An exploration plan was submitted by Kennecott Exploration Company (Kennecott) on January 25th, 2016 and summarized here by the DNR on February 1st, 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 is amended to extend the expected time period of activity. This is the only change to the original plan.

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
January 25th, 2016

Narrative: Kennecott Exploration Company (explorer) submitted an Exploration Plan on January 25, 2016 for exploration activities to be conducted on 27 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).


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

Expected time period of activity: February 15, 2016 - July 30, 2016 (Amended by Explorer on 02/10/2016)

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

Surface Ownership: The explorer has agreements or leases for the surface and mineral 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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**Narrative:** Kennecott Exploration Company (explorer) submitted an Exploration Plan on January 25, 2016 for exploration activities to be conducted on 27 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, a gravity survey and a magneto-telluric (MT) survey over its Tamarack Project.

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

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**Map: DNR Summary Overview Map of Exploration Plan Submitted by Kennecott Exploration on January 25, 2016**

**Township 48, Range 22**

**Township 49, Range 22**

**Township 47, Range 22**

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**About the Ground-Geophysical Surveys:**

The gravity survey 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).