



Minnesota Department of Natural Resources (DNR)

Minerals Exploration Plan on State Nonferrous Metallic Minerals Leases

*Twin Metals Minnesota LLC
Exploration Plan submitted on 10/30/2015*

DNR Summary Report and Associated Maps

The exploration plan was submitted by Twin Metals Minnesota on October 30th, 2015 and summarized here by the DNR's Lands and Minerals Division on November 5th, 2015. 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 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

Twin Metals Minnesota Exploration Plan Summarized by DNR November 5th, 2015

Narrative: Twin Metals Minnesota, (Explorer) proposes doing down-the-hole geophysical and hydrogeological tests at 12 existing temporarily sealed drill holes (exploratory borings). The 12 drill holes occur on 4 state nonferrous metallic minerals leases in St. Louis and Lake Counties east of Babbitt and south of Ely, Minnesota. The explorer will open the previously used access routes and drill pads to allow trucks and a drill rig access to the sites. No new trails are proposed. The tests inside the borings could take a number of days. All 12 borings will be permanently sealed after the tests are done. The work may begin shortly after all approvals are received. Some sites will be accessed only in winter when soils are frozen. Twin Metals is seeking separate approval from the Health Department for the hydrogeological tests.

State Minerals Lease Numbers: MM-9455-N, MM-9764-N, MM-9722-N, & MM-9756-P

Public Land Survey Locations: Sections 25 & 36, Township 61 North, Range 12 West in St. Louis County; Section 4, Township 61 North, Range 11 West & Section 34, Township 62 North, Range 11 West in Lake County.

Types of exploration activity: Down-the-hole geophysics and down-the-hole hydrogeological testing.

Expected time period of activity: From approximately 10 days after receiving all approvals to up to 12 months.

Plans to access exploration sites: No new access trails are proposed. Explorer will use existing access roads and trails.

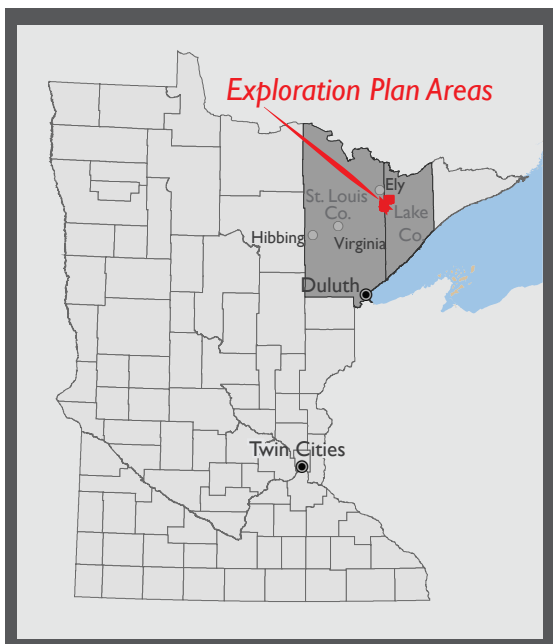
Surface Ownership: In Township 61, Range 12 the State of Minnesota owns the surface in the east half of Section 36 and Twin Metals controls (via Franconia Minerals) the surface in the West half of Section 36. Also in Township 61, Range 12 the land in Section 25 is private. The explorer is working on access agreements with the commercial property surface owner in Section 25 and will not do exploration work until agreements are in effect there. In the exploration areas in Township 61-62, Range 11 the State of Minnesota owns the surface in Sections 4 and 34.

Explorer contact: Kevin Boerst and Neil Smith, Twin Metals Minnesota, (218) 365-3306

End report section

Start maps section

Locator map for exploration plan activity



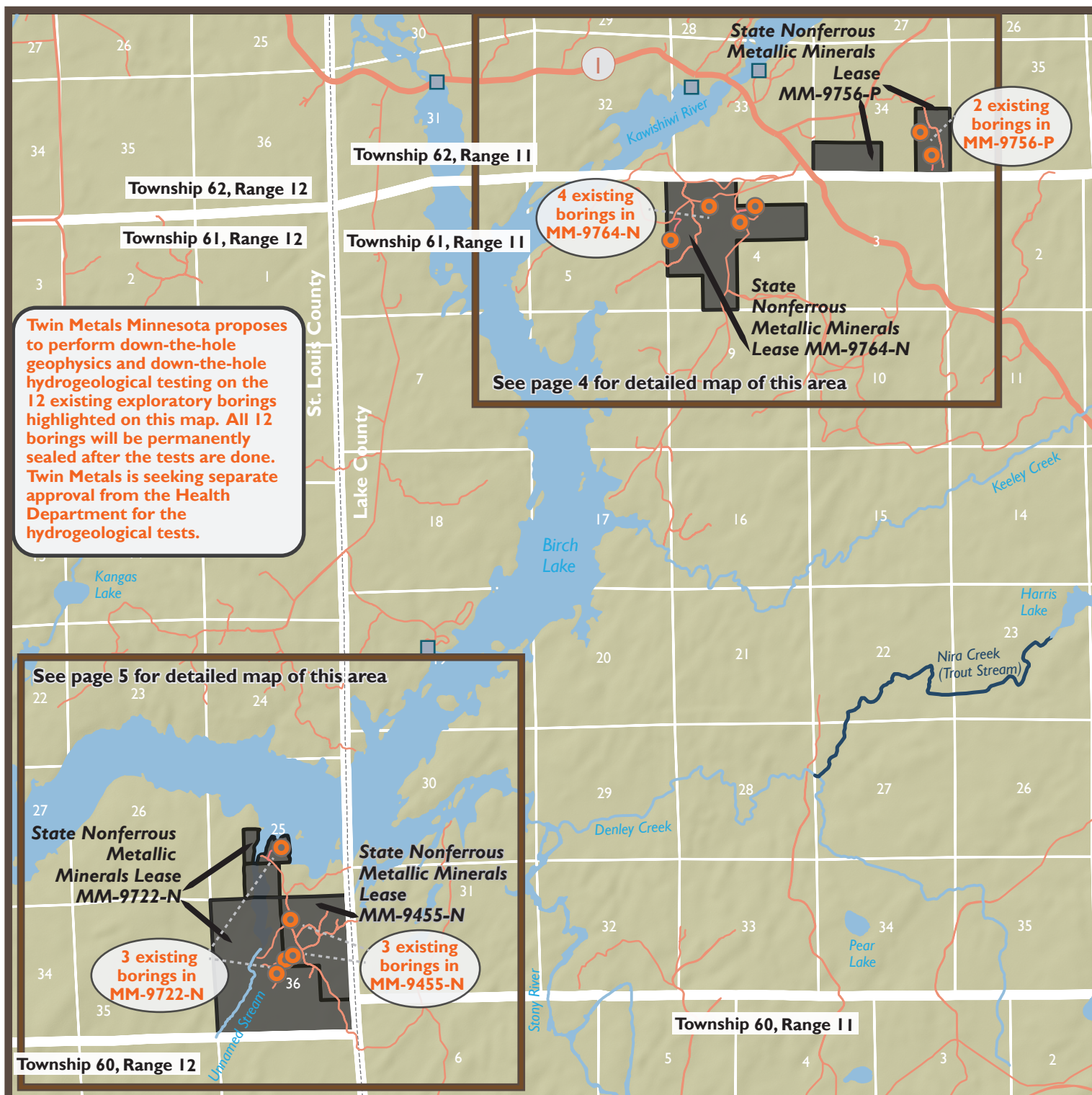
Exploration Plan Area

This small scale map displays the general location of the exploration plan relative to other cities in northern Minnesota. The following three maps provide more details on the exploration areas including general locations of drill holes, active state mineral leases, public land survey locations, cities, water bodies, and special features.

See pages 3-5 for detailed maps

Maps and Data Disclaimer

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DNR Summary Overview Map of Exploration Plan Submitted by Twin Metals on October 30, 2015

Narrative: Twin Metals Minnesota, (Explorer) proposes doing down-the-hole geophysical and hydrogeological tests at 12 existing temporarily sealed drill holes (exploratory borings). The 12 drill holes occur on 4 state nonferrous metallic minerals leases in St. Louis and Lake Counties east of Babbitt and south of Ely, Minnesota. The explorer will open the previously used access routes and drill pads to allow trucks and a drill rig access to the sites. No new trails are proposed. The tests inside the borings could take a number of days. All 12 borings will be permanently sealed after the tests are done. The work may begin shortly after all approvals are received. Some sites will be accessed only in winter when soils are frozen. Twin Metals is seeking separate approval from the Health Department for the hydrogeological tests.

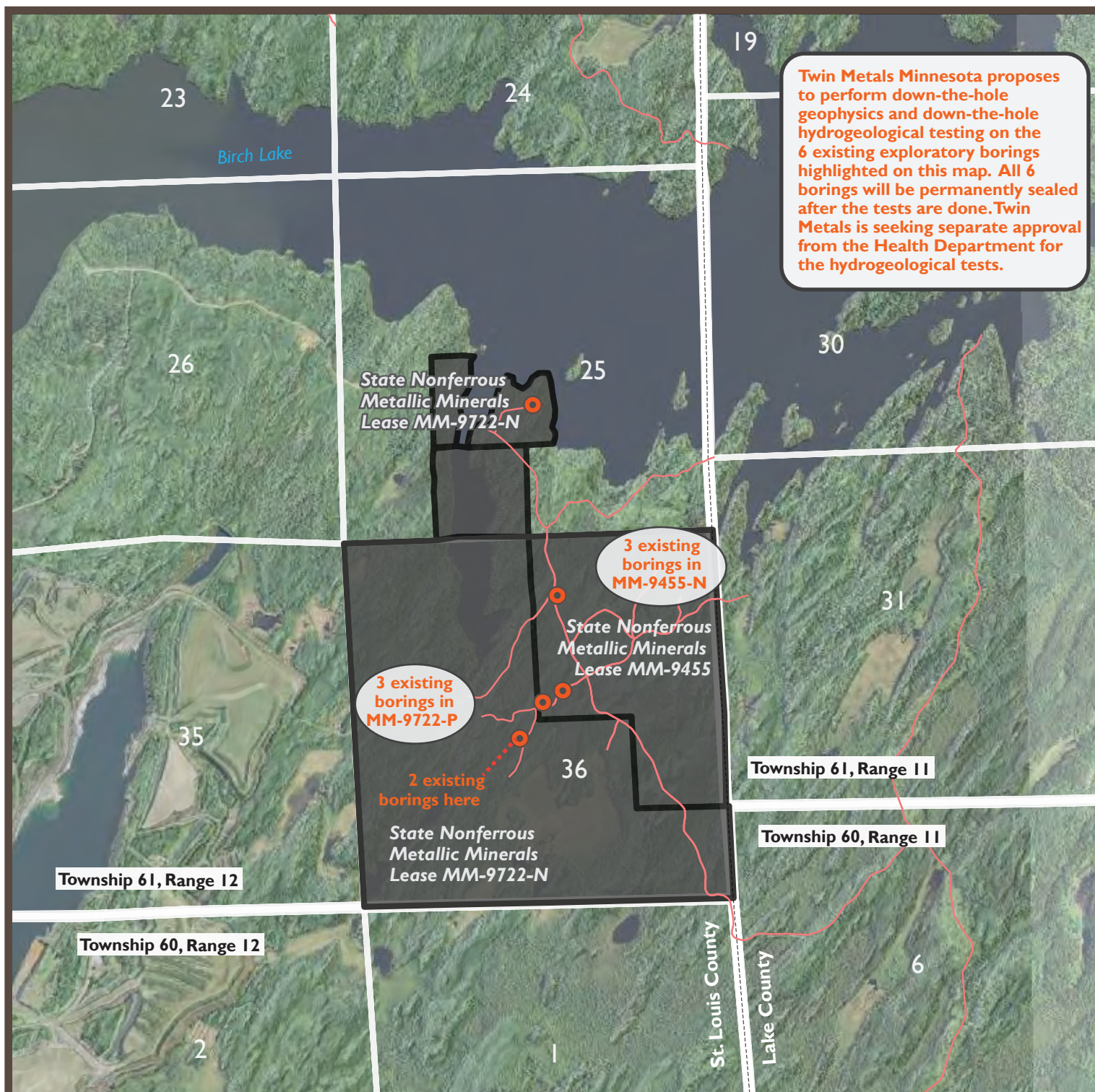
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- Proposal to perform down-the-hole geophysics and down-the-hole hydrogeological testing on 12 existing exploratory borings.
- Active state minerals leases with proposed exploration activity in this plan. Lease identification numbers labeled on the map (ex. MM-9455-N).
- Existing access roads and trails to exploratory boring sites.
- Water features
- Designated Trout Streams 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. Roads from MnDOT with additional access trails for the proposed areas from Twin Metals Minnesota.

Scale 1:63,360

0 0.5 1 2 Miles



DNR Summary Detailed Map of Exploration Plan Submitted by Twin Metals on October 30, 2015

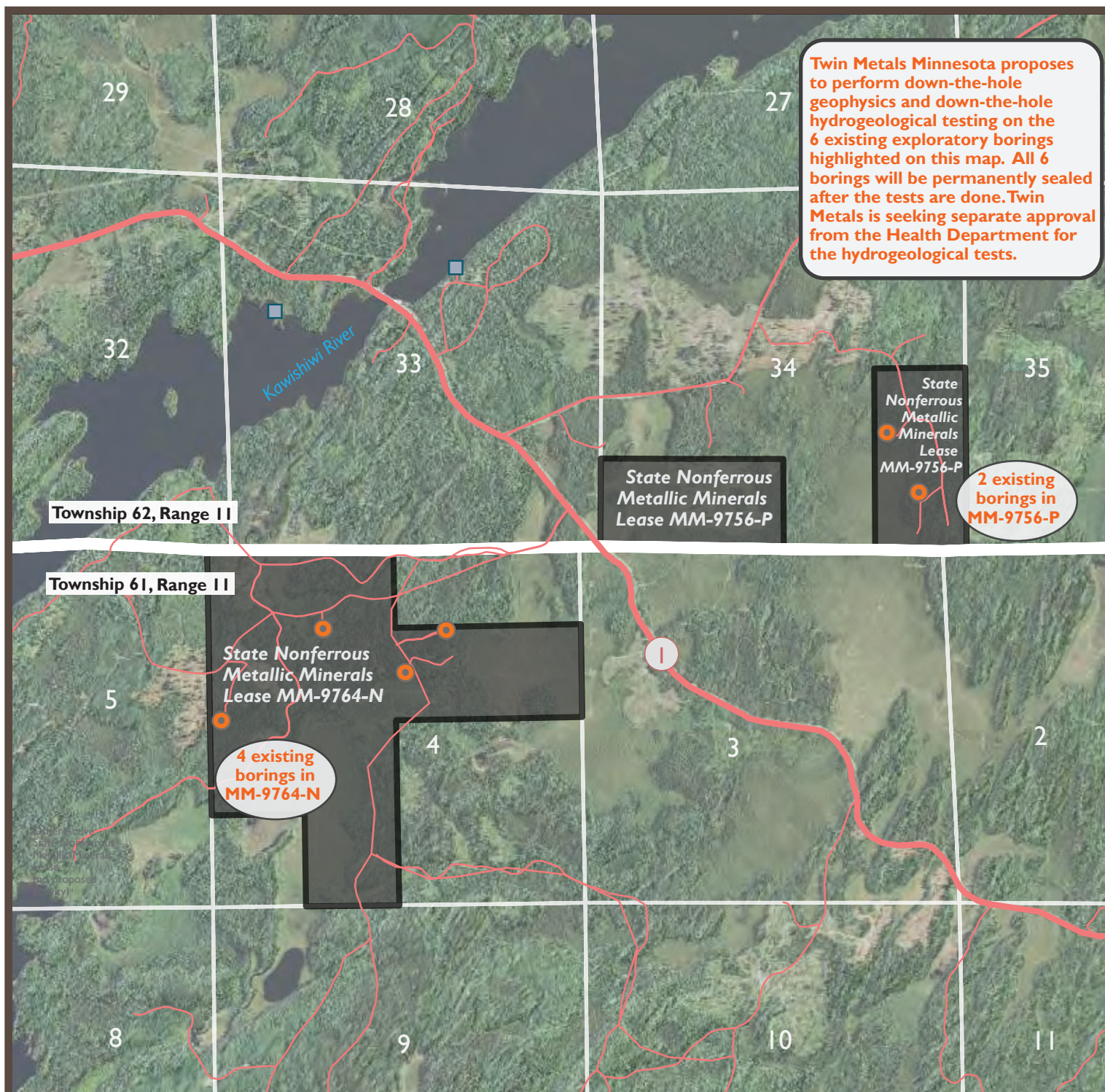
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- Proposal to perform down-the-hole geophysics and down-the-hole hydrogeological testing on 6 existing exploratory borings.
- Active state minerals leases with proposed exploration activity in this plan. Lease identification numbers labeled on the map (ex. MM-9455-N).
- Existing access roads and trails to exploratory boring sites.

Natural Heritage Features and Historic & Archaeologic Sites are not shown because they are non-public data. Roads from MnDOT with additional access trails for the proposed areas from Twin Metals Minnesota.

Scale 1:24,000 0 0.25 0.5 1 Mile



DNR Summary Detailed Map of Exploration Plan Submitted by Twin Metals on October 30, 2015

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- Orange circle: Proposal to perform down-the-hole geophysics and down-the-hole hydrogeological testing on 6 existing exploratory borings.
- Black rectangle: Active state minerals leases with proposed exploration activity in this plan. Lease identification numbers labeled on the map (ex. MM-9764-N).
- Red line: Existing access roads and trails to exploratory boring sites.
- Blue square: Public Water Access Sites are Special Features

Natural Heritage Features and Historic & Archaeologic Sites are not shown because they are non-public data. Roads from MnDOT with additional access trails for the proposed areas from Twin Metals Minnesota.

Scale 1:24,000 0 0.25 0.5 1 Mile