# S C L S T I C E

### Solstice Delineates Lithium Enrichment Coincident with Radiometric Anomalies on its Church and Kamuck Projects, Northwest Ontario

- Company Selected to Receive \$200,000 Ontario Government Grant -

VANCOUVER, British Columbia, January 31, 2024 - Solstice Gold Corp. (TSXV: SGC) ("**Solstice**", "we", "our" or the "**Company**") is pleased to provide an update on the exploration program at its Church and Kamuck Projects in the Quetico Subprovince, located approximately 85 km and 200 km NE of Thunder Bay, Ontario, respectively in the actively explored Quetico lithium district.

#### **Emerging Quetico Lithium District**

Spodumene discoveries reported by exploration groups in 2023 are defining a greatly expanded area with high lithium potential within the Quetico subprovince. The Quetico Lithium District is centred around the Georgia Lake Lithium deposit (owned by Rock Tech). In 2023, a new spodumene discovery was reported by Pegmatite One ("**PGA**"<sup>1</sup>) west of the Georgia Lake pegmatites and within 15 km of Solstice's **Church Property**. Spodumene was also reported in 2023 to the east of Georgia Lake by Tearlach ("**TEA**") on their Georgina Properties<sup>2</sup>, immediately adjacent to Solstice's Gathering Lake claims, optioned to Green Technology Metals. Solstice's **Kamuck Property** is located just to the east of these discoveries and exhibits abundant fertility indicators.

#### Principal Findings

Pablo McDonald, Solstice CEO stated, "After discovering several 20 to 30m wide pegmatites on the Church Property on the first few days of prospecting, our more in-depth exploration efforts throughout the fall showed a trend of lithium enrichment in alkali feldspars across the southern part of the property, as well as radiometric anomalies that are similar to those seen proximal to spodumene-bearing pegmatites in the region. We have also seen abundant pegmatite on both Kamuck and Church, with promising LIBS readings in an unknown mineral of up to 3.0% Li<sub>2</sub>O. The combination of positive signs coming out of these properties after initial prospecting show that these areas have the potential to host LCT Pegmatites and I'm therefore very excited to get back on the ground with detailed prospecting and sampling."

Both properties produced favourable results in 2023, which continues to show promise for Solstice's projects in the Quetico Lithium District:

- Preliminary exploration at Church in August of 2023, covering less than 5% of the area, delineated five 12-30mwide pegmatites with quartz, albite and potassium feldspar along with books of muscovite, garnet, and beryl or fluorapatite<sup>3</sup>.
- High Lithium values in alkali feldspars (50 280 ppm using LIBS<sup>4</sup>) define a lithium-enriched trend along the Southern end of Church. This trend largely aligns with the anomalies in radiometric data which continue to the north of Church and are spatially related to the Pegmatite One spodumene occurrence.
- LIBS analysis of unknown minerals at both Church and Kamuck have registered strong lithium responses. At Church, readings of up to 1.18% Li<sub>2</sub>O in an unknown mineral are coincident with the southern radiometric anomaly. At Kamuck, readings of up to 3.0% Li<sub>2</sub>O in a green mineral, likely fluorapatite were recorded after only one day of prospecting<sup>5</sup>.

#### **Detailed Results**

Further exploration of the area included prospecting and sampling throughout the fall of 2023, whole rock geochemical and LIBS analysis. Further study of publicly available geological and geophysical data has also helped to reveal promising geochemical and structural trends related to pegmatites on the Project.

#### Key results include:

- Analysis of Ontario Geological Survey (OGS) radiometric data<sup>6</sup> show Equivalent Uranium ("eU") anomalies that are related to a major structure the Black Sturgeon River Fault ("BSRF") and related faults which are also developed near Pegmatite One's recent spodumene discovery and other known pegmatites in the area (see Figure 1). The eU anomalies are interpreted by Solstice to be associated with a potassic granite source intrusion(s) which may also be the source of related pegmatites on the Property. Some pegmatites in the area are known to be uranium-bearing<sup>7</sup>.
- Geochemical analysis using LIBS has identified a lithium-enriched trend of over 50 ppm Li in alkali feldspars (50 280ppm), from potassic granites or pegmatites. Similar readings in alkali feldspars have been shown to be reliable indicators for the presence of spodumene in known lithium districts<sup>8,9</sup>.
- Sampling to date at Church suggests that elevated lithium in alkali feldspars is largely coincident with the pronounced eU anomaly. More regionally, the Pegmatite One spodumene occurrence and mapped (OGS) fertile pegmatites also display a close spatial relationship with eU anomalies (see inset, **Figure 1**)
- eU anomalies coincident with lithium enrichment in alkali feldspars at Church suggest potential fractionation outwards from core potassic (and uranium-enriched) source intrusion area(s). This is supported by low K/Rb ratios (a measure of fractionation) in pegmatites sampled to date outside the main area of eU enrichment (**Figure 1**).
- LIBS analysis in an unknown mineral has registered **readings of up to 5,470ppm Li** (**1.18% Li**<sub>2</sub>**O**) in a newly identified area of pegmatites in the SE area of the Project.



Figure 1: Church Project exploration results

Much of the Church Property has not been prospected or sampled. Based on the promising results that are clearly tied to eU anomalies that have analogs to the North along the BSRF, these areas have the potential to host LCT Pegmatites, and therefore the next step on the Property will be to cover the rest of this area with detailed prospecting and sampling.

#### Kamuck Property

Solstice acquired the 31km<sup>2</sup> Kamuck Property in October 2023 after a one-day property due diligence examination. Key observations include:

- Confirmation of a well exposed pegmatite swarm covering a 1km by 800m area which was initially identified using aerial imagery (Figure 2). The pegmatite is typically coarse-grained plagioclase feldspar with abundant indicators of fertility including books of muscovite, garnet, cordierite, and possible fluorapatite<sup>10</sup>. The pegmatite swarm correlates with a pronounced ENE and NNE trending, 3.9km long eU radiometric anomaly<sup>11</sup> that satellite imagery shows has extensive exposure.
- Elevated Li content (LIBS readings of up to 3.0% Li<sub>2</sub>O) in a green mineral, likely fluorapatite<sup>12</sup>. According to Selway et.al., "the presence of blue or green Mn-rich fluorapatite indicates that the pegmatite has economic potential for Li-Cs-Ta"<sup>13</sup>. The fluorapatite also contains up to 1.02% Mn (1.31% MnO) which is also noted as a component in other fluorapatites in LCT pegmatites.

- The pegmatite swarm lies at the western end of, and is coincident with, part of a prominent ~3km ENE-trending eU anomaly interpreted to be a potential fault structure along which additional pegmatites may be developed. This, and other prominent structures and eU anomalies will be prospected in the 2024 field season.
- Upon seeing positive correlations between eU anomalies and lithium values in alkali feldspars at Church and Kamuck, Solstice subsequently staked a strong eU anomaly adjacent to Kamuck to bring its entire area to 43 km<sup>2</sup>.



Figure 2: Kamuck Property, showing eU responses and individual samples on prospected areas identified by aerial imagery

#### Solstice Selected to Received \$200,000 Ontario Government Grant

The Company has also been selected to receive grant funding of up to \$200,000 under the Ontario Junior Exploration Program ("OJEP") from the Ontario Government. This amount will cover up to 50% of eligible exploration costs, to a maximum of \$200,000 in respect of expenditures incurred by the Company during the period from April 1, 2023 to February 15, 2024. The Company also received a \$200,000 OJEP Grant for the exploration program on its SLP Project in 2023.

"As the global search for critical minerals intensifies, our government's Ontario Junior Exploration Program (OJEP) gives us a major competitive advantage and ensures Ontario will be a leading global supplier of critical minerals," said George Pirie, Minister of Mines. "Our government's \$200,000 investment in Solstice Gold's Church Project will help develop this promising lithium deposit in northwestern Ontario and create jobs. Lithium is a vital component in the manufacturing of electric vehicles, and it is great to see companies exploring for the critical minerals that will help us build an integrated supply chain in Ontario."

"We would like to thank the Ontario Government for the approval for funding under the OJEP program. We look forward to using these funds to extend our exploration program at our Church Project, which is in the heart of the Quetico Lithium District, only 85km from the Port of Thunder Bay" commented Pablo McDonald, Solstice CEO.

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

#### LIBS:

Initial analysis of samples from Solstice's site visit were completed 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).

#### Whole Rock Analysis:

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.

#### References:

- 1. Pegmatite One News Release: Pegmatite One Discovers High-Grade Lithium Mineralization During Extended Exploration at Frazer Lake Mound Property, August 2, 2023.
- 2. Tearlach News Release: Tearlach Resources Discovers Spodumene on Georgina Properties, October 18, 2023
- 3. XRD or other additional work will be required to definitively identify this mineral.
- 4. See "LIBS" under "Data Sources and References" above for a detailed description of LIBS procedures.
- 5. It is important to note that these unknown minerals occur only in trace amounts and their significance is an indicator of fractionation and lithium pegmatite potential.
- 6. Ontario Geological Survey, Ontario Airborne Geophysical Surveys: Aeromagnetic and gamma-ray Spectrometric Data, Lake Nipigon Embayment Area. Geophysical Data Set 1074.
- 7. Reference Ontario Mineral Index assessment data (OMI)
- 8. 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.
- 9. 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/min1211144.
- 10. The probable fluorapatite has well developed P, Fl, Cl, Br peaks in LIBS spectra consistent with fluorapatite but XRD or other work is required to confirm this with 100% certainty.
- 11. Ontario Geological Survey, Ontario Airborne Geophysical Surveys: Aeromagnetic and gamma-ray Spectrometric Data, Lac des Mille Lacs–Nagagami Lake Area. Geophysical Data Set 1078.
- 12. The mineral tentatively identified as fluorapatite contains well developed fluorine, chlorine and bromine peaks in LIBS analysis which is consistent with fluorapatite. Further analytical work will be required to positively confirm its composition. It is important to note that the probable fluorapatite mineral occurs only in trace amounts and its significance is an indicator of fractionation and lithium pegmatite potential.
- 13. 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.