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

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## SECTION 1 :

### GENERAL

1. Applicant Miramar Bathurst Resources Ltd.  
(Company, corporation, owner)  
  
300-889 Harbourside Drive, North Vancouver, B.C. V7P 3S1  
(Postal address)  
  
604-985-2572 604-980-0731  
(Telephone number) (Fax)  
  
JWAKEFORD@MIRAMARMINING.COM  
(E-Mail)

Corporate Address (If different from above)

Same as Above  
(Corporate Office Address)  
  
   
(Telephone number) (Fax)  
  
  
(E-Mail)

Project Name Goose Lake Exploration

Location South east of Bathurst Inlet on NTS 76g/09,10

Closest Community Bathurst Inlet

Latitude/Longitude Lat. 65° 32' 40" Long. 112° 25' 37"

Show the location of the project on a general location map.

2. Environmental Manager Vivienne McLennan 604-985-2572  
(Name) (Telephone No.)

or Project Manager John Wakeford  
(Title)

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

Design	_____
Under construction	_____
In operation	_____
Suspended	<u>  X  </u>
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.

Along with the normal exploration activities that have been done to date including diamond drilling, environmental monitoring, an exploration camp, grab samples and water sampling, we want to start a trenching activity. It is needed to give a better understanding of what the surface drilling has outlined but not given definite answers to how the mineralization is tying together. This work is scheduled to start during the summer of 2005, pending getting an amendment to Land Use Permit KTL304C017. The normal work will continue with a start up date in late January and continuing until break up and the summer program starting on the beginning of July and ending at freeze up. The early winter start up begins immediately after freeze up until the Christmas break.

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

Hours per week	<u>84 (when on rotation)</u>
Days per week	<u>7 (when on rotation)</u>
Weeks per year	<u>26</u>
Number of employees	<u>25</u>
Number of Inuit employees	<u>12</u>

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

15 Years (Months / Year)

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

Firstly the area does not appear to be a caribou calving ground. The exploration work is shut down before the raptors start nesting. The footprints of the camp and diamond drilling on the tundra will not interfere with any of the traditional use of the land. Good clean camp practices of burning kitchen waste daily will keep the scavenging animals away from camp there fore keeping hunting patterns the same as pre Goose camp. Any drilling from the ice will not use salt in the water to keep the sting of bits from freezing in the hole, If it become necessary to use brine to keep the bits from freezing in the permafrost a recovery system will be used so that all the brine water will be removed at the end of the drilling. The sewage will be incinerated and the Greywater will be in a sump which will be filtered and limed. The kitchen and combustible items will be burned and buried. The metal waste will be removed for sale or to and landfill either north of further south.

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

The elders have not been contacted since this is an ongoing water license with the only change being a few trenches. It is the same area that the Access to Inuit Owned Land application was reviewed for permit number KTL304C017 that went through the NIRB screening in June 2004.

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

Same answer as in Item 8.

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

Miramar has not consulted the surrounding communities as the closest community is on the other side of Bathurst Inlet which could never be affected with anything that happened at Goose Lake. It is such a small amount of water involved and being so well monitored that there is small chance of any spill or drainage from the exploration site. In the unlikely situation of a small spill the spill contingency plan lays out in detail the steps to take to clean up the spill getting all the toxic material.

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 pump house, 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.

There is a map called (Figure 1) which shows the camp and new trenching area. As well there is also the maps NTS 1:50,000 76G/09 showing the diamond drilling for 2004. The estimated drilling for 2005 has not been decided yet, but should be similar to what was done during 2004.

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.

The only infrastructure that was built before Miramar taking over control of this property was the exploration camp. Since taking over the camp has been refurbished and extended as needed. The location of everything around the Goose lake camp is shown on the Figure 1. The general area is shown on NTS 1:50,000 map 76G09.

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.

A 100 CFM Honda gas pump is set up on the dock with a hose out to the intake. The intake is a standard screen with 1/4" spacing to prevent fish from becoming trapped.

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.

Each day of operation the camp and drilling will use about 74 cubic metres of water. None of this water will return to a lake or stream until it has been treated or filtered. None of the water used will be released until there is no change to the environment by doing so.

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

The holes that are drilled with their collar on land have permafrost. The holes that are drill on the ice of a lake are without permafrost. In spite of not having permafrost, Miramar still has the drillers put a casing down and recovers all the sludge from the hole as well as re-circulates the water used for drilling

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

When drilling on land the permafrost is continuous to the depth we are presently drilling. Drill from the ice on a lake the bottom of the lake does not have permafrost and we haven't encountered any permafrost from such drilling.

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) N/A

Total volume N/A cubic metres

Receiving Watercourse N/A

Dewatering flow rate into above N/A cubic metres / sec

Chemical characteristics of discharge:

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

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

N/A

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

N/A

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

All camp sewage is incinerated with electrical toilets.

## **SECTION 2 :**

### **GEOLOGY AND MINERALOGY**

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

The mineralization is hosted by iron formation, which has been folded into a tight anticline that plunges moderate to steeply to the northwest. The approximate dimensions (current extent) of the mineralization is 600m X 250m.

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

The mineralization is hosted by oxide iron formation and silicon iron formation.

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

The mineralized zones are comprised of quartz with varying percentages of arsenopyrite (0.5 – 10%), pyrrhotite (0.5 – 25%), pyrite (0.5 – 3%) and trace amounts of choleopyrite and sphalerite.

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.)

As we pass from the exploration program toward a production water license we will initiate more geochemical testing for baseline studies and potential problems with contamination from a mine.

26. Estimate the percentage of sulphide in the mineralization:

pyrite	<u>0.5 – 3%</u>
pyrrhotite	<u>0.5 – 2.5%</u>
pyrite / pyrrhotite mixture	<u>Same as pyrrhotite</u>
arsenopyrite	<u>0.5 – 10%</u>



### **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	<u>No Plan</u>
b)	Trenching	<u>100 X 100m area</u>
c)	Conventional open pit	<u>N/A</u>
d)	Decline	<u>N/A</u>
e)	Conventional underground	<u>N/A</u>
f)	Strip mining activity	<u>N/A</u>
g)	Other Exploration activity (please explain)	<u>Diamond Drilling, geological mapping, sampling, core logging, surface geophysics.</u>

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

N/A tonnes  
N/A number of samples

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

Diamond drilling will make up the most of the sampling. Around the camp there is proposed a series of trenches which will have bulk samples taken for assaying as well mapping done along the length of the trench. The sampling will consist of channel sampling or perhaps some grab samples which will make up only a few pounds.

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

N/A 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 <sup>3</sup> / day)
1.	<u>Camp</u>	<u>Potable</u>	<u>31 cubic metres</u>
2.	<u>Diamond Drill</u>	<u>Drilling</u>	<u>43 cubic metres</u>

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

N/A m<sup>3</sup> / day

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

All diamond drilling at Goose Lake is done using a re-circulating system.

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

While drilling in permafrost Miramar uses two additives. One is salt to lower the freezing point of the water used to remove the sludge from the drill holes. However, being granular it causes a lot of friction so the second additive, CISCO is added for lubrication. Cisco is a biodegradable polymer

## **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                        N/A  

Volume of discharge                        N/A   m<sup>3</sup> / 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.

N/A

37. Indicate the proposed rate of milling.

  X   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.)

N/A

Reagent:   N/A   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 <sub>3</sub> /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) ?

The greywater for the camp is contained in a sump which is filtered and has lime spread over it to prepare it for release to the environment. The diamond drill sludge and water are caught from each hole and placed in a disposal area where the sludge dries and the water filters away or evaporates thereby purifying itself for release into the environment.

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

N/A

- 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.

N/A

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

N/A

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.)

N/A

47. Has any evaporation and/or precipitation data been collected at the site? NO 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?

N/A

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

N/A

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

N/A

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

N/A

## **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.

N/A

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

N/A

## **SECTION 7 :**

### **ENVIRONMENTAL MONITORING PROGRAM**

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

The last time that Kinross required a water license there was n public concerns, therefore since nothing has changed with the new water license we felt that until we needed the license to start production we would not any Traditional Knowledge input at this time. It would also give Miramar time to make visits to the communities to start gathering the Traditional Knowledge that would be necessary later for the production water license.

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

Miramar feels that this license is for the period prior to development and is gathering information on the water quality while the exploration work is continuing.

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

None gather to date.

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

The following is a list of hazardous material at a maximum amount as while work is going on the amount fluctuates as more is brought in while the process continues to use these supplies up.

Fuel:	diesel	148,000 litres
	Gasoline	4,000 litres
	Jet A	41,000 litres
	Propane	200 pounds

#### Drilling supplies

Salt (not hazardous)	140,000 pounds
Vicos	200 gallons



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.

At the end of the exploration program remove all the casings from the diamond drill holes.

Removing or cutting off the casings.	\$6,000.00
Burn & bury the camp	\$7,200.00
Remove Equipment	\$25,000.00
“ Barrels	\$25,000.00
“ Tanks	\$25,000.00
“ Fuel	\$25,000.00
Total	\$113,200.00

We will submit a promissory note to cover the security needed to close this Water License. At any time there is probably no more than seventy percent of the supplies on site and going into a closure mode would even be less.

## **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 \_\_\_\_\_ No X \_\_\_\_\_ Unknown \_\_\_\_\_

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

63. If no, are such studies being planned? \_\_\_\_\_ No \_\_\_\_\_

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

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 \_\_\_\_\_

In the Land Use Application a total of twelve Inuit people were estimated to be able to get jobs depending on the availability of people and the qualifications of the people available.

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

67. If "No" is such a study being planned? Yes \_\_\_\_\_ No   X  

68. Describe any cumulative impacts the project may create?

The accumulation of greywater in one sump may cause a build up of soap residue in the sump.

A build up of dry sludge in the designated disposal area may over time change the composition of the tundra within the dumping site.

Continuing to bury ash under the tundra may at some point start to allow the permafrost to melt near the burying site.

Any problem with fuel spills that did not get properly treated at the time of the spill.

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

No

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?

If at some point in the future when contamination of the water has been proven the negotiations or arbitration will settle how the compensation will be determined.

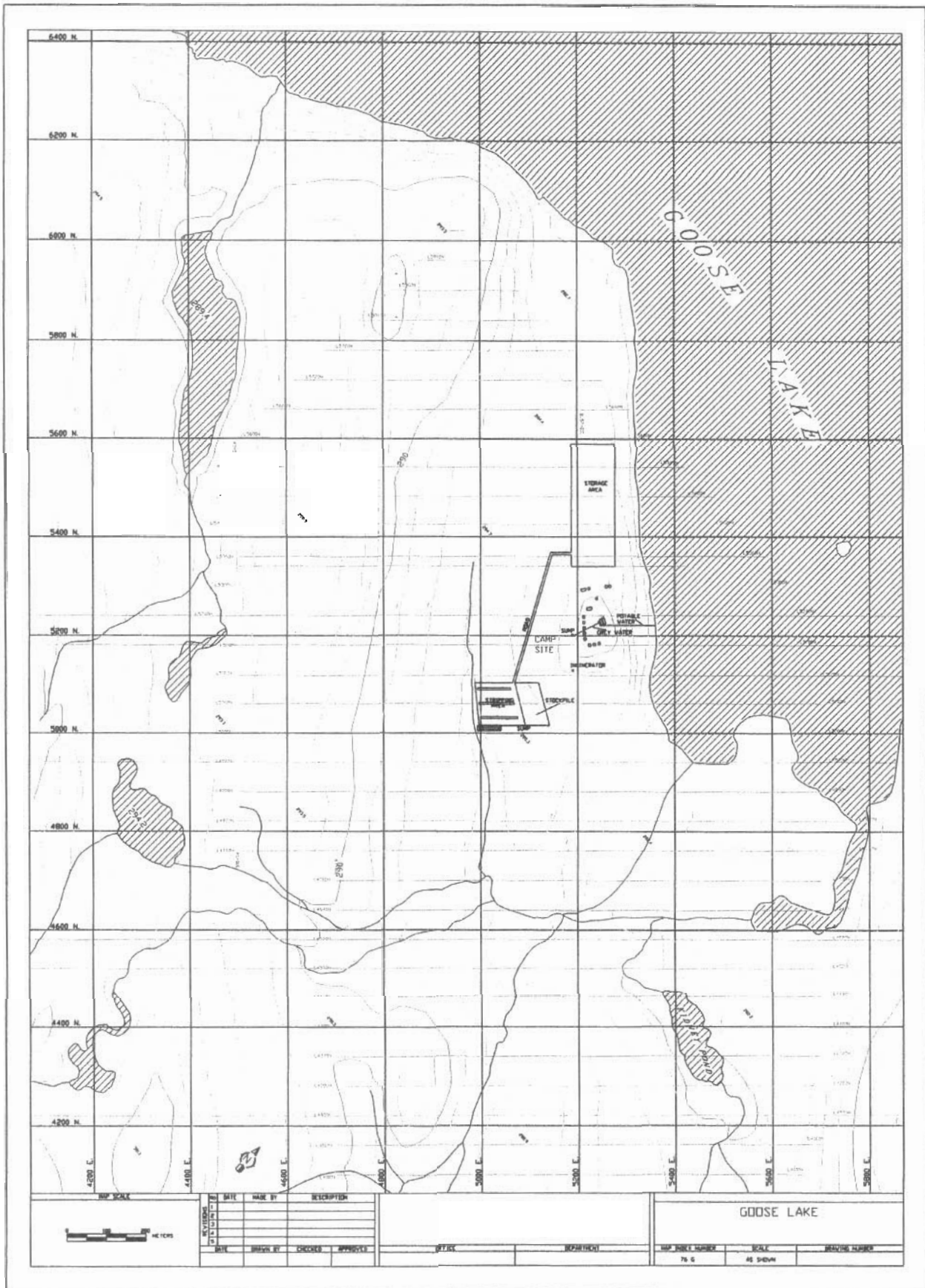


Figure 1







