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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

EXPLORATION/ REMOTE CAMP
SUPPLEMENTARY INFORMATION REQUEST

Applicant: WOLFDEN RESOURCES **Licence No:** NWB2HIG0305
(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environment Manager: T. Muraro Tel: 604-759-0473 Fax: 807-345-0284
E-mail: highlake@wolfdenresources.com

2. Project Manager: Ian Neill Tel: 604-759-0473 Fax: 807-345-0284
E-mail: ian.neill@wolfdenresources.com

3. Does the applicant hold the necessary property rights? Yes

4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)? If so, please provide letter of authorization. No

5. Duration of the Project
[X] Annual
[ ] Multi Year:
If Multi-Year indicate proposed schedule of on site activities
Start: _____ Completion:_____

CAMP CLASSIFICATION

6. Type of Camp
[ ] Mobile (self-propelled)
[ ] Temporary
[X] Seasonally Occupied: from March 1 to November 1, 2005
[ ] Permanent
[ ] Other:_____

7. What are the design population of the camp and the maximum population expected on site at one time? What will be the fluctuations in personnel?

The planned population of the camp is 34 people, this may fluctuate as low as 20 and as high as 38 for short periods of time (several days)

8. Provide history of the site if it has been used in the past.

The camp has existed at its present location since the discovery and beginnings of exploration on and around the High Lake showing in the 1950's. It has been expanded over time to include more structures in order to accommodate larger field crews. First discovered in the mid-1950's, the area has been historically worked through the 1970's and 1990's. Wolfden Resources obtained the property in 2000 and began work in 2001. Wolfden has had continuing exploration programs thoughout the 2001-2004 field seasons.

CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.

The Wolfden Resources High Lake Project is a mineral exploration project focused on base metal exploration in the High Lake volcanic belt. The High Lake Project is located in the Kitikmeot region of Nunavut, approximately 550km north-northeast of Yellowknife, NWT. The closest population center is Kugluktuk, located 175km west-northwest of the property. The property is approximately 45km south of the Coronation Gulf, and is bordered on its eastern edge the Kennarctic River.

The existing camp is located at the southern end of High Lake on its western shore. The lake itself sits high above the Kennarctic drainage which lies immediately to the east, and the surrounding area has lots of topographic relief including escarpments formed by basaltic cliff forming units, deep valleys and canyons cut into softer meta-sediments, and prominent hills formed by rock units more resistant to erosional forces.

Topography renders the area difficult for surface travel and therefore the region is void of the seasonal migrations of larger mammals.

10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.

The camp location was originally selected for its proximity to the main showings at High Lake discovered in the 1950's, these are easily discernable on the accompanying photograph as the oxidation at surface is quite extensive. The Regional Inuit Association was not in existence at this time and therefore was not consulted in its placement. The site was not previously used as far as we can determine from historical records.

11. Is the camp or any aspect of the project located on:

[ ] Crown Lands Permit Number (s)/Expiry Date: _____
[ ] Commissioners Lands Permit Number (s)/Expiry Date: _____
[X] Inuit Owned Lands
DIAND Permit Number (s)/Expiry Date: N 200100017
KIA Permit Number (s)/Expiry Date: KTL 3030006

12. Closest Communities (distance in km):

Kugluktuk, Nunavut is the closest community and is located approximately 175 km. west-northwest of the property

13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?

The local Inuit Administration in Kugluktuk has been notified as to our continued work at High Lake and we actively employ several individuals from Kugluktuk, Cambridge Bay, and Bathurst Inlet.

14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?

The proposed work will not in any way impact traditional water use areas of nearby communities. Direct impacts on local fish and wildlife habitats will be minimal. As outlined in the accompanying water license application, High Lake has been shown to be void of fish life and the surrounding area is not used by large mammals for migration due to the difficult nature of the terrain. Aside from localized noise around camp and drill sites there will be minimal impact.

PURPOSE OF THE CAMP

15. ⊗ Mining
○ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.)
(Omit questions # 16 to 21)
○Other _____ (Omit questions # 16 to 22)

16.
○ Preliminary site visit
⊗ Prospecting
⊗ Geological mapping
⊗ Geophysical survey
⊗ Diamond drilling
○ Reverse circulation drilling
○ Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)
○ Other: _____

17. Type of deposit:
⊗ Lead Zinc
○ Diamond
⊗ Gold
○ Uranium
○ Other: Silver and Copper

DRILLING INFORMATION

18. Drilling Activities
⊗ Land Based drilling
⊗ Drilling on ice

19. Describe what will be done with drill cuttings?

Water used during drilling is conserved with a closed system of circulation. Drill cuttings are collected in a sludge recovery system that allows them to settle out and accompanying water to be returned down the hole. The cuttings are then bagged and transported to natural sumps chosen as to be located more than 50m. from the closest water source and with sufficient opportunity for filtration through local soils.

20. Describe what will be done with drill water?

All water involved in drilling is re-circulated within a closed system. A small amount of water is actually consumed at the bit face but the majority returns to surface where it is passed through settling tanks to remove any particulate matter (cuttings) and then is returned down the hole. When drilling ceases, overflow from the settling tanks will run off and percolate into local soils, providing further filtration before eventually returning naturally to local water courses as ground water. A small amount surface run off is to be expected during this period and occasionally during the drilling process as well, and this will be contained or channeled so as not to directly enter any water courses and provide some filtration.

21. List the brand names and constituents of the drill additives to be used? Includes MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.

A list of the possible drill additives that may be required by Major Drilling are:

Brand Name	Constituent
Poly-Drill O.B.X.	Liquid Polymer
Poly-Drill 133-X	Liquid Anionic Polymer
Poly-Drill 1330	Liquid Anionic Polymer
Westcoast Drilling Supplies	Linseed Soap
Peladow	Calcium Chloride salt

Online MSDS information about the Poly-Drill products may be found at www.poly-drill.com

22. Will any core testing be done on site? Describe.

Core will be transported from the drill to the core shack where it is logged by geologists. Geologically significant intersections will be split with a core saw...half the core stored on site and the other half bagged and sent for lab assay.

SPILL CONTINGENCY PLANNING

23. Does the proponent have a spill contingency plan in place? Please include for review.

Camp Management – The Project Manager, or designee, is responsible for current environmental matters and has the right to exercise unilateral control over all camp environmental matters. The Camp Manager will implement day-to-day activities in accordance with camp environmental guidelines.

Spill Response – The control, containment and clean up of any spilled material, regardless of the amount, shall take priority over continued activities. All residual material resulting from cleaning up a spill must be minimized and incinerated and all efforts made to restore contaminated area to its original state. All spills of chemical or petroleum products over one gallon must be reported to the Camp manager and recorded in the Camp Directory. Procedures for proper spill response management are as follows:

Leaks or Spills

In the event of a spill or leak:

- Stop the flow of fuel.

- Remove all sources of ignition. Be prepared to use a fire extinguisher. Remember gas vapors flow down hill and are extremely explosive.

- Contain the spilled fuel by damming with earth or another suitable absorbent material. Don't wash the spilled fuel away into potentially higher risk areas. Protect water sources and septic systems.

- Work from the upwind side to avoid inhaling vapors and becoming engulfed in flames if a fire starts.

- Clean up and dispose of all fuel by shoveling the contaminated earth or absorbent material into metal containers. Dispose of contaminated cleanup materials in an approved manner.

- Ensure that all ignitable vapors are dispersed before resuming normal activities.

- It's a regulatory requirement that all spills and leaks of gasoline or diesel fuel must be reported to the Environmental Protection Branch. Any leak or spill of any amount into a watercourse, water body or groundwater must be reported.

Reporting Leaks and Spills

Contact:	Environment Canada Environmental Protection Branch, Northern Division 301 - 5204 50th Avenue Yellowknife, NT X1A 1E2
Ph:	(867) 669 - 4700
Fax:	(867) 873 - 8185

Loss Prevention

Leak Containment

Leak containment requires the planned use of absorbent pads, drip buckets, drip pans, or impermeable geomembrane sheets to catch any slow or unexpected leaks. The use of these collection methods requires regular monitoring to ensure that the leak collection device is not exceeded.

Locations containing fuel drums (near generator, fuel supplied for tents, main fuel cache) will be equipped or fitted with absorbent pads, pans, buckets or impermeable geomembrane sheets to prevent the escape of fuel to the environment. A regular

inspection program will be established to monitor the condition of the leak containment devices so they do not overflow.

Leak Prevention

Leaks most often occur during handling of the fuel but may also develop slowly over time. Fuel drums in any fuel cache will be inspected regularly for leaks.

Adequate worker training is required to avoid puncturing the fuel drums during handling. Fuel drum storage locations must be inspected for, and cleared of, puncture or tipping hazards. An impermeable geomembrane sheet will be put down before drums are stored at any fuel caches.

Workers will be trained in refueling techniques to prevent the spillage of fuel.

Propane tanks will be stored securely upright to prevent tipping and possible breakage.

Fire Prevention

No smoking signs and will be posted near to any fuel cache along with a dry chemical fire extinguisher. Fire extinguishers will also be located at each site where fuel is used. Workers will be trained in the use of the fire extinguisher and of electrical and open flame fire hazards near fuel.

The fuel cache will be located well away from camp buildings and water bodies and will be kept clean and free of litter. Each type of fuel will be stored in a separate cache.

Fuel Transfer Methods

Plans are to fly fuel (mostly diesel and jet fuel with minor gasoline) to the camp in 45 gallon drums and landing on the ice of Camp Lake (local name). Fuel drums would be rolled out of the airplane onto the ice surface using a ramp. A helicopter would be used to lift the drums off the ice and place them in the main fuel cache (separate caches for each fuel type).

Each diesel fuel consumption location (generator, drill, stoves) would be supplied from the fuel cache using a helicopter to move the fuel drums. The final adjustments to upright the fuel drum would be by hand. Diesel would be transferred from the upright fuel drum to a supply tank drum using a hand powered pump with an attached flexible hose. Gravity feed would be used to supply the generator, drill or stoves from the plumbed in supply tank drum.

Jet fuel would be transferred from the drum to the helicopter using a small 24 v electric motor powered from the helicopter.

Small gasoline water pump engines would be fueled from small (3 or 5 gallon) plastic fuel jugs fitted with a flexible plastic nozzle. The plastic fuel jugs would be fueled from a 45 gallon drum of gasoline using a hand powered wobble pump or crank pump.

Propane would be transferred using standard propane fittings, regulators and hoses.

24. How many spill kits will be on site and where will they be located?

There are 6 Emergency spill kits on site at this time. Two are located in the fuel cache area, there is a spill kit at each of the 3 diamond drills, and one is maintained in camp near the generator shack.

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

All combustible fuels stored on site are contained in 45 Gal. (205 L) steel drums. An existing fuel cache area is located approximately 250m to the North of the camp location and sits approximately 150m from the lake shore on a high bench. We plan to store in this cache approximately 1500 drums of fuel. Predominantly JP-4 helicopter fuel and Diesel although a small amount of Gasoline will be included as well. This cache is continuously monitored for leaks. A full count is completed every three days. Individual drums of diesel fuel are located behind each tent or building in the camp to provide fuel for the heaters, and there are commonly 2 or 3 drums located at the generator shack. The helicopter pad will normally have no more than 6 drums of fuel located at it for immediate use. Individual drums of gasoline are located in camp near the workshop in order to fuel snowmachines in the winter. All drums are kept a minimum distance of 30m from the lake shore at all times.

All lubricants and drill additives are contained in 5 Gal. (20 L) pails and are stored in a small shed where they are protected from the weather. At any one time there is approximately 1000 L of various lubricants and drill additives onsite.

Propane is transported and stored in 100lb. cylinders which are located approximately 100m from camp in a specifically designed storage area where they are stored vertically and chained to prevent tipping. On average there are approximately 20 cylinders onsite at any one time.
Individual cylinders are used at the kitchen and the dry to power hot water tanks, stoves, and laundry facilities. These cylinders are also vertically standing and housed in small sheds to prevent accidental tipping

In addition small amounts of soaps and cleaning fluids are located in the kitchen and dry areas.

MSDS sheets for the above mentioned fuels may be found at:
https://services.shell.ca/llutilsp/searchMSDS/Search.do?lang=en

MSDS sheets for the above mentioned lubricants may be found at:

www.online.petro-canada.ca/datasheets/en_CA/drodh.pdf
www.online.petro-canada.ca/datasheets/en_CA/dur13.pdf

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

A variety of small water bodies will supply the water for the drilling. Some of these are outlined on the map provided with this application that shows proposed drill hole locations. These are chosen for their proximity to the drill, minimizing the pumping distance and therefore the risk of freezing hose lines. Water supply for the camp will come directly from High Lake.

27. Estimated demand (in L/day * person):

- ⊗ Domestic Use: 100 L/day/person Water Source: High Lake
- ⊗ Drilling Units: 180,000 L/day Water Source: Various small Lakes and ponds
- ○ Other: _____ Water Source: _____

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? Describe:

Water is pumped from the lake with a submersible Jacuzzi pump that has a mesh screen attached to the intake, although environmental base line studies have determined High Lake to be void of fish. The water then passes through approximately 60 meters of insulated and heat traced hose-line before entering the holding tanks.

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

Water quality is monitered by Gartner Lee Environmental several times per year and is tested for trace concentrations of metals, Ph, and fecal content.

30. Will drinking water be treated? How?

Drinking water is treated with a small amount of bleach in the holding tanks before passing through a filtration system and entering general camp use. The amount is approximately 1 cm^3 of bleach for every 1m^3 of water.

31. Will water be stored on site?

Water is pumped from the lake daily into 5 holding tanks located within two structures onsite. Each of these tanks holds approximately 1m^3 of water.

WASTE TREATMENT AND DISPOSAL

32. Describe the characteristics, quantities, treatment and disposal methods for:

- ⊗ Camp Sewage (blackwater)

The sewage system currently in place eliminates waste through incineration, ie. No blackwater is produced

⊗ Camp Greywater

Grey water from the kitchen and showers drains into a series of settling tanks before being pumped to a natural depression (sump) behind camp and providing for further natural filtration through percolation before re-entering local water courses as ground water

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⊗ Solid Waste

Burnable solid waste is incinerated in a diesel powered forced air furnace capable of disposing 64Kg of refuse per hour.

Bulky Items/Scrap Metal

Scrap metal and any other non-combustible refuse is collected and sealed in 45 Gal drums and then transported to Yellowknife for eventual disposal by the appropriate means.

Waste Oil/Hazardous Waste

Waste oil is collected and sealed in 45 Gal drums clearly marked for this purpose and then transported to Yellowknife for eventual disposal by the appropriate means. Lead-Acid batteries are also contained in appropriate sealed containers, clearly marked, and returned to Yellowknife for disposal.

⊗ Empty Barrels/Fuel Drums

Empty drums are collected and transported back to Yellowknife either for disposal or for re-filling

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○ Other:

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33. Please describe incineration system if used on site. What types of wastes will be incinerated?

All burnable solid and semi-solid wastes will be incinerated, as well as human wastes. This will include sewage, kitchen refuse, plastics, cardboard and paper, and any fuel soaked material (ie. Rags, absorbent mats etc.)

34. Where and how will non-combustible waste be disposed of ? If in a municipality in Nunavut, has authorization been granted?

As stated above, non-combustible waste is sealed into 45 Gal drums and flown back to Yellowknife for appropriate disposal.

35. Describe location (relative to water bodies and camp facilities) dimensions and volume, and freeboard for sumps (if applicable).

The sump which handles the grey water discharged on a daily basis from camp is approximately 200m from the kitchen and dry. It has a $3m^3$ holding capacity, and this

amount of water would take approximately 6-8 hours to filter into the ground. It is approximately 300m from the closest water course, a small creek, which drains into the South end of High Lake.

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?

No leachate is expected to be developed at the site at this time.

OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?

All of these water supply and waste treatment and disposal measures have been used in previous years and have proven to be effective even during the coldest of temperature extremes. Possible problems which may arise are freezing hose-lines. Water intake lines are heat traced and insulated to ensure flow in cold temperatures. Grey water disposal hose-lines are self draining and need not be heat traced. Water moves through them fast enough when being pumped that no freezing can occur. In the event that greywater lines were to freeze, sufficient hose line is on hand to run a new line until the original can be dismantled and thawed.

ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.

After each drill hole is completed any trash and litter is gathered up and transported back to camp for either burning or flying out to Yellowknife. Capped casing pipes are expected to be used to mark hole locations were significant mineralization was intersected. Natural re-vegetation is expected to eventually reclaim drill sites. At the close of the field season rented equipment would be removed and flown back to Yellowknife for storage. The camp would be left in a clean and tidy state and the remaining camp structures would be secured for the winter as consistent with their use

BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.

- ⊗ Physical Environment (Landscape and Terrain, Air, Water, etc.)
- ⊗ Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic
- ○ Organisms, etc.)
- ⊗ Socio-Economic Environment (Archaeology, Land and Resources Use,
- ○ Demographics, Social and Culture Patterns, etc.)
- ○ Other:

A baseline environmental study was initiated in June of 2004 by Gartner Lee Environmental in order to provide background data on existing local conditions in regards to wildlife, vegetation, water, fish and aquatic life, archaeology, anthropology, and geography.

REGULATORY INFORMATION

40. Do you have a copy of

- Article 13 - Nunavut Land Claims Agreement
- NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- NWB - Interim Rules of Practice and Procedure for Public Hearings
- NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- NWTWB - Guidelines for Contingency Planning
- DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- Fisheries Act - s.35
- RWED - Environment Protection- Spill Contingency Regulations
- Canadian Drinking Water Quality Guidelines
- Public Health Act Camp Sanitation Regulations
- Public Health Act Water Supply Regulations
- Territorial Land Use Act and Regulations

You should consult the above document, guidelines, and legislation for compliance with existing regulatory requirements.