# Minnesota Department of Natural Resources (DNR)

## Minerals Exploration Plan on State Nonferrous Metallic Minerals Leases

Kennecott Exploration Company Exploration Plan Submitted on 05/02/2016

## **DNR Summary Report and Associated Maps**

An exploration plan was submitted by Kennecott Exploration Company (Kennecott) on May 2<sup>nd</sup>, 2016 and summarized here by the DNR on May 5<sup>th</sup>, 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 maps were created by the Minnesota DNR, Division of Lands and Minerals.

This report and associated maps are posted on the DNR's exploration plan website at: http://www.dnr.state.mn.us/lands\_minerals/metallic\_nf/regulations.html

This summary report and associated maps should be distributed as a complete document due to the relative nature of the content.

## Minerals Exploration Plan on State Nonferrous Metallic Mineral Leases

### Kennecott Exploration Company Exploration Plan Summarized by the Minnesota DNR

Narrative: Kennecott Exploration Company (explorer) submitted an Exploration Plan on May 2, 2016 for exploration activities to be conducted on 7 state nonferrous metallic mineral leases in Aitkin and Carlton Counties near the city of Tamarack. The company proposes to conduct two ground-based geophysical surveys over its Tamarack Project. One is a gravity survey. This is a non-invasive measurement that uses a sensor the size of a large coffee pot. It is placed on the ground at 100 to 200 meter intervals for a few minutes to passively measure the earth's gravity field. The other is a magneto-telluric (MT) survey. The MT survey is also a non-invasive technique to measure changes in the earth's electrical and magnetic fields over time. Small recording units will be placed at stations approximately 400 meters apart (roughly one every 40 acres). No trees or brush will be removed for these surveys. The company will capture the locations of every geophysical station with a high accuracy GPS (Global Positioning System).

State Minerals Lease Numbers: MM-9849-N, MM-10009-N, MM-10202-N, MM-10125-N, MLMB200001, MLMB200002, & MLMB200003

Types of exploration activity: Ground-based geophysical surveys: gravity survey and magneto-telluric survey

Expected time period of activity: May 22, 2016 - August 31, 2016

Plans to access exploration sites: The explorer will use existing access trails.

Surface Ownership: The explorer has agreements or leases for the surface ownership on the parcels involved.

Explorer contact: John Storie, Kennecott Exploration Company, (218) 768-3292 or john.storie@riotinto.com

### Locator map for exploration plan activity



### **Exploration Plan Area**

This small scale map displays the general location of the exploration plan relative to other cities in northern Minnesota. The following map provides more details on the locations of the geophysical survey, active state mineral leases, public land survey locations, cities, water bodies, special features, and excluded lands.

See page 3 for a detailed map

#### Maps and Data Disclaimer

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Map by DNR - Lands and Minerals Division 05/05/2016