

Preliminary Screening Report Form

<p>Preliminary screener: MVLWB</p> <p>Reference / File number: MV2013C0021</p> <p>TITLE: Mineral Exploration ORGANIZATION: New Discovery Mines Ltd.</p> <p>MEETING DATE: February 7, 2019</p>	<p>EIRB</p> <p>Reference number:</p>
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Type of Development:
(CHECK ALL THAT APPLY)

- New
- Amend, EIRB Ref. #
- Requires permit, licence, or authorization
- Does not require permit, licence, or authorization

Project Summary:

This site has been previously explored and mined, starting in 1937. On January 24, 1992 a preliminary screening determination was made by Indian and Northern Affairs Canada (INAC) for water use and waste disposal at a small gold mine located at the Mon property, including milling, as applied for under Water Licence N1L2-1598. A second screening was conducted on February 4, 1994 for an amendment to the Water Licence. In both screenings, INAC concluded that the potentially adverse effects and/or public concerns may be mitigated with known technology and that the project proceeds through the regulatory process (attached). The ore that was to be milled had been previously mined under Land Use Permit N89C103. Winter road access for the purposes of reclamation of the site was previously permitted under MV2001F0095. Any new activities associated with this amendment are identified in **yellow**.

The Project permitted currently allows New Discovery Mines Ltd. (NDM) to carry out surface and underground mineral exploration at the Mon Lake Mine, activities include advanced mineral exploration, diamond drilling, and bulk sampling. Water from Discovery Lake will be required for underground operations and for dust control. Water for diamond drilling will be drawn from local unnamed water bodies, not to exceed 2m³ per day. Underground sumps are constructed to collect any water, drill cuttings, and mine waste. Hydrocarbons are removed at the sump, solids will be settled, and the mine water is recirculated to the diamond drills or pumped to a surface sump at a rate not to exceed 2-3m³ per day; this water is subsequently discharged into a wetland more than 100m away from the ordinary high water mark.

NDM estimates they may extract up to 4,000m³ of rock and ore, including 1,080m³ of waste rock will be excavated from the main ramp and an additional 400m³ will be removed from the cross cuts. Bulk samples will be collected to establish grades and confirm established geochemical and metallurgical characteristics. Waste rock is used in construction, as needed, or placed in a waste rock pile to be located upslope of the previously disturbed area. Ammonium nitrate (ANFO) is required on-site for blasting activities associated with exploration and bulk sampling activities.

An 8-person camp is located on previously disturbed lands to support the project. Water for domestic use is sourced from Discovery Lake at a maximum rate of 3m³/day and greywater is discharged to the nearby wetlands. Outhouses are used to manage sewage waste. Shops and fuel storage areas are also located on previously disturbed lands. **Diesel fuel storage will be in a 120,000 double wall Envirotank with temporary containment in 205 liter drums used for transfer and local tannage.** Additional fuel types stored onsite include gasoline (4 x 205 litres), aviation fuel (4 x 205 litres), propane (1000 kg), and various oils.

Winter access to the site is created using an established Secondary Winter Road route, starting at Prosperous Lake along the Ingraham Trail, through to Discovery Lake. Water for flooding winter access road is not expected to be required but will not exceed 10m³/day, if needed. Potential water sources for winter road construction are Prosperous, Bluefish, Quyta, Sito, or Discovery lakes. **Helicopters will be used to fly into remote drill locations.** Float planes would be used during the open water season.

The location of activities remains within the boundaries of: 62°32'4.43"N by 114°98'54"W and 62°52'2" N by 114°20'60"W but for clarity, **all exploration activities are limited to the following mineral leases and claims:**

Lease Number	Issued	Expires	Owner
3004	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3005	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3006	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3007	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3008	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3009	12/11/1959	12/11/2022	New Discovery Mines Ltd.

3010	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3011	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3012	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3013	12/11/1959	12/11/2022	New Discovery Mines Ltd.
3014	12/11/1959	12/11/2022	New Discovery Mines Ltd.
Claim Number	Issued	Expires	Owner
F76520 (NDM)	19/03/2015	18/03/2022	New Discovery Mines Ltd.
F76521 (NDM)	19/03/2015	18/03/2022	New Discovery Mines Ltd.
M11200 (NDM)	1/24/2018	1/24/2020	New Discovery Mines Ltd.

Equipment required includes:

2 Snowmobiles

1 Propane tank

1 Incinerator

6 Canvas tents with stoves

1 stove, refrigerator, freezer

1 Miscellaneous camp supplies

1 Coil Stove

4 Water pump

1 Diamond drill

1 Sloop

2 Explosive Magazine

1 Fuel Tank, 120,000 litres

6 Camp Trailer

Assorted hand tools

1 Compressor

Assorted mining tools

2 Air-Driven Pumps

1 Fan

2 Scooptram

2 Rock Truck

1 Drill Jumbo

1 Bulldozer

1 Loader

2 Diesel Generator

2 Pick-up Truck

1 Quad

2 Boat and outboard

3 Shipping Containers 2 - 40', 1 - 20'

1 Snow Cat

1 Water Truck

1 Transport A-Train

Scope:

There has been no change in the Project scope:

- Use, construction and maintenance of a winter road from the Ingraham Trail to Discovery Lake;
- Re-opening and securing of the North and South Declines as identified in the land use permit application;
- Advanced mineral exploration program including bulk sampling;
- Storage of waste rock and ore;
- Quarrying;
- Construction and operation of camp;
- Fuel storage;
- Storage and use of explosives; and
- Use of equipment.

All activities take place within 62°32'4.43" N by 114° 08'54.00 W and 62° 54'2.00" N by 114° 20'60" W.

Land Use Eligibility - Section 18 Mackenzie Valley Land Use Regulations:

-

Type of Disposition**Disposition Number(s)**

- Mineral Claims
- Prospecting Permit (s)
- Mineral Leases
- Oil and Gas: EL/SDL/PL
- Quarry Permit
- Timber Permit
- Other:

F76520, F76521, M11200

3004 through 3014

Principal Activities (related to scoping) (CHECK ALL THAT APPLY)

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Construction | <input checked="" type="checkbox"/> Exploration | <input checked="" type="checkbox"/> Decommissioning |
| <input type="checkbox"/> Installation | <input checked="" type="checkbox"/> Industrial | <input checked="" type="checkbox"/> Abandonment |
| <input checked="" type="checkbox"/> Maintenance | <input type="checkbox"/> Recreation | <input type="checkbox"/> Aerial |
| <input type="checkbox"/> Expansion | <input type="checkbox"/> Municipal | <input type="checkbox"/> Harvesting |
| <input checked="" type="checkbox"/> Operation | <input checked="" type="checkbox"/> Quarry | <input checked="" type="checkbox"/> Camp |
| <input type="checkbox"/> Repair | <input checked="" type="checkbox"/> Linear / Corridor | <input type="checkbox"/> Scientific/ |
| <input type="checkbox"/> Research | <input checked="" type="checkbox"/> Sewage | <input checked="" type="checkbox"/> Solid Waste |
| <input checked="" type="checkbox"/> Water Intake | | |
| <input type="checkbox"/> Other: | | |

Principal Development Components (related to scoping) (CHECK ALL THAT APPLY)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Access Road | <input checked="" type="checkbox"/> Waste Management |
| <input checked="" type="checkbox"/> construction | <input checked="" type="checkbox"/> disposal of hazardous waste |
| <input checked="" type="checkbox"/> abandonment/removal | <input checked="" type="checkbox"/> waste generation |
| <input type="checkbox"/> modification e.g., widening, straightening | <input checked="" type="checkbox"/> sewage |
| <input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement | <input checked="" type="checkbox"/> disposal of sewage |
| <input checked="" type="checkbox"/> Blasting | <input type="checkbox"/> Geoscientific Sampling |
| <input type="checkbox"/> Building | <input checked="" type="checkbox"/> Trenching |
| <input checked="" type="checkbox"/> Burning | <input checked="" type="checkbox"/> Diamond drill |
| <input type="checkbox"/> Burying | <input checked="" type="checkbox"/> Borehole core sampling |
| <input checked="" type="checkbox"/> Channelling | <input type="checkbox"/> Bulk soil sampling |
| <input type="checkbox"/> Cut and Fill | <input type="checkbox"/> gravel |
| <input checked="" type="checkbox"/> Cutting of Trees or Removal of Vegetation | <input type="checkbox"/> hydrological Testing |
| <input type="checkbox"/> Dams and Impoundments | <input checked="" type="checkbox"/> Site Restoration |
| <input type="checkbox"/> construction | <input type="checkbox"/> fertilization |
| <input type="checkbox"/> abandonment/removal | <input type="checkbox"/> grubbing |
| <input type="checkbox"/> modification | <input type="checkbox"/> planting/seeding |
| <input type="checkbox"/> Ditch Construction | <input type="checkbox"/> reforestation |
| <input checked="" type="checkbox"/> Drainage Alteration | <input checked="" type="checkbox"/> scarify |
| <input checked="" type="checkbox"/> Drilling other than Geoscientific | <input type="checkbox"/> spraying |
| <input type="checkbox"/> Ecological Surveys | <input checked="" type="checkbox"/> re-contouring |
| <input checked="" type="checkbox"/> Excavation | <input checked="" type="checkbox"/> Slashing and removal of vegetation |
| <input checked="" type="checkbox"/> Explosive Storage | <input type="checkbox"/> Soil Testing |
| <input checked="" type="checkbox"/> Fuel Storage | <input type="checkbox"/> Stream Crossing/Bridging |
| <input type="checkbox"/> Topsoil, Overburden or Soil | <input checked="" type="checkbox"/> Tunnelling/Underground |
| <input type="checkbox"/> fill | <input type="checkbox"/> Other: |
| <input type="checkbox"/> disposal | |
| <input type="checkbox"/> removal | |
| <input type="checkbox"/> storage | |

NTS topographic map sheet numbers:

85 J 16

Latitude / longitude and UTM system:

62°32'4.43" N by 114 ° 08'54.00 W and 62 ° 54'2.00" N by 114 ° 20'60" W.

Nearest community and water body:

Discovery Lake, Dettah, N'Dilo and Yellowknife, NT

Land Status (consultation information)

- Free Hold/Private
- Commissioner's/Territorial Lands
- Federal Crown Land
- Municipal Land

Transboundary/Transregional Implications

- British Columbia
- Alberta
- Saskatchewan
- Yukon
- Nunavut
- National Park
- Inuvialuit Settlement Region
- Wek'èezhii
- Gwich'in
- Sahtu

Type of transboundary implication: Impact / Effect Development

Public concern: _____
(Describe.)

Physical - Chemical Effects

Impact

1) Ground Water

- water table alteration
- water quality changes

Mitigation

The condition on flowing artesian wells should mitigate this.

No chemical additives are used for drilling. Non-toxic drilling waste should be disposed in a sump. Once settling and oil removal is complete, water will be allowed to drain into a nearby wetland location more than 100 m from the highwater mark. Sewage waste will be contained in outhouses and covered when complete. Greywater will be discharged to the wetland located more than 100 m from the highwater mark. Spill Contingency Plan will be in place to address potential spills and with a requirement to contact the NWT 24-Hour Spill Line (867) 920-8130. Proper fuel handling, secondary containment, and waste disposal should mitigate this impact

- infiltration changes
- other:

N/A

Impact

2) Surface Water

- flow or level changes
- water quality changes

Mitigation

No chemical additives are used for drilling. Diamond drilling will discharge drill cuttings into the environment. These will not be allowed to enter any water courses or water body and as all drill holes are to be less than 200m long, drill cuttings will not be excessive. Non-toxic drilling waste should be disposed in a sump. Once settling and oil removal is complete, water will be allowed to drain into a nearby wetland location more than 100 m from the highwater mark. Sewage waste will be contained in outhouses and covered when complete. Greywater will be discharged to the wetland located more than 100 m from the highwater mark. Spill Contingency Plan will be in place to address potential spills and with a requirement to contact the NWT 24-Hour Spill Line (867) 920-8130. Proper fuel handling, secondary containment, and waste disposal activities should mitigate this impact. Spill kits are located wherever fuel is stored or used. Portable drip trays and appropriately sized fuel transfer hoses with pumps are used when refuelling aircraft, ATVs, or other motorized equipment, to avoid any leaks/drips onto the land. Waste oil is stored in empty 200 L drums in either of the fuel storage areas, and shipped out by plane or truck for off-site disposal at an appropriate waste facility. Runoff waters from the waste rock pile, tailings, and the downstream receiving environment are being monitored regularly and have shown to be non-ARD and not leaching metals.

- water quantity changes
- drainage pattern changes
- temperature

Land Use Permit Condition in place to prohibit the obstruction of natural drainages. All disturbed areas will be graded or contoured to approximate the natural topography.

wetland changes/loss Non-toxic drilling waste will be allowed to drain into a nearby wetland once settling and oil removal is complete. Greywater will also be discharged to the wetland, which is located more than 100 m from the highwater mark.

other:

N/A

Impact
3) Noise

Mitigation

noise in/near water No mitigation - Localized noise increase due to equipment use. Mine activities will be minimal outside of periods between May 1 and September 30 each year as needed.

noise increase No mitigation - Localized noise increase due to equipment use. Mine activities will be minimal outside of periods between May 1 and September 30 each year as needed.

other:

N/A

Impact
4) Land

Mitigation

geologic structure changes

soil contamination A Spill Contingency Plan will be in place to outline preventative spill measures and address spill clean-up. Proper fuel handling and waste disposal activities should mitigate this impact.

buffer zone loss

soil compaction and settling Some soil compaction may be expected through the increase use of equipment. As previous exploration programs have impacted this area, there is little potential for significant impact to the local environment through soil compaction. Land Use Permit Conditions have been put in place to minimize rutting and soil compaction and winter roads are to be constructed with appropriate snow cover.

destabilization/erosion Roadways will be prepared for natural revegetation. Land Use Permit Conditions have been put in place to minimize erosion.

permafrost regime alteration Some disturbance to local permafrost through construction of infrastructure and drilling and underground operations. Land Use Permit Conditions have been put in place to ensure ground surfaces are to be insulated beneath structures.

explosives/scarring

other: "This project will provide economic benefits to the NWT, and will provide the opportunity for proper abandonment and restoration of an earlier worked minesite" (from 1992 screening)

N/A

Impact
5) Non-renewable natural resources

Mitigation

resource depletion No mitigation – NDM estimates they may extract up to 4,000m³ of rock and ore, including 1,080m³ of waste rock will be excavated from the main ramp and an additional 400m³ will be removed from the cross cuts

other:

N/A

Impact

6) Air/climate/atmosphere

other:

N/A

Mitigation

No mitigation – Air quality will be temporarily affected by vehicle and equipment use.

BIOLOGICAL ENVIRONMENT

Impact

1) Vegetation

species composition

species introduction

toxin/heavy accumulation

other: Linear Migration routes, habitat fragmentation

N/A

Mitigation

Impact

2) Wildlife and Fish

effects on rare, threatened or endangered species

fish population changes

waterfowl population changes

breeding disturbance

population reduction

species diversity change

health changes

behavioural changes

habitat changes / effects

game species effects

toxins/ heavy metals

forestry changes

agricultural changes

other: general disturbance

N/A

Mitigation

All reasonable measures to prevent damage to wildlife and fish Habitat are required during this land-use operation. All wildlife encounters are documented.

Interacting Environment

Impact

1) Habitat and Communities

Mitigation

- predator-prey
- wildlife habitat/ecosystem composition changes
- reduction/removal of keystone or endangered species
- removal of wildlife corridor or buffer zone
- other:
- N/A

Impact

2) Social and Economic

- planning/zoning changes or conflicts
- increase in urban facilities or services use
- rental house
- airport operations/capacity changes
- human health hazard
- impair the recreational use of water or aesthetic quality
- affect water use for other purposes
- affect other land use operations
- quality of life changes
- public concern
- other:
- N/A

Mitigation

All mine openings will be sealed in accordance with WSNWT and MIS regulations. This is permanently sealed with rock or concrete, or fenced if rock or concrete seals are not possible.

"This project will provide economic benefits to the NWT, and will provide the opportunity for proper abandonment and restoration of an earlier worked minesite" (from 1992 screening)

Impact

3) Cultural and Heritage

- effects to historic property
- increased economic pressure on historic properties
- change to or loss of historic resources
- change to or loss of

Mitigation

Land Use Permit Conditions in place to mitigate change to or loss of archaeological

archaeological resources resources.

increased pressure on
archaeological sites

change to or loss of
aesthetically important sites

effects to aboriginal lifestyle

other:

N/A

- Pursuant to Schedule 4.1 of the **Northwest Territory Métis Nation (NWTMN)** Interim Measures Agreement, the MVLWB determined that written notice was given to the NWTMN and that a reasonable period of time was allowed for NWTMN to make representations with respect to the application.
- Pursuant to subsection 1.6, paragraphs (a) and (b) of the **Akaiitcho Territory Dene First Nations (ATDFN)** Interim Measures Agreement, the MVLWB determined that written notice was given to the ATDFN and that a reasonable period of time was allowed for ATDFN to make representations with respect to the Application.

Preliminary Screener / Referring Body Information

Akaitcho IMA Implementation Office	Hamlet of Fort Resolution
Athabasca Denesuline Council	INAC - CARD
Bathurst Inlet Development Ltd.	INAC - NWT Inspectors
Bathurst Inlet Lodge	Katlodeeche First Nation
BNT Gold Resources Ltd.	Lutsel K'e Dene First Nation - Chief or Wildlife, Lands and Environment
CanNor NWT Region	Mackenzie Valley Environmental Impact Review Board
City of Yellowknife	Manitoba Denesuline
Dene Nation	MVLWB
Deninu K'ue First Nation	National Energy Board
Det'on Cho Corporation	North Slave Metis Alliance
Environment and Climate Change Canada	Northwest Territory Metis Nation
Fisheries and Oceans Canada	NWT & Nunavut Chamber of Mines
Fort Resolution Metis Council	NWT- OROGO
Forward Mining	Salt River First Nation
GNWT – ECE	Smith's Landing First Nation
GNWT – ENR	Snap Lake Environmental Monitoring Agency – SLEMA
GNWT - ENR - North Slave Region	Tlicho Government
GNWT - ENR - South Slave Region - Fort Smith	Tlicho Lands Protection Department
GNWT – Health	Town of Fort Smith
GNWT – INF	True North Safaris Ltd.
GNWT – ITI	Wek' eezhii Renewable Resources Board
GNWT – Lands	West Point First Nation
GNWT - Lands - Hay River Region	WLWB
GNWT - Lands - North Slave Region	Wood
GNWT - Lands - South Slave Region - Fort Smith	Workers' Safety and Compensation Commission
GNWT – MACA	Yellowknives Dene First Nation
Golder Associates	

Reasons For Decision

(List all reasons and supporting rationales for preliminary screening decision)

DECISION

The Mackenzie Valley Land and Water Board (the Board) is satisfied that the preliminary screening of Application MV2013C0021, New Discovery Mines Ltd., Mineral Exploration, Mon Gold Mine has been completed in accordance with section 125 of the *Mackenzie Valley Resource Management Act* (MVRMA).

The Board is satisfied that communities and First Nations affected by the Application have been notified and provided adequate time to provide comment on the Application as required by land claim and self government agreements, the MVRMA, policy directions relating to Interim Measures Agreements, and any other applicable legislation and agreements.

Having reviewed all relevant evidence on the Public Registry, including the submissions of the Applicant, the written comments received by the Board and any Staff Reports prepared for the Board, the Board has decided that in its opinion:

- The proposed development will not have a significant adverse impact on the environment; and
- The proposed development is not a cause of public concern.

The Board is also of the opinion that the Application can proceed through the regulatory process and that any impacts of the development on the environment can be mitigated through the imposition of the terms and conditions in the attached Land Use Permit.

As a result, the Board, having due regard to the facts and circumstances, the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the Mackenzie Valley Land Use Regulations has decided that this Land Use Permit be issued subject to the terms and conditions contained therein.

Preliminary Screening Decision	
<input checked="" type="checkbox"/>	Outside Local Government Boundaries
<input type="checkbox"/>	The development proposal might have a significant adverse impact on the environment, <i>refer it to the EIRB.</i>
<input checked="" type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input checked="" type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	Wholly Within Local Government Boundaries
<input type="checkbox"/>	The development proposal is likely to have a significant adverse impact on air, water or renewable resources, <i>refer it to the EIRB.</i>
<input type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>
<input type="checkbox"/>	The development proposal might have public concern, <i>refer it to the EIRB.</i>
<input type="checkbox"/>	<i>Proceed with regulatory process and/or implementation.</i>

Preliminary Screening Organization

Mackenzie Valley Land and Water Board

February 7, 2019

Signatures

Mavis Cli-Michaud, Chair