's North Vancouver analytical facility for gold and multi-element analysis. Pulps (50gram split) were submitted for Au analysis by Fire Assay with Atomic Absorption finish (Au-AA24). The retained pulps also were analysed by Four Acid Digestion followed by Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) multi-element analyses (ME-ICP61m) with Hg by Aqua Regia and ICP-MS (Hg-MS42). Overlimit Au and Ag samples were analyzed by Fire Assay with Gravimetric Finish Ore Grade (Au-GRA21 or Au-GRA22, Ag-GRA21). Overlimit base metals were analyzed by Four Acid Digestion followed by Ore Grade Inductively Coupled Plasma Atomic Emission Spectrometry (ICP-AES) for Cu, Pb and Zn (Cu-OG62, Pb-OG62, Zn-OG62).

In-house quality control samples (blanks, standards, duplicates, preparation duplicates) were inserted into the sample set. ALS Global conducts its own internal QA/QC program of blanks, standards and duplicates, and the results were provided with the Company sample certificates. The results of the ALS control samples were reviewed by the Company's QP and evaluated for acceptable tolerances. All sample and pulp rejects will be stored at ALS Global pending full review of the analytical data, and future selection of pulps for independent third-party check analyses, as requisite.

All of the metal values disclosed herein by Silver Spruce are reported from grab and channel samples which may not be representative of the metal grades. The Company has reviewed the

current QA/QC certificates and believes the sampling, analytical protocols and data will withstand scrutiny for inclusion.

#### **Qualified Person**

Greg Davison, PGeo, Silver Spruce VP Exploration and Director, is the Company's internal Qualified Person for the Jackie 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 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 also is pursuing exploration of 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 Resources Inc. continues to investigate opportunities that Management has identified or that have been presented to the Company for consideration.

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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.