

Date: 09 September 2020

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Subject: Exploration History of AngloGold Ashanti Minnesota's Efforts Targeting Orogenic Gold in Northern Minnesota: An Outline to Accompany Lease Termination Data Delivered to Minnesota DNR

Introduction

This document serves to provide context for files submitted to the Minnesota Department of Natural Resources (DNR) by AngloGold Ashanti Minnesota (AGAM) according to paragraph 16 of AGAM's metallic minerals leases. The document is organized chronologically to give the reader a sense of AGAM's exploration efforts over the period 2016 to 2019.

Early Recon/ Historic Sonic Core Sampling H2-2016

AGAM contracted Phil Larson of Vesterheim Geoscience to provide recommendations on exploration strategies to explore for orogenic gold deposits in northern Minnesota. The work highlighted the following:

1. Younger, far traveled non-prospective tills with a northwesterly provenance buried older, short traveled till units of a predominantly northeasterly provenance. Till prospecting methods are applicable to the older prospective locally derived tills. Till units can be characterized using multielement geochemistry of a silt-clay fraction.
2. Transport and deposition of metals within a glacial till environment can diminish with distance at an exponential rate
3. Previous explorers had conducted sporadic and limited till exploration work over greenstone belts in Minnesota. The work almost always focused on sampling surface tills. Government till surveys (especially where rotasonic drilling was used) are useful to provide context for any future work.
4. Rotasonic drilling is suitable for recovering the subsurface tills of interest and an approximate hole spacing of 1x1km can be applied as a 'first pass' for detecting a large mineralized system with a suite of till analysis methods.

Geophysics H2-2016

Keith Martin (AGA geophysicist) reviewed available historic geophysical data available from the DNR/ MGS to assess the need for AGA to collect additional datasets. The available state-scale data was considered too low resolution for district-scale targeting and other company data was only available in outdated formats. A decision was made to fly an aeromagnetic (and radiometric) survey over an approximately 60x 120km Area of Interest (AOI). Sander Geophysics was contracted to conduct a fixed wing survey at 100m line spacing (0/180 degrees), 1000m tie line spacing (90/270 degrees), ~100m flight elevation for a total of 50,000-line kilometers. Radiometric data are considered poor quality due to extensive glacial deposits and lakes that cover bedrock. All subsequent exploration was focused on ground within the aeromagnetic AOI survey boundary.

AGAM provided a clipped copy of the complete survey which includes raw and interpreted aeromagnetic and radiometric products. The clipped area surrounds the leased areas within the larger AOI where



drilling, mapping, and sampling was conducted. Requests for the complete survey should be sent to:
ATTN: Exploration Manager- AngloGold Ashanti North America Inc. 4601 DTC Boulevard, Suite 550, Denver, Colorado 80237.

Celina Rotasonic Drilling Q1 2017

AGAM's first reconnaissance rotasonic drill program was conducted over the 'Celina' leases.

A program of 31 holes was planned parallel to the terrane boundary and perpendicular to known ice flow directions, for a total of 3391.5 feet (1033 m).

Twenty-five (25) holes intersected what was assessed to be suitable 'basal till' sample media for gold grain count and multi-element analysis. Drillholes CR0004, CR0005, and CR0026 returned weakly 'anomalous' raw gold grain counts with 18, 8 and 17 grains, respectively. When normalized to a 10kg table feed weight drillholes CR0004, CR0007, CR0011, and CR0026 stand out as being weakly "anomalous" with counts of 7, 8, 13, and 19 grains, respectively.

The weakly anomalous gold grain data and multielement data were not encouraging enough to warrant a follow up program, however the proof of concept for sonic drilling/ till exploration was achieved. The Celina leases were dropped December 31, 2018, and the project data are now public.

Historic Diamond Core Sampling Q2 2017

Following the Celina drill program, AGAM worked to better understand district-scale prospectivity within the AOI. Specifically, we evaluated 1) metamorphic grade, 2) lithology, 3) alteration style 4) mineralization style. Additionally, we gained familiarity of historic core logging and sampling practices by previous explorers.

AGAM concluded that within the AOI, favorable geology including greenschist grade, reactive (iron-rich) potential host rocks are present, however historic gold intercepts in diamond core are low-grade. No targets were identified from the historic core sampling program.

Winter 2018 Drilling Q1 2018

Sonic drilling was focused over three high-priority targets in Q1 2018. The targets were chosen primarily on geological interpretations of aeromagnetic data.

Aegir

Thirty-nine roto-sonic holes were completed for a total of 4192 ft (1278 m). Bedrock was recovered in 35/39 holes, and 35/39 holes encountered a basal till with 16/39 encountering an ideal Rainy lobe till. The drilling at Aegir identified a broad area of weakly- to moderately-encouraging results including: 1) anomalous F/A gold results from adjacent holes AR-0045 (75 ppb), AR-0046 (76 ppb), and AR-0025 (22 ppb) with supporting pathfinder (As, Sb, Te) element results, and 2) altered (chlorite, sericite, pyrite) bedrock samples at AR-0019 and AR-0014. A follow-up target definition program was planned to infill drill a 2.5x2.5km area (See **Winter 2019 Drilling Q1 2019** below).

Ran

Nineteen rotasonic holes were completed in Ran for a total of 1504 ft. (458m). Bedrock was recovered in all holes, and 16/19 encountered a basal till with 7/19 encountering an ideal Rainy lobe till. Sonic hole RR-

0005 returned the best gold grain result from one sample: 327 total corrected gold grains of which 266 show pristine morphology. Additionally, gold assays from the same basal till unit were repeatable and >10 ppb. Adjacent holes RR-0026 and RR-0027 did not yield impressive results (less than 3 grains).

Notable bedrock samples included RR-0019 with contains semi-massive stringer pyrite hosted in chlorite altered basalt and RR-0018, an intensely dolomite-chlorite altered basalt.

A follow-up target definition program was planned in a 7x3km area up-ice of the encouraging RR-0005 anomaly (See **Winter 2019 Drilling Q1 2019** below). Lower tenor till results and bedrock anomalies in Ran were not followed up.

Freyja

Ten roto-sonic drill holes were completed for a total of 1198.5 ft (365.3 m). All holes successfully reached bedrock with basal till encountered in 7/10 holes; 2/10 intersected an ideal Rainy Lobe till. Holes FR-0006 and FR-0005 returned the best results- 14 and 17 total corrected gold grains respectively. Fire assay Au results showed low values except one analysis in FR-0003 which returned 15 ppb; all other results were <10 ppb. The till silt/clay fraction analyses showed elevated to anomalous As in the 8-10 ppm range as well as elevated result for other orogenic gold pathfinders (As, Sb, Te). While weak anomalies were identified, the results do not suggest a proximal bedrock source. Given the overall poor preservation of basal till, lack of encouraging bedrock intersections, limited surrounding land tenure, and the weakly encouraging first-pass till results, the target was considered marginally tested. No further work was conducted.

Big Rock Exploration Bedrock Mapping Program Q3 2018

AGAM contracted Big Rock Exploration to conduct a four-person, two-week long mapping program in the Ran and Magni project areas.

The mapping program did not significantly advance the projects. Mapping was hindered by poor lease coverage, difficult access, and small, hard to locate bedrock exposures. While the aim was to identify significant shear zones, favorable alteration, and/or mineralization, the reality is massive, coherent units such as Archean gabbro, basalt, and mafic dikes are what is exposed, and if present, the economically significant rocks are likely covered. No additional mapping was conducted.

Fall 2018 Drilling Q4 2018

Knarr

A program of 17 roto-sonic holes was completed over the Knarr target. Every hole except one recovered bedrock, 11/17 encountered a basal till, and 7/10 intersecting an ideal Rainy Lobe till. Hole KR-0010 returned the best gold grain result- 27 total corrected gold grains (1 pristine grain) from one sample. Fire assay gold results from the same hole returned 54 and 37 ppb Au. An up-ice follow-up hole (KR-0029) was drilled but did not yield encouraging results (best sample: 7 grains, 9 ppb Au). Given the overall poor-quality basal till in the area (till was sandy, likely reworked) and the lack of encouraging till and bedrock results overall, the target was considered tested. No further work was conducted.

Winter 2019 Drilling Q1 2019

Ran RR-005 Follow-up (includes Q4 2018 Fall drilling)

The follow-up drilling (44 holes) within 7km up-ice of the RR-0005 anomaly did not define a gold-in-till dispersal train. All gold grain counts were <30 grains and showed primarily rounded shapes indicative of long travel distances. The best explanation for the original RR-0005 result: sonic drill hole RR-0005 cored through a weathered, Au mineralized clast in the basal till. The clast was transported from a distal (or very small, but local) source.

A gold-in-till dispersal train is not present near RR-0005, and the area was considered tested. No further work was conducted.

Magni

A program of 7 roto-sonic holes was completed over the Magni target. All but one hole intersected bedrock and 2/7 intersected an ideal Rainy Lobe till. Hole MR-0005 returned the highest gold grain count with 6 total corrected gold grains. Fire assay gold results are similarly negative with no till samples returning >10 ppb Au. Given the overall lack of prospecting tills, and the disappointing till and bedrock results in drilled holes the target was considered marginally tested, with no further work was conducted.

Ran Dahlberg Road

Results from the Ran- Dahlberg road prospect (RR-0038 through RR-0046) showed mixed results, with interpretations of various mineralization styles (BIF hosted, VMS?). This area has residual (untested) potential and no work was conducted to follow up the encouraging results (see Table 1).

Table 1: Table of results from Ran area near Dahlberg Road showing elevated gold grain counts and diverse mineralization styles including a mineralized boulder and chalcocite grains in till/ saprolite. Banded iron formation is also mapped and interpreted from geophysics in the area.

Hole ID	Easting	Northing	Best Gold Grain Count	Comments
RR-0038	480304	5290338	5	Tested- 18 ppb Au F/A reassayed 4 ppb, consistent F/A detections.
RR-0039	480079	5290870	12	Marginal test- 25 ppb Au F/A reassayed as 9 ppb. Chalcocite grain anomaly.
RR-0041	480100	5290476	23	Tested- Large anomaly in till surrounding BIF boulder containing 611 ppb Au. Detectable gold throughout.
RR-0042	480029	5289997	2	Marginal test- No significant results.
RR-0043	479806	5290738	3	Marginal test- Samples W076633 and W076634 contain 1000 grains chalcocite each.
RR-0044	479302	5291147	6	Tested- Consistent F/A detections. No significant results.
RR-0045	479135	5290546	6	Tested- 18 ppb Au F/A reassayed as 1 ppb. Consistent F/A detections. No significant results.
RR-0046	478824	5291334	14	Tested- Elevated gold grain and F/A results, also high As in basal till. Consider follow-up.

Aegir

Infill sonic drill testing (8 holes, ~400 m spaced) was designed to test the continuity of Phase I results and the drilling failed to delineate a gold-in-till dispersal train. Elevated to anomalous gold fire assay and silt/clay As results from Q1 2018 drilling can be explained by till reworking (which concentrated gold in fine fraction) and local incorporation of As from metasediments. Furthermore, bedrock samples from the follow-up program showed only weak chlorite-calcite alteration. The target was considered tested, with no further work conducted.

Boise State University Geochronology Q3 2019

An age dating project was designed with the goal of assessing the hypothesis that the western Wawa is correlative with the Abitibi Subprovince. Boise State University was contracted to acquire CA-TIMS ages for samples from 8 drill holes (Table 2).

The age of most samples fall within brackets of well-known southern Abitibi rock packages, however more work is required to fully interpret the results in the context of correlating subprovinces across the Canadian Border.

Table 2: Final CA-TIMS dates for Minnesota sonic samples and possible correlative assemblages in the Abitibi

Sonic Hole	Rock Type	Zircon Notes	Age (Ma)	Possible correlative assemblage in Abitibi GSB (from Discover Abitibi OFR 6154)
AR-0037	Leucogabbro	Yes, metamict	2674.01 \pm 0.55 Ma	Syntectonic Intrusions (2695-2670)
AR-0040	Monzonite	Yes, metamict	2675.09 \pm 0.42 Ma	Syntectonic Intrusions (2695-2670)
AR-0041	Monzogranite	Yes, metamict	2675.27 \pm 0.58 Ma	Syntectonic Intrusions (2695-2670)
AR-0036	Granodiorite	Yes, metamict	2680.05 \pm 0.50 Ma	Syntectonic Intrusions (2695-2670)
AR-0038	Granodiorite	Yes, metamict	2681.55 \pm 0.46 Ma	Syntectonic Intrusions (2695-2670)
KR-0004	Volcaniclastic	Yes, mixed population	2690.07 \pm 0.41 Ma	Porcupine (2690-2685)
FR-0010	Metasandstone	Yes, mixed population	2693.05 \pm 0.64 Ma	Unknown, Porcupine?
RR-0080	Volcaniclastic	Yes, mixed population	2717.66 \pm 0.47 Ma	Lower Kidd-Munro (2719-2717)

Rationale Exiting Minnesota and Conclusions Q4 2019

In August 2019, the exploration team were tasked with deciding to continue or cease exploration in Minnesota. They assessed the progress made toward a discovery in the previous three years, the residual opportunities within the lease package, and barriers/ opportunities to successful future efforts in Minnesota.

Assessing progress

AGA concluded that the work done to-date was effective in testing most of the targets drilled, however till exploration is costly, practical only in winter (in most areas), and imprecise. While seasonality and drilling/access costs are understandable, the imprecision of till exploration casts doubt on the overall approach of drill- supported till exploration. For example, the false positive result from Ran sonic hole RR-0005 lead to significant follow-up work that did not advance the project.

Residual opportunity



The residual opportunity of the lease package was determined to be low primarily because the highest priority targets were tested without yielding encouraging results.

Barriers to future success

To justify continued exploration in Minnesota, additional state leases would have been required. The likely long delay for acquiring ground through the state lease auction was viewed as a significant headwind to continued exploration in Minnesota.

Conclusions

Ultimately the factors explored above, and the desire to focus greenfield exploration efforts elsewhere, led to the decision to exit Minnesota.

Many exploration companies have explored northern Minnesota for gold, however no significant discoveries have been made. Future explorers may benefit from:

Cheaper and/or fast drilling technology. Drilling is the best way to better understand the geology under cover. A bedrock and till geochem program should identify anomalies.

Advances in geophysics and application of different methods to map cover thickness and better understand structural geology.

Find the main transcrustal structural break that would act as a favorable conduit for hydrothermal fluids, and the second-to-third order trap sites

Identifying 'Timiskaming-like' conglomerate assemblages associated with potential fertile structures.

Applying an integrated targeting approach through delineation of areas of interest through understanding of geophysical response, interpreted geologic setting, till stratigraphy, dispersal trains and following up with drill fences or grids immediately down ice.

Good luck!