



NIRB Application for Screening #125496

Ferguson Lake Project

Application Type: New

Project Type: Mineral Exploration

Application Date: 12/19/2019 3:19:51 PM

Period of operation: from 0001-01-01 to 0001-01-01

Proposed Authorization: from 0001-01-01 to 0001-01-01

Project Proponent: Trevor Boyd
Canadian North Resources and Development Corp
299 Courtneypark Drive
Mississauga Ontario M5P 2E6
Canada
Phone Number:: 905 565 5968 ext. 232, Fax Number::

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
PEL Haul Route	Other	Inuit Owned Surface Lands	The Ferguson Lake Deposit was originally discovered in 1950 by Inco Limited and has been intermittently explored by a variety of operators including Starfield Resources until 2013 when it went into bankruptcy. The project was taken over by Canadian North Resources and Development Corp. the same year. The project and camp has since been under care and maintenance and predominantly closed.	Unknown	The Ferguson Lake Property is in the Kivalliq region of southern Nunavut Territory some 250 kilometres west of Rankin Inlet and 170 kilometres south-southwest of Baker Lake. The area lies within designated caribou calving grounds which is closed to exploration between May 1 and July 31.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Rankin Inlet	none, not applicable	none, not applicable	2019-12-20
Baker Lake	none, not applicable	none, not applicable	2019-12-20

Authorizations

Indicate the areas in which the project is located:

Kivalliq

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Kivalliq Inuit Association	KVCL305H27 Extension of Commercial Licence for Ferguson Lake Camp	Active	2017-07-22	2022-07-22
Kivalliq Inuit Association	KVCA08Q17 Extension of Quarry Permit for Ferguson Lake airfield	Active	2019-09-11	2020-09-11
Kivalliq Inuit Association	KVRW06F09 Extension of Right of Way permit for Ferguson Lake Project , expected dates shown below.	Applied, Decision Pending	2019-10-17	2021-10-17
Nunavut Water Board	2BE-FER1318 TYPE "B" Extension of Class B Water Use License for Ferguson Lake Camp	Active	2018-12-11	2023-12-11
Indigenous and Northern Affairs Canada	N2013X0023 Extension of Right of Way permit for overland winter travel between Rankin Inlet and Ferguson Lake camp	Active	2019-03-16	2021-03-16
Kivalliq Inuit Association	KVRW98F146 Right of Way permit for overland winter hauling between Baker Lake and Ferguson Lake camp issued to Peter's Expediting Limited	Active	2019-04-01	2021-04-01

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	none	
Water	none	
Land	Based upon the amount of snow cover and weather conditions four proposed overland round trips to the Ferguson Lake camp are to be completed out of Baker Lake by Peters Expediting Limited during the winter season. The first trip would scout and ice profile a new less rocky route from last winter from Baker Lake to the camp using the Bombardier snow track vehicle. The second trip would use the full-size Quad Trak and Challenger to bring in empty sea-cans, pack a good trail to the camp and crusher site, and then retrieve and tow the crusher using both the machines over to the Ferguson	

camp. For the third and fourth trips, the full-size Delta heavy vehicle would carry in the 120 barrels of fuel to the camp with the Quad Trak along for support. The sea-cans brought to the camp would be filled with the stored waste material at the Ferguson Lake camp and towed back to Baker Lake on return trips. The waste would then be shipped south.	
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Project accomodation types

Other,

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
one Cat BL320 Evcavator, one Bobcat 287 Skid Steer, one Bombardier Snowcat, one Cat 950F Wheel Loader, one Cat 140G Motor Grader, two D250 haul trucks, one D4 Caterpillar Dozer, two Chev 2500 crew cabs, three diesel generators, 15 snowmobiles/ATVs	28	0.5m by 2m up to 3m by 5m in size	Equipment is stored and inactive. No equipment use is planned. The camp is presently closed.
Challenger 75D	2	2 by 15m	Tow crusher and containers from Baker Lake and crusher site to Ferguson Lake camp.
Foremost Delta	1	3 by 16m	Carry fuel and tow containers with waste between Baker Lake and Ferguson Lake camp
Case Quadtrac	1	3 by 12m	Tow containers and other equipment as needed
Various snow vehicles and sleds	4	1 by 2m	Carry personnel and provide support for main vehicles

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	1	5000	5000	Liters	Fuel to be used for powering heavy equipment for the overland travel.

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
1	No proposed water use at Ferguson Lake Camp since it will be closed. Water will be carried by personnel for their own use.	Baker Lake municipal water supply

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Dredging	Combustible wastes	0 (camp closed)	Burned in the incinerator at camp,	Unburnable materials flown out of camp to be disposed at legal dump site at Rankin Inlet
Camp	Combustible wastes	1 bag	Any waste generated will be carried back to Baker Lake.	No waste to be generated by Ferguson Lake camp since it will be closed during this operation.
Dredging	Greywater	0 (camp closed)	grey water disposed in sump and human waste in PAC toilets which is burned	none
Camp	Hazardous waste	30 tonnes	Camp waste and empty barrels to be placed into containers brought into camp and will be towed out to Baker Lake using the Challenger 75D and Case Quadtrac snow vehicles operated by Peter's Expediting.	Waste brought out to Baker Lake will be shipped south the following summer to be treated and disposed safely.
Dredging	Sewage (human waste)	0 (camp closed)	human waste in PAC toilets which is burned	none

Environmental Impacts:

Risk of hydrocarbon spill from fuels to the route surface and bodies of water along the way both from the hauling vehicles being utilized and the barrels being transported into the Ferguson Lake Camp from Baker Lake. Risk lessens once fuels are stored in lined permitted berm at the camp. Mitigation of impact based upon measures outlined in Ferguson Lake Project Spill Contingency Plan, 2015. No predicted significant mechanical environmental impacts from overland winter transportation between Baker Lake and Ferguson Lake camp and the crusher site because snow track vehicles will be used for the undertaking only if the snow layer is deep enough to not result in any significant damage to the tundra environment.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

Winter overland routes to Baker Lake and Rankin Inlet shown in uploaded map.

SECTION B1: Project Info

The Ferguson Lake Property consists of 9 mining leases in one block of contiguous mining leases that extends across and south of Ferguson Lake between latitudes 62° 30' and 62°55' North and longitudes 96°10' and 97°30' West in NTS map-areas 65I/10-16 (UTM coordinates 6,945,000 – 6,978,000N, 585,000 –625,00E – Zone 14).

SECTION B2: Exploration Activity

none at present

SECTION B3: Geosciences

none at present

SECTION B4: Drilling

none at present

SECTION B5: Stripping

none at present

SECTION B6: Underground Activity

none

SECTION B7: Waste Rock

none

SECTION B8: Stockpiles

none

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

Description of Existing Environment: Physical Environment

The Ferguson Lake area is in the tundra. It is an area of low relief, featuring numerous smaller lakes and a few large river systems, notably Kazan and Ferguson Rivers. Yathkyed and Ferguson Lakes are 141 and 114 metres above sea level respectively, and maximum elevations in the general area range from 200 to 275 metres. Elevations within the current property area average less than 200 metres and range from slightly less than 100 metres at the property's eastern boundary to 290 metres north of Yathkyed Lake. The orientation of Ferguson and a number of smaller lakes reflects the dominant south-easterly glacial direction. Bedrock is fairly well exposed on numerous low hills and ridges; in lower areas bedrock may be obscured by between 6 and 25 metres of glacial debris, mainly till.

Description of Existing Environment: Biological Environment

The terrain is typical of the tundra barren grounds; tree line is 150 km south of Ferguson Lake and vegetation consists principally of moss, lichen, dwarf birch and Labrador tea. Wildlife includes caribou, Arctic foxes, muskoxen, arctic hare, sik sik, wolves, wolverines, barren ground grizzly bears and various species of birds.

Description of Existing Environment: Socio-economic Environment

There are no inhabitants in the area. Ferguson Lake is occasionally visited for hunting and fishing purposes by Nunavut citizens.

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

No impacts because the camp remains closed and exploration and development is on hold.

Cumulative Effects

The development of a mine at Ferguson Lake would result in major cumulative impacts in the area.

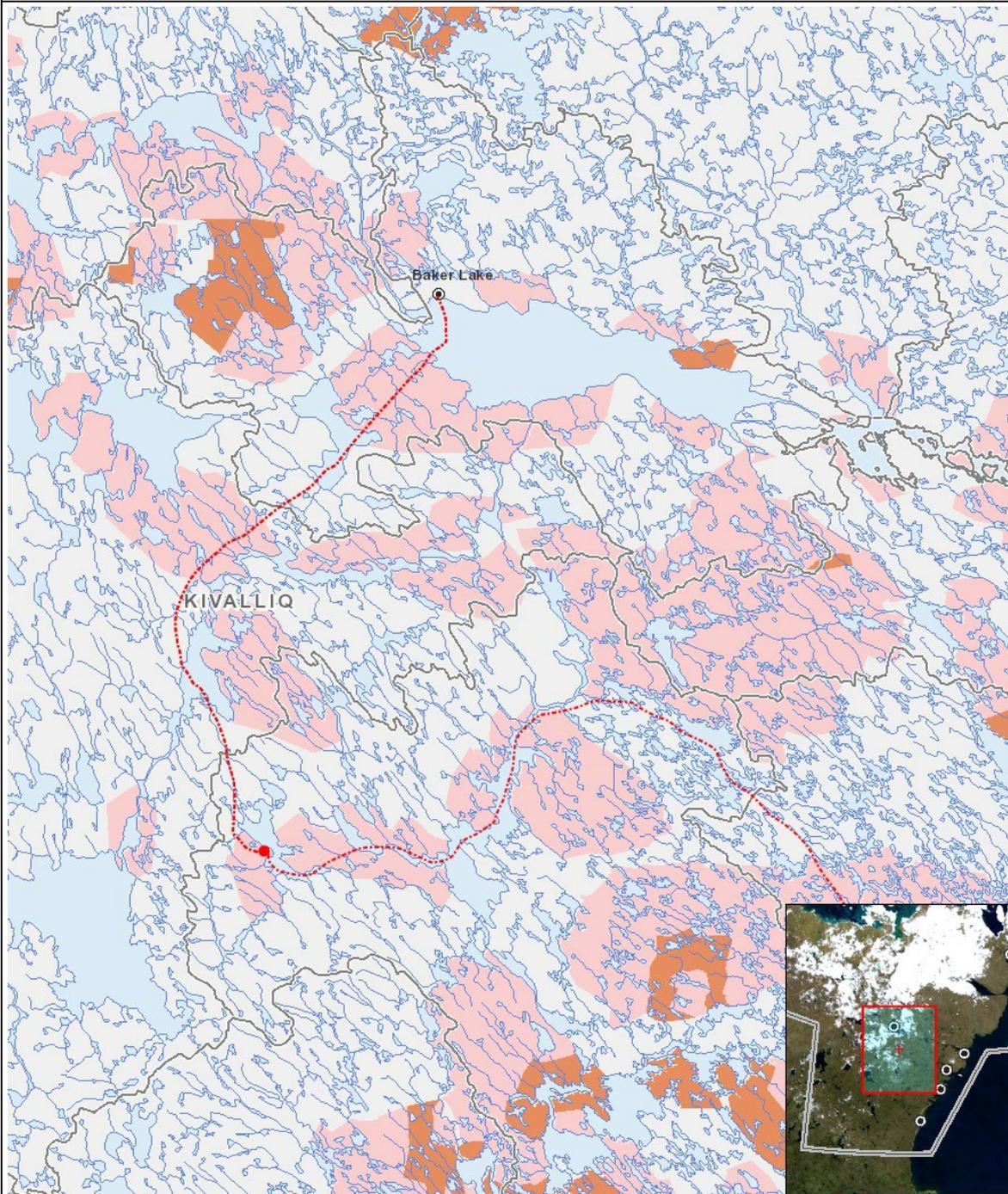
Impacts

Identification of Environmental Impacts

	PHYSICAL														BIOLOGICAL										SOCIO-ECONOMIC				
	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health							
Construction																													
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
Operation																													
Other	-	N	N	-	N	-	N	-	-	-	N	N	-	-	-	-	-	-	-	-	-	-							
Decommissioning																													
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

- | | | |
|---|----------|---|
| 1 | polyline | PEL Haul Route |
| 2 | polyline | Baker Lake to Ferguson Lake Overland Haul Route - Nov. 2019 |
| 3 | polyline | Ferguson Lake to Crusher Site |
| 4 | point | Ferguson Lake Camp |