[redacted]

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June 9, 1998

To: Mr. Phillipe di Pizzo
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NT X0E 1J0

Re: NIRB #: 98W02N077 NWB

Water Licence for Cumberland Resources - Meadowbank Project

Enclosed is the completed NIRB Screening Decision Report for the application for a water licence for Cumberland Resources to conduct mineral exploration near Baker Lake..

NIRB has screened this application for ecosystemic and socio-economic impacts of the proposal.

NIRB's indication to the Minister is:

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.

Please contact Joe Ahmad, Executive Director at (867) 983-2593 if you have any questions about the Screening Report.

Yours truly,

Larry Audlaluigak, Chairperson
Nunavut Impact Review Board
P.O.Box 2379
Cambridge Bay, NT
X0E 0C0
Tel: (867) 983-2593 Fax: (867) 983-2574

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SCREENING DECISION

Date: June 09,1998

Thomas Kudloo
Chairperson
Nunavut Water Board

Dear Mr. Kudloo:

RE: Screening Decision of the Nunavut Impact Review Board (NIRB) on Application:
NIRB 98W02N077 NWB2MEA
Cumberland Resources- Mineral Exploration at the Meadowbank Project

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 is referenced in the screening section 12.4.4 (a) 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.

ᐃᖃᓗᒃᑑᑦᑎᐊᖅ, ᓄᓇᕗᑦ/P.O. Box 2379 Cambridge Bay, NT /EKALUKTUTIAK, NUNATIAMI X0E 0C0 • ᐅᖄᓚᐅᑎᑦ/Phone/HIVAYAOTA: (403) 983-2593 • ᓈᓴᐅᑎᖓ ᐅᖄᓚᐅᑎᒃᑯᑦ/Fax/FAX-KOT: (403) 983-2594

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 gray water, and impact of these on the ecosystem;
- the impact of noise from drilling activities and their disturbance to wildlife;
- the movement of vehicles and equipment and the impact on wildlife;
- the movement of vehicles 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 the release of total suspended solids in the receiving environment shall be in compliance with *Guidelines for Total Suspended Solids* contained in the *Canadian Council of Ministers for the Environment's (CCME) Canadian Water Quality Guidelines, Chapter 3 - Freshwater Aquatic Life* (i.e. 10mg/L for lakes with background level under 100mg/L, or 10% for those above 100mg/L).
6. 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.
7. The Permittee shall ensure that the sump/depression capacity be sufficient to accommodate the volume of waste water and any fines that are produced so that there will be no additional impacts.

8. The Permittee shall not locate any sump within thirty (30) metres of the normal high water mark of any water body.
9. 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.
10. 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. If an artesian occurrence shall be reported to the Nunavut Water Board and Land Use Inspector within 48 hours.

Water

11. The Permittee shall ensure that the volume of fresh water for domestic purposes does not exceed 100 cubic metres per day.
12. 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

13. The Permittee shall ensure that fuel storage containers are not located within thirty (30) metres of the ordinary high water mark of any body of water.
14. 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.
15. The Permittee shall take all reasonable precautions to prevent the possibility of migration of spilled petroleum fuel or chemicals over the ground surface.
16. The Permittee shall have one extra fuel storage container on site equal to, or greater than, the size of the largest fuel container.
17. The Permittee shall examine all fuel and chemical storage containers for leaks. All leaks should be prepared immediately.
18. The Permittee shall have an emergency response and spill contingency plans in place prior to the commencement of the operation. In developing these plans the Permittee should follow the *NWT Spill Contingency Planning and Reporting Regulations* and the Guidelines for the Management of Hazardous Wastes. These documents are available from the Department of Resources Wildlife and Economic Development, GNWT at (867) 920-8069.
19. The Permittee shall immediately report all spills of petroleum and hazardous chemicals in accordance the Government of the NWT Spill Report to the twenty four (24) hour spill report line at (867) 920-8130 to NWB.

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. Any areas designated for waste disposal shall not be located 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 incinerate all combustible and food wastes to eliminate potential for wildlife problems created by the attraction of wildlife to garbage. A 45 gallon incinerator kit should be used to incinerate garbage. Kits are available form Northern Services and Supply in Yellowknife.
24. The Permittee shall ensure that all non-combustible wastes generated through the course of the operation are backhauled and disposed of in an approved dumpsite.
25. The Permittee shall deposit all scrap metal, discarded machinery and parts, barrels and kegs, at an approved disposal site.
26. The Permittee shall not bury any metal wastes.
27. The Permittee shall dispose of all toxic or persistent substance in a manner approved by the NWB and the land use inspector.

Wildlife

28. The Permittee shall ensure that there is no damage to wildlife habitat in conducting this operation.
29. The Permittee shall not locate any operation so as to block or cause substantial diversion to migration of caribou.
30. The Permittee shall cease activities that may interfere with migration or calving, such as airborne geophysics surveys or movement of equipment, drilling activities until the caribou and their calves have vacated the area.
31. Monitoring of caribou movements should be undertaken to determine if caribou will be going into the area where exploration activities are taking place.
    i) If it is determined that caribou will not be going into the area in question drilling and exploration activities should be allowed to continue.
    ii) In the event that caribou or muskox cows calve within site of the exploration activities, the Permittee shall suspend operations within the area(s) occupied by cows and/or calves between May 15 and July 15 or until the caribou have vacated the area. All personnel are to be removed from the zone who are not required for the maintenance and protection of the camp facilities and equipment.
32. 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. In the event that caribou or muskox cows and calves are present all overflights by aircraft should be suspended. Raptor nesting sites and concentrations of nesting or molting waterfowl should be avoided by aircraft at all times.
33. 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.
34. 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.

35. The Permittee shall not obstruct the movement of fish while conducting the land use operation.
36. The Permittee shall ensure that the drill sites avoid known environmentally sensitive areas (denning, nesting etc.) by a minimum of 250 metres.

Environmental

37. The Permittee shall ensure that the land use area is kept clean and tidy at all times.
38. The Permittee shall prepare the site in such a manner as to prevent damage to the ground surface.
39. 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.
40. The Permittee shall not use any equipment except of the type, size and number that is listed in the accepted application.
41. 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.
42. The Permittee shall suspend overland travel of equipment or vehicles if rutting occurs.
43. 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 to the satisfaction of a Fishery Officer.
    - Prior to the selection of stream/lake crossing locations, the permittee 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, included in a construction schedule.

Camp

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

Archaeological Sites

47. 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

48. The Permittee shall remove all scrap metal, discarded machinery and parts, barrels and kegs, buildings and building material upon abandonment.

49. The Permittee shall backfill and restore all sumps back to the natural surrounding contours of the land prior to the expiry date of this permit.
50. The Permittee shall undertake ongoing restoration for any land or improvements which are no longer required for the Permittee's operation on the land.
51. The Permittee shall cap all drill holes and cut off any drill casings that remain above ground to ground level upon abandonment of the operation.
52. The Permittee shall submit to the NWB and NIRB a summary report of activities undertaken and any abandonment and restoration of the site.

Monitoring

53. The Permittee shall monitor the impacts to wildlife by maintaining a log of wildlife observed (species, number, date, time, location observed) and their behavior (i.e. avoidance, segregation, disturbance/stress, alteration of migration patterns or movements by wildlife) and shall present these reports to NWMB, RWED and NIRB on a monthly basis.

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 June 9/98 at Cambridge Bay, NT

Larry Aknavigak, Chairperson

Attachment: NIRB Screening Form

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NUNAVUT IMPACT REVIEW BOARD
SCREENING FORM

1. General File Information on Screening

NIRB #: 98WO2NO77
(NIRBxxx/yyyy)

Authorizing Agency #(s): NWB - NWB2MEA
Can be permit or licence numbers

Project Title: Mineral Exploration - Meadowbank Project
Title of project

Proponent: Kerry M. Curtis
Company/Applicant

Proponent's Address: Cumberland Resources Ltd., #906 - 595 Howe Street, Vancouver B.C. V6C 2T5
Full Address

Contractor: ____
(e.g. company / persons doing the work, if different from the proponent)

EA Starting Date: 14 May 1998.
Date application accepted (yyyy-mm-dd)

Proposed Starting Date of Activity: March 1998 → September 1998.
(yyyy-mm-dd)

Date Application Referred for Comments: 14 May 1998
(yyyy-mm-dd)

Deadline for Comments: 03 June 1998
(yyyy-mm-dd)

NIRB's EA Indication: 12.4.4 (a)
(Article 12.4.4 Indication)

Date of Indication: ____
(~Due date)
Date (yyyy-mm-dd)

Project Cancelled: Yes ____
Date (yyyy-mm-dd)

Reason ____
Explain reason for cancellation

Comments: ____

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2. Authorizing Agencies

Authorizing Agency(ies): NTI, Kivalliq I.A., Kitikmeot I.A., BRIA (NWB) NWMB, DIAND, DFO, DOE, DRWED, Other _____
(circle one or more)

Land: Inuit Owned ✓ Crown ___ Commissioner's ___ Marine Areas ___

Type of Application: Water License
(e.g., water licence, land use permit, quarry 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): LUP# KE97P092 (KivIA)
(file number)

Previous Authorizations (inactive/expired) : _____
(file number)

Project File Location: NWB - Gjoa Haven, David Porter
Office where project file is located, contact person and number

3. Project Location

Kivalliq ✓ Kitikmeot ___ Baffin ___

Land Use Planning Region: _____
(eg., West Kitikmeot,....)

Geographic Place Name: Meadowbank River Area
(nearest place name or geographic feature)

Local Name: _____
(traditional name for location)

National Topographic Sheet (NTS) Number : _____ Scale: 1:250,000)

Latitude / Longitude: 65° 15' N 96° 10' E
(degrees, minutes, seconds)

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

Nearest Settlement: Baker Lake

Adjacent Settlement / Out-post camps: _____

Surrounding Land Status: Inuit Owned
(e.g., Inuit Owned, Commissioner's, Crown)

Special Designation: _____
(Yes/No - e.g., heritage river , if yes, identify)

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: camp, fuel cache, exploration
(construction, camp, fuel cache, quarrying, harvesting, water works, installation, modification, operation, maintenance, scientific research)

Multiple Activities: ___ Yes ✓ No

Project Category Code: Point (Multiple Points) Linear Area
(circle those that apply)

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

Project Description Summary:
(duration of project, size of project, number of personnel on site, related physical activities, machinery used, fuels and chemical use and storage, amount and source of resources needed eg. gravel.)

See Project overview Attached.

Alternatives Considered:
(list all alternatives to the project and/or components of the project to avoid unnecessary amendments, eg. give 2 alternatives to the location of an ice road and camp logistics)

PROJECT OVERVIEW

May 15, 1998

To: Distribution List via fax.

Re: NIRB file no. 98W02N077
Project: Mineral Exploration – Meadowbank River Area
Proponent: Mr. Kerry M. Curtis
Region: Kivalliq
Location: 65° 15' N 96° 10' E

Project Overview:

Cumberland Resources Ltd. is applying for a water license in support of their 1998 mineral exploration activities in the Meadowbank River area, near Baker Lake. They will be working under amended LUP KE97P092.

This water license will be used for the purpose of obtaining water while conducting the drilling program. The camp usage (showers, cooking), for approximatley 35 people, will be approximately 1500 L/day while the drilling will require 22,000 L/day. All grey water from camp usage will be disposed of in natural depressions on the ground surface. All drill water will be returned to the lake. No muds will be used. Human waste will be incinerated on site and sludge will be removed to a Baker Lake garbage facility.

A copy of the 1997 Water Quality Studies for Meadowbank is available through the Nunavut Water Board office.

P.O. Box 119
Gjoa Haven, NT X0E 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

APPLICATION FORM

Application for licence, amendment to licence, or renewal of licence

APPLICATION/LICENCE NO. (Amendment or renewal only) NWB2 MEA

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

CUMBERLAND RESOURCES LTD.
#906 - 595 HOWE STREET
VANCOUVER, BC V6C 2T5

Phone: 608-2557 Fax: 608-2559 (604)

2. ADDRESS OF HEAD OFFICE IN CANADA IF INCORPORATED

CUMBERLAND RESOURCES LTD.
#906 - 595 HOWE STREET
VANCOUVER, BC V6C 2T5

Phone: 608-2557 Fax: 608-2559 (604)

3. LOCATION OF UNDERTAKING (describe and attach a map, indicating watercourse and location of any proposed waste deposits)

See maps provided

Latitude: ______ Longitude: ______

NUNAVUT WATER BOARD
MAY 11 1998
PUBLIC REGISTRY

4. DESCRIPTION OF UNDERTAKING (describe and attach plans and drawings)

Mineral Exploration/Diamond Drilling

5. TYPE OF UNDERTAKING

- ☐ Industrial
- ☐ Mining and Milling
- ☐ Municipal
- ☒ Other (describe): Mineral exploration
- ☐ Power
- ☐ Conservation
- ☐ Agricultural
- ☐ Recreation

6. WATER USE

- ☒ To obtain water
- ☐ To cross a watercourse
- ☐ To modify the bed or bank of a water
- ☐ Other (describe):
- ☐ Flood control
- ☐ To divert water
- ☐ To alter the flow of, or store, water

7. QUANTITY OF WATER INVOLVED (litres per second, litres per day or cubic metres per year, including both quantity to be used and quality to be returned to source.)

Camp use (showers, cooking) 1500 L/day
Drilling (diamond coring) 22,000 L/day

8. **WASTE DEPOSIT** (type, quantity, quality, treatment, and disposal)

Grey water from camp use disposed on surface in natural depressions.
Drill water returned to lake - no muds used.

9. **OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING** (give names, mailing address and location; attach if necessary)

None

10. **PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES**

None expected

11. **CONTRACTORS AND SUB-CONTRACTORS** (name, address and functions)

Boart Longyear Drilling - Saskatoon, SK

12. **STUDIES UNDERTAKEN TO DATE** (list and attach copies of studies, reports, research, etc.)

Two years of baseline water quality studies.
See attached Golder report.

13. **THE FOLLOWING DOCUMENTS SHALL BE INCLUDED WITH THE APPLICATION**
Land Use Permit

DIAND	[ ] Yes [x] No	Date Expected
Regional Inuit Association	[x] Yes [ ] No	Date Expected
Supplementary Questionnaire	[x] Yes [ ] No	Date Expected
Inuktitut Summary of Project	[ ] Yes [x] No	Date Expected
MAP @ 1 : 250,000 (with camp, drill sites, etc.)	[x] Yes [ ] No	Date Expected

14. **PROPOSED TIME SCHEDULE**

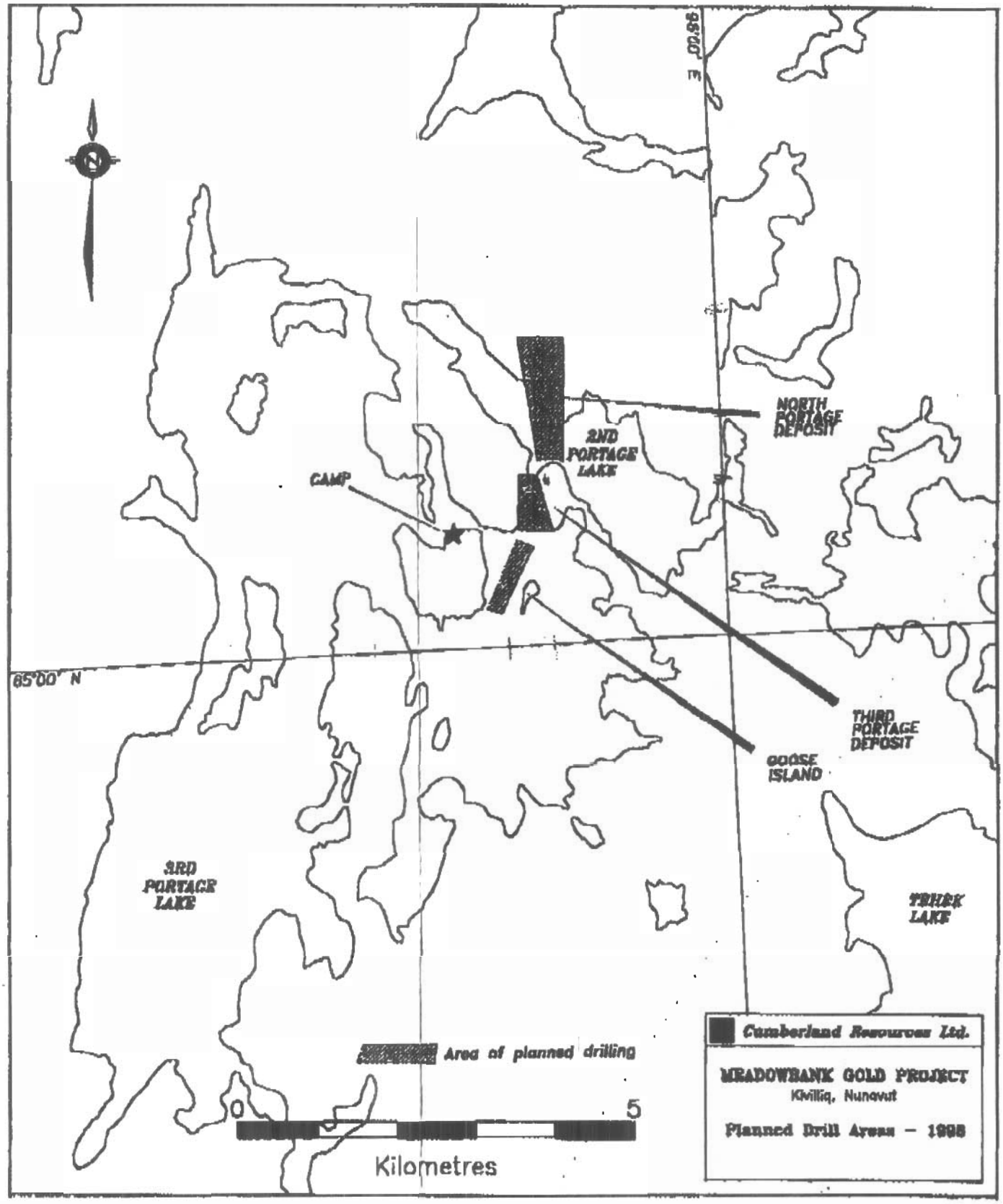
Start Date: March, 1998 Completion Date: September, 1998

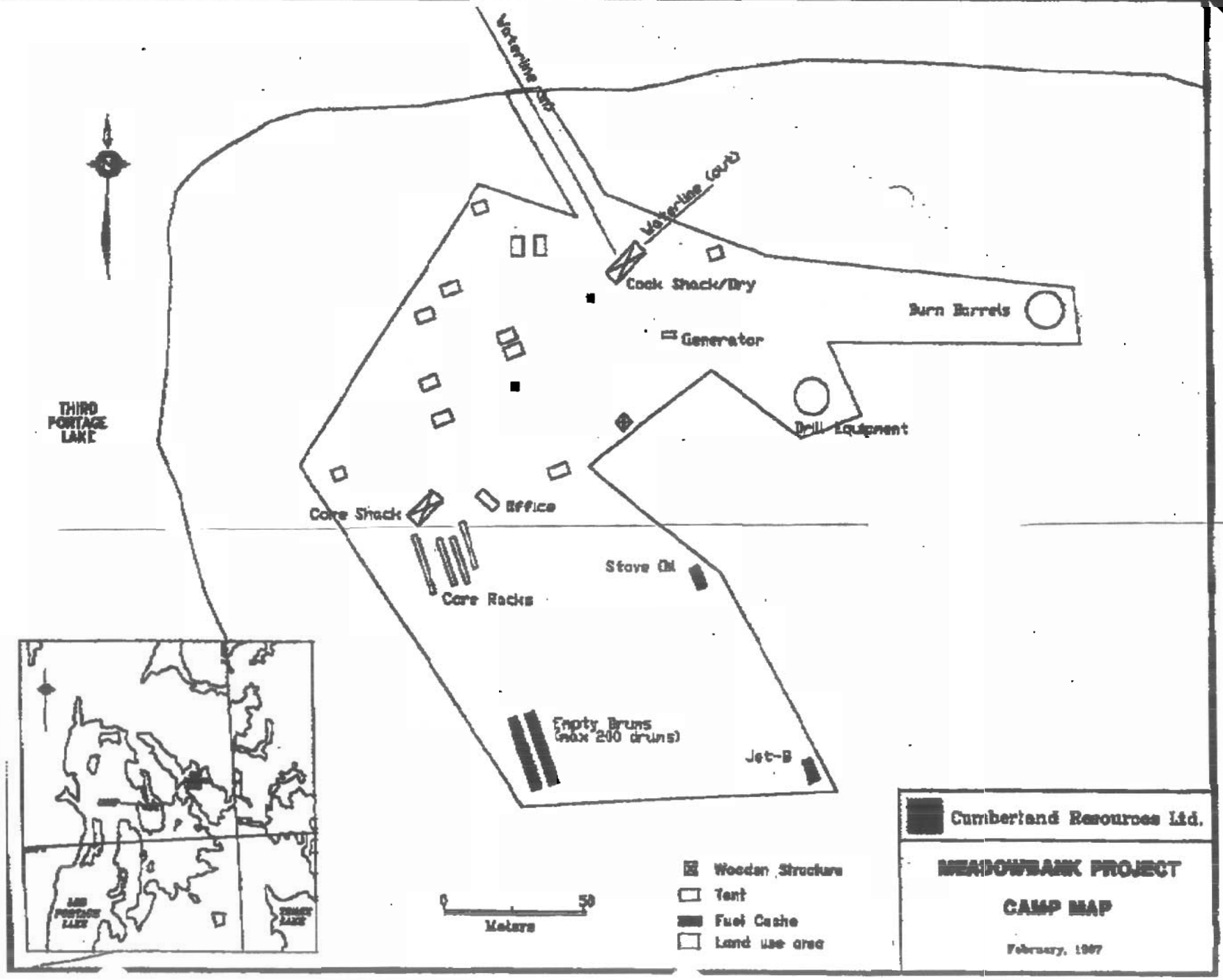
Kerry M. Curtis	Senior Vice President		May 6, 1998
Name (Print)	Title (Print)	Signature	Date

For Nunavut Water Board use only.

APPLICATION FEE Amount: $ Receipt No.:

WATER USE DEPOSIT Amount: $ Receipt No.:


96°00' E
N
NORTH PORTAGE DEPOSIT
2ND PORTAGE LAKE
CAMP
65°00' N
THIRD PORTAGE DEPOSIT
GOOSE ISLAND
3RD PORTAGE LAKE
TEHEK LAKE
Area of planned drilling
0
5
Kilometres
Cumberland Resources Ltd.
MEADOWBANK GOLD PROJECT
Kivilliq, Nunavut
Planned Drill Areas – 1998



5. The Proponent's Public Consultation Process

Description of Proponent's Public Consultation Process:

meetings have been held with KIA, HTO, CLARC NWB over past several years to update on exploration activities

Did proponent make use of traditional knowledge? ✓ Yes ___ No
(Please attach list of contact names and/or sources of TK)

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.~~

Elders have visited the site and been consulted on traditional use.

6. Description of the Environment

Description of Biophysical Environment:

This area has been identified as an important nesting area for arctic fox and wolves

Small cliffs throughout the area may be used by rough-legged hawks, peregrines and gyrfalcons for nesting.

Description of Socio-Economic and Cultural Environment:

In some years, significant numbers of barren-ground caribou winter in the Whitehills-Tehek lakes area. In these years, extensive caribou hunting occurs from fall through spring, especially in the vicinity of Whitehills Lake. Trapping Arctic fox in this area occurs in February and March. Domestic fishing, especially in Whitehills Lake, provides food for hunters and trappers. Baker Lake residents commonly travel to Whitehills Lake in spring and summer to occupy seasonal fishing camps.

7. NIRB's Consultation Process

Date application referred for comments: May 14, 1998. (yyyy-mm-dd)

Deadline for comments: June 03, 1998 (yyyy-mm-dd)

Distribution List:	Referral sent to: Contact Person	Date comments received: (yyyy-mm-dd)
NUNAVUT		
✓ NTI		
QIA		
✓ Kivalliq IA		
Kitikmeot IA		
✓ NPC		
✓ NWB		
✓ NWMB		
RWO/HTO		
✓ Inuit Heritage Trust		
RLO		
✓ Community(s)		
Hamlet		
✓ HTO		
✓ CLARC		
Other?		
FEDERAL:		
✓ DIAND		
✓ DFO	Margaret Keast	May 20/98.
✓ DOE		
Heritage Can.		
Natural Resources		
Other? (eg. Health, DOT, DND)		
GNWT		
✓ DRWED		
✓ Transport		
✓ ACA		
✓ PWNHC	Charles Arnold.	May 27/98.
Other? (Health, Soc.Serv., ECE,)		
TRANSBOUNDARY PARTIES		
OTHER PARTIES		
BQCMB		

8. 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
  - __ construction
  - __ abandonment/removal
  - __ modification e.g., widening
- ✓ automobile, aircraft or vessel movement helicopter
- __ 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 _____

✓ possibility for accidents or malfunctions. Describe. potential for fuel spills

__ effects of environment on project (e.g., flooding). Describe. _____

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 _____

Describe biophysical and socio-economic and cultural effects identified from checklist.

Environmental Effect	Describe
#1.	Highly used area by hunters and trappers of Baker Lake. Key area for Arctic fox and wolf denning area. Disturbance could impact # of fox / wolves available to hunt / trap.
	Key fishing areas. / recent campsites.
#12.	Possibility of drilling activities having an impact to archaeological sites. Impacts can be mitigated by terms + conditions set by NWB.
#24.	Helicopter drilling activities will increase ambient noise level. Possible avoidance of area in immediate vicinity by wildlife. Expect to be a temporary disturbance.
#25.	Drill cuttings, waste water and sewage will be deposited onto ground surface.
#38.	Caribou migrate through area. Sometime use area year round. Calves particularly susceptible to noise disturbance.
#39.	Key fox and wolf denning area. Residents of Baker Lake rely on to hunt / trap. any disturbance denning area ↓ population numbers.
#40.	Drill cutting deposited into fish bearing waters may impact fish / fish habitat. mitigation / to ensure drill cuttings deposited into sump which drains away from waterbody (min. 30m high water mark)
#41	Critical resting area in cliffs throughout area for peregrine / gyrfalcons.

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, lenses
- ✓ 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 Research.

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
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37. __ change in wildlife health
38. ✓ impact to large mammals
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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 _____

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)? possibly

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? possibly

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 Terms and Conditions.

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)

Prepared By: JAIDA EDWARDS. (Screener) Date: June 03, 1998. (yyyy-mm-dd)

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:

SEE SCREENING DECISION REPORT
TERMS AND CONDITIONS.

19. Authorization

Approved By: ______ (NIRB Decision Maker) Date: 98-06-09 (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?
___ Has screening report information been forwarded to NPC and NWB, for addition to their Project Registry?

Fisheries and Oceans Canada | Pêches et Océans Canada

Box 358
Iqaluit, NT.
X0A 0H0
Ph: (819) 979-8274
Fax: (819) 979-4539

May 28, 1998

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

Re: Mineral Exploration in the Meadowbank River Area NIRB: 98W02N077
NWB: NWB2MEA
Letter of Advice

On behalf of the Department of Fisheries and Oceans (DFO) I have reviewed the information submitted with the above application. DFO's assessment takes into consideration fish and fish habitat related concerns only.

On the basis of the information provided, it has been determined that the above project has the potential to effect 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 containment's 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 to 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.

- In addition, for drilling in kimberlite deposits, toxicity testing should be done on the effluents from the drilling operation.

- Slash or debris should be disposed of above the high water mark so that it does not enter any water body.

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 materials on the surface ice of any water body.

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 contact me at the above number.

Regards,

M. Kaast

Margaret Kaast
Area Habitat Management Biologist
Nunavut Area

Cc. Gary Weber, Area Manager, Nunavut Region

Northwest Territories Education, Culture and Employment

201 23

May 20, 1998

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

Fax: 867-983-2594
Due date: June 3, 1998

Re: NIRB 98W02N077: Water use permit for mineral exploration in the Meadowbank River area (Cumberland Resources Ltd.)

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.

Attachment #1 specifies the known sites to be avoided.

Under A.s. 33.5.13, the attached conditions specify plans and methods of site protection and restoration to be followed by the permittee if an archaeological site is encountered or disturbed in the course of the land use activity.

Regards,

Charles D. Arnold, Director
Culture and Heritage Division

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.

8. The permittee shall avoid the known archaeological sites as listed in Attachment #1.

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:

Return to: Prince of Wales Northern Heritage Centre, Yellowknife, Northwest Territories X1A 2L9
Telephone: 867-873-7551; Fax: 867-873-0205

ATTACHMENT #1

BORDEN NUMBER	**KkJx-6**
REPORTER NUMBER	156X;156X (Nalluqhiaq)
PERMIT NUMBER	NWT 96-824
PROJECT NAME	Harvaqtuuq Archaeological Survey
LOCATION	On peninsula on north(west) shore of Kazan River just below Kazan Falls.
PROVINCE/TERRITORY	NWT;TNO
DISTRICT	KEEWATIN
LATITUDE	644358
LONGITUDE	0964631
UTM	15VUA E6298 N6998
MAP REFERENCE	55M/12
ELEVATION	60 m. ASL
CONDITION	exposed boulder features on ground surface
SIZE AND ORIENTATION	.01 sq. km.
JURISDICTION	federal - PARKSCAN
SITE TYPE	campsite
SITE TYPE CLASS	indigenous historic
FEATURES	cache;tent ring;scatter (lithic)
CULTURE	Caribou Inuit
PERIOD	19th-20th century
RESEARCHER	Stewart, A.
RESEARCH DATE	1998
UNPUBLISHED REF	ASC ARCHIVES Ms. 3981
REMARKS	Consists of 2 tent rings, 1 qajaq stand, 1 cache, 1 hearth, 1 inukcuk and artifacts. Features occur on top of a small (100 by 20 m) esker(?) and on north side of the esker on tussock tundra. There is a large (100 sq m) concentration of quartzite bifacial thinning flakes and biface fragment on top of esker.

BORDEN NUMBER	**LhLa-1**
REPORTER NUMBER	5C46
PERMIT NUMBER	NWT 77-410B
PROJECT NAME	Polargas Archaeology Project - CREW 5
LOCATION	Below small rapids on N. bank of Meadowbank River, where it flows between two small unnamed lakes, 5 m. above the river.
PROVINCE/TERRITORY	NWT;TNO
DISTRICT	KEEWATIN
LATITUDE	651812
LONGITUDE	0960310
UTM	14WPH E3735 N4525
MAP REFERENCE	66H
JURISDICTION	federal
OWNER NAME	Nunavut
SITE TYPE	campsite (hunting, caribou)
SITE TYPE CLASS	indigenous historic
FEATURES	tent ring;cache
CULTURE	Inuit
RESEARCHER	Nash, R.
RESEARCH DATE	1977
UNPUBLISHED REF	ASC ARCHIVES Ms. 1999
REMARKS	Four rings, one cache containing a few pieces of cut bone. The presence of bone and the fact that this area is used by the present Inuit of Baker Lake suggest a historic period campsite connected with caribou hunting.

BORDEN NUMBER	**LhLa-2**
REPORTER NUMBER	5C47

PERMIT NUMBER	NWT 77-410E
PROJECT NAME	Polargas Archaeology Project - CREW 5
LOCATION	On esker, N. shore of Meadowbank River, at E. end of unnamed lake, 2-7 m. above the lake.
PROVINCE/TERRITORY	NWT;TNO
DISTRICT	KEEWATIN
LATITUDE	651857
LONGITUDE	0960829
UTM	14WPH E3317 N4644
MAP REFERENCE	66H
JURISDICTION	federal
OWNER NAME	Nunavut
SITE TYPE	burial
SITE TYPE CLASS	contemporary
FEATURES	tent ring;cache;grave (coffin)
CULTURE	Caribou Inuit
RESEARCHER	Nash, R.
RESEARCH DATE	1977
UNPUBLISHED REF	ASC ARCHIVES Ms. 1999
REMARKS	Three rings, one cache, one child's coffin burial, indicating a modern Inuit occupation.