

GoldSpot discovers new gold system at Quebec Precious Metals' Elmer East project, using artificial intelligence

Elmer East project¹

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GoldSpot Discoveries Corp. proprietary approach of Artificial Intelligence (AI) and geological interpretation yields positive results in greenfields exploration; Nine grab samples returned up to 17.75 g/t Au with an average of 5.41g/t Au, and also up to 7.99% Zn; The new discovery borders a regional-scale shear zone, previously interpreted by GoldSpot, which opens new multi-kilometers potential along strike; GoldSpot was the sole AI-company operating on the Elmer East Gold Project.

Introduction

GoldSpot Discoveries Corp. (GoldSpot) is a Canadian technology and services company that leverages machine learning to reduce capital risk, while working to increase efficiencies and success rates in resource exploration. GoldSpot combines proprietary technology and computational techniques with traditional geoscientific domain expertise, offering a front-to-back service solution to its partners. The solutions target big-data problems, especially where historically under-utilized datasets can be interpreted using advanced methods to better comprehend resource potential at property- and regional-scales.

One of many strengths of the GoldSpot approach to exploration is the ability to take large land packages and distill all available geological information to identify the most efficient and cost-effective way to explore prospective terrain. Using GoldSpot's standard workflow, all public data were compiled and synthesized for the Elmer East property and surrounding areas, including geochemical data, geophysical data, historical drilling, structural interpretations, and geological mapping.

QPM Project in Canada

GoldSpot Discoveries Corp. ("GoldSpot") is pleased to announce that Quebec Precious Metals Corporation ("QPM") has successfully discovered a new polymetallic gold rich vein system within one of GoldSpot's high priority targets at the Elmer East project located in James Bay, Quebec. GoldSpot is a shareholder of QPM but does not own any direct interest in the underlying properties. The new discovery borders a regional-scale shear zone previously interpreted by GoldSpot, which opens new multi-kilometers of potential along strike.

The GoldSpot Approach

GoldSpot believes that project success is dependent on collaboration between traditional geoscience and data science techniques. In creating prospectivity maps for large land packages, an important part of the process is working closely with the client team to understand all available data, and then conduct field work to understand, update, and validate existing data sources.

A. Field Work. One strength of the GoldSpot Smart approach of AI and geological methods to exploration is the ability to take large land packages and distill all available geological information to identify the most efficient and cost-effective way to explore prospective terrane. As is standard in GoldSpot's workflow, most of all available public geoscience data was compiled and synthesized for Elmer East property and surrounding areas. Structural, geological, metamorphism, hydrothermal footprint and geophysical components were all analysed through GoldSpot's proprietary AI tools to produce the final high-priority targets for field prospecting. This process included visiting over 600 outcrops and record-

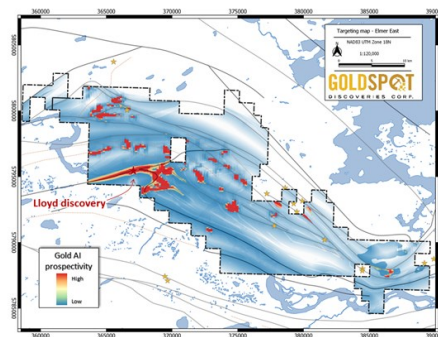


Fig. 1. GoldSpot's AI targeting results with GoldSpot's interpreted structures and mineral showings (MERN), Annabelle claims of the QPM's Elmer East project.

ing various rock types, collecting grab samples, and documenting a wide range of geological features. In addition, 1,278 new structural measurements were collected by the field team and used to reinterpret the current understanding of the structural regime of the property.

B. Structural Interpretation. As part of the mandate, GoldSpot's geologists spent one month in the field in the summer 2020 with QPM's geological team conducting a

follow-up field program on the targets. This process included visiting over 400 outcrops, previously identified by GoldSpot's unique AI methods, and recording various rock types, structures, collecting grab samples and documenting a wide range of geological features, which led to the discovery of the Lloyd showing.



Fig. 2. Aerial view of the Lloyd showing area.



Fig. 3. Mineralized samples at the Lloyd discovery. Sample B566106 grading at 13.55g/t Au

C. Behind the Discovery: Refining the Search Area.

GoldSpot conducted a desktop-based geological interpretation and a gold prospectivity assessment at the Elmer East project to orient the summer 2020 field exploration program. This study hinged on the digital extraction from a large collection of compiled data including assessment files, government data and academic studies which provided bedrock geology, geochemical analyses, geophysical surveys. Original data was cleaned and combined to create and optimize the data source for all human and machine learning interpretations.

D. Refining the Geological Portrait of the Elmer East Area.

The Elmer East project covers Archean greenstone belts and batholiths in the lower Eastmain region of James



Fig. 4. B566181 grading at 17.75g/t Au. See Table 1

Bay. The compilation of over 30,000 discrete outcrop observations combined with over 12,000 litho-geochemical samples allowed a reliable revisit to existing large-scale geologic mapping resulting in a refined geologic map (Figure 4). In particular, the study highlighted the definition of a hitherto unrecognized clastic sedimentary basin in the Annabelle claim, as well as felsic porphyritic intrusions and ultramafic intrusions in the properties.

Lithological contacts juxtaposing rocks with contrasting rheology (e.g. intrusive vs sedimentary rock) is an important factor for vein development, with gold-bearing examples in the region, and in particular at the Eleonore deposit area (cf. Fontaine, 2020).

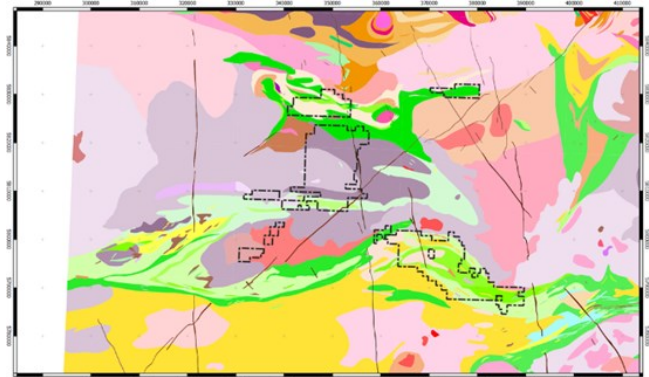


Fig. 5. Existing MERN's Geological map

The structural reinterpretation, generated using both the 2020 QPM's high-resolution aeromagnetic survey and the regional public aeromagnetic survey, highlights subvertical ductile shear systems, which border and transect volcano-sedimentary belts; and second and third order structures appear imbricated and flank isoclinal folds in the Annabelle block claim.

Structural complexity is widely recognized in Archean gold deposits, including in the James Bay, as a major contributor to the gold-bearing vein development (Dube and Mercier-Langevin, 2015; Fontaine, 2020). Following the initial interpretation, GoldSpot produced a map index of the perturbation

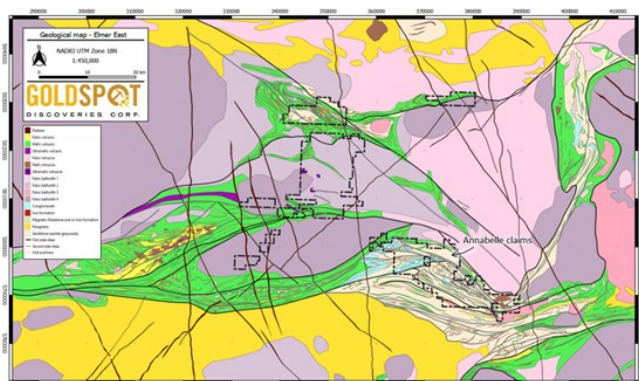


Fig. 6. Updated GoldSpot's Geological map with the Elmer East block claims in dashed line

of the azimuth of ductile structures, including the 1st and 2nd order shears and the foliation, which represent the structural complexity of the area. Results highlight an intense structural complexity in the northwestern part of the Annabelle claim, indicating dominant shearing, folding and intersection of both

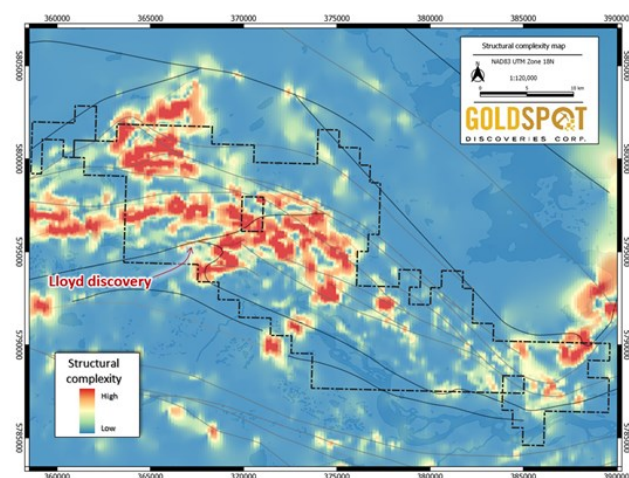


Fig. 7. Structural complexity in the Annabelle area, Elmer East project

The updated geological map and global understanding of the area allow GoldSpot to propose a comparison between the Annabelle area and the Eleonore zone (Reserves proven and probable: 1,28 Moz Au; cf. Newmont). Common geological characteristics include: a) a volcano-sedimentary sequence, from base to top, basalt, conglomerate, sandstone-greywacke and paragneiss, intruded by several felsic intrusions, b) a structural complexity highlighted by intense folding and shearing, c) felsic volcanic and sediment event <2709Ma, and d) a major metamorphic gradient ranging from greenschist to amphibolite superior.

E. Targeting. GoldSpot generated gold targets using a Smart approach combining tacit knowledge and AI data-driven methods. For the latter, the analysis trains machine learning algorithms to predict the presence of gold using all variables (features). Once the model performs to a satisfactory level, results produced include: 1) a series of zones with high probability of containing gold, illustrated in the Figure

1; and 2) a ranking of feature importance for each input feature. The new lithological and structural interpretation was the dominant contribution to the targeting model.

Following the targeting, the total area of investigation was reduced by 95%. The Lloyd showing has been discovered in one of the highest proposed priority zones.

F. QA/QC. Grab sample positions were recorded with a high-precision GPS. Quality assurance and quality control procedures have been implemented to ensure best practices in sampling and analysis of the grab samples. Standards and blanks were inserted regularly into the sample stream. The samples were delivered, in secure tagged bags, directly to the ALS Minerals laboratory facility in Val-d'Or, Quebec. The samples are weighed and identified prior to sample preparation.

All samples are analyzed by fire assay with AA finish on a 30 g sample (0.005-10 ppm Au), with a gravimetric finish for assays over 10 ppm Au. Samples were also tested for multi-element using four-acid digestion

"We appreciate the contribution of GoldSpot to the identification of this exploration target and the field work that resulted in the discovery."

Normand Champigny, CEO of Quebec Precious Metals

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