

Preliminary Screening Report Form

<p>Preliminary screener: MVLWB</p> <p>Reference / File number: MV2016C0038</p> <p>TITLE: Land Use Permit</p> <p>ORGANIZATION: TerraX Minerals Inc.</p> <p>MEETING DATE: January 12, 2017</p>	<p>EIRB</p> <p>Reference number:</p>
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Type of Development:
(CHECK ALL THAT APPLY)

- | | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | New |
| <input type="checkbox"/> | Amend, EIRB Ref. # |
| <input checked="" type="checkbox"/> | Requires permit, licence, or authorization |
| <input type="checkbox"/> | Does not require permit, licence, or authorization |

Project Summary:

On November 30, 2016, TerraX applied for a Permit MV2016C0038 to carry out drilling exploration in the Southbelt Property area, located approximately 8 km south of Yellowknife and comprised of 10 mineral claims within an area of 9,138.13 acres. The purpose of the proposed activities is to explore for gold and base metals (zinc, lead, copper, molybdenum) using diamond drilling. The program can be broken into two main phases:

- Phase 1: Diamond drilling; and
- Phase 2: Additional drilling contingent on results of Phase 1.

Access to the Southbelt Property area is via existing trails, boat and helicopter, and activities are proposed to occur on a year-round basis. Previous exploration activities in the area have occurred since the 1940's, and have mainly consisted of diamond drilling.

Phase 1 activities will be carried out entirely within areas previously drilled, and will involve the use of up to two diamond drills. Existing, well established roads and trails will be used to transport drill equipment to the target area, including previously established ice roads connecting Kam, Keg, Peg, Octopus Lakes. The Phase I portion of the exploration program is expected to take 3 months, commencing in the winter of 2017, and drilling would take place prior to the spring break-up in mid-April to utilize lake access and to minimize environmental damage along access roads. After spring break-up, Phase 1 drilling will continue into late August or early September.

Continued drilling on the Southbelt Property (Phase 2) will be contingent on Phase 1 drilling success, and the success of other ongoing exploration programs (mapping, prospecting, geophysics, geochemistry) that are below the thresholds of the Mackenzie Valley Land Use Regulations (MVLUR).

Equipment

TerraX has applied to use the following equipment, or similar:

<u>Type and Number</u>	<u>Size</u>	<u>Purpose</u>
25HH, 30HH, DD50 or H2000 Diamond Drills	23,000 to 25,000 lbs. each	Carry out drilling
Sloop for Equipment (1-3)	Skid mounted, approximately 3-ton capacity each	Carry drill rods, bits and consumables
Electric water pump and 1000 metres of water line (1-3)	3-5 hp motor with up to 1000m of hose per drill with approximate weight of 1000 lbs.	Provide water for drill rig
Insulated pump shack with fuel tank and propane bottles (1-3)	Approximately 1,5000 to 2,000 lbs.	Required during winter conditions to keep water pump and water lines from freezing.
Insulated heat shack for water lines with fuel tank and propane bottles (1 to 3)	Approximately 1,5000 to 2,000 lbs.	Required during winter conditions to keep water pump and water lines from freezing.
Insulated heat shack for each drill with fuel tank (1 to 3)	Approximately 1,5000 to 2,000 lbs.	Required during winter to provide heat to the drill.
Drill cuttings tank (1-3)	Approximately 1,5000 to 2,000 lbs.	Used to collect drill cuttings that are then pumped to a natural land based sump from either a land or ice based drilling site.
Cuttings separator unit inside a wooden shack or a steel container with fuel tank and generator (1-3)	Approximately 8,000 to 10,000 lbs.	Used to collect drill cuttings that are then removed to a natural land based sump. This unit is used to minimize water usage.
D-6 Dozer (1-3)	Approximately 29,000 lbs. each	For moving drills and equipment
Marooka (1-3)	Approximately 32,000 lbs. each	For moving drills and equipment
Skidder (1-3)	Approximately 18,000 lbs. each	For moving drills and equipment

Snowcat with 8 way snow plow (1-2)	Approximately 18,000 lbs. each	For building and grooming ice roads and portages in winter
Ardco water truck with large flotation tires and a V snow plow (1-2)	Approximately 17,000 lbs. each	For building ice roads, drill pads and portages in winter
Electric and diesel powered water pumps with up to 1000 metres of water line (1-3)	Approximately 100 to 200 lbs.	For building ice roads, drill pads and portages in winter
½ ton to 1.5 ton, 4 x 4 wheel drive trucks	Approximately 1,000 to 3,500 lbs.	For moving personnel, light weight drill supplies, fuel and drill core
¾ ton 4 x 4 wheel drive trucks with a 6 way snow plow (1-2)	Approximately 1,500 to 2,000 lbs.	For clearing lake ice and grooming ice roads
Bombardier tracked Ski dozer with 4-way angle plow (1)	Approximately 9,000 lbs.	For building and grooming ice roads and portages in winter
1 ton dump truck (1)	Approximately 2,000 lbs.	For removing snow and ice from drill site clean-ups
Tracked skid steer loader (1)	Approximately 9,000 lbs.	For removing snow and ice from drill site clean-ups
Snow machines with small metal sleds (4 to 6)	Approximately 250-350 lbs. each	For moving personnel, light weight drill supplies, fuel and drill core

Fuel

<u>Fuel Type</u>	<u>Maximum Amount*</u>
Diesel	10,000 litres
Gasoline	2,050 litres
Aviation Fuel	4,100 litres
Propane	2,000 pounds

*Means Maximum amounts of fuel stored on the Southbelt Property.

Scope:

This Permit entitles the Permittee to conduct the following land-use operations:

- a) Mineral exploration, including diamond drilling;
- b) Use of equipment, vehicles, and machines;
- c) Construction and maintenance of access roads; and
- d) Use and storage of fuel.

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:

K19813, K19815, K19669, K19670, K19788, K19905, K19906, M10087, M10088, M10089.

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

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

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

- | | |
|--|---|
| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Access Road <ul style="list-style-type: none"> <input checked="" type="checkbox"/> construction <input type="checkbox"/> abandonment/removal <input checked="" type="checkbox"/> modification e.g., widening, straightening <input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement <input type="checkbox"/> Blasting <input type="checkbox"/> Building <input type="checkbox"/> Burning <input type="checkbox"/> Burying <input type="checkbox"/> Channelling <input type="checkbox"/> Cut and Fill <input type="checkbox"/> Cutting of Trees or Removal of Vegetation <input type="checkbox"/> Dams and Impoundments <ul style="list-style-type: none"> <input type="checkbox"/> construction <input type="checkbox"/> abandonment/removal <input type="checkbox"/> modification <input type="checkbox"/> Ditch Construction <input type="checkbox"/> Drainage Alteration <input type="checkbox"/> Drilling other than Geoscientific <input type="checkbox"/> Ecological Surveys <input type="checkbox"/> Excavation <input type="checkbox"/> Explosive Storage <input checked="" type="checkbox"/> Fuel Storage <input type="checkbox"/> Topsoil, Overburden or Soil <ul style="list-style-type: none"> <input type="checkbox"/> fill <input type="checkbox"/> disposal <input type="checkbox"/> removal <input type="checkbox"/> storage | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Waste Management <ul style="list-style-type: none"> <input type="checkbox"/> disposal of hazardous waste <input checked="" type="checkbox"/> waste generation <input type="checkbox"/> sewage <input type="checkbox"/> disposal of sewage <input checked="" type="checkbox"/> Geoscientific Sampling <input type="checkbox"/> Trenching <input checked="" type="checkbox"/> Diamond drill <input type="checkbox"/> Borehole core sampling <input type="checkbox"/> Bulk soil sampling <ul style="list-style-type: none"> <input type="checkbox"/> gravel <input type="checkbox"/> hydrological Testing <input type="checkbox"/> Site Restoration <ul style="list-style-type: none"> <input type="checkbox"/> fertilization <input type="checkbox"/> grubbing <input type="checkbox"/> planting/seeding <input type="checkbox"/> reforestation <input type="checkbox"/> scarify <input type="checkbox"/> spraying <input type="checkbox"/> re-contouring <input checked="" type="checkbox"/> Slashing and removal of vegetation <input type="checkbox"/> Soil Testing <input type="checkbox"/> Stream Crossing/Bridging <input type="checkbox"/> Tunnelling/Underground <input type="checkbox"/> Other: |
|--|---|

NTS topographic map sheet numbers:

NAD83 Zone 11

Latitude / longitude and UTM system:

Minimum Latitude: 62°, 19', 23"

Minimum longitude: -114°, 20', 11"

Maximum latitude: 62°, 26', 05"

Maximum longitude: -114°, 34', 04"

Nearest community and water body:

Yellowknife, NT; Great Slave Lake

Land Status (consultation information)

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

Transboundary/Transregional Implications

- | | | | |
|---|--|---|--------------------------------|
| <input type="checkbox"/> British Columbia | <input type="checkbox"/> Alberta | <input type="checkbox"/> Saskatchewan | <input type="checkbox"/> Yukon |
| <input type="checkbox"/> Nunavut | <input type="checkbox"/> National Park | <input type="checkbox"/> Inuvialuit Settlement Region | |
| <input type="checkbox"/> Wek'èezhii | <input type="checkbox"/> Gwich'in | <input type="checkbox"/> Sahtu | |

Type of transboundary implication: Impact / Effect Development

Public concern: _____
(Describe.)

Physical - Chemical Effects

Impact

1) Ground Water

Mitigation

- water table alteration
- water quality changes
- infiltration changes
- other:

N/A

Impact

2) Surface Water

Mitigation

- flow or level changes
- water quality changes

- water quantity changes
- drainage pattern changes
- temperature
- wetland changes/loss
- other:
- N/A

The use of fuel and heavy equipment near water or on ice may impact water quality if a spill occurs or if sediments are transported into the water. Conditions from the 'Standard Conditions for a Land Use Permit' list will be suggested to ensure water quality is maintained.

Impact

3) Noise

Mitigation

- noise in/near water
- noise increase

- other:
- N/A

Noise increase is expected due to road activities and the use of machinery. These impacts will be temporary in nature, and cease as soon as equipment passes by an area, or is turned off. No mitigation proposed.

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Impact

4) Land

Mitigation

- geologic structure changes
- soil contamination

There is the potential for soil contamination due to the fuel being transported and used by equipment. Conditions from the 'Standard Conditions for a Land Use Permit' list will be suggested to ensure soil is not contaminated by fuel.

buffer zone loss

soil compaction and settling

Heavy equipment and vehicle movements have the potential to increase localized soil compaction and settling. Established erosion and sediment control measures should be followed.

destabilization/erosion

Erosion/sedimentation may increase as a result of heavy equipment operation. Standard prevention techniques and established erosion and sediment control measures should be followed.

permafrost regime alteration

explosives/scarring

other:

N/A

Impact

Mitigation

5) Non-renewable natural resources

resource depletion

other:

N/A

Impact

Mitigation

6) Air/climate/atmosphere

other:

N/A

BIOLOGICAL ENVIRONMENT

Impact

Mitigation

1) Vegetation

species composition

species introduction

toxin/heavy accumulation

other: Linear Migration routes, habitat fragmentation

A Wildlife Management and Mitigation Plan has been submitted and reviewed with the application. Conditions will be suggested to ensure the protection of migration routes and habitats.

N/A

Impact

Mitigation

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

A Wildlife Management and Mitigation Plan has been submitted with the application. Conditions will be suggested to ensure the protection of wildlife.

- game species effects
- toxins/ heavy metals
- forestry changes
- agricultural changes
- other:
- N/A

Interacting Environment

Impact

Mitigation

1) Habitat and Communities

- 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

Mitigation

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

Impact

Mitigation

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 archaeological 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 **Akaiicho 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	National Energy Board
Bathurst Inlet Development Ltd.	North Slave Métis Alliance
Bathurst Inlet Lodge	Northwest Territory Métis Nation
Boxxer Gold Corp.	Salt River First Nations
Canadian Northern Economic Development Agency	Smith Landing First Nation
CanNor NWT Region	Snap Lake Environmental Monitoring Agency - SLEMA
City of Yellowknife	Tłı̨chǫ Government
Dene Nation	Town of Fort Smith
Deninu K'ue First Nation	Town of Hay River
Ecology North	West Point First Nation
Environment and Climate Change Canada	Workers' Safety and Compensation Commission
Fisheries and Oceans Canada	Yellowknives Dene First Nation
Fort Smith Métis Council	
GNWT - DOT	
GNWT - ENR	
GNWT - Health	
GNWT - ITI	
GNWT - Lands	
GNWT - MACA	
GNWT - Prince of Wales Northern Heritage Centre	
GNWT- OROGO	
Golder Associates	
Gov of Canada	
Hamlet of Fort Resolution	
Hay River Metis Council	
INAC - Contaminants and Remediation Directorate	
INAC - NWT Inspectors	
Katlodeeche First Nation	
Lutsel K'e Dene First Nation - Chief or Wildlife, Lands and Environment	
Mackenzie Valley Environmental Impact Review Board	
Manitoba Denesuline	
MVLWB	

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 MV2016C0038, TerraX Minerals Inc., Mineral Exploration, Southbelt Property, NT 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

January 12, 2017

Signatures



Violet Camsell-Blondin, A/Chair