

**PRELIMINARY SCREENING REPORT FORM**

<p><b>PRELIMINARY SCREENER: GLWB</b>  <b>REFERENCE / FILE</b>  <b>NUMBER:</b> Winter Road - G02F010                  Drilling Program (C-36) - G02A011                  Drilling Program (D-39) - G02A012                  Drilling Program (N-73) - G02A013                  Drilling Program (B-10) - G02A014                  Water Licence (Type B) - G02L1002</p> <p><b>TITLE:</b> DEVLAN Exploration Ltd., Tree River Winter Access and Drilling Program.</p> <p><b>ORGANIZATION:</b> Gwich'in Land and Water Board  <b>Date:</b> December 19, 2002</p>	<p><b>EIRB</b>  <b>REFERENCE</b>  <b>NUMBER:</b></p>
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- Type of Development:** (CHECK ALL THAT APPLY)
- |                                     |   |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | New Development                                   |
| <input type="checkbox"/>            | Amend, EIRB Ref. #                                |
| <input type="checkbox"/>            | Renew, EIRB Ref.#                                 |
| <input checked="" type="checkbox"/> | Requires permit, license or authorization         |
| <input type="checkbox"/>            | Does not require permit, license or authorization |

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

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

**Principal Development Components (related to scoping)**

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Access Road<br><input checked="" type="checkbox"/> construction<br><input checked="" type="checkbox"/> abandonment/removal<br><input checked="" type="checkbox"/> modification e.g., widening, straightening<br><input checked="" type="checkbox"/> Automobile, Aircraft or Vessel Movement<br><input type="checkbox"/> Blasting<br><input checked="" type="checkbox"/> Building<br><input checked="" type="checkbox"/> Burning<br><input checked="" type="checkbox"/> Burying<br><input type="checkbox"/> Channeling<br><input type="checkbox"/> Cut and Fill<br><input checked="" type="checkbox"/> Cutting of Trees or Removal of Vegetation<br><input type="checkbox"/> Dams and Impoundments <ul style="list-style-type: none"> <li><input type="checkbox"/> construction</li> <li><input type="checkbox"/> abandonment/removal</li> <li><input type="checkbox"/> modification</li> </ul> <input type="checkbox"/> Ditch Construction<br><input type="checkbox"/> Drainage Alteration<br><input checked="" type="checkbox"/> Drilling other than Geoscientific<br><input type="checkbox"/> Ecological Surveys<br><input checked="" type="checkbox"/> Excavation<br><input type="checkbox"/> Explosive Storage<br><input checked="" type="checkbox"/> Fuel Storage<br><input checked="" type="checkbox"/> Topsoil, Overburden or Soil <ul style="list-style-type: none"> <li><input type="checkbox"/> fill</li> <li><input checked="" type="checkbox"/> removal</li> </ul> | <input checked="" type="checkbox"/> Waste Management <ul style="list-style-type: none"> <li><input type="checkbox"/> disposal of hazardous waste</li> <li><input checked="" type="checkbox"/> waste generation</li> <li><input checked="" type="checkbox"/> Sewage</li> <li><input checked="" type="checkbox"/> disposal of sewage</li> <li><input type="checkbox"/> Geoscientific Sampling                         <ul style="list-style-type: none"> <li><input type="checkbox"/> trenching</li> <li><input type="checkbox"/> diamond drill</li> <li><input type="checkbox"/> borehole core sampling</li> <li><input type="checkbox"/> bulk soil sampling</li> </ul> </li> <li><input checked="" type="checkbox"/> Gravel</li> <li><input type="checkbox"/> Hydrological Testing</li> <li><input checked="" type="checkbox"/> Site Restoration                         <ul style="list-style-type: none"> <li><input type="checkbox"/> fertilization</li> <li><input type="checkbox"/> grubbing</li> <li><input checked="" type="checkbox"/> planting/seeding</li> <li><input type="checkbox"/> reforestation</li> <li><input type="checkbox"/> scarify</li> <li><input type="checkbox"/> spraying</li> <li><input checked="" type="checkbox"/> recontouring</li> </ul> </li> <li><input checked="" type="checkbox"/> Slashing and removal of vegetation</li> <li><input type="checkbox"/> Soil Testing</li> <li><input checked="" type="checkbox"/> Stream Crossing/Bridging</li> <li><input type="checkbox"/> Tunneling/Underground</li> <li><input checked="" type="checkbox"/> Other (describe): water intake</li> </ul> |
|--|--|

disposal       storage

**NTS Topographic Map Sheet Numbers**  
(LIST ALL THAT APPLY)  
Arctic Red River, 106N&106O - 250, 000 Scale  
106 o/5 - 50 000 Scale  
106 o/6 - 50 000 Scale

**Latitude / Longitude and UTM System:**

Drilling Footprint: Minimum Latitude: 67° 26' 36" N,  
Minimum Longitude: 133° 44' 25" W

Maximum Latitude: 67° 02' 58" N,  
Maximum Longitude: 131° 32' 17" W

**Nearest Community and Water Body:**

Tsiigehtchic, NT.  
Mackenzie River, Tree River, Ontaratue River, Thunder River

**Land Status (consultation information)**

Free Hold / Private       Commissioners Land       Federal Crown Land       Municipal Land

**Transboundary Implications**

British Columbia       Alberta       Saskatchewan       Manitoba       Yukon  
 Nunavut       Wood Buffalo National Park       Inuvialuit Settlement Region

**Type of Transboundary Implication:**       Impact / Effect       Development

Public Concern \_\_\_\_\_

**PHYSICAL - CHEMICAL EFFECTS**  
**IMPACT**

**MITIGATION**

**1. Ground Water**

water table alteration

water quality changes

- Snow will be cleared from the sump area and the underlying organic top soil layer will be stripped and stored for later use.
- All stationary fuel containers or group of fuel containers exceeding 4000 L will be required to have a lined dyke constructed.
- A fuel contingency plan is in place.
- Oil and gas well surface casing would protect groundwater.
- Any camp sumps, drilling sumps or pits would be designed and constructed to the satisfaction of the RMO.

infiltration changes

other

N/A

**IMPACT**

**MITIGATION**

**2. Surface Water**

flow or level changes

- Water withdrawals from the four named lakes (see application) will be used during drilling of the wells, impacts will be small and will not result in any effects on fish habitat as proponent will follow DFO protocol.
- Additional water should be drawn from the Mackenzie River
- Where flowing water from boreholes is encountered, the borehole shall be permanently plugged.
- All snow fills in stream crossings will be removed by V-notching.

Water quality changes

- Drill waste sumps will be located in an area accessible to all wellsite locations, on an upland area avoiding steep slopes.
- Well sites and remote sump will be well clear of rivers and lakes (100 m minimum).
- Snow or ice bridges to be constructed to cross drainages and water bodies and would use only clean snow or ice.
- Access roads paralleling lakes or streams will be more than 30 m from the water bodies to prevent deleterious materials from entering the water and minimize effects to the riparian zones.
- Surface drainage ditches to be reclaimed to original condition by v-notching snow bridges upon completion.
- No materials or fuel will be stored on the ice surface of any water body or within 30 m of any water body.
- All fuel or chemical spills must be reported to the NWT Emergency Spill Response Line and NEB.
- A fuel contingency plan is in place to contain and clean up any spills.
- All combustible waste petroleum products and camp garbage will be removed or incinerated.

Water quantity changes

- Use of water for access road construction and camps from unnamed lakes may draw-down the water level which will be monitored at all times.

Drainage pattern changes

- Permitted area will be re-contoured once operation is finished.
- Snow bridges/ice roads crossing creeks will be reclaimed to original condition by V-notching crossings upon completion.
- All debris will be removed from the drainage channels crossed.
- All obstructions made to natural drainages by this land use operation will be removed
- Drainage or erosion problems may include earth breaks or cross ditches.

temperature

wetland changes / loss

- Line routing to go around wetlands with water under ice.

other:

N/A

**IMPACT**

**3. Noise**

noise in/near water

other: noise increase

**MITIGATION**

- Only temporary, and low intensity; some absorbed by surrounding forested area.
- Adjacent forest would attenuate noise from generator engine and vehicles.

N/A

**IMPACT**

**4. Land**

geologic structure changes

soil contamination

**MITIGATION**

- Extensive spill response manual and emergency response plan (Contingency Plan); Spill kits, absorbent pads, etc available on site.
- Drilling waste sump must be constructed in material that shows signs of low permeability.
- All combustible waste petroleum products and camp garbage will be removed or incinerated.
- Chemical and petroleum spills will be reported the 24 Hour Spill Report Line
- All large fuel storage containers will be bermed.

buffer zone loss

- Special attention will be paid to erosion control and preservation of vegetation near and on riparian zones adjacent to waterbodies or drainages.

soil compaction & settling

- Bull dozers will be equipped with mushroom type shoes to elevate the blade 20 cm above the ground to prevent disturbance to the permafrost and organic mat.
- Compacted snow pads to be used to protect ground surface at wellsites.
- Low pressure vehicles (tracks) will be used for this project.
- Frozen ground and snow cover will lessen the impact of soil compaction.
- Drilling will occur in winter to minimize impact; small amount of incidental compaction
- All accesses to be clearly marked to reduce possible inadvertent soil disturbance.

Destabilization / erosion

- The whole project will completed under frozen ground conditions.
- Compacted snow pads will be used to protect ground surfaces at wellsites.
- No stream or lake banks will be cut in the permitted area of the land use operation.
- Vehicles or equipment are not to be moved until the ground surface is completely frozen, all operations will be stopped should rutting occur.

- Shooflies on access and seismic lines to be used around slopes and sensitive areas as necessary.
- Tracked units would minimize surface disturbance.
- Equipment operators will be instructed to not disturb the organic mat.
- All accesses to be clearly marked to reduce possible inadvertent soil disturbance.
- If the surface is disturbed in an area such as a creek where drainage or erosion is possible, control measures may include earth breaks or cross ditches.
- Salvaged slash, if any, may be used as rollback for erosion control.
- Seismic lines that parallel water bodies would be set back 30 m to prevent disturbance to the banks of the water body.
- Disturbance to creek banks to be minimized.
- Approaches to streams or water crossing to be hand-cleared.
- Line width to be reduced at stream crossings.
- Snow fills and ice bridges to be removed by v-notching the fill to reduce risk of damming and erosion of banks.
- Drainage or erosion problems may include earth breaks or cross ditches.

permafrost regime alteration

- Surface disturbance will be minimized by leaving a layer of snow on all access roads and wellsites and using low pressure tracked vehicles.
- The proponent will be required to stop all activities should rutting occur.
- The proponent must not conduct any overland movement of vehicles until the ground is frozen enough to support the weight of the vehicles.
- Project undertaken during frozen ground conditions.
- Dozer blades to be equipped with mushroom shoes to elevate the blade.
- Equipment operators will be instructed to not disturb the organic mat.
- All accesses to be clearly marked to reduce possible inadvertent soil disturbance.
- 20 cm snow cover to be left on all access trails.

other:

N/A

**IMPACT**

**MITIGATION**

**5. Non Renewable Natural Resources**

resource depletion

- Oil and gas resources regulated by National Energy Board.
- Granular material will not be used on this project, should the proponent require granular material, they must obtain a quarry permit from DIAND.

- [N.B. depletion of oil or gas resource through testing would be minimal and testing would adhere to COGOA requirements]

other:

N/A

**IMPACT**

**6. Air/Climate/ Atmosphere**

Ice fog and emissions from generator

**MITIGATION**

- Construction to be completed expeditiously
- Work to be confined to project elements
- Equipment outfitted with appropriate mufflers and standard emissions equipment

Burning of residua/slash along seismic cutlines

- Burning to be done in accordance with local restrictions
- Merchantable timber to be salvaged, not burned
- Slash volumes to be minimized by using some slash for rollback

**BIOLOGICAL ENVIRONMENT  
IMPACT**

**1. Vegetation**

species composition

**MITIGATION**

- Existing cut lines will be used for access.
- Grown willows on the existing cut lines will be sheared off protecting the root system.
- Seismic and drilling operations will occur during the winter months, which will coincide with the dormant period for herbaceous plants.
- The forest cover types in this area are not limited or rare.
- Access width restricted to 8 m.
- Line width to be reduced at stream crossings to preserve more of the riparian habitat use of slash rollback would promote natural re-vegetation.

species introduction

toxin / heavy accumulation

other:

N/A

**IMPACT**

**1. Wildlife & Fish**

effects on rare, threatened or endangered species

**MITIGATION**

- Known eagle nest in the area will not be disturbed or cut down.
- A local environmental monitor will be employed by the proponent to advise on wildlife concerns in areas of operations.
- Bear encounters to be reported to RWED.

fish population changes

- Permitted activity must not obstruct the free movement of fish populations.
- Screens to be in place on water intake hoses to prevent intake of fish.

waterfowl population changes

breeding disturbance

population reduction

species diversity change

health changes  
(waste may be harmful to wildlife)

- Regular (daily) garbage patrols will be undertaken to remove materials (e.g. metals, plastics, grease) which may be potentially harmful to wildlife.
- Activity to be restricted to the right-of-way, wellsite, accesses and camps.
- Sumps to be treated with lye to discourage wildlife.

behavioural changes  
(avoidance behaviour and blockage of migration or movement corridors)

- Wildlife may exhibit avoidance behaviour.
- No dogs to be allowed on the program.
- A local environmental monitor to be employed to advise on wildlife concerns in areas of operation.
- Seismic operations to be completed prior to arrival of the majority of migratory species and prior to mating or calving of resident species.
- Bluenose caribou range rarely extends into this area - no large migration anticipated.
- Operations to be completed expeditiously to minimize impacts to resident wildlife.

habitat changes / effects

- The entire project will be conducted under winter conditions.
- Sump site will be reclaimed upon completion of operation.

game species effects

- No hunting, trapping or dogs will be allowed on the program.

toxins / heavy metals

- Fuel spill contingency plan is in place to contain and clean up any spills.
- All spills to be reported to NWT 24-hour spill line and NEB.

forestry changes

- Minimized clearing; using existing seismic lines as access routes.
- Proponent will avoid densely forested areas to the extent feasible.
- Timber will be bucked into 2m lengths and hauled back to the community of Tsiigehtchic to be made available to local residents for firewood and other uses.

agricultural changes

other:

N/A

**INTERACTING ENVIRONMENT**

**IMPACT**

**MITIGATION**

**1. Habitat and Communities**

- predator-prey
- wildlife habitat / ecosystem

- Temporary loss of habitat; will be allowed to regenerate after completion of operation

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

**IMPACT**

**3. Cultural and Heritage**

affects to historic property

increased economic pressure on historic properties

change to or loss of historic resources

change to or loss of

**MITIGATION**

- The operator must take reasonable safe guards against damage to private property from the operation.

- Access and benefit plans developed for the community of Tsiigehtchic and with the Gwich'in Tribal Council.

- A temporary airstrip has been constructed in Tsiigehtchic for use by the proponent.

- Possibility of re-opening an abandoned airstrip near seismic program.

- Ground crew to be instructed on traffic safety on winter access.

- Work areas would be flagged.

- Access will increase for local hunters and trappers through the access road, although these have been cleared previously through seismic activity, but the proponent has indicated that they will not allow hunters and trappers to use the access roads.

- Trapline operators to be notified of operations and timing through public consultation with Tsiigehtchic community.

- Work areas to be flagged.

- Snowmobile trails to be cleared of any debris.

- Access and benefits plans are in place.

- Local companies and individuals would be hired to participate in various aspects of the project.

- Existing cabin locations were mapped and will be avoided.

- Consultations have been held Gwich'in communities.

**MITIGATION**

- 27 registered archaeological and historical sites have been identified in the

archaeological resources

vicinity of the seismic and drilling operations. All known sites are well clear of the project. Conditions respecting archaeological sites will be included in a permit to protect any new sites.

- Prince of Wales Northern Heritage Centre, the community and the NEB would be notified and consulted on any newly discovered sites.

increased pressure on archaeological sites

change to or loss of aesthetically important site

affects to aboriginal lifestyle

other:

N/A

**NOTES:**

**PRELIMINARY SCREENER / REFERRING BODY INFORMATION  
(CHECK ALL THAT APPLY)**

	RA or DRA	ADVICE	PERMIT REQUIRED
<b><u>Federal</u></b>			
ATOMIC ENERGY CONTROL BOARD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CANADIAN HERITAGE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CANADIAN TRANSPORTATION AGENCY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENVIRONMENT CANADA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FISHERIES & OCEANS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
INDIAN AFFAIRS & NORTHERN DEVELOPMENT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
INDUSTRY CANADA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NATIONAL DEFENSE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NATIONAL ENERGY BOARD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
NATURAL RESOURCES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PUBLIC WORKS & GOVERNMENT SERVICES	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TRANSPORT CANADA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NOGD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MACKENZIE VALLEY LAND AND WATER BOARD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MACKENZIE VALLEY ENVIRONMENTAL IMPACT REVIEW BOARD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b><u>Territorial</u></b>			
RESOURCES, WILDLIFE AND ECONOMIC DEVELOPMENT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MUNICIPAL AND COMMUNITY AFFIARS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
INUVIK REGIONAL HEALTH BOARD	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

CANADIAN WILDLIFE SERVICE

**Aboriginal / First Nation**

GWICH'IN TRIBAL COUNCIL

AKLAVIK DGO/RRC

FORT MCPHERSON DGO/RRC

INUVIK DGO/RRC

TSIIGEHTCHIC DGO/RRC

**Local Government**

TSIIGEHTCHIC CHARTER COMMUNITY

**REASONS FOR DECISION**

(LIST ALL REASONS AND SUPPORTING RATIONALES FOR PRELIMINARY SCREENING DECISION)

*All known and potential impacts regarding the Land Use operation and water use can be mitigated through permit and licence terms/conditions and compliance inspections. Pre-existing lines will be utilized during the initial phase of the program. The development will result in economic benefits to the region.*

<input type="checkbox"/>	PRELIMINARY SCREENING DECISION
<input checked="" type="checkbox"/>	<b>Outside Local Government Boundaries</b>
<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"/>	<b>Wholly within Local Government Boundaries</b>
<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

Signatures

Gwich'in Land and Water Board  
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