P.O. Box 119
GJOA HAVEN, NT X0E 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369
kNK5 wmoEp5 vtmpq
NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

Water Licence Application
Supplementary Questionnaire
for Advanced Exploration
(Underground drilling, bulk sampling, etc.)

SECTION 1 :

GENERAL

1. Applicant Cumberland Resources Ltd.

(Company, corporation, owner)
906-595 Howe St.,
Vancouver, B.C., V6C 2T5

(Postal address)
(604)608-2557 (604)608-2559

(Telephone number) (Fax)
info@goldmin.com

(E-Mail)

Corporate Address (If different from above)

(Corporate Office Address)

(Telephone number) (Fax)

(E-Mail)

Project Name ____Meadowbank_____

Location _____70 km. North of Baker Lake, Nunavut_____

Closest Community ____Baker Lake _____

Latitude/Longitude___650 00' 75'' N, 960 04' 39'' E _____
Show the location of the project on a general location map.

2. Environmental Manager _Brian Alexander_ *(604)608-2557*
(Name) (Telephone No.)

or Project Manager _Project Manager_____
(Title)

3.Indicate the status of the exploration activity on the date of application.
(Check the appropriate space.)

Design	___OFFICE PLANNING___
Under construction	_____
In operation	_____
Suspended	____FIELD ACTIVITIES SUSPENDED___
Care and Maintenance	_____
Abandoned	_____

4. If a change in the status of the exploration activity is expected, indicate the nature and anticipated date of such change.

PROPOSED FIELD ACTIVITIES TO RESUME MARCH, 2000 TO SEPTEMBER, 2000.

5. Indicate the present (or purposed) schedule for the exploration activity.

Hours per week	_168_
Days per week	__7__
Weeks per year	__22__
Number of employees	__25__
Number of Inuit employees	___7___

6. Estimate the term (life) of the exploration activity.

_____5-6 Months/Year_____ (Months / Year)

7. How will the project effect the traditional uses on Inuit Owned Lands?

N/A

8. Have the Elders been consulted on effects to the traditional use on Inuit Owned Land? If so, list them. If not, why not?

Yes, elders have been consulted, and visited the site. Elders have been instrumental in the 1999 archeological studies. Report is in progress.

9. Has the proponent consulted Inuit Organizations in the area? If so, list them.

Yes, meetings and correspondance have ongoing over the last several years; with Kivalliq Inuit Association, Nunavut Water Board, Nunavut Tunngavik Inc., Community Land and Resource Committee, Hunter's and Trapper's Association and the hamlet of Baker Lake.

10. Has the proponent consulted surrounding communities on traditional water use areas? If so, list them. If not, why not?

Yes, the community of Baker Lake has been consulted due to its proximity to the site. No sites have been identified.

11. Attach a detailed map drawn to scale showing the relative locations (or proposed locations) of the exploration activity, Sewage and solid waste facilities, and containment areas. The plan should include the water intake and pumphouse, fuel and chemical storage facilities. Ore and waste rock storage piles, piping distribution systems, and transportation access routes around the site. The map also should include elevation contours, water bodies and an indication of drainage patterns for the area.

12. If applicable, provide a brief history of property development which took place before the present company gained control of the site. Include shafts, audits, mills (give rated capacity, etc.) waste dumps, chemical storage areas, tailings disposal areas and effluent discharge locations. Make references to the detailed map.

Previous activity included diamond drilling with no surface disturbance.

13. Give a short description of the proposed or current freshwater intake facility, the type and operating capacity of the pumps used, and the intake screen size.

Submerged well pump used for camp water supply.

14. At the rate of intended water usage for the exploration activity, explain water balance inputs and outputs in terms of estimated maximum draw down and recharge capability of the water source from fresh water will be drawn.

Exploration water usage insufficient to cause draw down to water balance.

15. Will any work be done that penetrates regions of permafrost?

No.

16. If "YES"above, is the permafrost continuous or discontinuous ?

17. Were (or will) any old workings or water bodies (be) dewatered in order to conduct the exploration activity ?

No.

18. If "YES" above, indicate the name of the water body, the total volume of water to be discharged and the chemical characteristics of the water.

Water body (if unnamed give Latitude/Longitude)_____
Total volume _____ cubic metres
Receiving Watercourse _____
Dewatering flow rate into above _____ cubic metres / sec

Chemical characteristics of discharge:

T/Pb	_____mg/L	Total Ammonia	_____ mg/L
T/Cu	_____mg/L	Suspended solids	_____ mg/L
T/Al	_____mg/L	Specific conductivity	_____ uhmo/cm
T/HCN	_____mg/L	pH	_____
T/Hg	_____mg/L		
T/Zn	_____mg/L		
T/Cd	_____mg/L		
T/As	_____mg/L		
T/Ni	_____ mg/L		
T/Mn	_____ mg/L		

19. Was (or will) the above discharge (be) treated chemically ?

N/A

20. If "YES" above, describe the applied treatment.

21. Briefly describe what will be done with the camp sewage.

All effluent from toilets is incinerated several times daily. Ash is removed to Baker Lake dump site.

Grey water from kitchen/showers is settled in natural depression.

SECTION 2 :

GEOLOGY AND MINERALOGY

22. Briefly describe the physical nature of the mineralization, including known dimensions and approximate shape.

Gold mineralization is hosted in Archean iron formation and inter-bedded sedimentary to volcano-clastic schists. Four deposits have been outlined with an overall strike length of 3 kilometers. Mineralization generally dips to the west. Dimensions of the deposits are 150 x 700 meters for Goose Island, 250 x 1000 meters for Third Portage (proposed open pit), 150 x 300 meters for Bay Zone and 150 x 300 meters for North Portage.

23. Briefly describe the host rock in the general vicinity of the mineralization (from the surface to the mineralized zone.)

The host rock is predominantly Archean iron formation with gold associated with sulphide-rich zones. Mineralization sub-crops at surface and is generally within 150 meters of surface which is amenable to open pit mining methods. Interlayered rock types would include sedimentary to volcano-clastic schists and ultra-mafic (talc-chlorite-serpentine) schist.

24. Provide a geological description of the mineralized zone. (If possible, include the percentage of metals.)

Mineralization in the iron formation is present in oxide-rich facies, and has been described as a sulphide (pyrrhotite and pyrite) replacement of magnetite. Sulphide content has been estimated at 5-20% pyrrhotite and 1-20% pyrite.

Secondary mineralization has been recorded in the oxide-rich and oxide-poor facies of the iron formation, as well as in quartz-feldspar-sericite-chlorite schists. Alteration of these rock types has been described as silicification with associated quartz veining. Possibly a second mineralizing event or re-mobilization of pre-existing gold mineralization. Sulphide content has been estimated at 5-10% pyrrhotite and 5-10% pyrite. Arseno-pyrite is present only in trace amounts to locally up to 2%.

25. Describe the geochemical tests which have been (or will be) performed on the ore, host rock, and waste rock to determine their relative acid generation and contaminant leaching potential. Outline methods used (or to be used) and provide test results in an attached report (ie. static tests, kinetic tests.)

An ARD program was initiated in 1997. A suite of 26 drill core samples were submitted to Watermark Consulting Inc. in Vancouver, B.C. Static tests are being carried out by CESL Laboratories

in Vancouver, which include acid base accounting, ICP, and whole rock geochemistry. Preliminary results are incomplete and testing is ongoing.

26. Estimate the percentage of sulphide in the mineralization:

pyrite	1-20%
pyrrhotite	1-40%
pyrite / pyrrhotite mixture	
arsenopyrite	trace to 3%

SECTION 3 :

EXPLORATION OPERATION

27. Check off the type (or proposed type) of exploration operation that will be used on the property and briefly describe the method in more detail.

a)	Reverse circulation to obtain bulk sample		
b)	Trenching		X
c)	Conventional open pit		
d)	Decline		
e)	Conventional underground		
f)	Strip mining activity		
g)	Other Exploration activity	(please explain)	Diamond drilling

28. Indicate the size and number of samples that will be obtained.

_____ tonnes
_____ number of samples

Please note if smaller samples are to be taken from different areas (note location) to form one large bulk sample.

29. Indicate the present or proposed average rate of exploratory production from all mineralized sources on the property:

_____ tonnes ore / day

30. Outline the water usage (or proposed water usage) in the exploration activity, indicate the source and volume of water for each use.

	Source	Use	Volume (m^3 / day)
1.	_Third Portage Lake_	_Camp Use_	___1.5-3.0 m^3/day__
Spring Season (April-May) One drill operating.			
2.	_Second OR Third Portage_	_Diamond drilling_	___27.5 m^3/day_____
3.	_Un-named Lake (Vault)	_Diamond drilling_	___27.5 m^3/day_____
Summer Season (July-August) One drill operating.			
4.	_Un-named Lake (PDF)	_Diamond drilling	___27.5 m^3/day_____
5.	_Un-named Lake (Area 1)	_Diamond drilling	___27.5 m^3/day_____
6.	_Un-named Lake (Area 2)	_Diamond drilling	___27.5 m^3/day_____

31. If applicable, indicate or estimate the volume of natural ground water presently gaining access to the mine workings.

_____N/A_____ m^3 / day

32. If applicable, outline methods used underground or on surface to decrease mine water flow. (For example: recycling)

N/A

33. List the brand names and constituents of the drill additives to be used.

Minor amounts of drill salt. No muds or additives are used.

SECTION 4 :

THE MILL OR PROCESSING PLANT

34. Is there (or will there be) a portable mill processing plant be operating on the property in conjunction with the exploration activity ?

_____ Yes _____X_____ No

35. If "yes" indicate the proposed point of discharge for the mill or process plant water and the volume of the discharge.

Point of discharge _____

Volume of discharge _____ m^3 / day

36. Attach a copy of the portable mill or processing plant flow sheet. Indicate the points of addition of all the various reagents (chemicals) that are (or will be) used.

37. Indicate the proposed rate of milling.

_____ not applicable (check) or _____ tonnes / day

38. List the types and quantities of all reagents used in the mill or processing plant (in kg/tonne ore milled.)

Reagent:_____Amount in kg/tonne ore milled:_____

39. If applicable, is the (proposed) milling circuit based on autogenous grinding ?

Yes _____ No _____Partially _____

40. Based on present production or bench test results, describe the chemical and physical characteristics of liquid mill or processing plant wastes directed to the tailing deposition area.

T/Cu	_____mg/L	Total Ammonia	_____mg/L
T/Pb	_____mg/L	Suspended solids	_____mg/L
T/Zn	_____mg/L	Specific conductivity	_____uhmo/cm
T/Ag	_____mg/L	pH	_____
T/Mn	_____mg/L	Alkalinity	_____$CaCo_3$/L
T/Ni	_____mg/L	Hardness	_____mg/L
T/Fe	_____mg/L	Total cyanide	_____mg/L
T/Hg	_____mg/L	Oil and Grease	_____mg/L
T/As	_____g/L		
T/Cd	_____mg/L		
T/Cr	_____mg/L		
T/Al	_____mg/L		

41. Provide a geochemical description of the solid fraction of the tailings.

Cu	_____mg/g	Al	_____mg/g
Pb	_____mg/g	Fe	_____mg/g
Zn	_____mg/g	Hg	_____mg/g
Ag	_____mg/g	Ni	_____mg/g
Mn	_____mg/g	As	_____mg/g
Cr	_____mg/g	CN	_____mg/g
Cd	_____mg/g		

SECTION 5 :

THE CONTAINMENT AREAS

42. What is the (Proposed) method of disposal of the mine water, mill or process plant tailings (ie. sump, subaqueous, surface tailings pond, settling pond) ?

N/A

43. Attach detailed scale plan drawings of the proposed (or present) containment area. The drawings must include the following:

a) details of pond size and elevation;
b) details of all retaining structures (length, width, height, materials of construction, etc.);
c) details of the drainage basin;
d) details of all decant, siphon mechanisms etc., including water treatment plant facilities;
e) details with regard to the direction and route followed by the flow of wastes and / or waste water from the area; and
f) indicate of the distance to nearby major watercourses.

44. Justify your choice of location for the containment area design by rationalizing rejection of other options. Consider the following criteria in your comparisons: subsurface strata permeability, abandonment, recycling/reclaiming waters, and assessment of runoff into basins. Attach a brief summation.

45. The average depth of the existing or proposed containment area is dependent on the volume of water encountered metres.

46. Indicate the total capacity for the existing or proposed containment area by using water balance and stage volume calculations and curves. (Attach a description of inputs and outputs along with volume calculations.)

47. Has any evaporation and/or precipitation data been collected at the site ? _____ if so, please include the data.

48. Will the present or proposed containment area contain the entire production from the mill or processing plant complex for the life of the project ?

49. Will the proposed tailings deposition area engulf or otherwise disturb any existing watercourse?

50. If "Yes", attach all pertinent details (Name of watercourse, present average flow, direction of flow, proposed diversions, etc.)

51. Describe the proposed or present operation, maintenance and monitoring of the containment area.

SECTION 6 :

WATER TREATMENT

52. If applicable, will the minewater, mill or process plant water be chemically treated before being discharged to the containment area ? If so, explain the treatment process (Attach flow sheet if available.

N/A

53. Will (treated) effluent be discharged directly to a natural water body or will polishing or settling ponds be employed ? Describe location, control structures, and process of water retention and transfer. Attach any relevant design drawings.

54. Name the first major watercourse the discharge flow enters after it leaves the area of company operations.

SECTION 7 :

ENVIRONMENTAL MONITORING PROGRAM

55. Has Traditional Knowledge in the area been considered? If so, how? If not, why not?

Yes, two years of collection of traditional use information.

56. Has any baseline data been collected for the main water bodies in the area prior to development ?

Yes, three years of aquatic baseline data.

57. If "Yes", include all data gathered on the physical, biotic and chemical characteristics at each sampling location. Identify sampling locations on a map.

1997 Golder report which was attached to 1997 application.
Submitting 1998 Water Quality studies. 1999 data collected and report is pending.

58. Provide an inventory of hazardous materials on the property and storage locations.

Inventory as of September, 1999 was:

103,475 liters P50 in 3 Fuel Vaults
5670 liters P50 in 210 liter drums
97 drums of JetB
29 cylinders of propane (100 lbs. Ea.)
270 liters gasoline

Meadowbank Project Camp Map provides storage location.

59. Provide a conceptual abandonment and restoration plan for the site, detailing the costs to carry out the plan, and a proposal for a financial assurance which covers the costs to carry out the plan.

Since inception the camp has been designed as a semi-permanent establishment in anticipation of either development or demobilization if long term economic prospects are not favorable. Large structures (kitchen-dry, core-lab) are wood and easily dismantled. Fuel storage is also skid mounted and easily dismantled. All other structures are temporary tents designed for quick removal. As such, costs of dismantling, demobilizing and reclamation are relatively inexpensive and largely revolve around manpower and ground transportation of equipment. The following cost estimate includes removal of all equipment, structures, fuel barrels and tanks. The core storage facilities would stay in their present location in the event of a change in economic conditions more favorable to development.

Camp Reclamation Estimate:

Delta 3 transport	$65400
Reclamation estimate:	$4300
Labour:	$5000
Total:	**$75,100**

SECTION 8 :

ENVIRONMENTAL ASSESSMENT AND SCREENING

60. Has this project ever undergone an initial environmental review? If yes, by whom and when.

No.

61. Has any baseline data collection and evaluation been undertaken with respect to the various biophysical components of the environment potentially affected by the project (eg. Wildlife, soils, air quality), ie. In addition to water treated information requested in this questionnaire ?

Yes___X_____ No _____ Unknown _____

62. If "Yes" please attach copies of reports or cite titles, authors and dates.

A project description report summarizing data collected over the past three years is in progress, and will be submitted when complete.

63. If no, are such studies being planned ? _____

Briefly describe the proposals.

64. Has authorization been obtained or sought from the Department of Fisheries and Oceans for dewatering or using any waterbodies for containment of waste?

No, but DFO has visited and evaluated the site in summer of 1999.

65. Has a socio-economic impact assessment or evaluation of this project been undertaken ? (this would include a review of any public concerns, land, water and cultural uses of the area, implications of land claims, compensation, local employment opportunities, etc.)

Yes _____ No __X_____ Unknown _____

66. If "Yes" please describe the proposal briefly.

67. If "No" is such a study being planned ? Yes ___X_____ No _____

68. Describe any cumulative impacts the project may create?

None.

69. Does the project alter the quantity or quality or flow of waters through Inuit Owned Lands?

Yes, proposed hydrology studies will require the temporary installation of weirs (aquadams) or monitoring stations. These would be constructed to modify the channel flow conditions for measuring lake discharge. The objective is to gather information on existing environmental conditions in support of future environmental assessment and long term monitoring for the mine. Monitoring will begin in early spring to capture melt conditions, and will continue to late summer. Monitoring stations will be located in the lakes surrounding the mine site. The work was approved in 1999 permit amendment number 1, but was not carried out. The proposed work will be carried out this year instead.

70. If yes, has the applicant entered into an agreement with the Designated Inuit Organization to pay compensation for any loss or damage that may be caused by the alteration.

No.

71. If no compensation arrangement has been made, how will compensation be determined?

Compensation would not be required. The installation of temporary monitoring stations will not cause any loss or damage.