



Minerals Exploration Plan on State Nonferrous Metallic Minerals Leases

Submitted by AngloGold Ashanti Minnesota on October 31, 2017 and summarized here by the DNR Division of Lands and Minerals

Narrative: AngloGold Ashanti Minnesota (AGAM) submitted a project plan to explore for metallic mineral deposits by drilling this winter when the ground is frozen. AGAM plans to drill exploratory borings at 28 sites in an area that covers less than a township. The exploration area is about 8 miles west of Togo, Minnesota and south of State Highway 1 in northern Itasca County (Figure 1). AGAM will use rotosonic drilling to drill exploratory borings at 28 locations. Rotosonic drilling uses high frequency vibration of the drill bit to advance and collect cores of soils, glacial sediments, and a short length of the underlying bedrock. The borings will end shortly after the top of bedrock is encountered. No drilling fluids are circulated during drilling, so sumps are unnecessary. AGAM plans to permanently seal each boring immediately after drilling is complete.

State nonferrous metallic mineral lease ids: Drilling is proposed on 12 leases: MLMB200110, MLMB200111, MLMB200119, MLMB200120, MLMB200151, MLMB200152, MLMB200158 through MLMB200162, and MLMB200172.

Public Land Survey location: Sections 19, 20, 28, and 29 of T61N R23W, and Sections 12, 14, 22-26, and 36 of T61N R24W.

Types of exploration activity: Exploratory borings (rotosonic drilling).

Expected time period of activity: When the ground is sufficiently frozen, approximately from December 2017 through March 2018.

Access: AGAM will open and use existing logging trails to get to the drill sites. Brushing will be done with a boom-mounted mulcher. AGAM is not proposing new trails.

Surface ownership: Pending DNR approval, which may include stipulations, AGAM will have the right to explore as described in the exploration plan on state-owned surface lands. AGAM will coordinate with the Itasca County Land Department as well as any other affected private landowners for access to tax-forfeited and private lands.

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This report is posted on the [DNR's exploration plan webpage](#).

Maps and Data Disclaimer

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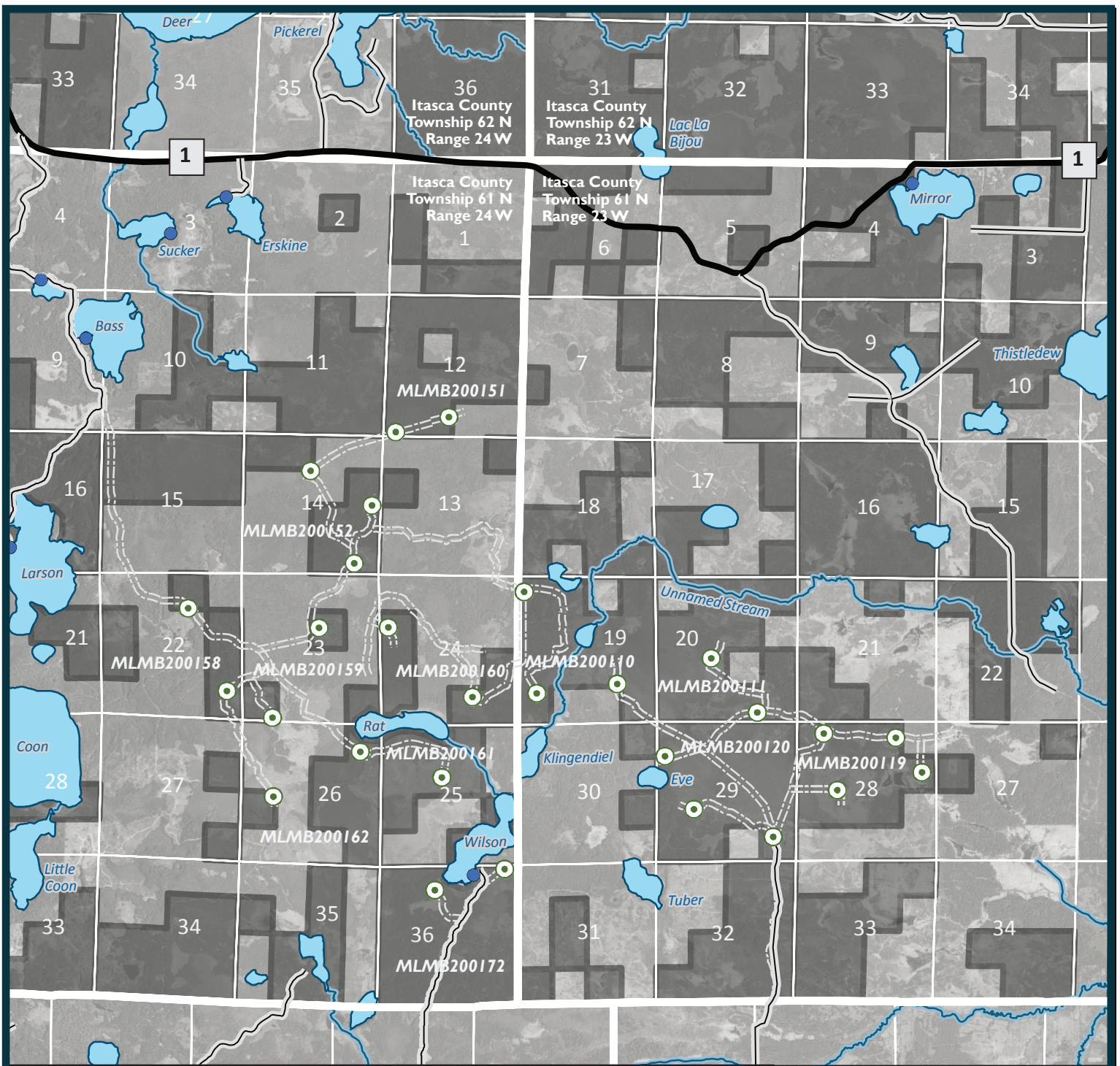


Figure 1. DNR Summary Map of Exploration Plan

- Proposed exploratory boring (rotosonic drilling) sites
- Existing logging trails proposed to be opened and used to get to drill sites
- State Highway 1
- County roads and highways
- Active state nonferrous metallic minerals leases
Leases that have proposed exploration drilling are labeled by Lease ID (ex. MLMB200172).

- The beds of DNR's Public Waters Inventory are excluded from exploration activity on public lease sale nonferrous metallic mineral leases.
 - Public water sites are special features
- There are known natural heritage features in T.61, R.24, S.22 (MLMB200158). These are special features and are not shown since they are considered nonpublic data.

State lease boundaries depicted are for reference only. The state of Minnesota's land and mineral interests GIS data is mapped at the 40 acre Public Land Survey level of resolution.



GIS Data Sources - Proposed drill sites and existing logging trails provided by AGAM. State mineral leases, Public Waters Inventory, Public Water Sites, & PLS township and section boundaries from DNR. Highways and roads from MnDOT. 2010 Black and White Air Photo Farm Service Agency.

