GoldSpot Discoveries & Critical Elements Identify Lithium-Tantalum Targets in the Nemiscau Belt Using Artificial Intelligence

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- GoldSpot's proprietary Artificial Intelligence (AI) and geological interpretation highlights Lithium-Tantalum potential at Critical Elements' New Block 1-6 and 7 claims within the Nemiscau greenstone belt
- Engagement with Critical Elements to uncover EV battery material showcases GoldSpot's ability to work with leaders across all commodities and deposit types to identify new mineral exploration targets
- A total of 19 high to moderate prospectivity Lithium-Tantalum targets were identified, with Nickel-Copper and Gold potential also revealed

Toronto, September 7, 2021 - GoldSpot Discoveries Corp. (TSXV: SPOT) (OTCQX: SPOFF) ("GoldSpot" or the "Company"), a leading technology services company leveraging machine learning to transform the mineral discovery process and Critical Elements Lithium Corp. (TSXV: CRE) (OTCQX: CRECF) (FSE: F12) ("Critical Elements") are pleased to announce the results of a property-wide comprehensive data review, compilation, and target generation on Critical Element's New Block 1-6 and 7 claims within the prolific Nemiscau greenstone belt in James Bay, Québec.

GoldSpot works with leading exploration and mining clients across all commodities and deposit types, using cutting-edge technology and geoscientific expertise to mitigate exploration risks and significantly increase the efficiency and success rate of mineral exploration across resources.

Vincent Dubé-Bourgeois, CEO of GoldSpot Discoveries commented: "I'm thrilled to announce the results of our investigation and analysis of Critical Element's claims sourced from our team's extensive digital extraction of assessment files, government data and academic studies. This dataset provided outcrop/sample description, bedrock geology, geochemical analyses, and geophysical surveys which generated lithium-tantalum, copper-nickel, and gold focused targets, using our geological and machine learning methods. We look forward to working with the Critical Elements exploration team to validate these targets and further advance the claims."

Jean-Sébastien Lavallée, CEO of Critical Elements commented: "We are very pleased with the results of the combined AI targeting and the outcrop detection conducted by GoldSpot. These cutting-edge approaches enabled us to quickly generate several promising targets. These tools are extremely useful to reduce exploration cost and time, in particular the large portfolio of 700 square kilometers owned by Critical Elements."

Figure 1: Location of Critical Elements' projects, Eeyou Istchee, James Bay, Québec

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https://orders.newsfilecorp.com/files/5844/95730_5db3fb561400c985_001full.jpg

Methodology

This study hinged on digital extraction from an exhaustive collection of compiled data, including assessment files, government data and academic studies. This dataset provided outcrop/sample description, bedrock geology, geochemical analyses, and geophysical surveys. Original data cleaned and combined to create a comprehensive data set for geological interpretation and machine learning processes.

Geological Interpretation

- The compilation of discrete outcrop observations allowed a reliable update to existing geologic maps, resulting in a refined pegmatite map. A total of 42 pegmatite bodies were added to the current geological map, highlighting previously unknown potential for economic lithium-tantalum mineralization.
- An up-to-date structural interpretation was created based on a high-resolution aeromagnetic survey commissioned by Critical Elements. This survey revealed structurally complex patterns, including large-scale folds and major ENE-trending ductile fault zones.

GoldSpot Target Generation

GoldSpot generated lithium-tantalum, copper-nickel, and gold focuses targets, using a "Smart approach" of knowledge- and AI data-driven methods.

- Processes: The AI data analysis trains machine learning algorithms to predict the presence of lithium-tantalum (model 1), copper-nickel (model 2), and gold (model 3), using all variables (features), both numeric and interpreted on a 10 x 10 m grid cell datacube. Once the model performs to a satisfactory level, results produced include:
  - 1) a series of zones with relatively high probability of containing lithium and tantalum (model 1; same process for models 2 and 3);
  - 2) a ranking of feature importance for each input feature.
- Performance: The best prediction model for the lithium-tantalum model was obtained using a Random Forest classifier for which performance metrics were above 80% precision. The updated geology and structural interpretation were the dominant contributors to the targeting model.

Figure 2

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- Results: A total of 19 lithium-tantalum exploration targets were identified (Figure 2), reducing the area of investigation to approximately 16% of the total claim holding. These targets highlight the outer zones of felsic batholiths as the most prospective areas of the claims of scope, including ENE trends at both northern and southern margins of the pertained claims. In addition to lithium-tantalum targets, a total of 5 copper-nickel and 7 gold targets were identified. These targets commonly occur in similar geological settings: areas of intense structural complexity where a diversity of rock units occurs, including mafic units, felsic intrusions and paragneiss.

Outcrop Detection

In addition to the targeting, GoldSpot provided a map of probable outcrop zones to support future field programs. More than 75% of the existing outcrops were found by the machine learning model, highlighting the predictive accuracy of this approach. The machine learning-assisted outcrop detection allows for time- and cost-efficient field exploration.

General Geology at Area of Interest

The area of interest occurs in the southeastern part of the Nemiscau Subprovince. The northern Nemiscau Subprovince is marked by the volcano-sedimentary rocks of the Lac des Montagnes Group which consists of mafic to felsic volcanic units and iron formations. These Archean volcano-sedimentary packages are affected by major NE-trending ductile shear-zones (Pedreira et al., 2020) during the Kenoran orogeny (2720 - 2680 Ma). Local geology exposes metamorphosed sediments units (i.e., paragneiss from the Rupert Complex and Voirdye Formation), syn-tectonic intrusives (i.e., De la Hutte Complex and The Canard Suite) and post-tectonic pegmatites (i.e., Mezière Suite and Spodumène Suite).

Qualified Person

The technical information in this press release has been prepared in accordance with the Canadian

regulatory requirements set out in NI 43-101 -- Standards of Disclosure for Mineral Projects, and reviewed and approved by Ludovic Bigot, professional geologist (OGQ - P.GEO No. 01655), a qualified person as defined by NI 43-101 guidelines.

About Critical Elements Lithium Corp.

Critical Elements Lithium Corp. aspires to become a large, responsible supplier of lithium to the flourishing electric vehicle and energy storage system industries. To this end, Critical Elements Lithium is advancing the wholly owned, high purity Rose lithium project in Quebec. Rose is our first lithium project to be advanced within a highly prospective land portfolio of over 700 square kilometers. In 2017, the Company completed a robust feasibility study on Rose Phase 1 for the production of high quality spodumene concentrate. The internal rate of return for the Project is estimated at 34.9% after tax, with a net present value estimated at C$726 million at an 8% discount rate. Capital cost parameters were confirmed in 2019 by Primero Group in the context of a Guaranteed Maximum Price under an Early Contractor Involvement agreement, as a prelude to an Engineering, Procurement and Construction process. Detailed engineering for Phase I is expected to conclude this year as we also deliver technical studies for Phase II, the conversion of spodumene concentrate to high quality lithium hydroxide. In our view, Quebec is strategically well-positioned for US and EU markets and boasts exceptional infrastructure including a low-cost, low-carbon power grid featuring 93% hydroelectricity. The project has received approval to proceed from the Federal Minister of Environment and Climate Change on the recommendation of the Joint Assessment Committee, comprised of representatives from the Impact Assessment Agency of Canada and the Cree Nation Government; we await similar approval under the Quebec environmental assessment process near-term. We have a strong, formalized relationship with the Cree Nation.

About GoldSpot Discoveries Corp.

GoldSpot Discoveries Corp. (TSXV: SPOT; OTCQX: SPOFF) is a technology services company in mineral exploration. GoldSpot is a leading team of expert scientists who merge geoscience and data science to deliver bespoke solutions that transform the mineral discovery process. In the race to make discoveries, GoldSpot produces Smart Targets and advanced geological modelling that saves time, reduces costs and provides accurate results.

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