Minnesota Department of Natural Resources (DNR)

Minerals Exploration Plan on State Nonferrous Metallic Minerals Leases

*AngloGold Ashanti Minnesota*

*Exploration Plan Submitted on November 2, 2016*

DNR Summary Report and Associated Maps

An exploration plan was submitted by AngloGold Ashanti Minnesota (AGAM) on November 2, 2016 and summarized here by the DNR on November 9, 2016. The locations of proposed exploration activities by this state nonferrous metallic minerals lessee are shown in a standard format and legend. This report and associated map were created by the Minnesota DNR, Division of Lands and Minerals.

This report and associated map are posted on the DNR’s exploration plan website at: [http://www.dnr.state.mn.us/lands_minerals/metallic_nf/regulations.html](http://www.dnr.state.mn.us/lands_minerals/metallic_nf/regulations.html)

This summary report and associated map should be distributed as a complete document due to the relative nature of the content.
Narrative: AngloGold Ashanti Minnesota proposes to do exploration drilling when soils are frozen to obtain core samples of glacial sediments, and the top of bedrock on 19 state nonferrous metallic mineral leases in southeastern Koochiching County (see location map). It submitted an Exploration Plan to the DNR for review on November 2nd, 2016.

State Minerals Lease Numbers: MLMB-200008, MLMB-200011, MLMB-200013 to MLMB-200017, MLMB-200019, MLMB-200021, MLMB-200022, MLMB-200025 to MLMB-200030, MLMB-200032, MLMB-200035, and MLMB-200036 (19 leases seen on following map)

Public Land Survey Location: Township 63, Range 22, Sections 7, 11, 13-17, 19, 21, 22, 25-30, 32, 35, & 36

Types of exploration activity: The Explorer plans to drill thirty-one (31) exploratory rotosonic borings within nineteen (19) active state nonferrous metallic minerals leases. Rotosonic drilling uses high frequency vibration of the drill bit to collect cores of unconsolidated glacial sediment and underlying bedrock. Each boring will end shortly after the top of bedrock is encountered. No drilling fluids are needed. It should take less than a few days to complete each boring. The borings are anticipated to be vertical holes approximately 150 feet in depth. The borings will be permanently sealed immediately after drilling in accordance with Minnesota Department of Health regulations.

Expected time period of activity: December 1, 2016 through March 31, 2017

Plans to access exploration sites: The Explorer will access the drill sites by paved public roads, existing unpaved frozen winter roads, and/or frozen winter use routes. This proposed work would commence upon DNR approval, and after sufficient frozen ground and snow cover have been established.

Surface Ownership: The proposed exploratory drilling program will not involve areas of private surface lands held by individuals. Pending DNR approval, the Explorer has the right to work on state-owned surface lands, which covers most of the work proposed. The Explorer has obtained authorization from the Koochiching County Land department for work on county-owned surface and Potlatch Holdings for work on their land.

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Locator map for exploration plan activity

Exploration Plan Area
This small scale map displays the general location of the exploration plan in northern Minnesota. The following map provides more details on the proposed exploration area.
See page 3 for a detailed map

Maps and Data Disclaimer
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Other Special Features including Natural Heritage Features and Historic & Archaeologic Sites are not shown because they are non-public data. *Lease boundaries are for reference only. The state of Minnesota's land and mineral interests GIS data is mapped at the 40 acre level of resolution. The proposed exploratory borings and winter access trails are for reference only.

The Little Fork River is a PWI and State Water Trail which is a Special Feature. Designated Trout Streams are Special Features.

Proposed areas of exploration activities on *Active State Leases. Lease identification numbers labeled on the map (ex. MLMB200032).

The beds of significant rivers and water bodies in DNR’s Public Waters Inventory (PWI) are excluded from exploration activity.

Designated Trout Streams are Special Features.

*Active state nonferrous metallic minerals leases. These are not labeled.

Public Water Access Sites are Special Features.

Public roads including county and state forestry roads used to access drill sites.

Proposed exploratory boring (rotosonic) sites

Proposed winter access trails to access drill sites.

Public road use (active state nonferrous metallic mineral leases). These are not labeled.

Township 64
Range 22

Township 63
Range 22

Koochiching County

Itasca County

Koochiching County

Round Lake

St. Louis County

Koochiching County

Koochiching County

St. Louis County

St. Louis County

St. Louis County

St. Louis County

Itasca County

Itasca County

Itasca County

Koochiching County

Koochiching County

DNR Summary Overview Map of Exploration Plan Submitted by AngloGold Ashanti Minnesota

Scale 1:63,360

0 0.5 1 2 Miles