# S C L S T I C E

### Solstice delineates structurally complex area of fertile pegmatites on its Stewart Lake Project, Northwest Ontario

- Field, whole rock, and LIBS data point to high potential for spodumene mineralization -

VANCOUVER, British Columbia, January 9, 2024 - Solstice Gold Corp. (TSXV: SGC) ("**Solstice**", "we", "our" or the "**Company**") is pleased to provide an update on the exploration program at its Stewart Lake Project ("**SLP**") in the English River Subprovince ("**ERS**"), approximately 275 km NNE of Thunder Bay, Ontario.

Solstice's 2023 exploration program covered the majority of the SLP Property using road, boat, and helicopter-based prospecting traverses, as well as an initial soil survey. Over 350 pegmatites have been delineated through 2023 prospecting and historical drilling and are widely distributed across the property. A combination of high pegmatite density, fertile mineral assemblages, and elevated lithium in indicator minerals, summarized in this News Release, define a broad swath of fractionated fertile pegmatites coincident with major regional structures in the east and southeast of SLP (see **Figure 1**) which we believe suggest high potential for spodumene mineralization in the area.

Major faults traversing the property define a sub-domain boundary zone. These juxtapose two structurally distinct granite – migmatite terrains and bound a regionally extensive iron formation and metasediment stratigraphy. The most fractionated pegmatites and most promising geochemical signatures are developed within these fault zones, especially where associated with the iron formation package. The most fractionated pegmatites occur mainly in the east and southeast part of the project area, where numerous pegmatites occur, some with thicknesses exceeding 25m and crystals of albite up to 1m across. Over 14km strike length of this target area remains to be explored and will be the focus of exploration in 2024.

Pablo McDonald, Solstice CEO stated, "Our technically focused program of mapping, hand-held LIBS and whole rock geochemistry demonstrate that our district-scale SLP project contains an extensive, fractionated pegmatite field in an attractive structural setting. By analogy to the history of known lithium districts in Ontario, we believe that the potential for discovery of lithium mineralization at SLP is high. It is important to note that much of the target area that we have vectored towards remains open for exploration. The next step is to focus exploration on the 14 km target area that exhibits promising indicators of LCT fertility."

#### Pegmatite Geochemistry Compares Favourably with Established LCT Pegmatite Districts

Extensive geochemical analysis using LIBS<sup>1</sup> and whole rock geochemistry<sup>2</sup> show indicators of fertility across the property with the best values being found within the sub-domain boundary structural zone, especially in its southeastern part of the project area. Whole rock geochemistry of these pegmatites compares favourably with other established pegmatite districts – particularly the Quetico Subprovince and the Allison Batholith<sup>3</sup> areas, both of which host numerous spodumene-bearing pegmatites and lithium deposits. Key results include:

<u>Elevated Lithium in Alkali Feldspars</u>: A total of 63 (22%) of analyzed alkali feldspars contain detectable lithium, ranging from 10 ppm to 2,080 ppm (i.e. 0.45% Li<sub>2</sub>O – see Figure 1 and Table 1). Elevated lithium in potassium feldspar at SLP is widespread and is best-developed in the southeastern part of the project area. Elevated lithium in alkali feldspar has been shown to be a reliable indicator for the presence of spodumene in lithium districts<sup>4,5</sup>. The lithium contents and distributions of alkali feldspars at SLP (Figure 1) are comparable to those found in these districts and are considered by Solstice to be a positive indication of potential spodumene mineralization. The

distribution of elevated Lithium in potassium feldspar at SLP is independently supported by whole rock data, particularly K/Rb ratios, discussed below.

<u>Fractionated K/Rb ratios</u>: Selway et al.<sup>6</sup> suggest that K/Rb ratios below 270 are a good indicator of advanced fractionation in pegmatite exploration. Low K/Rb ratios are developed in several parts of the SLP project, particularly in the SE part of the project area (Figure 1). Analyses of K/Rb vs K/Cs plots for SLP pegmatites suggest that the SLP data fall within the fields of the Allison Lake Batholith and Quetico areas (OGS MRD111), both of which host lithium-bearing pegmatites and have lithium deposits.



#### Figure 1: Lithium in Alkali Feldspars and K/Rb Ratios at SLP.

Note: Li values >100 in alkali feldspar is labelled. See Table 1 in Data Sources for summary statistics and References for analytical details.

#### Multi-Element Soil Anomalies Defines Additional Fertile Pegmatite Potential

Based on the development of fractionated pegmatites in the southeastern part of the project area, a test soil survey (Ah, humus) was carried out to determine the effectiveness of this technique to aid exploration of the largely overburdencovered iron formation target area which extends >14km to the west. Historical diamond drill logs of the iron formation reported in government files document extensive pegmatites over this strike length.

Soil Survey results exhibit elevated multielement anomalism (Li-Rb-Cs-Nb-Be) adjacent to exposed pegmatites discussed above. Stronger anomalies are identified in other overburden covered areas of the limited survey identifying new targets and demonstrating the utility of soils surveys in LCT pegmatite exploration. The strongest results define anomalies that crosscut the stratigraphic trend and are present where there is no outcrop or historical drilling (see **Figure 2**). These anomalies suggest that an expanded soil program has the potential to delineate additional pegmatite targets.



**Figure 2: SLP Soil Survey showing Lithium concentrations in soils, K/Rb values, and known pegmatites** See Table 2 for statistical data related to geochemical analysis on soil samples.

David Adamson, Solstice Chairman, stated "Our first pass exploration of this district-scale project has been very successful and confirms a newly-identified area of fertile pegmatites in a permissive structural setting which we believe demonstrates good potential for lithium discovery. Our analysis of project data suggests that SLP is geochemically similar to other evolved pegmatite districts in Ontario that were subsequently found to host spodumene mineralization. Our goal is to replicate this success as we vector towards discovery."

#### **Sampling and Analytical Protocols**

#### Soils:

An approximately 250 g sample of Ah (humus) soil was collected in standard kraft sample bags at 100 metre stations along 200 m spaced lines. Samples were shipped to Activation Laboratories Ltd. (ActLabs) in Ancaster Ontario. At ActLabs, the sample was dried and 0.5g of sample material was digested using Aqua Regia and subsequently analyzed by ICPMS analysis for 63 elements (package UT1). In addition to internal ActLabs controls, internal standards were inserted into the sample stream. ActLabs is independent of Solstice and its consultants.

#### Whole Rock:

Sample material weighing from 1 to 2 kg is selected and placed in plastic bags. Sample details and a GPS coordinate were recorded. A sample tag with the sample number is tied with flagging tape to an example of the sample and left in the field. A duplicate sample tag is placed in the sample bag. The samples were delivered directly to the lab in Thunder Bay, Ontario by Solstice employees. Analysis method: Peroxide (Total) Fusion, ICP-OES & ICP-MS with 55 elements that include detection levels for Li of 15ppm - 50,000ppm and Rb of 0.4ppm - 5,000ppm (ActLabs code UT7). Sodium peroxide fusion provides total metal recovery and is effective for the decomposition of sulphides and refractory minerals which are common to pegmatites.

#### **Data Sources and References**

#### LIBS:

Initial analysis of samples from Solstice's site visit were done using a Sci-Labs Z-300 LIBS (laser-induced breakdown spectroscopy) analyzer. Lithium data were calibrated against LCT pegmatite standard GTA-06. Data should be considered semi-quantitative, but are independently confirmed by whole rock data (K/Rb values, for example). In addition, at least four analyses per mineral were carried out (two in "Geochem" mode, two in Element Pro mode).

#### Table 1: Summary statistics for Lithium in LIBS for Alkali Feldspars

Statistic	Li_ppm		
Number of observations	63		
Minimum	20.000		
Maximum	2080.000		
1st Quartile	60.000		
Median	80.000		
3rd Quartile	115.000		
Mean	176.984		
Variance (n-1)	121234.306		
Standard deviation (n-1)	348.187		

Note: analyses contain >1.5% Mg and/or Fe were rejected for inclusion in the statistics and in Figure 1.

Statistic	Li_ppm	Cs_ppm	Rb_ppm	Ga_ppm	Nb_ppm	Sn_ppm
Number of observations	134	134	134	134	134	134
Minimum	0.100	0.060	0.400	0.010	0.050	0.025
Maximum	8.100	1.480	11.500	7.070	1.400	1.280
1st Quartile	0.300	0.200	1.200	0.010	0.100	0.180
Median	0.700	0.335	2.250	0.470	0.200	0.310
3rd Quartile	1.575	0.508	4.500	1.288	0.400	0.500
Mean	1.244	0.378	3.123	0.813	0.337	0.381
Variance (n-1)	1.993	0.060	6.372	1.115	0.098	0.064
Standard deviation (n-1)	1.412	0.246	2.524	1.056	0.313	0.253

Table 2: Summary statistics for Soil Samples

<sup>1</sup> LIBS (laser-induced breakdown spectroscopy) using a Sci-Labs Z-300 analyzer. Lithium data calibrated against LCT pegmatite standard GTA-06. Data should be considered semi-quantitative pending confirmation by other analytical techniques. See <u>Data</u> <u>Sources and References</u> above.

<sup>2</sup> Rock chip and channel samples were taken in the field and sent to ActLabs in Thunder Bay, Ontario for analysis. Samples were tested using the UT-7 analytical package using QOP Sodium Peroxide (Sodium Peroxide Fusion ICPOES + ICPMS). Also see <u>Sampling</u> <u>Protocols</u>, above.

<sup>3</sup> When K/Rb versus K/Cs values from SLP pegmatites are plotted against other pegmatite districts, the data show good overlap with the Quetico and Allison Lake pegmatite district fields. Internal SGC analysis and comparison with data from OGS MRD111.

<sup>4</sup> Maneta, V. and Baker, R. The potential of lithium in alkali feldspars, quartz, and muscovite as a geochemical indicator in the exploration for lithium-rich granitic pegmatites: A case study from the spodumene-rich Moblan pegmatite, Quebec, Canada, Journal of Geochemical Exploration, Volume 205, 2019, 106336, ISSN 0375-6742, https://doi.org/10.1016/j.gexplo.2019.106336.

<sup>5</sup> Morozova,L. et al. Distribution of Trace Elements in K-Feldspar with Implications for Tracing Ore-Forming Processes in Pegmatites: Examples from the World-Class Kolmozero Lithium Deposit, NW Russia. Minerals 2022, 12, 1448. https://doi.org/10.3390/ min12111448

<sup>6</sup> Selway et al. A Review of Rare-Element (Li-Cs-Ta) Pegmatite Exploration Techniques for the Superior Province, Canada, and Large Worldwide Tantalum Deposits. Exploration and Mining Geology, Vol. 14, Nos. 1-4, pp. 1-30, 2005.

#### About Solstice Gold Corp.

Solstice is an exploration company with quality, district-scale gold and lithium projects in established mining regions of Canada. Our 268 km<sup>2</sup> SLP lithium property is located in the English River Subprovince in an area that has recently garnered significant interest for its potential to host rare metals. Our 194 km<sup>2</sup> Red Lake Extension (RLX) and New Frontier projects are located at the northwestern extension of the prolific Red Lake Camp in Ontario and approximately 45 km from the Red Lake Mine Complex owned by Evolution Mining. Our 322 km<sup>2</sup> Atikokan Gold Project is approximately 23 km from the Hammond Reef Gold Project owned by Agnico Eagle Mines Limited. Our Qaiqtuq Gold Project which covers 886 km<sup>2</sup> with certain other rights covering an adjacent 683 km<sup>2</sup>, hosts a 10 km<sup>2</sup> high grade gold boulder field, is fully permitted and hosts multiple drill-ready targets. Qaiqtuq is located in Nunavut, only 26 km from Rankin Inlet and approximately 7 km from the Meliadine Gold Mine owned by Agnico Eagle Mines Limited. An extensive gold and battery metal royalty and property portfolio of over 80 assets was purchased in October 2021. Over \$2 million in value and three new royalties have been generated since the acquisition.

Solstice is committed to responsible exploration and development in the communities in which we work. For more details on Solstice Gold, our exploration projects and details on our recently acquired portfolio of projects please see our Corporate Presentation available at <u>www.solsticegold.com</u>.

Solstice's Chairman, David Adamson, was a co-award winner for the discovery of Battle North Gold Corporation's Bateman Gold deposit and was instrumental in the acquisition of many of the district properties in the Battle North portfolio during his successful 16 years of exploration in the Red Lake.

Sandy Barham, M.Sc., P.Geo., Senior Geologist, is the Qualified Person as defined by NI 43-101 standards responsible for reviewing and approving the technical disclosures of this news release.

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#### On Behalf of Solstice Gold Corp.

Pablo McDonald, Chief Executive Officer For further information on Solstice Gold Corp., please visit our website at <u>www.solsticegold.com</u> or contact: Phone: (604) 283-7234 <u>info@solsticegold.com</u>

#### Forward-Looking Statements and Additional Cautionary Language

This news release contains certain forward-looking statements ("FLS") including, but not limited to rare metal pegmatites prospectively, the need for more prospecting and analysis, reconnaissance prospecting in currently unexplored areas of the project, the focus of follow-up efforts on promising geochemical and mineralogical anomalies, the potential for LCT pegmatites to be high, and the extension of in-depth systematic prospecting and sampling program in the fall. FLS can often be identified by forward-looking words such as "approximate or (~)", "emerging", "goal", "plan", "intent", "estimate", "expects", "potential", "scheduled", "may" and "will" or similar words suggesting future outcomes or other expectations, beliefs, plans, objectives, assumptions, intentions or statements about future events or performance. In respect of the FLS, the Company has made certain assumptions that management believes are reasonable at this time. The assumptions include that the Company will have sufficient financial resources for fall sampling and prospecting, that pegmatite discoveries will be to the level anticipated however, there can be no assurance that such assumptions and statements will prove to be accurate and actual results could differ materially from those anticipated in such statements. Factors that could cause actual results to differ materially from any FLS include, but are not limited to, limited capital or access to additional capital for prospecting, delays in obtaining or failures to obtain required TSXV, governmental, environmental or other project approvals, inflation, changes in exchange rates, fluctuations in commodity prices, delays in the development of projects, regulatory approvals and other factors. FLS are subject to risks, uncertainties and other factors that could cause actual results to differ materially from expected results.

Potential shareholders and prospective investors should be aware that these statements are subject to known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those suggested by the FLS. Shareholders are cautioned not to place undue reliance on FLS. By their nature FLS involve numerous assumptions, inherent risks and uncertainties, both general and specific that contribute to the possibility that the predictions, forecasts, projections and various future events will not occur. Solstice undertakes no obligation to update publicly or otherwise revise any FLS whether as a result of new information, future events or other such factors which affect this information, except as required by law.