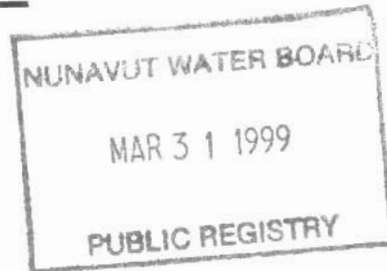


ᓄᓇᓗᑦ ᑲᓄᑦᑎᓕᑎᓕᓐᑦ ᑲᑎᓚᓐᑦ/NUNAVUT IMPACT REVIEW BOARD/NUNAVUTMI KANOGILIVALIANIKOT ELITTOHAIYEOPLOTIK KATIMAYIIT

**SCREENING DECISION**

**Date: March 31, 1999**

Mr. Thomas Kudloo  
Chairperson, Nunavut Water Board  
Gjoa Haven, NT



Dear Mr. Kudloo:

**RE: Screening Decision of the Nunavut Impact Review Board (NIRB) on Application:  
NIRB 99EN129 DIAND#N1999C0018 NWB:NWB2FER KivIA  
Mineral Exploration at Ferguson Lake -- Starfield Resources Inc.**

**Authority:**

Section 12.4.4 of the Nunavut Land Claim Agreement states:

Upon receipt of a project proposal, NIRB shall screen the proposal and indicate to the Minister in writing that:

- a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;
- b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.

**Primary Objectives:**

The primary objectives of the Nunavut Land Claims Agreement are set out in section 12.2.5 of the Land Claims Agreement. This section reads:

In carrying out its functions, the primary objectives of NIRB shall be at all times to protect and promote the existing and future well-being of the residents and communities of the Nunavut Settlement Area, and to protect the ecosystemic integrity of the Nunavut Settlement Area. NIRB shall take into account the well-being of the residents of Canada outside the Nunavut Settlement Area.

**The decision of the Board in this case is 12.4.4 (a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5.**

**Reasons for Decision:**

NIRB's decision is based on specific considerations that reflect the primary objectives of the Land Claims Agreement. Our considerations in making this decision included:

- the impact of drilling activities on the ecosystem;
- disposal of drill cuttings and waste water;
- impact to water quality, aquatic habitat and wildlife and fish populations from chemicals, drill waste, drill fluids and potential fuel spills;
- storage and disposal of chemicals, fuel, garbage, sewage, and grey water, and impact of these on the ecosystem;
- the impact of noise from drilling activities and their disturbance to wildlife and traditional users of area;
- the impact of campsite and equipment on terrain;
- the impact of exploration activities on archaeological sites or cultural landmarks in the area; and
- clean up/restoration of the camp site and drilling locations upon abandonment.

**Terms and Conditions:**

That the terms and conditions attached to this screening report will apply.

**Drill Sites**

- ✓ 1. The Permittee shall not conduct any land based drilling within thirty (30) metres of the normal high water mark of a water body.
- ✓ 2. The Permittee shall conduct any the lake-based winter drilling, in accordance with the Interim Guidelines for On-Ice drilling. A copy of these Guidelines can be obtained from Mr. Steve Harbicht, Head of Assessment and Monitoring, Environment Canada in Yellowknife at (867) 669-4733.
- ✓ 3. The Permittee shall ensure that all drill cuttings are removed from ice surfaces.
- ✓ 4. The Permittee shall not use drilling muds or additives in connection with drill holes unless they are recirculated or contained such that they do not enter the water, or are certified to be non-toxic.
- ✓ 5. The Permittee shall ensure that any drill cuttings and waste water that cannot be re-circulated be disposed of in a properly constructed sump or an appropriate natural depression that does not drain into a waterbody. The Permittee shall ensure that drilling wastes do not enter any water body.
- ✓ 6. The Permittee shall ensure that the sump/depression capacity is sufficient to accommodate the volume of waste water and any fines that are produced so that there will be no additional impacts.
- ✓ 7. The Permittee shall not locate any sump within thirty (30) metres of the normal high water mark of any water body.
- ✓ 8. The Permittee shall ensure that any return water released to the lake must be non-toxic and will not result in an increase in total suspended solids in the immediate receiving waters of

the lake above Canadian Council of Ministers for the Environment Guidelines (CCME) for the Protection of Freshwater Aquatic Life (i.e. 10mg/L for lakes with background level under 100mg/L, or 10% for those above 100mg/L.

- 8/ The Permittee shall ensure that disturbance of vegetation from deposit of drill fluids/cuttings is restricted to the area of the sump and the ground prepared for revegetation upon abandonment.
- 9/ The Permittee shall, where flowing water from bore holes is encountered, plug the bore hole in such a manner as to permanently prevent any further outflow of water. The occurrence shall be reported to the Nunavut Water Board and Land Use Inspector within 48 hours.

### **Water**

- 10/ The Permittee shall ensure that all water intake hoses are equipped with a screen with an appropriate mesh size to ensure that there is no entrapment of fish.

### **Fuel and Chemical Storage**

- 11/ The Permittee shall ensure that fuel storage containers are not located within thirty-one (31) metres of the ordinary high water mark of any body of water.
- 12/ The Permittee shall ensure that any chemicals, fuels or wastes associated with the project do not spread to the surrounding lands or enter into any water body.
- 13/ The Permittee shall take all reasonable precautions to prevent the possibility of migration of spilled petroleum fuel or chemicals over the ground surface.
- 14/ The Permittee shall examine all fuel and chemical storage containers daily for leaks. All leaks should be prepared immediately.
- 15/ The Permittee shall seal all container outlets except the outlet currently in use.
- 16/ The Permittee shall mark all fuel containers with the Permittee's name.
- 17/ The Permittee shall dispose of all combustible waste petroleum products by incineration and removal from the site.
- 18. The Permittee shall have emergency response and spill contingency plans in place prior to the commencement of the operation.
- 19/ The Permittee shall immediately report all spills of petroleum and hazardous chemicals to the twenty four (24) hour spill report line at (867) 920-8130 to NWB and to the Land Use Inspector.

### **Waste Disposal**

- 20. The Permittee shall not discharge or deposit any refuse substances or other waste materials in any body of water, or on the banks thereof, which will impair the quality of the waters of the natural environment.
- 21. The Permittee shall not locate any sumps or areas designated for waste disposal within thirty (30) metres of the ordinary high water mark of any body of water, unless otherwise authorized.

22. The Permittee shall construct a sump to contain all greywater discharged and shall ensure drainage is away from any waterbody.
23. The Permittee shall not dispose of sewage into a pit.
24. The Permittee shall use latrines which shall be located in an area that does not leach into any water body and contaminate the potable water supply.
25. The Permittee shall backfill and recontour all sumps to match the natural environment prior to the expiry date of the permit.
26. The Permittee shall incinerate all combustible and food wastes daily. The Permittee shall use as a minimum incineration method a 45 gallon drum modified to form a more efficient incinerator.
27. The Permittee shall keep all garbage in a covered metal container until disposed of.
28. The Permittee shall ensure that all wastes generated through the course of the operation are backhauled and disposed of in an approved dumpsite.
29. The Permittee shall not bury any wastes.
30. The Permittee shall deposit all scrap metal, discarded machinery and parts, barrels and kegs, at an approved disposal site.
31. The Permittee shall handle, store, dispose and keep records of all hazardous and toxic chemicals in accordance with the Environmental Protection Act (EPA).

### Wildlife

32. The Permittee shall ensure that there is no damage to wildlife habitat in conducting this operation.
33. The Permittee shall not feed wildlife.
34. The Permittee shall abide by the attached Caribou Protection Measures for the Qaminurjuak and Beverly Caribou Herds.
35. The Permittee shall ensure that aircraft pilots adhere to recommended flight altitudes of greater than 300 m above ground level as to not disturb wildlife. Raptor nesting sites and concentrations of nesting or molting waterfowl should be avoided by aircraft at all times.
36. The Permittee shall ensure compliance with Section 36 of the Fisheries Act which requires that no person shall deposit or permit the deposit of a deleterious substance on any type in water frequented by fish or in any place under any conditions where the deleterious substance may enter such a water body.
37. The harmful alteration, disruption or destruction of fish habitat is prohibited under Section 35 of the Fisheries Act. No construction or disturbance of any stream/lake bed or banks of any definable watercourse is permitted unless authorized by DFO.
38. The Permittee shall not obstruct the movement of fish while conducting the land use operation.
39. The Permittee shall ensure that the drill sites avoid known environmentally sensitive areas (denning, nesting etc.) by a minimum of 250 metres.

### Environmental

40. The Permittee shall ensure that the land use area is kept clean and tidy at all times.

- ✓ 41. The Permittee shall prepare the site in such a manner as to prevent rutting of the ground surface.
- ✓ 42. The Permittee shall be required to undertake any corrective measures in the event of any damage to the land or water as a result of the permittee's operation.
- ✓ 43. The Permittee shall not use any equipment except of the type, size and number that is listed in the accepted application.
- ✓ 44. The Permittee shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging.
- ✓ 45. The Permittee shall suspend overland travel of equipment or vehicles if rutting occurs.

### **Camp**

- ✓ 47. The Permittee shall not erect camps or store material on the surface ice of lakes or streams.
- 48. The Permittee shall locate all camps and storage facilities on gravel, sand or other durable land.
- ✓ 49. The Permittee shall follow the Camp Sanitation Regulations made under the authority of the Public Act of the Northwest Territories.

### **Archaeological Sites**

- 50. The Permittee shall follow all terms and conditions for the protection and restoration of archaeological resources as outlined by the Prince of Wales Northern Heritage Centre (PWNHC) in attached letter.

### **Reclamation**

- ✓ 51. The Permittee shall remove all scrap metal, discarded machinery and parts, barrels and kegs, buildings and building material upon abandonment.
- ✓ 52. The Permittee shall complete all clean-up and restoration of the lands used prior to the expiry date of the permit.
- ✓ 53. The Permittee shall undertake ongoing restoration for any land or improvements, which are no longer, required for the Permittee's operation on the land.
- ✓ 54. The Permittee shall plug or cap all bore holes and cut off any drill casings that remain above ground to ground level upon abandonment of the operation.

### **Other Recommendations**

- 1. NIRB would like to encourage the proponent to hire local people and services, to the extent possible.
- 2. NIRB advises proponents to consult with local residents regarding their activities in the region.
- 3. Any amendment requests deemed by NIRB to be outside the original scope of the project will be considered a new project.

- 4/ The Environmental Protection Branch (DOE), Department of Fisheries and Oceans (DFO), Nunavut Impact Review Board (NIRB), and the Nunavut Water Board (NWB) should be advised of any material changes to plans or operating conditions associated with the project.

**Validity of Land Claims Agreement**

Section 2.12.2

Where there is any inconsistency or conflict between any federal, territorial and local government laws, and the Agreement, the Agreement shall prevail to the extent of the inconsistency or conflict.

Dated March 31/99 at Cambridge Bay, NT

  
Larry Pokok Akenavigak, Chairperson

Attachment: NIRB Screening Form

**CARIBOU PROTECTION MEASURES  
(QAMANIRJUAQ AND BEVERLY HERDS) 1988**

1. (a) The Permittee shall not, without approval, conduct any activity between May 15 and July 15 within the Caribou Protection Areas depicted on the map certified by the Engineer as the "Caribou Protection Map" annexed to this Land Use Permit.

**CARIBOU  
PROTECTION  
AREAS**

- (b) A Permittee may, upon approval by the Land Use Inspector, operate within the said Caribou Protection Areas beyond the May 15 deadline set out in 1(a), provided that when monitoring information indicates that caribou cows are approaching the area of operation, the Permittee will implement 1(c).

- (c) On cessation of activities pursuant to 1(a) or 1(b), the Permittee will remove all personnel from the zone who are not required for the maintenance and protection of the camp facilities and equipment unless otherwise directed by the Land Use Inspector.

- (d) The Permittee may commence or resume activities prior to July 15 within those parts of the Caribou Protection Areas released by the Land Use Inspector for the reason that caribou cows are not expected to use those parts for calving or post-calving (note 1).

- 2 -

2. (a) In the event that caribou cows calve outside of the Caribou Protection Areas, the Permittee shall suspend operations within the area(s) occupied by cows and/or calves between May 15 and July 15. CARIBOU PROTECTION GENERAL
- (b) In the event that caribou cows and calves are present the Permittee shall suspend:
- (i) blasting,
  - (ii) overflights by aircraft at any altitude of less than 300 metres above ground level, and
  - (iii) the use of snowmobiles and ARV's (all-terrain vehicles) outside the immediate vicinity of the camp.
3. (a) During migration of Caribou, the Permittee shall not locate any operation so as to block or cause substantial diversion to migration. CARIBOU PROTECTION MIGRATION
- (b) The Permittee shall cease activities that may interfere with migration, such as airborne geophysics surveys or movement of equipment, until the migrating caribou have passed.
4. (a) The Permittee shall not, between May 15 and September 1, construct any camp, cache any fuel or conduct any blasting within 10 km of any "Designated Crossing" as outlined on the map certified by the Engineer as the "Caribou Protection Map" and annexed to this Land Use Permit. CARIBOU CROSSING

.../3



- 3 -

- (b) The Permittee shall not, between May 15 and September 1, conduct any diamond drilling operation within 5 km of any "Designated Crossing" as outlined on the map certified by the Engineer as the "Caribou Protection Map" and annexed to this Land Use Permit.

NOTE

1. The Land Use Inspector's decision will be based on the existing caribou information.
2. Concentrations of caribou should be avoided by low level aircraft at all times.



**2. Authorizing Agencies**

Authorizing Agency(ies): Kivalliq I.A., Kitikmeot I.A., QIA, NWB, NWMB, DIAND, DFO, DOE, NRI, RWED, Other: \_\_\_\_\_

Authorizing Agency Contact Person: David Porter  
(office where project file is located, contact person, number)

Land Status: Inuit Owned ☒ Crown \_\_\_\_\_ Commissioner's \_\_\_\_\_ Marine Areas \_\_\_\_\_

Type of Application: Water License  
(e.g. water licence, land use permit, quarry permit, research permit, lease, reserve)

Type of Approval being sought: New  
(e.g. new, renewal, amendment, cancellation)

Other required approvals, permits or licences: \_\_\_\_\_  
(e.g. water licence, land use permit, quarry permit, lease, reserve)

Present Authorizations (active): NWB NWB-FER  
(file number)

Previous Authorizations (inactive/expired): \_\_\_\_\_  
(file number)

**3. Project Location**

Kivalliq ☒ Kitikmeot ☒ Baffin \_\_\_\_\_

Land Use Planning Region: Kivalliq  
(e.g. West Kitikmeot, North Baffin, South Baffin, Kivalliq)

Geographic Place Name: Ferguson Lake  
(nearest place name or geographic feature)

Local/Traditional Name: \_\_\_\_\_

National Topographic Sheet (NTS) Number: 65I/15W Scale: 1:50,000

Latitude/Longitude: 62°51' 46" 45', 63°00' 47" 00'  
(degrees, minutes seconds)

Drainage Region and Watershed: Ferguson Lake  
(nearest creek, river or lake system)

Nearest Settlement: Rankin Inlet & Whale Cove

Adjacent Settlement/Out-post camps: \_\_\_\_\_

Special Designation: \_\_\_\_\_  
(Yes/No - e.g. Heritage River, Wildlife Reserve, Park)

Does the project have Nunavut transboundary implications? Yes \_\_\_\_\_ No ☒

If yes, what additional procedures/contacts are needed? \_\_\_\_\_

**4. Project Description and Assessment**

Physical Work, Activity(ies): Drilling  
(drilling, construction, camp, research, water works, installation, modification, maintenance)

Multiple Activities: Yes ✓ No       

Project Category Code: Point Multiple Points Linear Area

Phase of Project: Exploration  
(exploration, bulk sampling, development, operations, decommissioning, abandonment/restoration)

**Project Description Summary (non-technical):**

(duration of project, size of project, number of personnel on site, related physical activities, machinery used, fuels and chemical use and storage, associated infrastructure, methods of transportation, amount and source of resources needed eg. Gravel)

Attach Project Overview (English and Inuktitut)

**Alternatives Considered:**

(list all alternatives to the project and/or components of the project to avoid unnecessary amendments, (e.g. alternatives to location of ice road or camp logistics)

**5. The Proponent's Public Consultation Process****Description of Proponent's Public Consultation Process**

Did proponent make use of traditional knowledge? Yes ✓ No       

Was information available in the community's preferred language? Yes        No       

In NIRB's opinion, was the proponent's public consultation adequate? Yes        No       

If no, explain why the proponent's consultation program was found deficient.



# Starfield Resources Inc.

NUNAVUT WATER BOARD

FEB 17 1999

REGISTRY

## EXECUTIVE SUMMARY

Starfield Resources Inc. has acquired the right to earn a 100% interest in the Ferguson Lake copper-nickel project located at Ferguson lake in the Northwest Territories.

The property lies approximately 150 nautical miles west of Rankin Inlet and consists of one prospecting permit and six contiguous mineral claims totaling 23,2000 hectares.

Copper-nickel and platinum group elements mineralization is hosted by easterly-trending, moderately north-dipping hornblende units which are conformable with enclosing Archean hornblende-rich gneisses. The principal sulphide-bearing hornblende unit, which has been traced in bedrock exposures and by diamond drilling over a 9 km strike length, is between 50 and 200 m thick.

Sulphide minerals within the hornblende unit include pyrrhotite, pyrite and chalcopyrite which occur as massive pods and lenses and in stringers and veinlets. The sulphide-rich zones are marked by prominent gossans which are up to 24 m wide and several metres in length.

Previous work within the area of the present property includes 37 500 meters of diamond drilling completed by a subsidiary of INCO in the early 1950's. Most of this drilling was directed to three contiguous mineralized zones along the known 9 km strike length of the principal hornblende unit. Two of the mineralized zones are exposed east (Main Zone East) and west (Main Zone West) of Ferguson Lake; the intervening central zone underlies the lake. Main Zone West drilling identified a resource of 8.4 million tonnes grading 0.87% copper and 0.75% nickel; this zone is open to depth and along strike. Drilling also intersected copper-nickel mineralization in the central and Main zone East zones and in several subparallel hornblende units south of Main Zone East and West.

Surface sampling of the various copper-nickel sulphide zones in the mid-1980's identified significant platinum-palladium and cobalt values in both bedrock and soil samples. Additional sampling in 1998 essentially confirmed the results of earlier work and prospecting south of the area of previous exploration resulted in the discovery of a new sulphide-bearing hornblende unit which containing appreciable copper, nickel, cobalt, platinum and palladium values.

The full extend of the copper-nickel mineralization has yet to be defined and the significance of the associated platinum-palladium and cobalt values is unknown. Additional exploratory work is warranted and it is recommended that a first phase, late winter program include geophysical surveys and some diamond drilling at an estimated cost of \$496,750.00. A second phase, summer program should consist of geological mapping, prospecting and sampling of the lesser explored parts of the large property area. Additional diamond drilling is also recommended as part of the phase two program. results obtained from phase one work will assist in determining priority areas for further investigation. Costs for the phase two program are estimated to be \$1,201,750.00.

APPENDIX A

Discussion on the following points:

- 5) During the winter exploration which will include surface geophysics and diamond drilling the equipment used will be ski-does to transport people from the camp to their work locations and back. This will include the people putting in the grid, the geophysics crew and the diamond drill crew.

The diamond drill utilized for this drill program during winter will be a Boyles 17a with a weight of 1.5 tons (3000 lb.) and will be transported from drill site to drill site by skidding the diamond drill across the frozen lakes and tundra by Muskeg buggy that has a ground pressure of 1.75 lb/sq. inch. Water will be supplied to the diamond drill by Boyle 8B25 diesel pumps.

- 6) Diesel fuel will be used to heat the camp (Ferguson Lake Lodge), power the diamond drill and pumps. The ski-does will use gasoline. Heating of the water for the diamond drill will be by propane as will the food preparation. Power for the camp is provided by a diesel generator set located at Ferguson Lake Lodge.

All fuel will arrive on site by cat train which will be permitted by Keith Sharp. This fuel will consist of approximately 160 barrels of diesel fuel, 20 barrels of gasoline and up to 40 barrels of jet-B helicopter fuel to be utilized during the summer drill program.

- 7) All fuel transfers will be by hand pump the total area under the fuel transfer location will be underlaid by "Matasorb" an industrial matting that only absorbs hydrocarbons. In case of a spill there will be pelletized industrial absorbatives located.

- 8) All garbage produced during the exploration program will be burned in the incinerator located at the Ferguson Lake camp. All grey produced at the Ferguson Lake camps will operate under the existing permitted camp.

- 9) Transportation to and from camp to work areas will be by ski-doo for all personnel. The diamond drill will be moved by muskeg buggy. All bulk supplies will be moved into Ferguson Lake by cat train which will be permitted by Keith Sharp.

- 10) Discussions with people operating out of Rankin area on the components of the environment within the project have reported to me two areas of concern. Located approximately 10 km to the east of Ferguson Lake is a caribou calving area, also at the southern portion of Ferguson Lake down by Scotty Rapids is a caribou crossing.

- 11) During the winter operation there will be little to no environmental impact. During the summer exploration program all personnel will be transported by helicopter; during the summer a diamond drilling program will be conducted in which all drill moves will be performed by helicopter lowering the impact to the area as much as possible.

- 14) During the winter exploration program a minimum of two people will be hired out of Rankin Inlet to assist during our winter program.

Based on the results of the winter program a program will be designed for the summer utilizing local labour as much as possible. All supplies for support will originate out of Rankin Inlet thereby benefiting the community as a whole.



[illegible][illegible][illegible]



ጋላ፡ ርታ፡ ጸሐፊ  
የጊዜና የብሔር ጥገና፡ ለፍጥነትና ለደህንነት

[illegible]

Ընդհանուր ֆոնդ» ԼՂ, 1999-ի Հճ Լեռնային Լեռնային  
 Լեռնային ֆոնդ» Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ»  
 Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ»  
 100 Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ»  
 13 Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ»  
 Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ»  
 Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ»  
 Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ» Ընդհանուր ֆոնդ»

ጋጽ ለጥራታቸው ለሰውነትና ለደህንነት ጥገና ለጥራት ማረጋገጫ ለጥራት ማረጋገጫ፡፡

[illegible][illegible]

ርዕሴ ወይም ለጠቅላይነት የመስፈርት ለጠቅላይ ኃላፊ ሪፖርት/የማሳሰቢያ  
የዘጋጃልበኝ፡

## 6. Description of the Environment

### Description of Biophysical Environment

The surrounding area Kammak Lake and the Ferguson lake-chain is well known for its hunting, trapping and fishing potential. A major calving area is located north of Kammak Lake and caribou sometimes winter just southeast of the lake; hunting can therefore be a year round, but usually occurs in winter. Arctic Fox are trapped in November-December and March-April. Fish are an important food source for hunters and trappers during the winter, activity is concentrated in early spring and late fall. Many of the camps in the area occupied at this time. Whale cove residents concentrate their activities to the northeast of Quartzite Lake.

### Description of Socio-Economic and Cultural Environment

Ferguson Lake is a well known fishing lake.

**7. NIRB's Consultation Process**

Date application referred for comments:

Feb. 19/99

Deadline for comments:

March 25/99

(yyyy-mm-dd)

(yyyy-mm-dd)

Distribution List:

Contact Person:

Date comments received:

**NUNAVUT:**

- ☒ NTI  
☐ QIA  
☒ Kivalliq I.A.  
☐ Kitikmeot I.A.  
☒ NPC  
☒ NWB  
☒ NWMB  
☒ RWO  
☒ Inuit Heritage Trust  
☒ Community(s)  
 Hamlet ☒  
 HTO ☒  
 Other? ☐

Rebecca MilceMar. 22/99Guy Enuapik - W. Cove.Mar. 24/99**FEDERAL:**

- ☒ DIAND  
☒ DFO  
☒ DOE  
☒ Heritage Can.  
☒ Natural Resources  
 Other? (eg. Health  
 DOT, DND)

Paul SmithMar. 22/99.Margaret Keast.Mar. 23/99Steve HarbichtMarch 26/99.**GNWT:**

- ☒ DRWED  
☒ Transport  
☒ MACA  
☒ PWNHC  
 Other? (eg. Health,  
 Soc. Serv., ECE)

Alain ChouinardMarch 25/99.Charles Arnold.Mar. 10/99**TRANSBOUNDARY  
PARTIES****OTHER PARTIES**

## Identification of Project Activities and Environmental Effects

Identify all activities of the project under screening and their potential adverse environmental effects.

### Project Activities

(√ check all the items appropriate to this project)

- ☐ access road
  - ☐ winter
  - ☐ construction
  - ☐ abandonment/removal
  - ☐ modification e.g., widening
- ☒ automobile, aircraft or vessel movement
- ☒ blasting
- ☒ burning
- ☒ burying
- ☐ channelling
- ☐ construction
  - ☐ building
  - ☐ shed/warehouse
  - ☐ landing strip
- ☐ cut and fill
- ☐ removal of vegetation
- ☐ dams and impoundments
  - ☐ construction
  - ☐ abandonment/removal
  - ☐ modification
- ☐ ditch construction
- ☐ drainage alteration
- ☐ drilling other than geoscientific
- ☐ ecological surveys
- ☐ excavation
- ☒ explosive storage
- ☒ fuel storage
- ☒ garbage
  - ☐ disposal of hazardous waste
  - ☒ disposal of sewage or grey water
  - ☒ disposal of solid waste
- ☒ geoscientific sampling
  - ☐ trenching
  - ☒ diamond drill
  - ☒ borehole core sampling
  - ☐ bulk soil sampling
- ☐ quarry
- ☐ hydrological testing
- ☐ river/stream/lake crossing/bridging
- ☒ site restoration
  - ☐ fertilization
  - ☐ grubbing
  - ☐ planting/seeding
  - ☐ scarification
  - ☐ spraying
  - ☒ recontouring
- ☐ soil testing
- ☐ topsoil, overburden or soil
  - ☐ fill
  - ☐ disposal
  - ☐ removal
  - ☐ storage
- ☒ tunnelling/underground
- ☒ other, explain Camp
- ☒ possibility for accidents or malfunctions. Describe. potential fuel spills
- ☒ effects of environment on project (e.g., flooding). Describe. ice conditions

### Project Effects

(√ check all the items appropriate to this project)

#### Directly-related Socio-Economic & Cultural Effects:

1. ☐ impact to hunting / trapping / fishing
2. ☐ impact on: ☐ women
  - ☐ men
  - ☐ children
  - ☐ elders
3. ☐ impact to traditional use or traditional use area
4. ☐ impact to outfitters
5. ☐ impact on recreational use
6. ☐ impact on family structure
7. ☐ impact to community health
8. ☐ change in community economics
9. ☐ change in community housing or infrastructure
10. ☐ impact to industry
11. ☐ change in regional transportation
12. ☒ impact to archaeological or cultural landmarks
13. ☐ impact on beauty of the landscape
14. ☐ other, explain \_\_\_\_\_

#### Biophysical Environment Effects

15. ☒ deposit into surface or ground water
16. ☐ deposit to marine environment
17. ☐ change in surface or ground water flow
18. ☐ change in water temperature
19. ☐ change in drainage pattern
20. ☐ change in air quality
21. ☐ change in air flow
22. ☐ micro-climate change
23. ☐ ice fog
24. ☒ change in ambient noise level
25. ☒ deposit onto ground surface
26. ☐ change in slope stability
27. ☐ change in soil structure
28. ☐ alteration of permafrost regime
29. ☐ destabilization/erosion
30. ☒ soil compaction
31. ☐ change in access to renewable resources
32. ☐ depletion of non-renewable resource
33. ☐ removal of rare/endangered plant species
34. ☐ introduction of species
35. ☐ toxin/heavy metal accumulation
36. ☐ removal of rare/endangered wildlife species
37. ☐ change in wildlife health
38. ☒ impact to large mammals
39. ☐ impact to small mammals
40. ☐ impact to fish
41. ☐ impact to birds
42. ☐ impact to other wildlife
43. ☐ impact in a calving, nesting, staging or spawning area
44. ☐ removal of wildlife buffer zone
45. ☐ change in wildlife habitat/ecosystem
46. ☐ other, explain \_\_\_\_\_



**9. Cumulative Effects: Identification of Other Resources Used in the Area.** Identify past, current and future (pending applications) physical works and activities in the area (for the proponent, other proponents and nearby communities) and their potential adverse environmental effects.

#### Other Resource Uses

(✓ check all the items appropriate to this project)

- ✓ harvesting
  - \_\_\_ marine mammals
  - \_\_\_ land mammals
  - \_\_\_ fur bearers
  - \_\_\_ birds
  - \_\_\_ shellfish
  - \_\_\_ plants
  - \_\_\_ berries
  - ✓ fish
- ✓ mining
  - ✓ exploration
  - \_\_\_ open pits
  - \_\_\_ underground
  - \_\_\_ off-shore
- \_\_\_ mineral processing
- \_\_\_ industry \_\_\_\_\_ (type)
- \_\_\_ quarries
  - \_\_\_ carving stone
  - \_\_\_ aggregate
- \_\_\_ transportation/communications
  - \_\_\_ airport / landing strip
  - \_\_\_ roads/access routes
  - \_\_\_ shipping
  - \_\_\_ channels/canal
  - \_\_\_ telephone lines, satellite dishes, cables
  - \_\_\_ beacons
- \_\_\_ waste disposal (solid, liquid or gas?)
- \_\_\_ energy project
  - \_\_\_ hydro
  - \_\_\_ pipeline
  - \_\_\_ transmission line
- ✓ other water licenses, permits, leases
- ✓ lands
  - ✓ Inuit owned
    - \_\_\_ surface rights
    - \_\_\_ sub-surface rights
  - \_\_\_ Crown
  - \_\_\_ Commissioner's
  - \_\_\_ Marine Areas
- \_\_\_ other private lands held under tenure
- \_\_\_ heritage sites or archaeological sites
- \_\_\_ recreation (eg. cabins, tent frames)
- \_\_\_ tourism
- \_\_\_ municipal (construction)
  - \_\_\_ commercial
  - \_\_\_ built structures
  - \_\_\_ infrastructure
- \_\_\_ agriculture
- \_\_\_ forestry
- \_\_\_ other, explain \_\_\_\_\_

#### Effects from Other Resource Uses

(✓ check all the items appropriate to the scope of this project)

#### Directly-related Socio-Economic & Cultural Effects:

1. \_\_\_ impact to hunting / trapping / fishing
2. \_\_\_ impact on:
  - \_\_\_ women
  - \_\_\_ men
  - \_\_\_ children
  - \_\_\_ elders
3. \_\_\_ impact to traditional use or traditional use area
4. \_\_\_ impact to outfitters
5. \_\_\_ impact on recreational use
6. \_\_\_ impact on family structure
7. \_\_\_ impact to community health
8. \_\_\_ change in community economics
9. \_\_\_ change in community housing or infrastructure
10. \_\_\_ impact to industry
11. \_\_\_ change in regional transportation
12. \_\_\_ impact to archaeological or cultural landmarks
13. \_\_\_ impact on beauty of the landscape
14. \_\_\_ other, explain \_\_\_\_\_

#### Biophysical Environment Effects

15. \_\_\_ deposit into surface or ground water
16. \_\_\_ deposit to marine environment
17. \_\_\_ change in surface or ground water flow
18. \_\_\_ change in water temperature
19. \_\_\_ change in drainage pattern
20. \_\_\_ change in air quality
21. \_\_\_ change in air flow
22. \_\_\_ micro-climate change
23. \_\_\_ ice fog
24. \_\_\_ change in ambient noise level
25. \_\_\_ deposit onto ground surface
26. \_\_\_ change in slope stability
27. \_\_\_ change in soil structure
28. \_\_\_ alteration of permafrost regime
29. \_\_\_ destabilization/erosion
30. \_\_\_ soil compaction
31. \_\_\_ change in access to renewable resources
32. \_\_\_ depletion of non-renewable resource
33. \_\_\_ removal of rare/endangered plant species
34. \_\_\_ introduction of species
35. \_\_\_ toxin/heavy metal accumulation
36. \_\_\_ removal of rare/endangered wildlife species
37. \_\_\_ change in wildlife health
38. \_\_\_ impact to large mammals
39. \_\_\_ impact to small mammals
40. \_\_\_ impact to fish
41. \_\_\_ impact to birds
42. \_\_\_ impact to other wildlife
43. \_\_\_ impact in a calving, nesting, staging or spawning area
44. \_\_\_ removal of wildlife buffer zone
45. \_\_\_ change in wildlife habitat/ecosystem
46. \_\_\_ other \_\_\_\_\_

**10. Cumulative Environmental Effects**

Based on a comparison of effects identified in #8 and #9.

Matching Number(s)

Description of Cumulative Environmental Effects


NO Will the project make large demands on non-renewable energy sources?  Will the project encourage further developments within the current project or other developments (other similar projects, energy development, generation, petroleum development and extraction, the building of additional roads)?NO Will the project encourage a "boom-bust" economy over an economy of permanence?NO Will the project encourage more wildlife harvesting on account of better access for hunters and fishers?  Will the project have an effect on the water quality of the watershed? \*NO Will the project have a significant effect on existing land uses?**11. Mitigation Measures**

For each environmental effect identified in #8, #9 and #10, describe the required mitigation measures.

Number(s)  
(as identified  
in #8, #9 & #10)

Description of Mitigation Measures

	See screening decision report.



**12. Significance**

After taking into account the mitigation measures identified in #11, are any of the residual, adverse environmental effects significant?

☐ Yes ☒ No

If yes, identify which one(s) and proceed to #13; if no proceed to # 14.

Number(s) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**13. Likelihood of Occurrence**

Of the significant, residual, adverse environmental effects identified in #12, are any likely to occur?

☐ Yes ☒ No

Number(s) \_\_\_\_\_  
 \_\_\_\_\_

**14. Information Sources**

What sources of information were used in the screening process?

- ☐ local knowledge
- ☐ traditional ecological knowledge
- ☒ land use plans (and draft land use plans)
- ☒ authorizing agencies' data
- ☒ departmental or agency opinions
- ☒ maps
- ☐ photos
- ☐ reports (scientific, economic, social, or anthropological, archival or historical information)
- ☐ Nunavut Environmental Database (NED)
- ☐ personal communications
- ☒ Project Registry (NPC)
- ☒ previous similar projects
- ☐ service organizations
- ☐ media monitoring
- ☐ experts
- ☐ other \_\_\_\_\_

For information sources identified above, provide contact person and/or information location (for future follow-up): \_\_\_\_\_



**15. Staff Recommendations**

Staff Recommendations: (include rationale)

The project should have little or no significant impacts if the terms and conditions in the screening decision report are adhered to.

Prepared By:

Jeannie Ehaloak

Screening

Date:

1999 Mar.

(yyyymm-dd)

March 31/99

**16. NIRB'S Principles**

- ☐ The project has significant adverse effects on the ecosystem, wildlife habitat or Inuit harvesting activities.
- ☐ The project may have significant adverse socio-economic effects on northerners.
- ☐ The project will cause significant public concern.
- ☐ The project involves technological innovations for which the effects are unknown.
- ☒ The project **does not** have significant effects or concerns.

**17. Indication to the Minister (12.4.4)**

N.B. Transfer this information to Box 1: "EA Indication" and "Date of Indication".

- ☒ a) the proposal may be processed without a review under Part 5 or 6; NIRB may recommend specific terms and conditions to be attached to any approval, reflecting the primary objectives set out in Section 12.2.5;
- ☐ b) the proposal requires review under Part 5 or 6; NIRB shall identify particular issues or concerns which should be considered in such a review;
- ☐ c) the proposal is insufficiently developed to permit proper screening, and should be returned to the proponent for clarification; or
- ☐ d) the potential adverse impacts of the proposal are so unacceptable that it should be modified or abandoned.

**18. Terms and Conditions**

If the determination is 12.4.4 (a), NIRB's terms and conditions include those listed in the **Screening Decision Report**.

Specific Terms and Conditions to note include:

---

---

---

---

---

---

---

---

**19. Authorization**

Approved By: \_\_\_\_\_

(NIRB Decision Maker)

Date: \_\_\_\_\_

99-03-31

(yyyy-mm-dd)

**20. Follow-up / Monitoring**

Minister's Determination

\_\_\_\_\_ Minister agreed with NIRB's indication.  
Action? \_\_\_\_\_

\_\_\_\_\_ Minister varied NIRB's indication.  
Action? \_\_\_\_\_

\_\_\_\_\_ Minister rejected NIRB's indication  
Action? \_\_\_\_\_

If applicable,

\_\_\_\_\_ Is a follow-up/monitoring program required? If yes, give details.  
\_\_\_\_\_

\_\_\_\_\_ Has screening report information been added to NIRB's GIS/Calyx system?



**Northwest Territories** Education, Culture and Employment

201 23

March 10, 1999

Jaida Edwards  
Environmental Assessment Screener  
Nunavut Impact Review Board  
Box 2379  
Cambridge Bay, NT X0E 0C0

Fax: 867-883-2594  
Due date: March 25, 1999

**Re: NIRB 99EN148 – Mineral Exploration at Ferguson Lake – Starfield Resources**

Dear Ms. Edwards:

Pursuant to A.s. 33.5.12 of the Nunavut Land Claim Agreement, the Prince of Wales Northern Heritage Centre gives consent for approval of the above-cited land use application,

Our search of the archaeological sites database for the region shows that no archaeological sites have been reported in the land use area. If an archaeological site is encountered or disturbed in the course of the land use activity, under A.s. 33.5.13, the attached conditions specify plans and methods of site protection and restoration to be followed by the permittee.

Regards,

Charles D. Arnold, Director  
Culture, Heritage and Languages

Prince of Wales Northern Heritage Centre



## ARCHAEOLOGICAL RESOURCES: TERMS AND CONDITIONS BACKGROUND

- i. The archaeological record of the Inuit of the Nunavut Settlement Area is a record of Inuit use and occupancy of lands and resources through time. The evidence associated with their use and occupancy represents a cultural, historical, and ethnographic heritage of Inuit society and, as such, Government recognizes that Inuit have a special relationship with such evidence which shall be expressed in terms of special rights and responsibilities.

The archaeological record of the Nunavut Settlement Area is of spiritual, cultural, religious and educational importance to Inuit. Accordingly, the identification, protection and conservation of archaeological sites and specimens and the interpretation of the archaeological record is of primary importance to Inuit and their involvement is both desirable and necessary.

In recognition of the cultural, spiritual and religious importance of certain areas in the Nunavut Settlement Area to Inuit, Inuit have special rights and interests in these areas as defined by Article 33 of the Nunavut Land Claim Agreement.

- ii. "Archaeological site" means a site or work within the Nunavut Settlement Area of archaeological, ethnographical or historical importance, interest or significance or a place where an archaeological specimen is found, and includes explorers' cairns. "Archaeological specimen" means an object or specimen found in an archaeological site of archaeological, ethnological or historical importance, interest or significance and includes explorers' documents.
- iii. Any new Terms and Conditions raising issues found in ss. 10 and 16 of the Territorial Land Use Regulations should duplicate statutory sections, or be stricter, but not more lenient in terms of protection of archaeological resources.
- IV.
  1. The permittee shall not operate any vehicle over a known or suspected archaeological site.
  2. The permittee shall not remove, disturb or displace any archaeological specimen or site.
  3. The permittee shall contact the Arctic Archaeologist at the Prince of Wales Northern Heritage Centre (867-873-7551) and DIAND official should an archaeological site or specimen be encountered or disturbed by any land use activity.
  4. The permittee shall immediately cease any activity which disturbs an archaeological or historical site, encountered during the course of a land use operation, until permitted to proceed with the authorization of the Prince of Wales Northern Heritage Centre (PWNHC).
  5. The permittee shall follow the direction of the Prince of Wales Northern Heritage Centre and DIAND in restoring disturbed archaeological sites to an acceptable condition, and according to the respective jurisdictions and authorities of the PWNHC (Article 33, Nunavut Land Claim Agreement) and DIAND Land Administration Division (Territorial Land Use Regulations).
  6. The permittee shall provide information to the Prince of Wales Northern Heritage Centre about each archaeological site or specimen encountered by any land use activity, by completing the attached form.
  7. The permittee shall make best efforts to ensure that all persons working under authority of the permit are aware of these conditions concerning archaeological sites and specimens.

of the permit are aware of these conditions concerning archaeological sites and specimens.

8. Foot traffic on a heritage site may cause deterioration of the vegetation; this promotes erosion by exposing soil to the wind and melting underlying permafrost which leads to irreversible damage to archaeological deposits. Tourists and crew must use existing trails wherever possible.
9. Visitors should not stand in or on archaeological features as this will destabilize rocks which may be part of the structure or crush unexposed artifacts. Rocks which are part of a structure should not be moved at all; even removing and returning a rock to its original place can be damaging.
10. Ancillary activities (e.g. lecturing, picnicking) should be conducted off the site proper.

**ARCHAEOLOGICAL SITE RECORD**

FIELD NUMBER:

SITE NAME:

PROJECT:

DESCRIBE LOCATION OF SITE:

TERRITORY: Northwest Territories

DISTRICT:

MAP REFERENCE:

JURISDICTION:

UTM:

LATITUDE:

LONGITUDE

ELEVATION:

SIZE:

CONDITION:

SITE TYPE CLASS:

- ☐ Prehistoric
- ☐ Indigenous historic
- ☐ Historic
- ☐ Natural
- ☐ Undetermined

SITE FEATURES:

CULTURE:

REPORTER'S NAME AND ADDRESS:

YEAR OBSERVED:

REMARKS/SKETCH/PHOTOGRAPHS:

[Please attach a copy of the NTS map (1:250,000) with the site location clearly marked.]

Return to: Prince of Wales Northern Heritage Centre, Yellowknife, Northwest Territories X1A 2L9  
Telephone: 867-873-7551; Fax: 867-873-0206

## COMMENT FORM FOR NIRB SCREENINGS

The Nunavut Impact Review Board has a mandate to protect the integrity of the ecosystem for the existing and future residents of Nunavut. In order to assess the environmental and socio-economic impacts of project proposals, NIRB would like to hear your concerns, comments and suggestions about the following project application:

**Project Title:** Ferguson Lake Copper - Nickel Project  
**Proponent:** Starfield Resources  
**Location:** Ferguson Lake, Kivalliq, NIRB#: 99EN148  
**Comments Due By:** Thursday, March 25, 1999

**Indicate your concerns about the project proposal below:**

- |   |   |
|---|---|
| <input type="checkbox"/> no concerns                      | <input type="checkbox"/> traditional uses of land               |
| <input type="checkbox"/> water quality                    | <input type="checkbox"/> Inuit harvesting activities            |
| <input type="checkbox"/> terrain                          | <input type="checkbox"/> community involvement and consultation |
| <input type="checkbox"/> air quality                      | <input type="checkbox"/> local development in the area          |
| <input type="checkbox"/> wildlife and their habitat       | <input type="checkbox"/> tourism in the area                    |
| <input type="checkbox"/> marine mammals and their habitat | <input type="checkbox"/> human health issues                    |
| <input type="checkbox"/> birds and their habitat          | <input checked="" type="checkbox"/> Other: _____                |
| <input type="checkbox"/> fish and their habitat           |   |
| <input type="checkbox"/> heritage resources in area       |   |

**Please describe the concerns indicated above:**

Because Ferguson Lake Lodge will be used as the camp, all remaining impacts are reduced to the actual drill targets. Assuming good land use practices, the moving of equipment and deposition of drill water into sumps will cause minimal damage and only be present for a short period of time.

Ferguson Lake Lodge holds no water licence, so references to the facilities there should be viewed in this light (i.e. no water sampling has been carried out to judge the effectiveness of the 'seep field.' Is the 'pond' used for grey water disposal large enough? I ask this because I have never been there and I do not know).

Does Starfield Resources have permission from the Hamlet of Rankin Inlet to dispose of wastes at the Hamlet's waste disposal site? It is referenced that waste oil and hazardous materials will be incinerated (where appropriate) or otherwise transported to Rankin. Has permission been granted? The Hamlet of Rankin Inlet does not maintain a proper hazardous waste storage area and has no approved plans for dealing with such material.

Public Health may have some concerns with the fact that the water supply at Ferguson Lake Lodge is not treated - more so because it also operates as a tourist accommodations facility.

Although incomplete in areas, I support the proposal.

**Name of person commenting:** PAUL SMITH of \_\_\_\_\_  
**Position:** Water Resources Officer **Organization:** DIAND  
**Signature:** [Signature] **Date:** March 5, 1999

**Project Title:** Ferguson Lake Copper - Nickel Project

**Proponent:** Starfield Resources

**Location:** Ferguson Lake, Kivalliq, NIRB#: 29EN148

**Comments Due By:** Thursday, March 25, 1999

**Indicate your concerns about the project proposal below:**

- |   |   |
|---|---|
| <input type="checkbox"/> no concerns                      | <input type="checkbox"/> traditional uses of land               |
| <input type="checkbox"/> water quality                    | <input type="checkbox"/> Inuit harvesting activities            |
| <input type="checkbox"/> terrain                          | <input type="checkbox"/> community involvement and consultation |
| <input type="checkbox"/> air quality                      | <input type="checkbox"/> local development in the area          |
| <input type="checkbox"/> wildlife and their habitat       | <input type="checkbox"/> tourism in the area                    |
| <input type="checkbox"/> marine mammals and their habitat | <input type="checkbox"/> human health issues                    |
| <input type="checkbox"/> birds and their habitat          | <input type="checkbox"/> Other: _____                           |
| <input type="checkbox"/> fish and their habitat           |   |
| <input type="checkbox"/> heritage resources in area       |   |

**Please describe the concerns indicated above:**

**Do you have any suggestions or recommendations for this application?**

*This project should be checked by the inspector regularly as it is in the vicinity of caribou crossing area and migration as well as calving. Any defense killed bears are subject to compensation.*

**Do you support the project proposal? YES ☒ NO ☐**

**Any additional comments?**

**Name of person commenting:** Rebecca Niles of Iqaluit  
**Position:** Asst. Director **Organisation:** NWMB  
**Signature:** [Signature] **Date:** 22.03.99



**Fisheries and Oceans  
Canada****Pêches et Océans  
Canada**

Box 358  
Iqaluit, NT.  
X0A 0H0

Ph: (867) 979-8007  
Fx: (867) 979-8039

March 22, 1998

Jaida Edwards  
Environmental Assessment Screener  
Nunavut Impact Review Board  
P.O. Box 2379  
Cambridge Bay, NT  
X0E 0C0

**Re: Ferguson Lake Copper-Nickel Project  
NIRB: 99EN148  
Letter of Advice**

The Department of Fisheries and Oceans, Habitat Management, (DFO-HM) has reviewed the information submitted with the above application. DFO's assessment takes into consideration fish and fish habitat related concerns only. Please be advised that the following strategies for mitigation include those for any on-ice drilling and for any possible mineral exploration for kimberlites.

On the basis of the information provided, it has been determined that the above project has the potential to affect fish or fish habitat pursuant to the Fisheries Act. It has also been concluded that the potentially adverse environmental effects that may be caused by the proposal are mitigable with known technology. Factors to consider when developing measures to mitigate any potentially adverse effects on fish and fish habitat may include, but are not limited to, the following:

1. The harmful alteration, disruption or destruction of fish habitat is prohibited under Section 35 of the Fisheries Act, unless authorized by regulation. No disturbance of the bottom or banks of any definable watercourse is permitted unless authorized by DFO.
- DFO recommends that mechanized clearing not be permitted within 30 metres of the normal high water mark of a watercourse in order to maintain a vegetative mat for bank stabilization.
2. If applicable, the construction of any winter stream/lake crossings to access drill sites should be located to minimize approach grades. The use of material other than ice or snow to construct a temporary crossing over any ice-covered stream is prohibited under Section 11 of the Northwest Territories Fishery Regulations, unless authorized by a Fishery Officer. All temporary crossings shall be removed prior to spring breakup in a manner and to the satisfaction of a Fishery Officer.
- Prior to the selection of stream/lake crossing locations, the proponent should provide details of the fish habitat in the area of the proposed crossings and outline the methods that will be employed to mitigate any adverse effects on this habitat or areas downstream, and include a construction schedule.

3. The deposition of deleterious substances into water bodies frequented by fish is prohibited under Section 36 of the Fisheries Act unless authorized by regulation. The proponent shall, therefore, ensure that any chemicals, fuel or wastes associated with the proposed project do not enter any such waters.
- DFO recommends that all sumps, wastes, sewage containments and fuel caches be located a minimum of 30 metres from the normal high water mark of any water body, and be sufficiently bermed or otherwise contained to ensure that these substances do not enter a waterway.
  - All spills of oil, fuel or other deleterious materials shall be reported immediately to the 24 hour Spill Line at (867) 920-8130.
  - Given the potential toxicity of kimberlite, DFO recommends that all drill cuttings and associated wastes be disposed of in such a manner that they do not enter fish habitat and/or water frequented by fish.
  - Slash or debris should be disposed of above the high water mark so that it does not enter any waterway.
4. If artesian flow is encountered during drilling, drill holes should be plugged and permanently sealed upon project termination.
5. The permittee should not erect camps or store material on the surface ice of streams or lakes.

DFO should be notified of any changes in plans or operating conditions associated with this land use activity which may adversely affect fish or fish habitat.

If the proposed work is carried out as described in the information provided to the Department of Fisheries and Oceans and appropriate mitigation measures are implemented, the proposed work will not be considered as contravening Section 35(1) of the Fisheries Act which reads:

*"No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat."*

Accordingly, an authorization under Section 35(2) of the Fisheries Act will not be necessary. Failure to comply with any of the above conditions and failure to implement measures to mitigate adverse impacts may result in the harmful alteration, disruption, or destruction of fish habitat in contravention of the Fisheries Act subject to prosecution under Section 35(1) of the Fisheries Act.

Please note that none of the foregoing should be taken as authorization of the undertaking in accordance with the Fisheries Act or any other applicable legislation.

If you have any questions, concerns or comments with respect to the above, please do not hesitate to contact me.

Regards,



Margaret Keast  
Habitat Management Biologist, Iqaluit

cc: Gary Weber (Area Manager, DFO - Nunavut Area)  
Winston Fillatre (Fishery Officer, DFO - Nunavut Area)



**Starfield Resources Inc.**

March 26, 1999

TO: Alexandra Thompson  
NIRB  
Gjoahaven, NT

VIA FAX: 867-983-2594

Dear Alexandra,

As per our discussion yesterday with regard to your request that under all fuel containment areas we use polyethylene I made some inquiries. I have no problems doing this if required. However, I did speak with an engineer on this procedure, and there is a concern that under freezing conditions with high winds, the plastic becomes very brittle and tends to shred and break off thus being blown everywhere.

Please call me with your comments on this at 604-608-0400.

Sincerely

A handwritten signature in dark ink, appearing to be 'R. Krause', with a large, looping flourish extending to the right.

R. (Bob) Krause B.Sc.  
Geologist

## COMMENT FORM FOR NIRB SCREENINGS

The Nunavut Impact Review Board has a mandate to protect the integrity of the ecosystem for the existing and future residents of Nunavut. In order to assess the environmental and socio-economic impacts of project proposals, NIRB would like to hear your concerns, comments and suggestions about the following project application:

Project Title: Ferguson Lake Copper - Nickel Project  
 Proponent: Starfield Resources  
 Location: Ferguson Lake, Kivalliq, NIRB#: 00EN148  
 Comments Due By: Thursday, March 25, 1999

Indicate your concerns about the project proposal below:

- |  |   |
|--|---|
| <input type="checkbox"/> no concerns                                 | <input type="checkbox"/> traditional uses of land               |
| <input checked="" type="checkbox"/> water quality                    | <input type="checkbox"/> Inuit harvesting activities            |
| <input checked="" type="checkbox"/> terrain                          | <input type="checkbox"/> community involvement and consultation |
| <input type="checkbox"/> air quality                                 | <input type="checkbox"/> local development in the area          |
| <input type="checkbox"/> wildlife and their habitat                  | <input type="checkbox"/> tourism in the area                    |
| <input checked="" type="checkbox"/> marine mammals and their habitat | <input type="checkbox"/> human health issues                    |
| <input type="checkbox"/> birds and their habitat                     | <input type="checkbox"/> Other: _____                           |
| <input checked="" type="checkbox"/> fish and their habitat           |   |
| <input type="checkbox"/> heritage resources in area                  |   |

Please describe the concerns indicated above:

NO oil spill from any kind of equipment to the ground.

Do you have any suggestions or recommendations for this application?

ALL BARRELS MUST BE PILED UP ON LAND THAT IS NOT  
STEEP TO THE RIVER OR LAKE.

Do you support the project proposal? YES ☒ NO ☐

Any additional comments?

Name of person commenting: CLAY ENIAPIK of WHALE CUBE  
 Position: DIRECTOR FOR H.T.O. Organisation: \_\_\_\_\_  
 Signature: [Signature] Date: March 24/99

March 24, 1999

Notes and comments on the Ferguson Lake Copper-Nickel Project (diamond drilling).

NIRB : 99EN148

The area under the fuel transfer location will be underlaid with a "Matasorb" mat. This is good for small dripping, however, large amount of fuel or gasoline will go right through the membrane after saturation. I recommend a plastic film (polyethylene) under the matasorb, especially in winter. Pelletized absorbents are of little use in winter or on moss or rock. Prevention of spills must be a priority.

On the "Exploration/remote camp supplementary questionnaire", the following question remain unanswered or need clarification:

- 19,20, 21 : Will the company use an additive ? If yes, need MSDS.  
It is written water will be filtered and cleaned: what does it mean, please provide way of filtration and cleaning.
- 23 : Is the spill contingency plan submitted ? *Yes - H119*
- 32 : Waste oil / hazardous waste not burned will be transported to Rankin Inlet, what will be the final destination of these wastes ?  
\* Non burnable, in my understanding are inert material, is it the case? *→ dump in Q. 34. Rankin*
- 36 : This question remains unanswered. What is the quality of such a leachate
- 37 : For my information, I would like to obtain such a proof, even if it is old documents.
- 38 : Is there any restoration needed ?

*Re: Water: Forward Dianne's phone number to him. All other questions answered.*

Alain Chouinard  
Environmental Protection Officer  
RWED Kivalliq  
Government of N.W.T.  
Arviat, NT  
X0C 0E0  
Phone : 867-857-2828, fax: 2986  
Email: alainc@arotio.ca

*Mar 26 1999*

## COMMENT FORM FOR NIRB SCREENINGS

The Nunavut Impact Review Board has a mandate to protect the integrity of the ecosystem for the existing and future residents of Nunavut. In order to assess the environmental and socio-economic impacts of project proposals, NIRB would like to hear your concerns, comments and suggestions about the following project application:

Project Title: Ferguson Lake Copper - Nickel Project  
Proponent: Starfield Resources  
Location: Ferguson Lake, Kivalliq, NIRB#: 98EN148  
Comments Due By: Thursday, March 25, 1999

**Indicate your concerns about the project proposal below:**

- |   |   |
|---|---|
| <input type="checkbox"/> no concerns                      | <input type="checkbox"/> traditional uses of land               |
| <input type="checkbox"/> water quality                    | <input type="checkbox"/> Inuit harvesting activities            |
| <input type="checkbox"/> terrain                          | <input type="checkbox"/> community involvement and consultation |
| <input type="checkbox"/> air quality                      | <input type="checkbox"/> local development in the area          |
| <input type="checkbox"/> wildlife and their habitat       | <input type="checkbox"/> tourism in the area                    |
| <input type="checkbox"/> marine mammals and their habitat | <input type="checkbox"/> human health issues                    |
| <input type="checkbox"/> birds and their habitat          | <input type="checkbox"/> Other: <u>SEE ATTACHED LETTER</u>      |
| <input type="checkbox"/> fish and their habitat           |   |
| <input type="checkbox"/> heritage resources in area       |   |

**Please describe the concerns indicated above:**

WHAT WILL BE THE FINAL DESTINATION OF THE WASTE/OIL  
RETURNED TO RANKIN INLET?

**Do you have any suggestions or recommendations for this application?**

**Do you support the project proposal?** YES ☒ NO ☐  
**Any additional comments?**

Name of person commenting: ALAIN CHOUINARD of AWED-KIVALLIQ  
Position: ENVIRONMENTAL ACTIVIST Organisation: NWT GOVERNMENT  
Signature: Alain Chouinard Date: March 24 99



Environment Canada  
Environnement Canada

Environment Canada  
Environmental Protection Branch  
Suite 301, 5204 50<sup>th</sup> Ave.  
Yellowknife, NT  
X1A 1E2

March 25, 1999

RECEIVED  
26/3/99

Jaida Edwards  
Environmental Assessment Screener  
NIRB,  
Box 2379  
Cambridge Bay, NT, X0E 0C0

**RE: File # 99EN148 Ferguson Lake Copper-Nickel project, Starfield Resources:**

On behalf of Environmental Protection Branch (EPB), Environment Canada, I have reviewed the information submitted for the above noted project.

EPB's contribution to your request for specialist advice is based primarily on the mandated responsibilities for the enforcement of Section 36 of the Fisheries Act and the Canadian Environmental Protection Act (CEPA). On the basis of the information provided, EPB believes that the above noted project has the potential to affect fish pursuant to the Fisheries Act.

Camp waste management has been addressed in the application with the use of incineration at Ferguson Lake camp however for the handling of waste oil from the drilling operation it is not known whether the incinerator will be appropriate. The incinerators capabilities should be assessed and approved before any waste oil is disposed of by this method. For other hazardous material, that may result because of this project, the proponent should identify these and obtain an approval for its disposal option.

**Fuel storage and handling:** Environment Canada recommends that a portable containment structure be used for the storage of the various fuels that will be used for this project. The spill contingency information provided is very limited and the company should be asked to develop a spill plan for this operation.

**Drilling on Ice:** was identified in the application, but I was unable to identify where or how many drill location would be on ice.

For on ice drilling, any return water released to the lake must be non-toxic, and not result in an increase in total suspended solids in the immediate receiving waters of the lake above Canadian Council of Ministers for the Environment Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10 mg/L for lakes with background levels under 100 mg/l, or 10% for those above 100 mg/l).

Canada



Drilling additives or mud shall not be used in connection with holes drilled through the lake ice unless they are recirculated or contained such that they do not enter the water, or are demonstrated to be non-toxic.

**Drilling on Land:**

For all land based drill sites the applicant shall ensure that any drill cuttings, chemicals, fuel or wastes associated with the project do not enter waters frequented by fish.

If artesian flow is encountered, drill holes shall be plugged and permanently sealed upon project termination.

Please advise the NWT, EPB, Environment Canada of any substantive changes to the proposed project. If you have any question or comments regarding the above please contact me at (867) - 669-4733 or by email at [stephen.harbicht@ec.gc.ca](mailto:stephen.harbicht@ec.gc.ca).

Sincerely

A handwritten signature in black ink, appearing to read 'Stephen Harbicht', with a long horizontal flourish extending to the right.

Stephen Harbicht  
Head, Assessment and Monitoring

cc. Neil Scott, Inspector EPB, YK.