GT Gold Provides Saddle North Geological Model and 2020 Plan for Exploration

29.04.2020 | GlobeNewswire

VANCOUVER, April 28, 2020 - GT Gold Corp. (TSX-V:GTT) (the “Company” or “GT Gold”) is pleased to provide a summary of its completed geological model for the Saddle North gold-rich copper porphyry discovery, as well as an overview of the 2020 exploration plan to drill untested high-priority targets on the Tatogga property in the prolific Golden Triangle of northern British Columbia.

“The company has reached another milestone with the delivery of a robust geological model, which now provides the strong foundation on which to estimate the initial mineral resource for the Saddle North, greenfields porphyry copper discovery. The model is supported by the integration of numerous empirical data sets”, commented Paul Harbidge, President and CEO. “We’re also very pleased to report plans to test the exciting new targets at Tatogga in the upcoming exploration season. We’re wrapping up one resource and determined we’ll find another in a region that is beginning to show the signs of a new porphyry district.”

Summary

This report details the work undertaken to develop a geological model to understand the controls on mineralization for the recently discovered Saddle North gold-rich copper porphyry in northern British Columbia. A total of 31,397 metres of drill core was relogged in detail over the past four months to develop a robust three-dimensional geological model for Saddle North. This involved the production of hand drawn cross-sections and level plans at 100 metre intervals through the kilometre-scale mineralized zone for lithology, alteration, mineralization and structure, and was complemented by a thorough assessment and classification of the Company’s large database of geochemical data. The resultant plans and sections were then scanned, georeferenced and integrated with magnetic and Induced Polarization data to create a well-constrained three-dimensional digital model. The model will be used as the basis for the Company’s initial mineral resource estimate, due to be released by the end of June 2020, and both will underpin a Preliminary Economic Assessment for Saddle North expected to be released by year-end, 2020.

- Saddle North is a gold-rich copper porphyry centered on a series of pre-mineralization to late inter-mineralization monzodiorite and monzonite intrusions. The intrusive complex is interpreted to represent a series of igneous bodies emplaced over a relatively short period of time in the late Triassic. Minor post-mineralization felsic and mafic dykes have also been observed.
- Copper and gold mineralization in the porphyries varies with the intrusive phases and is associated with stockwork and sheeted quartz-pyrite-magnetite-chalcopyrite vein zones, with the highest grades occurring where the vein densities are greatest. Almost all the copper is contained in chalcopyrite. Additional copper may be related to minor occurrence of tennantite together with chalcopyrite in late quartz-carbonate-sericite veins.
- Geochemistry and spectral data reveal that high copper and gold grades are also closely associated with high-temperature potassic alteration assemblages (potassium feldspar, biotite and magnetite). Abundant secondary and local primary biotite has been almost wholly replaced by chlorite-phengitic muscovite, and the high-temperature alteration in places has been overprinted by quartz-sericite (muscovite)-pyrite alteration.
- The mineralized zone is limited by the northwest-southeast oriented, steeply southwest dipping Poelzer fault. The footwall country rocks to the fault are not well-mineralized but are characterized by widespread quartz-sericite-pyrite alteration and the local presence of pyrophyllite and kaolinite, which are typical in the shallow portions of porphyry systems. This highlights additional exploration potential along strike and at depth across the Poelzer fault.
- Compared to other porphyry systems, Saddle North appears to be hosted in a relatively straightforward alteration system with minimal clays and localized low to moderate arsenic.

The Company continues to generate exploration targets on the Tatogga property, in part by undertaking further greenfields-style exploration (soil geochemistry, Induced Polarization surveys and field mapping), as well as reassessing the substantial historical exploration datasets gleaned from Assessment Reports for the district, which have been archived by the Ministry of Mines of B.C. The combined datasets include soil, stream, and rock geochemistry, as well as geophysical data in the form of a number of merged regional airborne magnetic surveys, new property-scale detailed airborne magnetic, radiometric (gamma), and “Mobile MT” surveys, plus regional gravity data and several new ground-based Induced Polarization (IP) surveys.

The results of this work highlight two main areas for follow-up in the 2020 summer field program:

1. The greater Saddle area; adjacent to the known Saddle North and Saddle South discoveries, where four principal targets have been outlined.

2. The Quash-Pass area, where two large-scale anomalous trends and several adjacent individual target areas have been defined.

An initial 10,000 metre diamond drill program has been budgeted as a first phase of following on these high priority targets.

Saddle North Technical Session Webcast

The Company will host a technical webcast scheduled for April 29, 2020 at 10:00am Pacific (1:00pm Eastern) to present the geological model and review exploration plans. Participants may access the webcast call as follows:

- Online on the Company website at www.gtgoldcorp.ca
  or via the direct link: https://edge.media-server.com/mmc/p/8dkog46v
- By phone at 1-888-337-1150 toll free in Canada or the U.S., or at 1-956-394-3454 internationally.
- A recorded playback of the conference call will be available until May 6, 2020 by calling toll free 1-855-859-2056, or 1-404-537-3406 outside of the U.S. and Canada, conference ID 3484372. An archived webcast will also be available for 12 months at www.gtgoldcorp.ca.

Saddle North 3D Geological Model

A slide deck for public viewing of the 3-dimensional model showing the Saddle North mineralization, lithology and alteration can be accessed at the VRIFY link here: https://vrify.co/GTGold

Saddle North Re-Logging Program

All of the Saddle North drill core, amounting to 31,397 total metres, was relogged at the company’s core facility (Figure 1) following the shut down of the field program in late October 2019. The relogging program was completed in mid-February 2020, with the overall aim of generating a geological model that will support initial mineral resource estimates, due later in this second quarter of 2020. A Preliminary Economic Assessment is also planned to be released by the end of 2020.

Figure 1 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/988b8fd3-034f-49a0-8e5b-54adbdd0a16c

Methodology

In addition to visual re-logging of the core, multi-element geochemistry and modelled geophysical data was used to delineate the various lithological units, alteration types, and structures. A series of hand drawn cross sections and level plans (Figure 1) were completed for lithology, structure, alteration and mineralization. These were then scanned and georeferenced for manipulation using Seequent’s Leapfrog software to construct digital solids for each layer of the geological model (Figure 2).

Figure 2 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/97ac0d96-a474-4223-bbce-d17a9be20bd9

Lithology

Saddle North is a gold-rich copper porphyry centered on monzodiorite and monzonite intrusions (Figure 3). The intrusive complex is interpreted as a series of igneous bodies that intruded volcanic rocks of the Upper Triassic Stuhini Group over a short period of time, which led to local brecciation and co-mingling of magmas. The intrusive complex and its host rocks are overlain, unconformably on their northeastern and northern margins, by volcaniclastic and local volcanic rocks of the Lower Jurassic Hazleton Group.

Specific immobile trace element ratios (e.g., Zr/Ti, Cr/Al, Th/Ti) aided greatly in outlining and differentiating lithologies, especially the different porphyry phases (Figure 3), and the approach was validated by principal component analysis (PCA) based classification of the rocks, which employed Al, Ce, Cr, Ga, Ge, Nb, P, Sc, Ti, Th, Zr, Ta, V, Ni, and Y. The immobile element ratio and PCA approach separated the porphyries into a total of eight phases; six pre-mineral (P0-P5) and two inter-mineral phases (I1 and I2). The inter-mineral porphyries are the most recognizable lithologies at Saddle North, and have distinctive geochemistry and are interpreted as individual pencil- to tabular-shaped intrusions with smaller irregular apophyses. Inter-mineral I1 can carry some mineralized veining and Au and Cu grades. A number of younger post-mineral mafic to felsic dykes are also present and are represented in the plots in figure 3 they are, however, insignificant in terms of volume and are not shown in figure 4.

Figure 3 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/aae93da5-4ec3-4d89-9231-8d78da677f83

Figure 4 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/99d9a80f-3774-4c9e-bf9c-ca16b6591559

Alteration

Six alteration styles were recognized and quantified in the relogging program. The relogging was supplemented by systematic collection of downhole hyperspectral data, which was processed via aiSIRIS, and CoreScan imagery for a number of Saddle North holes, as shown in Figure 5, along with petrography. The alteration phases include potassic, quartz-sericite-pyrite (QSP), chlorite-sericite, weak to trace intermediate-argillic, propylitic, and sodic-calcic (Figure 6). Each phase was developed with iso-shells representing intensities ranging between strong (5) to weak (1) and absent (0). The resulting model depicts a well-developed, steeply plunging potassic core that is associated with the highest-grade mineralization, and which lies within the bounds of intense QSP alteration, which shoulders the potassic alteration core (Figure 6). Alteration phases commonly overlap with one another and as a result each style was modelled independently in Leapfrog.

Figure 5 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/db633cfa-372e-4633-b847-3f4ba876c262

Figure 6 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/8043c931-442e-4fe6-8608-75d7bc2122a1

Potassic Alteration

Potassic alteration is the dominant style of alteration associated with mineralization and grade at Saddle North. It is defined by the presence of secondary potassium feldspar, biotite (typically completely altered to phengitic-muscovite and chlorite), and magnetite, and is associated with intense A-type quartz-magnetite-sulphide quartz vein stockworks that carry higher-grade gold and copper. Potassic alteration is limited to the hangingwall of the Poelzer fault and therefore the fault was set as a hard boundary to the model. The geometry of the potassic alteration plunges steeply to the southwest, along the general orientation of interpreted porphyry emplacement.

Quartz-sericite-pyrite (QSP)

Quartz-sericite-pyrite alteration, also commonly referred to as phyllic alteration in porphyry literature, is an intense hydrothermal alteration that can be found both above and on the shoulders of the potassic core of the Saddle North porphyry system. This alteration zone is characterized by the abundance of quartz, sericite and pyrite minerals. At Saddle North, intense QSP alteration is most notable in two places: 1) in the hangingwall of the Poelzer fault it lies on the periphery of the mineralized system where it overprints potassic alteration, and 2) in the immediate footwall of the Poelzer fault, where pervasive and intense QSP alteration of the Stuhini Group produces mineralogical but not textural replacement of the Stuhini Group volcani-sedimentary sequence and associated porphyritic intrusions, and where it commonly grades outward into propylitic alteration.

Other Alteration Styles

Other alteration styles were also modelled with the same methodology but with less meaningful results. Chlorite-sericite alteration proved to be ubiquitous. It is particularly common in the upper levels of the system, where it overprints all other alteration styles and essentially outlines the intrusive system itself. In detail, this style of alteration is manifest as chlorite after mafic minerals, sericite after feldspars, and hematite after magnetite. It bears a common association with narrow pyrite veinlets and disseminated pyrite.

The propylitic alteration model, characterized by the presence of epidote and chlorite, displays a significant correlation with both post-mineral dykes and with one of the inter-mineral porphyry phases (I1). Within the Saddle North mineralized system it is typically weak in intensity and does not appear to influence grade. It is also present locally in the rocks in the footwall of the Poelzer fault.

Mineralization

Copper sulfide mineralization, dominantly chalcopyrite, is disseminated, occurs in quartz veins, and in microfractures. Quartz veins range from microveinlets about a millimetre thick to domains of quartz flooding several centimetres thick. The veins can be wavy and anastomosing, or form intricate stockworks, and most may be characterized as A-veins. In mineralized A-veins, fine specks or coarser blebs of chalcopyrite, +/- magnetite exist. Zones of higher A-vein density result in increased grade.

Pyrite occurs commonly as very fine to coarse-grained, anhedral to euhedral disseminations, fracture fillings, and veins. It ranges from less than 1% to over 10% and is quite ubiquitous within the bounds of the model. Late-stage pyrite (? minor chalcopyrite) veins cut quartz vein stockworks and with sericitic-argillic alteration are particularly common in the upper levels of the mineralized system, these represent classic D-veins.

There is a clear association of copper and gold grades with potassic alteration, and this is commonly overprinted by an assemblage of phengitic white mica and chlorite (Figure 7). Thus, the bulk of the copper and gold mineralization appears to have been introduced relatively early in the evolution of the Saddle North porphyry system.

Mineralogy calculated from 4-acid ICP-MS data as well as petrographic studies suggest that almost all the copper is contained in chalcopyrite. Additional copper may be related to minor occurrences of tennantite which may occur together with chalcopyrite in late carbonate-sericite veins.

Figure 7 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/21b7fa39-c97a-4b94-a03b-1a32016e4c3a

Structure

During the core-logging at Saddle North, structural data was collected from drill core and documented in four components: 1. Structure Type (Fault zone, Fracture zone, Late Carbonate-Quartz-Chalcopyrite (Cbn-Qtz-Cpy) veins), 2. Structure Intensity (measured on a scale of 1 (trace) to 5 (intense)), 3. Structure

Style (Brittle, Ductile, Shear), and 4. Interval Length (metres).

Occurring as a relatively mobile element, arsenic values were plotted downhole to test the hypothesis that elevated values could potentially outline the presence of faults. While arsenic did appear to correlate locally with zones of low Rock Quality Designation (RQD) values and simplified range structures, the correlations were too inconsistent to be considered universally applicable at Saddle North and were therefore not used directly in the structural interpretation.

In the structural model for Saddle North (Figure 8), the principal structural features are: 1) the well-defined and very predictable Poelzer fault, a strongly foliated zone which forms the footwall to the presently known mineralized zone, and 2) the similarly relatively planar and apparently predictable brittle fractured Southern fault, which marks the southern contact of the Saddle North porphyritic intrusive rocks with their host Stuhini Group volcanic rocks. Less well-defined structures, also defined more by brittle fracturing, include what is referred to as the “Southern Crush Zone,” which dips to the northeast and lies near the southwestern margin of the Saddle North zone, and a number of north-northwest to northwest trending, steeply southwest-dipping brittle fracture zones which are likely anastomosing and that lie between the aforementioned features.

Figure 8 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/4d89f91a-57b6-4b86-9eb1-9e8c13cb2673

Transition-fresh rock boundary

There is no true weathered oxide zone developed at Saddle North. The transition zone is characterised by variably mild oxidation of sulphide minerals and limonite development on fractures and ranges and varies between 11 metres to 105 metres thick. Below the transition zone only fresh rock is present.

Property-Scale Exploration

GT Gold continues to generate exploration targets on the Tatogga property. In part by interpreting the data collected by the Company on the property, as well as by revisiting the relatively vast previous exploration datasets gleaned from Assessment Reports for the district, archived by the Ministry of Mines of B.C. The datasets included soil, stream, rock geochemistry, geophysical data (merging of a number of regional airborne magnetic surveys, property-scale detailed airborne magnetic, radiometric (gamma), and “Mobile MT” surveys, plus regional gravity data and ground based Induced Polarization (IP) surveys.

1. The results of this work highlight two main areas: The greater Saddle area; adjacent to the known Saddle North and Saddle South discoveries, where four principal broad targets have been outlined.
2. The Quash-Pass area, where two large-scale anomalous trends and several adjacent individual target areas have been defined.

An initial 10,000 metre diamond drill program has been budgeted, as a first phase of follow-up, on these two high priority target areas, planned for the summer 2020 field campaign.

Saddle Area

- The Saddle North copper gold porphyry mineralization returns a strong chargeability anomaly from Induced Polarization geophysical surveys, which extends over 3 kilometres. There is a limited geochemical response due to thicker colluvial cover. Drilling to date has not drilled beyond the mineralized envelope and has not fully tested the geophysical anomaly. The extensions and presence of additional porphyries remains a high priority target

- At the Northwestern end of the Saddle North trend, which lies due north of the Saddle South mineralized system, the potential is highlighted by a plus 2 kilometre high-tenor gold-in-soil geochemical anomaly, as well as by a continuous linear chargeability anomaly and associated magnetic highs (Figure 9). This area has only been tested by limited previous drilling but encouraging results were returned from drill hole TTD17-064 which yielded 1.35 g/t Au, 1.42 g/t Ag, and 0.37% Cu over 18.40 metres from 134.60 metres (est. 90% true width), including 2.28 g/t Au, 2.03 g/t Ag and 0.56% Cu over 7.40 metres from 134.60 metres, that coincided with sheeted vein-style mineralization hosted by high-temperature potassic alteration developed within porphyritic intrusive rocks (refer to GT Gold news release dated December 13, 2017).
- The Central target locates between Saddle North and South and highlights where these two systems intersect and coincides with a geochemical as well as chargeable geophysical anomaly and remains untested by drilling.
- The southern target is low priority but is represented by a strong geophysical response from the Induced Polarization survey.

Figure 9 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/f0e31d55-1a12-4cbc-9497-499722ffbc50

At Quash-Pass, the multi-element soil geochemical anomalies stretch over a strike length of at least six kilometres and remain open (Figure 10). In addition, Induced Polarization geophysical surveys return coincident chargeability anomalies, while structural interpretations reveal district scale West-Northwest trending faults and outcrop mapping show the presence of moderately abundant iron carbonate alteration and associated veining. This high priority area has previously not been drill tested.

Figure 10 is available at
https://www.globenewswire.com/NewsRoom/AttachmentNg/a2585568-7097-4c3c-9c68-821313ce80b2

References

Middlemost, E.A.K., 1994. Naming Material in the Magma/Igneous rock system. Earth Science Reviews, Volume 37, Issues 3-4, pp. 213-224.

Pearce, J.A., 1996. A user’s guide to basalt discrimination diagrams. Trace element geochemistry of volcanic rocks: applications for massive sulphide exploration. Geological Association of Canada, Short Course Notes, 12, pp.79-113.

QA/QC Procedures

GT Gold has implemented a rigorous quality assurance / quality control (QA/QC) program to ensure best practices in sampling and analysis of diamond drill core, the details of which can be viewed on the Company's website at http://www.gtgoldcorp.ca/projects/tatogga/. All assays are performed by ALS Global Ltd., with sample preparation carried out at the ALS facility in Terrace, BC, and assays determined mainly at the North Vancouver laboratory. For gold, fire assays are performed as per ALS method Au-AA26 (0.01 - 100 g/t Au) using 50 grams of sample measured by atomic absorption. Assays equal to or greater than 100 g/t Au are reanalyzed gravimetrically by method Au-GRA22. Silver and copper are analyzed by ALS method ME-MS61 with a 4-acid digestion followed by ICP-MS analysis. Assays greater than 100 ppm silver or 1% copper are reanalyzed by ICP-AES by method OG-62.

Qualified Person

Michael Skead, FAusIMM, Vice President, Project Development for GT Gold Corp., is a qualified person under NI 43-101 and has reviewed and approved all other contents of this report.

About GT Gold

GT Gold Corp. is focused on exploring for base and precious metals in the geologically fertile terrain of

British Columbia’s renowned Golden Triangle. The Company’s flagship asset is the wholly-owned, 46,827 hectare Tatogga property, located near Iskut, BC, upon which it made two significant discoveries in 2017 and 2018 at its Saddle prospect: a precious metal rich vein system at Saddle South and a gold-rich copper porphyry at Saddle North.

For further information, please contact:

GT Gold Corp.
Paul Harbidge
President and Chief Executive Officer
Tel: (236) 427 5744
Website: www.gtgoldcorp.ca

GT Gold Corp.
Shawn Campbell
Chief Financial Officer
Tel: (236) 427 5744

Cautionary Statement Regarding Forward Looking Statements

This news release contains forward-looking statements and forward-looking information (together, "forward-looking statements") within the meaning of applicable securities laws. All statements, other than statements of historical facts, are forward-looking statements. Generally, forward-looking statements can be identified by the use of terminology such as "plans", "expects”, "estimates", "intends", "anticipates", "believes" or variations of such words, or statements that certain actions, events or results "may", "could", "would", "might", "will be taken", "occur" or "be achieved". Forward looking statements involve risks, uncertainties and other factors disclosed under the heading “Risk Factors” and elsewhere in the Company’s filings with Canadian securities regulators, that could cause actual results, performance, prospects and opportunities to differ materially from those expressed or implied by such forward-looking statements. Although the Company believes that the assumptions and factors used in preparing these forward-looking statements are reasonable based upon the information currently available to management as of the date hereof, actual results and developments may differ materially from those contemplated by these statements. Readers are therefore cautioned not to place undue reliance on these statements, which only apply as of the date of this news release, and no assurance can be given that such events will occur in the disclosed times frames or at all. Except where required by applicable law, the Company disclaims any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise. Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.