Minerals Exploration Plan on State Nonferrous Metallic Minerals Leases

*Kennecott Exploration Company*  
*Exploration Plan Submitted on 11/19/2015*

**DNR Summary Report and Associated Maps**

The exploration plan was submitted by Kennecott Exploration Company (Kennecott) on November 19th, 2015 and summarized here by the DNR on November 24th, 2015. The locations of proposed exploration activities by this state nonferrous metallic minerals lessee are shown in a standard format and legend. Report and associated maps by Minnesota DNR, Lands and Minerals Division.

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
November 19th, 2015

Narrative: Kennecott Exploration Company (explorer) submitted an Exploration Plan on November 19, 2015 for exploration activities to be conducted on 4 state nonferrous metallic mineral leases in Aitkin County near the city of Tamarack. The company proposes to drill approximately 10 to 20 drill holes (exploratory borings). The explorer has also proposed to conduct down-the-hole geophysical surveys in the exploratory borings.


Public Land Survey Location: Sections 3 and 23 in Township 48, Range 22 in Aitkin County, Minnesota; Sections 34 and 35 in Township 49, Range 22 in Aitkin County, Minnesota.

Types of exploration activity: Exploratory borings and down-the-hole geophysical surveys

Expected time period of activity: December 16, 2015 - April 30, 2016

Plans to access exploration sites: The explorer will use existing access trails for the majority of drill sites. The explorer will need to extend an existing trail approximately 300 feet to access one of the exploratory boring sites. When ground conditions are frozen, drill sites in the wetlands will be built by packing or clearing snow so that the ground is sufficiently frozen and stable; composite mats may be placed, if it is deemed necessary for safety reasons. New exploration information obtained through the drilling program may indicate new drilling targets nearby. If necessary existing access trails will be extended on the order of several hundred feet to access new drilling locations.

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 two maps provide more details on the exploration area including general locations of the drill holes, access trails, active state mineral leases, public land survey locations, cities, water bodies, special features, and excluded lands.

See following pages 3 and 4 for detailed maps

Maps and Data Disclaimer
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Plans to access exploration sites: The explorer will use existing access trails for the majority of drill sites. The explorer will need to extend an existing trail approximately 300 feet to access an exploratory boring site seen on the detailed map. When ground conditions are frozen, drill sites in the wetlands will be built by packing or clearing snow so that the ground is sufficiently frozen and stable; composite mats may be placed, if it is deemed necessary for safety reasons. New exploration information obtained through the drilling program may indicate new drilling targets nearby. If necessary existing access trails will be extended on the order of several hundred feet to access new drilling locations.

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DNR Summary Overview Map of Exploration Plan Submitted by Kennecott Exploration on November 19, 2015

Proposed exploratory boring sites (10-20 borings planned at 4 locations)
Existing access trails
Active state minerals lease with proposed exploration activity in this plan. Lease identification numbers labeled on the map (ex. MM-9849-N)
Active state leases with no proposed exploration activity in this plan
The beds of significant rivers and water bodies in DNR’s Public Waters Inventory are excluded from exploration activity
Designated Old Growth Stands are Special Features
Public Water Access Sites are Special Features
Natural Heritage Features and Historic & Archaeologic Sites are not shown because they are non-public data.

Scale: 1:63,360

Kennecott Exploration Company Exploration Plan 11/19/2015, page 3/4
Map by DNR - Lands and Minerals Division 11/24/2015
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