



Minerals Exploration Plan on State Nonferrous Metallic Minerals Leases

Submitted by [AngloGold Ashanti Minnesota](#) on November 10, 2017 and summarized here by the [DNR Division of Lands and Minerals](#)

Narrative: AngloGold Ashanti Minnesota (AGAM) submitted an exploration plan to explore for metallic mineral deposits by drilling this winter when the ground is frozen. AGAM plans to drill shallow exploratory borings at 47 sites in an area east and southeast of Togo, Minnesota (Figure 1). All proposed drill sites are more than 150 feet from waterbodies and no stream crossings are proposed. AGAM will use a roto sonic drilling method. Roto sonic drilling uses high frequency vibration of the drill bit to advance and collect cores of glacial sediments and a short length (typically less than 10 feet) of the underlying bedrock. Each boring will end shortly after the top of bedrock is encountered. No drilling fluids are recirculated during drilling, so sumps are unnecessary. AGAM plans to permanently seal each boring shortly after it is drilled.

State nonferrous metallic mineral lease ids: Drilling is proposed on 20 leases: MLMB200047, MLMB200048, MLMB200057 through MLMB200059, MLMB200085 through MLMB200088, MLMB200094 through MLMB200096, MLMB200312, MLMB200318, and MLMB200320 through MLMB200325.

Public Land Survey location: Sections 1, 2, 10 (access only), and 11-13 of T61N R22W, and Sections 25-28, and 34-36 of T62N R22W in Itasca County. Sections 20 (access only), 21, 22 (access only), 27, and 29-34 of T62N R21W in St. Louis County.

Types of exploration activity: Exploratory borings (roto sonic 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 with two possible exceptions. AGAM has not yet determined the access to reach drilling sites in Sections 34 and 35 of T62N R22W. AGAM plans to coordinate access with a logging operation planned in Section 34, but new trails may be needed for a portion of the access trails used in these two sections. Brushing will be done with a boom-mounted mulcher.

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 and St. Louis County Land Departments 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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State lease boundaries depicted are for reference only. The GIS data of the state of Minnesota's land and mineral interests is mapped at the 40 acre Public Land Survey level or government lot.

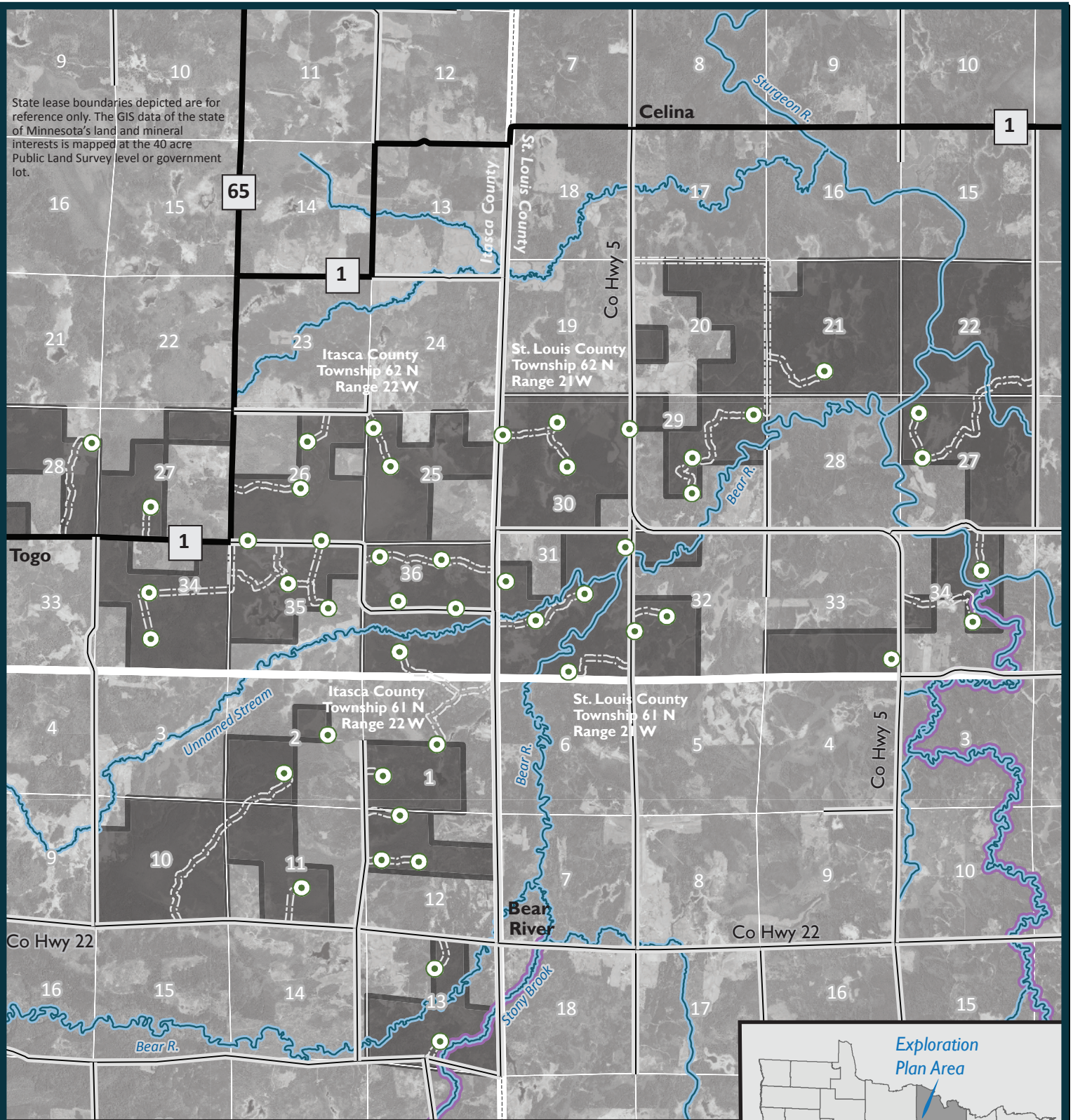


Figure 1. DNR Summary Map of Exploration Plan

- Proposed exploratory boring (rotasonic drilling) sites
- Proposed access trails
- State Highways
- County roads and highways
- State nonferrous metallic minerals leases that have proposed exploration activity

0 0.5 1 2 Miles
1:63,360 Scale

- The beds of DNR's Public Waters Inventory are excluded from exploration activity on public lease sale nonferrous metallic mineral leases.
- Designated trout streams are special features

Special Features Not Shown on the Map

The following 5 sections with proposed exploration activity have identified *natural heritage features* (Section-Township-Range):

- 32-62-21 / 34-62-21 / 27-62-21 / 31-62-21 & 33-62-21

The following 5 sections have identified *historic or archaeological sites* (Section-Township-Range):

- 32-62-21 / 34-62-21 / 27-62-22 / 28-62-22 & 13-61-22

