Overview of all nonferrous exploratory borings on non-state and state minerals leases. Definition of Exploratory Boring per Minnesota Statutes, Chapter 103I.

An "extension" occurs when a borehole is drilled deeper, such as Kennecott’s borehole from 2015 (15-TK-0220 extension) that was deepened in 2016 as shown on page 2.

What are wedges and extensions? A "wedge" is a term used here to describe when a new segment of the borehole is drilled from inside an existing borehole by drilling out the sidewall of the existing borehole to obtain core from the geologic feature that is off to the side.

(2 Companies) 61,562 Feet of Drilling

<table>
<thead>
<tr>
<th>Exploration Company (General Name)</th>
<th>Project Area</th>
<th>Drilling Count</th>
<th>Feet Drilled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twin Metals Maturi</td>
<td>1 boring</td>
<td>2,505</td>
<td></td>
</tr>
<tr>
<td>Kennecott Tamarack</td>
<td>8 wedges</td>
<td>10.461</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1 extension</td>
<td>1,669</td>
<td></td>
</tr>
</tbody>
</table>

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Kennecott Exploratory Borings

- Drilled in 2016
  - 21 New Exploratory Borings / 46,927 ft.
  - *Wedges and Extensions in 2016
    - 8 Wedges and 1 Extension / 12,130 ft.
- 59,057 feet drilled

Labeled by ID & Feet drilled

*What are wedges and extensions?*
A "wedge" is a term used here to describe when a new segment of the borehole is drilled from inside an existing borehole by drilling out the sidewall of the existing borehole to obtain core from the geologic feature that is off to the side. An "extension" occurs when a borehole is drilled deeper, such as Kennecott’s borehole from 2015 (15-TK-0220 extension) that was deepened in 2016.

Drilled before 2016

Kennecott State Leasing

- Active State Nonferrous Metallic Minerals Leases
- Active State Industrial Minerals Leases

Private leases are not shown

Basemap from MN DNR Public Land
Survey Townships and Sections, Lakes, MnDOT Roads and Rail
Exploratory Borings for Metallic Minerals in 2016

Twin Metals Minnesota Borings
- Drilled in 2016
  - 1 boring on Federal Lease
  - 2,505' feet drilled
  - Labeled by ID & feet drilled
- Drilled before 2016

Twin Metals Minnesota Federal Mineral Leasing and Prospecting Interests
- Federal Hardrock Lease - Beaver Bay Joint Venture
- Federal Hardrock Prospecting Permit - Twin Metals Minnesota

Twin Metals Minnesota State Leasing Interests
- Active State Nonferrous Metallic Minerals Leases

Private leases are not shown

Basemap from MN DNR Public Land
Survey Townships and Sections, Lakes; MnDOT Roads; Federal Hardrock Mineral Leasing and Prospecting Permits from United States Forest Service.