Mackenzie Valley Land and Water Board
7th Floor - 4910 50th Avenue
P.O. Box 2130
YELLOWKNIFE NT X1A 2P6
Phone (867) 669-0506
FAX (867) 873-6610

Application for:
New Land Use Permit [X] **Amendment** [ ] **to**

1. Applicant's name and mailing address: Golder Associates Ltd. for **Ur-Energy Incorporated** **1128 Clapp Lane,** **P.O. Box 268** **Manotick, Ontario K4M 1A3**	Fax number: **(613) 692-3234** Telephone number: **(613) 692-7704** **Toll-Free: (877) 692-7704**
2. Head office address: **1128 Clapp Lane,** **P.O. Box 268** **Manotick, Ontario K4M 1A3** Field supervisor: Jack Charlton Radiotelephone: To be provided	Fax number: **(613) 692-3234** Telephone number: To be provided (Field supervisor direct line) **(613) 692-7704** (company direct line)

3. Other personnel (subcontractor, contractors, company staff etc.)

Staffing requirements and personnel will vary periodically. Standard complement expected to be: 1 Helicopter pilot/ engineer, up to 3 contract personnel (geologists, consultants), 2 camp support personnel (cook, cook helper), up to 5 contract diamond drill personnel, and 1 camp manager. Engineering contractor – Charlton Mining Exploration Inc., Drilling contractor –To be determined, Helicopter contractor – Great Slave Helicopters.

The number of people in camp may swell to 15 from 12 for short periods of time to accommodate short-term visits by company management. Person days will remain approximately the same if the program continues into 2008 - 2011.

TOTAL: **12** (# persons on site) x **92** (#Operating days **March 1 – May 31, 2007**) = **1104 Person Days**

4. Eligibility:
(Refer to section 18 of the *Mackenzie Valley Land Use Regulations*)

a)(i) **X** a)(ii) a)(iii) b)(i) b)(ii)

5. a) Summary of operation (Describe purpose, nature and location of all activities.)

The following is a summary of the operation proposed by Ur Energy Inc. (Ur Energy) at Screech Lake for further details see Ur Energy's screening study "*Environmental screening study for Ur Energy Inc. permit application to conduct uranium exploration drilling at Screech Lake, NorthWest Territories*" which is appended to this application.

The Ur Energy proposed drill program is for exploration purposes only. Five (5) initial drill holes are proposed, if the results are positive a maximum of 20 drill holes may be developed over the course of the two year program. The initial five drill holes may include the extension of an existing hole (UG DDG #10 drilled by Urangellschaft in 1979) by an additional 400 meters plus four new holes averaging 750 m in depth each for a total drill distance of 3,400m. All drill holes will be vertical to sub-vertical NQ core diameter diamond drill

holes located in close proximity to Screech Lake (within 1.5 km of the western end of Screech Lake, Figure 1) but may proceed into the other proposed areas depending on the findings. It is possible that drilling will take place near the Screech Lake shoreline. Results of the preliminary drilling will dictate where the remainder of the program is conducted within the claim boundary.

It is anticipated that the initial program will begin as early as March 2007 and end in May, 2007. The majority of drilling will occur during the winter of 2007/ 2008 but may continue for the remainder of the permit period, subject to the LUP application approval and any restrictions proposed in the application.

The drill (Longyear LF 70 or Boyles B 20), fuel, consumables, other materials and personnel will be transported from the camp to the drill area by means of a helicopter. By initiating the program when the ground is snow covered and frozen it is anticipated that impact on flora and fauna will be minimized. Furthermore, an experienced drill contractor familiar with remote location drilling in ecologically sensitive areas will be chosen for the project.

Drill cuttings will be contained at the drill site in natural depressions so that there will be no dispersion of the cuttings to nearby water bodies. Providing water circulation is not lost down the hole, the entire water medium will be maintained and recirculated in and from large tanks beside the drill rig (normally within the drill shack). Should water circulation be lost (due to intersection with faults or unconsolidated material), the water will disappear and not return to surface. Approximately two 45 gallon drums would be the maximum expected volume of waste water during the drill procedure. Through containment of the drill solutions there will be negligible effect on terrestrial and aquatic habitats. Upon completion of the drilling project, drums containing waste drill water will be removed.

To avoid contamination from potential leaks or spills of fuel and oils absorbent matting will be used to collect any discharges from the drilling operation. Drip trays will be used at all fueling – refueling areas. Water used in the drilling process will be pumped from the nearest available water supply (Screech Lake for drilling and Looksok Lake for camp site) and heated if necessary by a coil stove. An appropriate screen will be placed around the intake hoses to prevent impingement or entrainment of fish. During a previous drill program it was observed that permafrost was not present at the Screech Lake location. Should permafrost exist at the Screech Lake site, calcium chloride will be mixed with the drill water and pumped down the hole to prevent the permafrost from enclosing the drill hole.

In the event significant uranium mineralization is intersected, the best measures practice as laid out in the Mineral Exploration Guidelines for Saskatchewan will be followed. This will include, the return of cuttings containing greater than 0.05% uranium down the drill hole and immediately filling with cement any drill hole deemed to have a uranium rich intersection. Any radioactive drill water resulting from such an intersection would be collected in barrels and shipped away for disposal. Furthermore, drill holes that produce water will be plugged and permanently sealed. The occurrence of an artesian well will be documented and reported to the INAC (Indian and Northern Affairs Canada) Site Inspector (Site Inspector) immediately.

The final location coordinates of each of the drill sites will be submitted to the Site Inspector at least 48 hours before the start of drilling activities.

Following completion of the exploration program, Ur Energy will prepare and submit a closure report to regulatory agencies. The closure report will summarize how the Program was completed and detail any unforeseen situations or events that occurred as a result of the exploration activities. Furthermore, any unanticipated environmental impacts that occurred will be documented and a description of the mitigation measures implemented to reduce the impacts will be provided as well as a summary of the site reclamation efforts that were or will be completed following exploration activities.

Community visits were conducted in order to give local residents an opportunity to learn about the proposed exploration programs and voice any concerns or issues. Details from the community visits with the Lutsel K'e Dene First Nation and the Deninu Kue First Nation communities in regards to the proposed Project are in the screening report appended to this application.

b) Please indicate if a camp is to be set up. (Please provide details on a separate page, if necessary.)

The exploration camp will be mobilized and constructed on the shore of Looksok Lake about 2 km north of Screech Lake (Figure 1). The camp will consist of 9 tents to house the kitchen, dry, office, sleeping quarters, core shack and outhouse. There will also be a core rack for storage of drill core material.

All sumps, pits, spill basins and fuel caches will be located above the high water mark of any waterbody and in such a manner as to prevent the contents from entering any waterbody. All fuel cache will use secondary containment with an impervious liner (insta-berms) for storage of all barreled fuel. No fuel storage containers will be located within 100m of the normal high water mark of any water body, unless otherwise prior authorized in writing by the Site Inspector. The location and quantity of all fuel caches will be provided in writing to the Site Inspector within ten (10) days of their establishment and mark with flags, posts or similar devices so that they are at all times plainly visible to local vehicular traffic.

The camp will be demobilized at the end of the permit period unless prior written authorization for extension of the LUP or storage is received from the MVLWB by Ur Energy.

6. Summary of potential environmental and resource impacts (describe the effects of the proposed land-use operation on land, water, flora & fauna and related socio-economic impacts). Use separate page if necessary.

To support Ur Energy's application for this project a screening study "*Environmental screening study for Ur Energy Inc. permit application to conduct uranium exploration drilling at Screech Lake, NorthWest Territories*" was generated. The following is a summary of the potential environmental and resource impacts, full details can be found in the attached report.

Air Quality- Based on the modelling predictions, the air quality impacts that could result from this project will be minor in magnitude, local, of short duration and reversible. The overall impact to air quality is expected to be negligible.

Noise- Noise levels are not expected to exceed 94 dBA at 10 m beyond the drill rig and will be well below the any current regulatory criteria. The proposed activity is local, of short duration and the impact is reversible therefore the overall impact is considered negligible.

Terrain- No access trails are planned; all movement of equipment and personnel will be by helicopter. Drilling activities are to be conducted during the winter months to minimize topographic disturbance, drill pads will be established on the most suitable surface to reduce required surface grading for safe and accurate drilling conditions. Potential impacts to topography are anticipated to be minor in magnitude and of medium-term duration (grading of drill pads), infrequent (once for each pad) and limited to the drill pads (site-specific). The overall impact is expected to be negligible.

Hydrology- Use of water from the Screech Lake target area is estimated to be in the order of less than $1/100^{th}$ of one percent of the total drainage into the Thelon River basin. Anticipated impact of the Project on the local area is negligible in magnitude, will occur frequently but over a short-term period and will be site specific. Therefore, the overall environmental consequence of this project's disturbance is believed to be negligible.

Fish and Fish Habitat- Limited residual impacts to stream crossings and habitat are anticipated, due to the Project's use a helicopter for all transport and scheduling for drilling (*i.e.* winter). Intake pipes for water collection will involve the use of screens (Fisheries and Oceans Canada Freshwater Intake End-of-pipe Fish Screen Guidelines, 1995). Grey water elimination will be monitored to prevent access to any local water, and drill water will be contained. The routine nature of the drilling program would suggest that impacts to fish habitat are unlikely. Residual impacts are anticipated to be minor in magnitude, and medium-term in duration, infrequent (drawing of water), limited to the drill and camp sites, with an unlikely potential for contaminating local water. The cumulative impacts are anticipated to have a negligible environmental consequence.

Soil and Vegetation- All drilling activities are planned for the winter months. To limit soil loss and disturbance a helicopter will used for transport, and the surface grading for level safe drilling practices will be kept to a minimum. Remediation of drill areas will be carried out promptly after the Program to minimize erosion potential. Due to the proposed size of the drill rig and small number of holes it is anticipated that impact will be minor in magnitude and medium-term in duration. The limited clearing requirements and winter schedule will mean a site-specific impact of frequent occurrence. The overall environmental impact is anticipated to be negligible.

Wildlife and Wildlife Habitat- Measures will be taken to reduce interaction and disturbance of any migratory animals, local birds, and vegetation within the target area. The use of mufflers and best work practices should partially mitigate noise, light and dust generated by drilling activities. The residual impacts to wildlife and wildlife habitat are anticipated to be minor in magnitude, and medium-term in duration, disturbances will be frequent, but be limited to the drill and camp sites. The cumulative impacts are anticipated to have a negligible environmental consequence.

Heritage Assessment Requirements- Prior to start of this program a License Agreement will be executed between Ur Energy and the Prince of Wales Northern Heritage Centre (PWNHC). All Archaeological/Historical/Cultural and Burial sites within the land pertaining to this land use permit application will be documented. Should any archaeological materials be inadvertently disturbed or discovered, they will be immediately reported to the Prince of Wales Northern Historical Centre. The proposed Program at Screech Lake was reviewed by the PWNHC and it was determined that a heritage assessment was not required (Letter from Tom Andrews to Adrian Paradis, March 22, 2005). The negative effects will be minor in magnitude, will occur for a medium duration and have minimal potential to uncover an archaeological presence at the site-specific target areas. Thus the environmental consequence is predicted to be negligible.

Traditional Land Use- Hunting and trapping activities occur within the region of the target area, mitigation measures include no hunting or trapping and no disturbance linked to these activities. Provisions will be flown in and garbage will be removed and burned. Negative impacts on current traditional land use will be negligible in magnitude and short-term in duration. The occurrence of any disruption will be unlikely and site-specific so the overall environmental consequence would be negligible.

Non-Traditional Land Use- Non-traditional trap lines are not registered within 50 km of Screech Lake, and domestic and sport hunting is conducted through Artillery Lake (150 km west). It is anticipated that the winter timing will reduce any disturbance, and mitigation measures similar to those instituted for Traditional Land Use will reduce negative impacts. It is anticipated that exploration activity will have negligible effect on this industry.

Socio-economic- There will be a need to purchase supplies from Northern communities. Although the workforce will be specialized Ur Energy will look for opportunities to employ local residents It is anticipated that any effects to socio-economics would be localized to towns used for departing to the site and be considered positive. Impacts are anticipated to be minor in magnitude, be of medium-term duration, with likely occurrence but will extend regionally to the larger centres. It is anticipated that socio-economic consequence will be negligible.

Evaluation of Environmental Consequences By using helicopter for most of the movement of equipment and personnel Ur Energy anticipates minimal disturbance from drilling and construction activities. This combined with the proposed winter month activity will minimize negative effects to soil, vegetation, wildlife and aquatic resources and result in overall negligible impacts.

7. Proposed restoration plan (please use a separate page if necessary).

All garbage, reserve fuel, empty drums, spill matting, propane bottles etc. will be returned to Yellowknife throughout the program and during final decommissioning. Combustible materials will be incinerated on a regular basis at the camp site using an approved incinerating device. The incinerated residue will be collected and disposed of in Yellowknife.

Grey water from kitchen and dry facilities will be channelled to a settling sump (the nearest natural depression). Camp sewage will be collected in a pit constructed below an outhouse at a minimum depth of 36 inches. Several service flights will be made into the camp during the course of the drilling program. Each return flight will be maximized with respect to empty fuel drums, propane bottles, plus camp and fuel garbage and any recyclable materials. Additional flights will be employed upon completion of the program to remove any remaining empty fuel drums or additional recyclable materials.

Upon completion of the drill holes the casing will be removed and if unable to do so it will be cut off at ground level. Furthermore, the top 10 metres of all holes will be filled with bentonite or cement as recommended in the Mineral Exploration Guidelines for Saskatchewan. Before leaving the site each hole will also be marked with a noticeable stake to identify the purpose and designation of the drill hole. All materials will be removed from the drill site (*i.e.,* garbage collected, absorbent matting retrieved and properly disposed of, empty fuel drums and propane bottles returned to camp fuel cache and extracted from the site by available service flights). Each drill site will be inspected by the camp supervisor who will determine if additional clean-up is required. Effort will be made to return each site to its natural state upon completion.

Prior to camp break up the project supervisor will contact the designated Site Inspector at least ten days in advance of shut down of the project to advise of removal of equipment, completion of project and site restoration. The camp will be dismantled upon completion of the exploration program and the location will be inspected prior to leaving. All sumps will be backfilled and recontoured to match the surrounding landscape. All scraps metal, machinery, barrels and kegs, buildings and building materials will be removed to an approved waste disposal facility prior to expiration date of the permit.

For further details see Ur Energy's screening study "*Environmental screening study for Ur Energy Inc. permit application to conduct uranium exploration drilling at Screech Lake, NorthWest Territories*" appended.

8. Other rights, licences or permits related to this permit application (mineral rights, timber permits, water licences, etc.)

The 3 Thelon Project properties of Ur-Energy consist of the following mineral claims:
Eyeberry Property: claims F88021 – F88029 incl.; F91041 – F91060 incl.; F88046 – F88048 incl. (on NTS 75P/07).
Screech Property: claims F88001 – F88009 incl.; F90011 – F90021 incl.; F98495 – F98498 incl. (on NTS 75I/10, 15).
Gravel Hill Property: claims F88031 – F88039 incl.; F91031 – F91040 incl.; F90137 (on NTS 65L/04)
All of the above claims are registered 100% to Ur-Energy Inc.

Roads: N/A Is this to be a pioneered road? Has the route been laid out or ground truthed?

9. Proposed disposal methods.

a) Garbage: All combustible garbage will be incinerated daily in an approved incinerating device and its residual will be collected and disposed of in Yellowknife. All non-combustible garbage will be removed and disposed of in Yellowknife. All garbage and debris will be kept in covered metal containers on site until disposed of.

b) Sewage (Sanitary & Grey Water): Camp sewage will be collected in a pit constructed below an outhouse. Grey water from the kitchen and dry facilities will be collected in a settling sump (nearest natural depression).

c) Brush & trees: N/A

d) Overburden (Organic soils, waste material, etc.): N/A

10. Equipment (includes drills, pumps, etc.) (Please use separate page if necessary.)

Type & number	Size	Proposed use
1 Drill (Longyear 38 or L70) with pumps (2) and coil stoves(2)	Drill rig ~ 3000 kg Pumps, shack + Rig = ~ 5000kg	Drill holes into bedrock and retrieve the core.
1 Helicopter	Capable of transporting pilot and 4 passengers	Move drill and transport crew.

2 Portable water pumps	3 hp 2 inch pump	Pump water for camp use.
1 Propane Stove	Standard 30 inch	Kitchen.
1 Water heater	60 gallon	Washing facility.
1 Generator	10 KVA	Electrical Requirements

11. Fuels	( )	Number of containers	Capacity of containers	Location
Diesel		240	205 litres	Camp fuel cache
Gasoline		8	205 litres	Camp fuel cache
Aviation fuel		80	205 litres	Camp fuel cache
Propane		120	45 kg cylinders	Camp fuel cache
Other				

12. Containment fuel spill contingency plans. (Please attach separate contingency plan if necessary).

A comprehensive Health and Safety site specific orientation will be held with all camp personnel and sub-contractors before participating in the exploration program. The orientation will review the *Environmental Spill Control Regulations*, methods of handling fuels and other hazardous substances stored at the Project (Table 1), activation requirements for the spill contingency plan, and the spill contingency plan. Material Safety Data Sheets (MSDS) will be available for all on-site chemicals (Table 1) at all times for all personnel. Fuels will be transported to the drill sites on an "as needed" basis. Fuel caches will be inspected on a daily basis and all leaks will be repaired immediately upon detection.

Spill Contingency Plan

Company President/ Project Manager: William Boberg/ Jack Charlton

Project Geologist/Camp Supervisor: Jack Charlton

The Screech Project is currently an exploration camp. All fuels will be stored in compliance with the Land Use Regulations. The storage facilities will be separate caches in areas underlain by sand, more than 100m above the ordinary high water mark and 100m removed from the camp for the following fuels:

- diesel;
- gasoline;
- aviation fuel; and,
- propane.

To reduce the risk of spills all chemicals will be shipped and stored in their original containers following their MSDS specific guidelines.

In the event of a spill

The personnel detecting the spill, while following appropriate safety procedures, will immediately notify the Camp Supervisor.

The Camp Supervisor will coordinate the spill containment and clean-up operation by:

- identify the source of the spill;
- take appropriate action to prevent further spillage;
- minimize the impact of the spill; and,
- initiate the clean up with the equipment available (See **Inventory & Location of Response and Clean-up Equipment**).

Once the spill has been identified and clean-up initiated the Camp Supervisor will report all chemical and petroleum spills in accordance with the instructions in the "Spill Report Form N.W.T. 1752/ 0593" including:

- Calling the **24 hour Spill Report Line** (867) 920-8130 (reporting date and time of spill; location; direction spill is moving; contact person information close to spill location; cause of spill; status of spill; description of existing containment; action taken to contain, recover, clean-up and dispose of spill and name of person in charge at time of spill);
- confirm with the **Spill Report Line** if further action and/or materials are needed;
- report all spills to the company representative, Ur-Energy Inc (613) 834-7708;
- supervise the completion of the clean-up;
- restore the affected area to its pre-spill state or the closest possible state;
- contain any damaged equipment and materials used for clean-up until the Site Inspector provides approval of disposal; and,
- prepare and submit a "Spill Report Form."

Inventory & Location of Response and Clean-up Equipment

Main fuel cache and fuelling stations will have:

1) Personal Safety Equipment (disposable coveralls, gloves, goggles);
2) Large and small spill kits;
3) Empty barrels;
4) Shovels;
5) Absorbent pads and materials;
6) Pumps;
7) Hazardous labels and stickers; and,
8) MSDS for every chemical on site.

13. Methods of fuel transfer (to other tanks, vehicles, etc.)

Electric pump for helicopter, manual (electric) pumps for drills, camp stoves, water pumps

14. Period of operation (includes time to cover all phases of project work applied for, including restoration)

March 1, 2007 to May 31, 2007 to complete proposed exploration as outlined above (5).
May 31, 2007 to December 31, 2011 to complete further work contingent upon results of work outlined in (5).

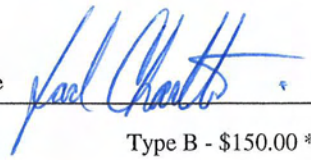
15. Period of permit (up to five years, with maximum of two years of extension).

Ur Energy requests a five year permit. January 1, 2007 to December 31, 2011.

16. Location of activities by map co-ordinates (attach maps and sketches) See Figure 1

Minimum latitude (degrees, minutes, seconds)	Maximum latitude (degrees, minutes, seconds)
62°40'00"N	62°49'00"N
Minimum longitude (degrees, minutes, seconds)	Maximum longitude (degrees, minutes, seconds)
104°28'00"W	104°55'00"W

Map Sheet no. 75I/10 and 75I/15

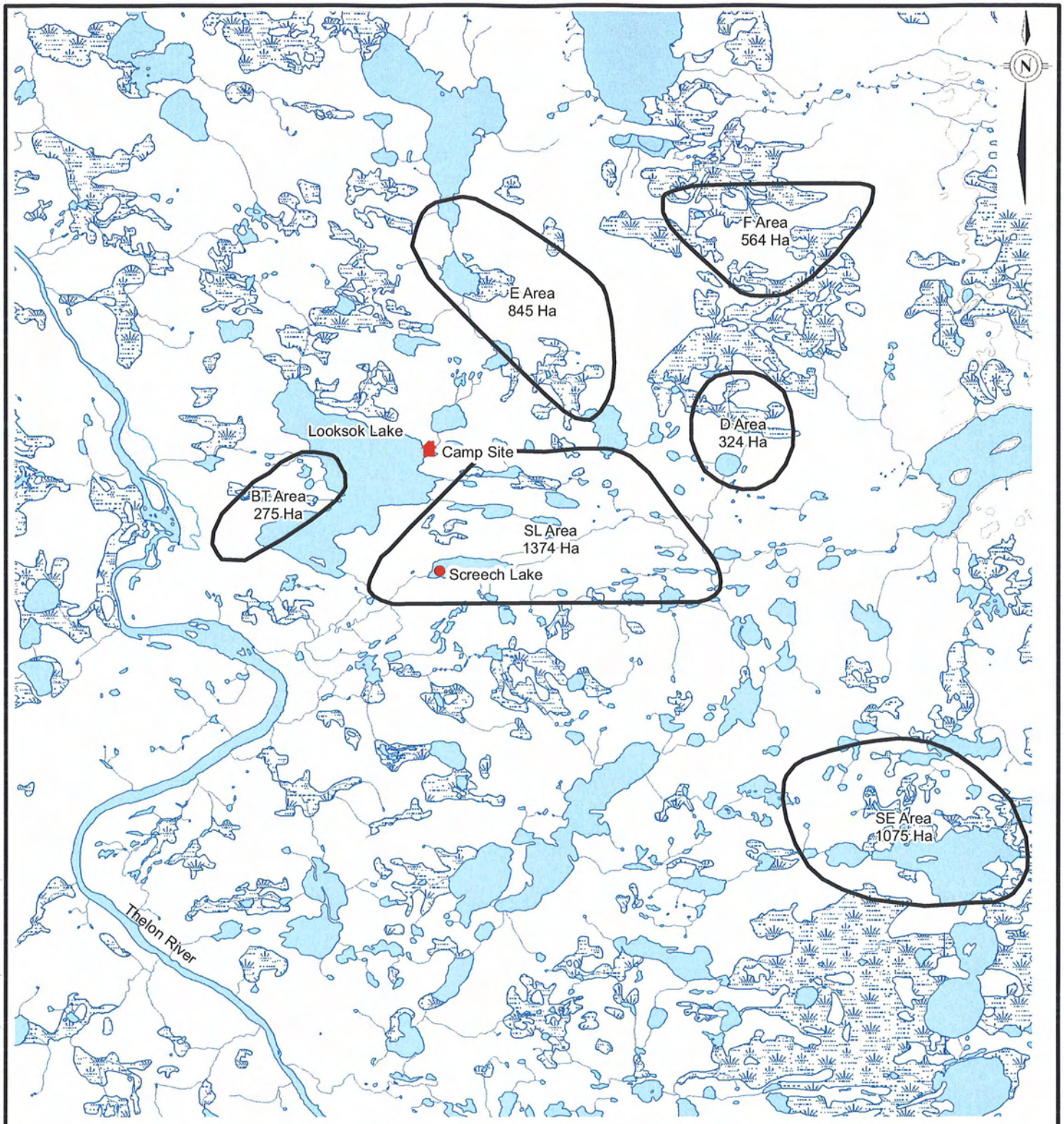
17. Applicant
Print name in full John D Charlton
Signature  Date July 13, 2006

18. Fees X Type A - $150.00 ** Type B - $150.00 ** (**Application Fees are Non-Refundable**)

Land use fee: 2 hectares @ $50.00/hectare $ 100.00
Assignment fee $50.00 $ 50.00

Total application and land use fees $ 300.00

Please make all cheques payable to "Receiver General of Canada"



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SCALE 1:150,000 KM

PROJECT
Ur-ENERGY INC.
SCREECH LAKE SCREENING STUDY

TITLE
Ur-ENERGY PROPOSED DRILL EXPLORATION SITES

Legend
Study Areas

NAD 83, ZONE 13

Golder Associates
Saskatoon, Saskatchewan

PROJECT		06-1365-036	FILE No.	
DESIGN			SCALE AS SHOWN	REV. 0
GIS	JRC	31/05/06	FIGURE: 1	
CHECK				
REVIEW	DB	19/07/06		

Appendix 1 Table of Chemicals anticipated to be used for Ur-Energy's 2006 Drill Program

Product Name	Chemical Identification	Material Use	WHMIS Classification	Work Place Hazard	Classification
Extreme Super G- Gold	Polysaccharide suspension	Drilling Mud Additive	D-2B	Skin & Eye Irritant	Not Dangerous Goods
Extreme Torq-Eez	Proprietary	Drilling Fluid Lubricant	None	None	Not Dangerous Goods
Extreme Clay Seam	Polyacrylic	Specialty Clay Dispersant	D-2B	Skin & Eye Irritant	Not Dangerous Goods
Extreme Extra High Yield Gel	Sodium montmorillonite	Drilling Mud Additive/ Viscosifier	D-2A		Not Dangerous Goods
Extreme Linseed Lube	Linseed soap	Lubricating Compound	Not Applicable	Not Applicable	Not Dangerous Goods
Extreme Number One	Acrylamide, Acrylate co-polymer	Drilling Fluid Lubricant	Not Regulated	Not Applicable	Not Dangerous Goods
Extreme Rod Grease	Petroleum Hydrocarbon	Industrial Lubricant	Not Regulated	Not Applicable	Not Dangerous Goods
Extreme Super Trol	Semi-synthetic Cellulose	Drilling Fluid Lubricant	Not Regulated	Not Applicable	Not Dangerous Goods
Extreme Super-G Blue	Anionic polyacrylamides in water oil emulsion	Drilling Mud Additive	B3, D-2B	Combustible liquid; Skin and Eye Irritant	Not Dangerous Goods
Extreme Stop	Acrylamide Co-polymer	Lost Circulation Material	Non-Hazardous	Not Applicable	Not Dangerous Goods
Extreme Enviro Cote	Calcium Sulfonate thickened Greases	Lubricating Compound	Not Controlled	Skin & Eye Irritant	Not Dangerous Goods
Calcium Chloride	Calcium Chloride	Drilling Fluid & Cement Additive	D-2B	Skin & Eye Irritant	Not Dangerous Goods
Gasoline		Fuel	D-3	Flamm Liquid: Skin & Eye Irritant	Dangerous Good
Propane		Fuel	D-2	Flamm Gas; Skin & Eye Irritant	Dangerous Good

ENVIRONMENTAL SCREENING STUDY FOR Ur ENERGY INC. PERMIT APPLICATION TO CONDUCT URANIUM EXPLORATION DRILLING AT SCREECH LAKE, NORTHWEST TERRITORIES

Golder Associates

Golder Associates Ltd.

145 1st Avenue North, Suite 200
Saskatoon, Saskatchewan, Canada S7K 1W6
Telephone 306-665-7989
Fax 306-665-3342

Submitted to:

Ur Energy Inc.
341 Main Street North, Suite 206
Brampton, Ontario
L6X 3C7

Attention: Mr. Paul Pitman

DISTRIBUTION:

25	Copies -	Mackenzie Valley Land and Water Board, Yellowknife, Northwest Territories (+ 25 CDs)
2	Copies -	Ur Energy Inc, Brampton, Ontario
1	Copy -	Charlton Mining Exploration Inc., St-Lazare, Quebec
2	Copies -	Golder Associates Ltd., Saskatoon, Saskatchewan

July 2006
06-1365-036

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1.0 INTRODUCTION

Ur Energy Inc. (Ur Energy) is applying for a Land Use Permit (LUP) in the Northwest Territories (NWT) for the purpose of conducting an exploration drilling Program in the area of Screech Lake. Golder Associates Ltd. (Golder) was contracted to prepare this environmental screening document in support of the application. This environmental screening report was designed to identify any potential regulatory and community concerns arising from potential environmental impacts associated with the five hole drilling Program and proposed mitigation strategies. Data gaps that exist around information from the Screech Lake area are also identified. Should the development of the property proceed any further than a preliminary exploration Program, it would be necessary to conduct additional baseline studies to address those gaps.

This report was generated from available data in the Northwest Territories and focused on conditions within the vicinity of Screech Lake (local) and the Thelon Basin (regional). This environmental screening study addresses the concerns from regulatory authorities and applicable communities for a LUP Application. This document was developed to address the following key issues related to the drilling Program:

- potential adverse impacts to animal and plant species of concern that may occur in the Project area;
- potential adverse impacts to heritage resources;
- identification of data gaps that may dictate further environmental review prior to or during exploration activity in the area; and,
- potential cumulative impacts associated with the mineral exploration Program.

As such, this document contains:

- a Project description;
- an environmental overview of the Project area; and,
- identification of mitigation and protective measures (*i.e.,* waste disposal, spill containment, site restoration and reclamation) that are and/or will be implemented to avoid or reduce potential adverse effects to the existing environment.

2.0 PROJECT DESCRIPTION

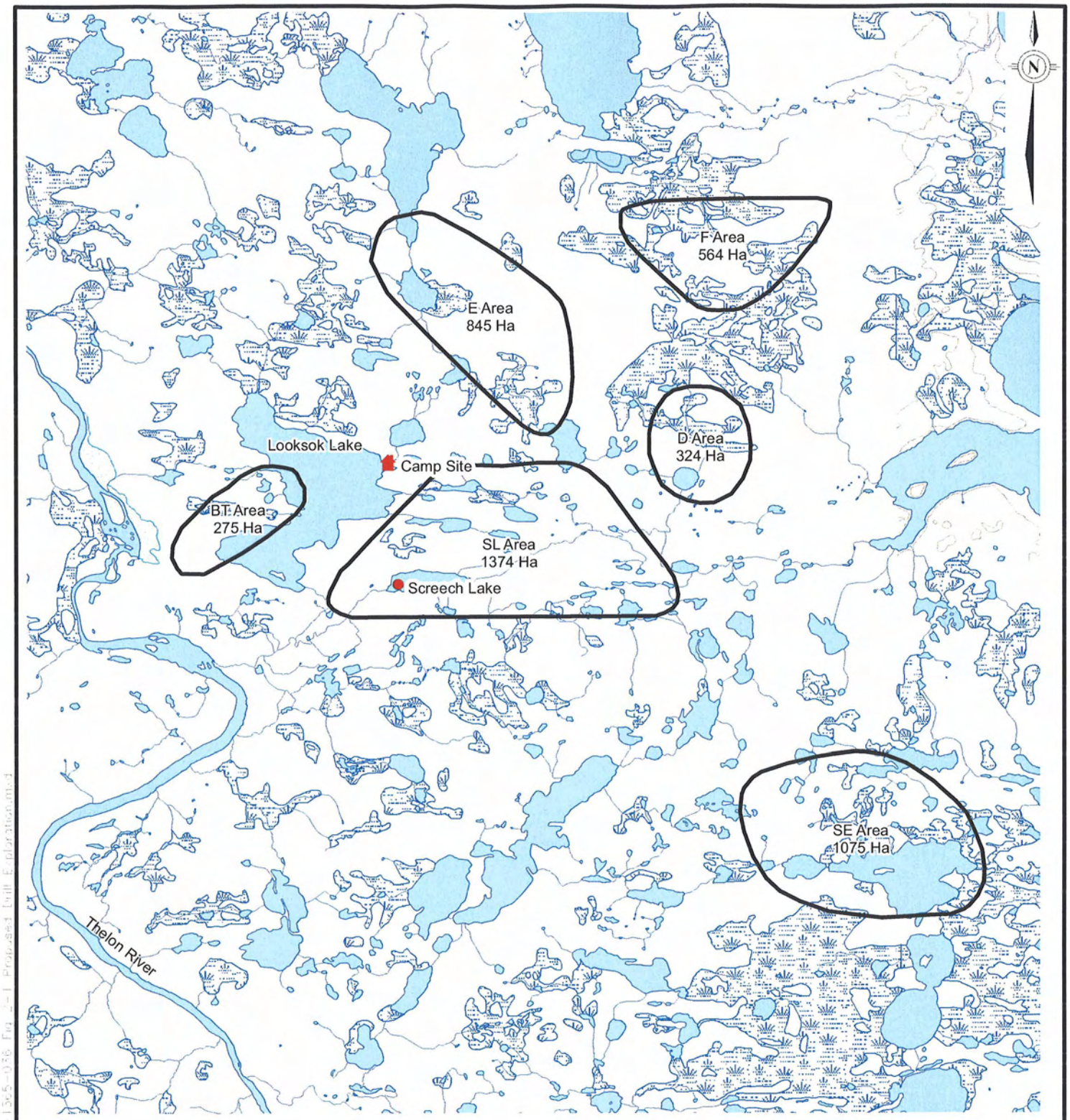
2.1 Project Description

The Ur Energy proposed drill Program is for exploration purposes only. Five initial drill holes are proposed. A maximum of 20 drill holes may be developed over the course of the five year Program should results prove positive. Drill distance into the ground will extend a total of 3,400 m. This may include the extension of an existing hole (UG DDH #10) by an additional 400 m plus four new holes averaging 750 m in depth each. All drill holes will be vertical to sub-vertical NQ core diameter diamond drill holes located in close proximity to Screech Lake (within 1.5 km of the western end of Screech Lake but may proceed into the other proposed areas depending on the findings (Figure 2-1). It is possible that drilling will take place near the Screech Lake shoreline. Results of the preliminary drilling will dictate where the remainder of the Program is conducted within the claim boundary.

It is anticipated that the initial Program will begin in March 2007 and end in May 2007. The majority of the drilling will occur during the winter of 2007/2008 but may continue for the remainder of the permit period, subject to the LUP application approval and any restrictions proposed in the application.

The exploration camp will be mobilized and constructed on the shore of Looksok Lake about 2 km north of Screech Lake. The camp will consist of nine tents to house the kitchen, dry goods, office, sleeping quarters, outhouse and core shack, as well as a core rack for storage of drill core material. The drill (Longyear LF 70 or Boyles B 20), fuel, consumables, other materials, and personnel will be transported from the camp to the drill area by means of a helicopter. By initiating the Program when the ground is snow covered and frozen, it is anticipated that impact on flora and fauna will be minimized. Furthermore, an experienced drill contractor familiar with remote location drilling in ecologically sensitive areas will be chosen for the Program.

Drill cuttings will be contained at the drill site in natural depressions so that there will be no dispersion of the cuttings to nearby water bodies. Providing water circulation is not lost down the hole, the entire water medium will be maintained and re-circulated in and from large tanks beside the drill rig (normally within the drill shack). Should water circulation be lost (due to intersection with faults or unconsolidated material), the water will disappear and not return to surface. Approximately two 45-gallon drums would be the maximum expected volume of wastewater during the drill procedure. Through containment of the drill solutions there will be negligible effect on terrestrial and aquatic habitats. Upon completion of the drilling Program, drums containing waste drill water will be removed from the site and properly disposed of at a designated waste disposal site.



3 0 3
SCALE 1:150,000 KM

PROJECT
Ur-ENERGY INC.
SCREECH LAKE SCREENING STUDY

TITLE
Ur-ENERGY PROPOSED DRILL EXPLORATION SITES

Legend
Study Areas

NAD 83, ZONE 13

Golder Associates
Saskatoon, Saskatchewan

PROJECT		06-1365-036	FILE No.
DESIGN			SCALE AS SHOWN REV. 0
GIS	JRC	05/03/06	FIGURE: 2-1
CHECK			
REVIEW	DB	19/07/06	

To avoid contamination from potential leaks or spills of fuel and oils absorbent matting will be used to collect any discharges from the drilling operation. Drip trays will be used at all fueling – refueling areas. Water used in the drilling process will be pumped from the nearest available water supply (Screech Lake for drilling and Looksok Lake for campsite) and heated if necessary by a coil stove. An appropriate screen will be placed around the intake hoses to prevent impingement or entrainment of fish. During a previous drill Program it was observed that permafrost was not present at the Screech Lake location. Should permafrost exist at the Screech Lake site, calcium chloride will be mixed with the drill water and pumped down the hole to prevent the permafrost from enclosing the drill hole.

In the event significant uranium mineralization is intersected, the best measures practice as laid out in the Mineral Exploration Guidelines for Saskatchewan will be followed. This will include, the return of cuttings containing greater than 0.05% uranium down the drill hole and immediately filling with cement any drill hole deemed to have a uranium rich intersection. Any radioactive drill water resulting from such an intersection would be collected in barrels and shipped away for disposal. Furthermore, drill holes that produce water will be plugged and permanently sealed. The occurrence of an artesian well will be documented and reported to the Indian and Northern Affairs Canada (INAC) Project Inspector (Site Inspector) immediately.

2.2 Proposed Mitigation

Following completion of a drill hole, all materials will be removed from the drill site (*i.e.,* garbage collected, absorbent matting retrieved and properly disposed of, empty fuel drums and propane bottles returned to camp fuel cache and extracted from the site by available service flights) at the end of the Program. Each drill site will be inspected by the Program supervisor upon completion and he will determine if further clean up is required. Each drill site will resemble, as closely as possible, its natural state upon completion. The only noticeable feature will be a labelled picket depicting the drill hole location.

The drill casing will be removed from each drill hole upon completion. If the casing cannot be retrieved, it shall be cut off at ground level.

All non-combustible garbage and recyclable material will be collected, removed, and disposed of in Yellowknife, NWT. During the Program all combustible garbage will be incinerated daily in an approved incinerating device. The incineration residue will be collected and disposed of in Yellowknife.

Grey water from kitchen and dry facilities will be channelled to a settling sump (the nearest natural depression). Camp sewage will be collected in a pit constructed below an outhouse at a minimum depth of 36 inches. Several service flights will be made into the camp during the course of the drilling Program. Each return flight will be maximized with respect to empty fuel drums, propane bottles, plus camp and fuel garbage and any recyclable materials. Additional flights will be employed upon completion of the Program to remove any remaining empty fuel drums or additional recyclable materials. Upon completion of the exploration Program the camp will be demobilized and the location will be inspected prior to leaving. Prior to camp break up the Program supervisor will contact the Site Inspector at least ten days in advance of shut down of the Program to advise of removal of equipment, completion of Program and site restoration.

3.0 PHYSICAL ENVIRONMENT

The objective of this section was to summarize existing environmental information at the Screech Lake site and the Thelon Basin. This was accomplished through collection and review of relevant databases, documents (both internal and public domain), satellite imagery maps, and other topographical maps. Additional technical information was collected through communication and consultation with regulators. The steps used for gathering relevant information, review, and report generation are provided below.

3.1 Climate

3.1.1 Data Collection Process

Climate parameters (*e.g.*, precipitation, evaporation, and evapotranspiration) were obtained through available data. The Environment Canada (EC) and Agriculture and Agri-Food databases were consulted for both descriptive purposes and to assist with runoff calculations for water balance estimates.

3.1.2 Results

Complete, long-term climate data records were not available for the Screech Lake area. Some regional meteorological data are available from EC at Hanbury River, Lynx Lake, and Dubawnt Lake (Table 3-1). Examination of the data from these stations indicates that the periods of record are quite short and are substantially missing or incomplete. Table 3-1 indicates the location of each station in universal transverse mercator (Nad 83) coordinates and also contains the years of operation for each of the stations. The available records for each of the stations are tabled in the Appendix (EC 2006).

Table 3-1
Climate Station Locations

Station	Years Operational	Zone	Easting	Northing
Screech Lake	-	13 V	516786	6957523
Dubawnt Lake (Aut), Nunavut	1993-2005	14 V	361770	7012692
Hanbury River	1994-2006	13 V	494212	7052448
Lynx Lake	1990-1993	13 V	403738	6927560

Given the brevity and paucity of the meteorological data from the nearest monitoring stations it was concluded that regionally derived meteorological data would be most suitable for the preliminary assessment of climatic conditions in the Screech Lake Project area. A regional estimate of average climatic conditions is available from Agriculture and Agri-Food Canada (AAFC). A Canadian Ecodistrict Climate Normals database for years including 1961-1990 (AAFC 1997) was created to provide estimates for climatic parameters where no measurements had previously been collected. Various spatial distribution models were used to estimate each parameter (precipitation, temperature, vapour pressure, wind speed, potential evaporation, *etc.*) within each ecodistrict. Ecodistricts or land resource areas are local regions of similar characteristics. These characteristics include regional landform, local surface form, permafrost distribution, soil development, textural group, vegetation cover/land use classes, range of annual precipitation, and mean temperature. The upper Thelon River drainage area includes portions of three Ecodistricts. Data from these three Ecodistricts were combined, with average values considered to be representative of climatic conditions at the Screech Lake drill area. Should the Program advance beyond the explorations stage, site specific meteorological data would be collected to further refine the data provided in this report. At present, the derived data are considered a suitable representation of climatic conditions for the Screech Lake Program.

Summarized in Table 3-2 are Ecodistrict rainfall, snowfall, total precipitation, vapour pressure, wind speed, and potential evaporation. Mean total annual precipitation is 345 mm with approximately 65% occurring as rain. The months with the greatest precipitation are July and August. The coldest month is January with a mean temperature of -28.7°C while the warmest month is July with a mean temperature of 13.8°C. Maximum potential evapotranspiration would occur in June and July.

Table 3-2
Summary of Climatic Parameters

Month	Ecodistrict Average Rainfall (mm)	Ecodistrict Average Snowfall (cm)	Ecodistrict Average Total Precipitation (mm)	Ecodistrict Average Dry Bulb Temperature (°C)	Ecodistrict Average Vapour Pressure (kPa)	Ecodistrict Average Wind Speed (km/hr)	Ecodistrict Average Potential Evapo-transpiration (mm)
Jan	0.0	17.0	15.7	-28.7	0.124	13.4	0.0
Feb	0.0	12.1	11.0	-25.3	0.151	13.0	0.0
Mar	0.0	16.7	15.5	-19.0	0.168	14.3	0.1
Apr	3.6	13.6	17.7	-7.0	0.266	15.0	10.5
May	16.9	0.6	21.9	2.6	0.478	14.7	72.2
Jun	41.5	0.8	42.4	10.1	0.806	14.5	111.7
Jul	56.1	0.0	56.1	13.8	1.094	14.1	108.5
Aug	53.9	0.3	54.3	12.0	1.041	14.7	71.0
Sep	37.5	2.1	39.2	5.3	0.707	15.7	29.4
Oct	15.3	16.9	31.7	-2.4	0.437	16.6	4.4
Nov	0.1	26.1	24.1	-15.5	0.191	15.0	0.0
Dec	0.0	18.2	16.8	-24.2	0.100	13.1	0.0
Annual	225.3	122.9	345.3	-6.7	0.580	14.3	407.8

3.2 General Geology and Hydrogeology

3.2.1 Data Collection Process

A screening level assessment of geological and bedrock formations was accomplished through review of:

- reports provided by Ur Energy; and,
- public domain and in-house geological maps of the area of interest.

3.2.2 General

The Project is located by Screech Lake on the southwest rim of the Thelon Basin, located in National Topographic Systems (NTS) map areas 75I/10 and 75I/15, in an area known as the southeast Barrenlands. The area is generally characterized by flat topography with east-west trending eskers. Sediments are mostly glacio-fluvial in nature.

The Thelon Basin is drained by two major rivers. In the vicinity of the Program, the Thelon River drains the Screech Lake area to Baker Lake, and water bodies are usually ice free between mid June to late September. Several springs have been discovered in and around Screech Lake. It is hypothesized that this aquifer interacts with primary uranium deposits, similar to those of the Athabasca Basin in northern Saskatchewan.

Several regional correlations between the Athabasca and Thelon Basins can be made. Both basins are characterized by sandstone deposits overlying a thick, minerally stratified, paleoweathered zone.

3.3 Regional Geology

3.3.1 Results

The Project is situated in the Thelon Basin of the Western Churchill Province, in the Shield Region of the NWT. The Shield Region covers over half of the NWT and Nunavut, and is generally low relief, with elevation differences usually less than 60 m. Glacial deposits cover ancient erosional surfaces (Advisory Commission on the Development of Government in the NWT [ACDGNWT] 1966).

The Churchill Province is mainly comprised of granitic gneiss lithofacies. The Thelon Basin (Thelon Formation or Thelon Plain) is characterized by flat lying sandstone, which weathers to sandy flats, overlying the granitic rocks of the Western Churchill Province. The Thelon Basin is one of the most extensive Paleohelikian (approximately 1.7 billion years old – 1.7 Ga) siliciclastic sequences (Charlton 2005).

3.3.1.1 Surficial Geology

To the east of the Thelon Basin, continental volcanics of the Christopher Island Formation and the Pitz Formation are present (Charlton 2005). However, these are absent from the south western Thelon stratigraphy except for narrow dykes. To the east of the Thelon Basin, the Baker Lake Group, and Wharton Group rocks are widespread, but are absent to the west of the basin due to widespread weathering. Wharton Group rocks are comprised of felsic volcanics, and consist of rhyolite, dacite, associated pyroclastics, and minor sediments. Baker Lake Group rocks are intruded by granites correlating to the Pitz Formation, and have high magnetic and radioactive signatures.

The Thelon Basin unconformity overlies Archean-Paleoproterozoic basement rocks. It's stratigraphy is primarily fine to medium grained sandstone, with minor conglomerate horizons. The Thelon Formation is primarily flat, quartz rich sandstone, conglomerate, and minor siltstone. The base of the formation is generally comprised of cross-stratified conglomerate, grading upwards to sandstone. To the west-southwest of the basin, the sandstone is interbedded with calcite cemented crossbeds of sandstone, siltstone, and mudstone. The sedimentary style reflects the depositional changes of the area, from alluvial/fluvial fan with some aeolinan features to shallow marine settings (in ascending order).

The Thelon Formation in the north-eastern portion of the Thelon Basin was formed from three separate depositional events. This formed three aquifer-aquitard systems within the stratigraphy, however, it is unknown if these features extend past the northeast portion of the basin.

The Thelon Formation was originally several kilometres thick. This now varies from approximately 2 km in the Baker Lake area, to approximately 60 m, 10 km to 15 km south of Screech Lake. Outliers of the Thelon Formation can be found as far east as Baker Lake. This suggests that the Thelon Basin was much more extensive originally, and has been eroded away by uplift, making the outer edge of the Thelon Basin an erosional surface.

3.3.1.2 Basement Geology

The Western Churchill Province is unique to other provinces of the Canadian Shield (Charlton 2005). It comprises 1.1 billion years of crustal evolution, preserved in three supracrustal sequences between 2.8 – 1.76 Ga. These sequences are widely conserved in the basement rocks underlying the sedimentary rocks of the Thelon Basin.

In the northeast portion of the Thelon Basin, sedimentary rocks of the Thelon Formation unconformably overlie Woodburn Lake Group rocks (2.8 Ga), granitoid gneisses (presumed older than 2.8 Ga), and Amer Group folded metasediments (2.2 - 2.1 Ga). Overlying the Amer Group are the Baker Lake and Wharton Groups of the Dubawnt Supergroup (1.83 - 1.76 Ga). In the northwest, west, and south portions of the Thelon Basin, the basement is comprised of granitoid gneisses of unknown age and remnants of infolded, high grade, sediment dominated belts. These belts may correlate to the Woodburn Lake and Amer Groups found in the northeast of the basin.

The basement of the Thelon basin is broadly comparable to that of the Athabasca Basin. The Wollaston Group of the Athabasca Basin correlates to sediment dominated belts like the Amer Group in the Thelon Basin. Both have comparable structure and composition, which is favourable for the formation of unconformity related uranium deposits.

3.3.1.3 Structure

The Western Churchill Province is defined by dominant northeast trending structural elements (Charlton 2005). Aeromagnetics have outlined numerous northeast to east trending, parallel to sub-parallel crustal scale features, corresponding to the Snowbird Tectonic Zone, Mackenzie Fault Zone, and Chantrey Fault Zone. A second set of northwest trending features, representing a southeast extension of the Bathurst Fault Zone, was also identified through aeromagnetics. In the north and northwest of the Thelon Basin, gneiss from the Queen Maud Uplift is present, while in the west of the Thelon Basin, gneiss and plutonic rocks of the Thelon Tectonic and Taltson Magmatic Zones Uplift are found.

3.4 Screech Lake Area Geology

3.4.1 Results

3.4.1.1 Overburden and Surficial Geology

The surface features in the Screech Lake area are dominated by an east-west trending esker on the north shore of Screech Lake (Charlton 2005). In addition, there are scattered sand deposits, most likely derived from the weathering of the Thelon Formation sandstones, and marshy wetlands. The entire property, except perhaps for the most western edge, is underlain by Thelon Formation sandstone.

Overburden materials are comprised of glacial fluvial sediments and sandy eskers. The overburden thickness in the vicinity of Screech Lake is approximately 10 m to 30 m. However, 10 km to 12 km to the south in the Boomerang Lake property area, the overburden can be 50 m to 70 m thick.

Sandstone thickness at the Boomerang Lake uranium-gold prospect is approximately 10 m to 40 m. At Screech Lake, the sandstone thickness is unknown. During exploration activities in the 1970's, one borehole was drilled approximately 250 m west of the northwest corner of Screech Lake, from the top of the esker bordering the north shore of the lake. Encountered was medium to coarse grained, gently dipping to horizontally bedded sandstone, comprised of quartz cemented loosely with a clay matrix and thin hematitic layers. The borehole was terminated within the sandstone at a depth of 459 m. Geophysical surveys indicate that it is in the order of 600 m in the Screech Lake area.

3.4.1.2 Basement Geology

The sandstone-basement contact in the area of Screech Lake is interpreted to lie near the west property boundary (Charlton 2005). The basement is comprised of northeast striking gneiss and metasediments, intruded by thick northeast to north northeast trending gabbroic bodies. Based on information collected near Boomerang, which is interpreted to continue in the Screech Lake area through an aeromagnetics low, the most common basement lithologies in the area include hematitic garnet gneiss, graphitic gneiss, biotite graphitic hornblende gneiss, and hematitic biotite gneiss. A sheared mylonitized metasediment is found approximately 75 km southwest of the Screech property in the Lynx Lake area. This deposit strikes northeast-southwest in the direction of Boomerang and Screech Lakes. This zone is approximately 10 km to 12 km wide in the Screech Lake area and is interpreted to be an extension of the Amer Group rocks.

3.4.1.3 Structure

Structural information in the area of Screech Lake is based on interpretations from aeromagnetic surveys performed in the area (Charlton 2005). There are three predominant basement structural trends striking northeast-southwest, northwest-southeast, and north-south, with an east-west trending fault intersecting Screech Lake. A major northeast-southwest trend continues to the Boomerang property to the southwest, where the basement has been disrupted by a set of northwest striking normal faults. Structural areas are often bounded by severely altered and brecciated rocks acting as a pathway for alteration fluids. Structure generally postdates basement metapelites and possibly the deposition of the sandstone of the Thelon Formation.

3.5 Hydrogeology

3.5.1 Results

Both surficial and bedrock hydrogeological information is lacking in the study area. At present only large territorial to national scale information is available.

Surficially, the area is covered by glacial deposits, such as fluvial sands and eskers. These types of materials may provide good surficial aquifers, however a groundwater resource will depend on the deposition (porosity and permeability of the materials). These deposits are usually thickest near major river systems, like the Mackenzie River. Surficial groundwater quality has been estimated at less than 500 parts per million (ppm) total dissolved solids (TDS), at varying yields (F & EC 1978).

Little to no hydrogeological information regarding bedrock aquifers exists. General estimates for the Thelon sandstone for groundwater resources are TDS less than 500 ppm. For the bedrock gneiss of the surrounding area, groundwater resources are also estimated at TDS less than 500 ppm. It should be noted that these estimates are based on average values which could be expected from each particular rock type, and would need to be confirmed with field investigation (F & EC 1978).

An additional factor which may affect groundwater resources is permafrost. The Screech Lake property is located in a subartic climate, in the zone of continuous permafrost (ACDGNWT 1966). Permafrost is defined as a subsurface zone which remains below a temperature of 0°C for a period longer than one year, while the zone of continuous permafrost is described as the -5°C isotherm of average annual subsurface temperature at a level just below the depth at which no seasonal change in temperature occurs (Department of Energy, Mines and Resources Canada [DEMR] 1974). Permafrost thickness in the zone of continuous permafrost varies, with no measurements available within the study area. Frost thickness can be influenced by soil or rock type, snow cover, and proximity to water bodies. Water inhibits permafrost in areas of poor drainage (*i.e.,* marsh lands) and under water bodies (F & EC 1978).

Several observations were made around Screech Lake during exploration activities in the 1970's (Charlton 2005). Continuous, strong, cold, murky springs were noted upwelling through the sand and clay along several fissures on the lake bed, in the west part of Screech Lake. Percolating gas and upwelling water along the southwest shoreline during periods of low water level were also noted, along with several hillside springs along the esker on the north shore of the lake. These springs may indicate several aquifer systems, both surficial and deep, in the area. In addition, the regionally present permafrost layer is not present in the immediate vicinity of Screech Lake.

3.6 Hydrology

3.6.1 Data Collection Process

Screening level hydrological assessment was done by use of physical characteristics that govern runoff processes in the local and regional study area and calculating estimates of runoff and stream flow rates. Hydrology data was then used to assist in the assessment of fish habitat investigations, and the impact of water used or releases in the receiving environment.

As there was limited site specific data, estimates were based on regional stream flow data from EC hydrometric stations located approximately 91 km (Hanbury River) and 255 km (Thelon River) from the proposed permit area (Table 3-3). Physical descriptions of watersheds was based on 1:50,000 scale maps.

Table 3-3
Hydrometric Station Locations

	Drainage Area (km^2)	Years of Operation	Unit Area Runoff ($m^3/s/km^2$)	Zone	Easting*	Northing*	Distance# (km)
Screech Lake	-	-	-	13 V	516786	6957523	-
Hanbury River above Hoare Lake	5,895	1971-2002	0.00485	13 V	492285	7051489	97
Thelon River above Beverly Lake	65,734	1970-2004	0.00454	14 W	386634	7158251	258

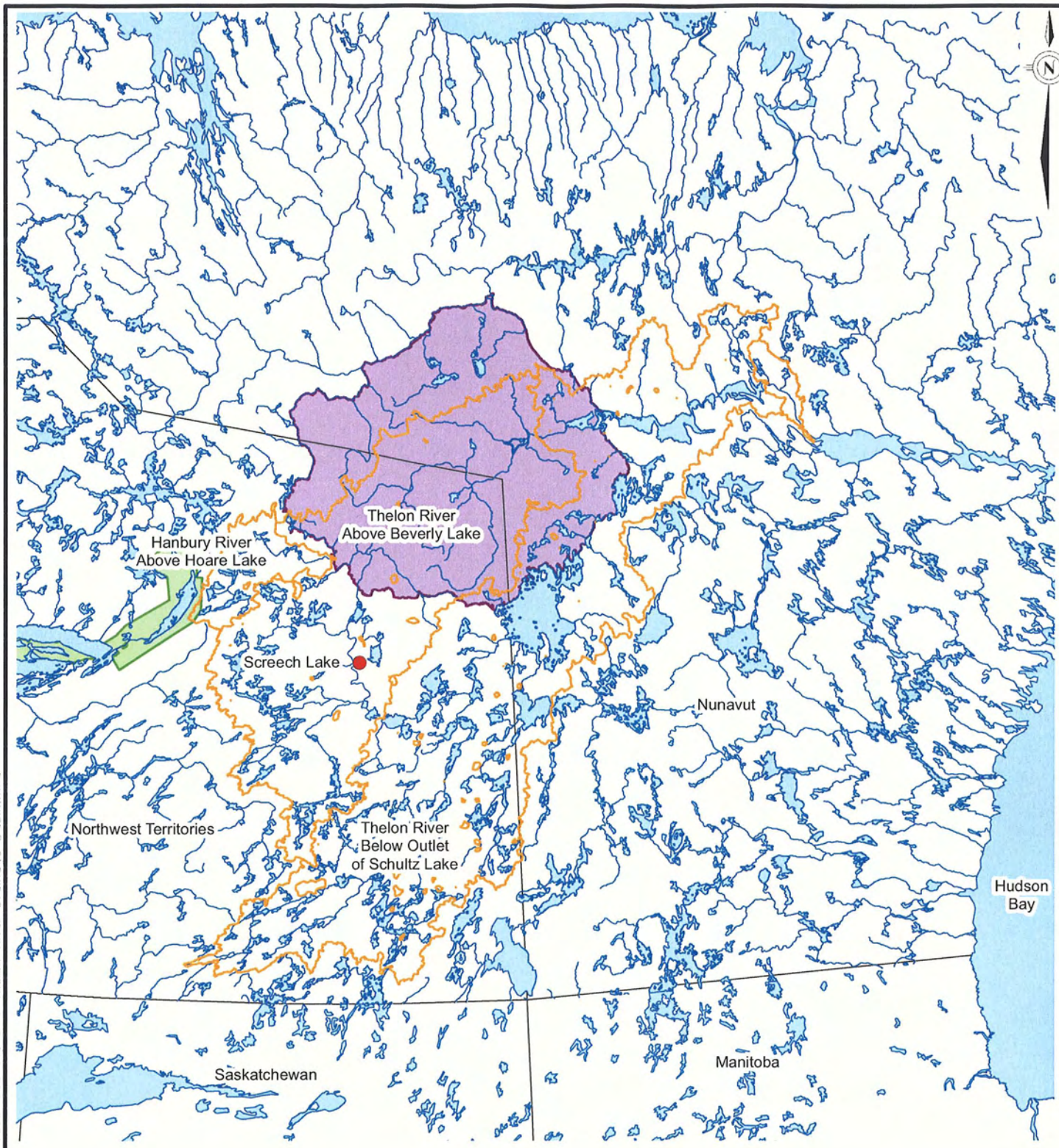
Note: * UTM NAD 83; # distance from Screech Lake location.

3.6.2 Results

The hydrology component focuses on water quantity within the watershed basin surrounding the Screech Lake drill permit area. Specifically it addresses flows in receiving lake, streams, and wetlands. As no site specific streamflow data has been collected to date, the primary data sources are from monitored streams in the region. These data represent typical runoff volumes and the seasonal distribution of runoff in the area. This section describe the hydrologic environment under baseline conditions.

The Screech Lake Program occurs within the Thelon River Basin (Figure 3-1). The Thelon River drains an area of 142,400 km^2 prior to discharging to Hudson Bay. The Screech Lake Project area occurs on portions of several small drainage areas (<100 km^2) which flow directly to the Thelon River (Figure 3-2).

The Screech Lake Program area lies within the arctic-nival region of Canada. This region is characterized by continuous-permafrost regions where deep infiltration is impeded by perennially-frozen strata and hence, base flow and winter flow to rivers is low. Spring snowmelt forms the major flow event of the year. Summer peaks can also result from rainfall events, but since precipitation is generally low, flood-level flows are usually generated only on very small basins (Prowse and Ommanney 1990). Peak flows in response to snowmelt typically occur in mid-June but may vary by several weeks depending on snowmelt conditions.



10 0 10
SCALE 1:5,000,000 KM

Legend

- Screech Lake Site
- Thelon River Watershed
- Thelon Wildlife Sanctuary
- Proposed Great Slave National Park

NAD 83, ZONE 13

PROJECT
Ur-ENERGY INC.
SCREECH LAKE SCREENING STUDY

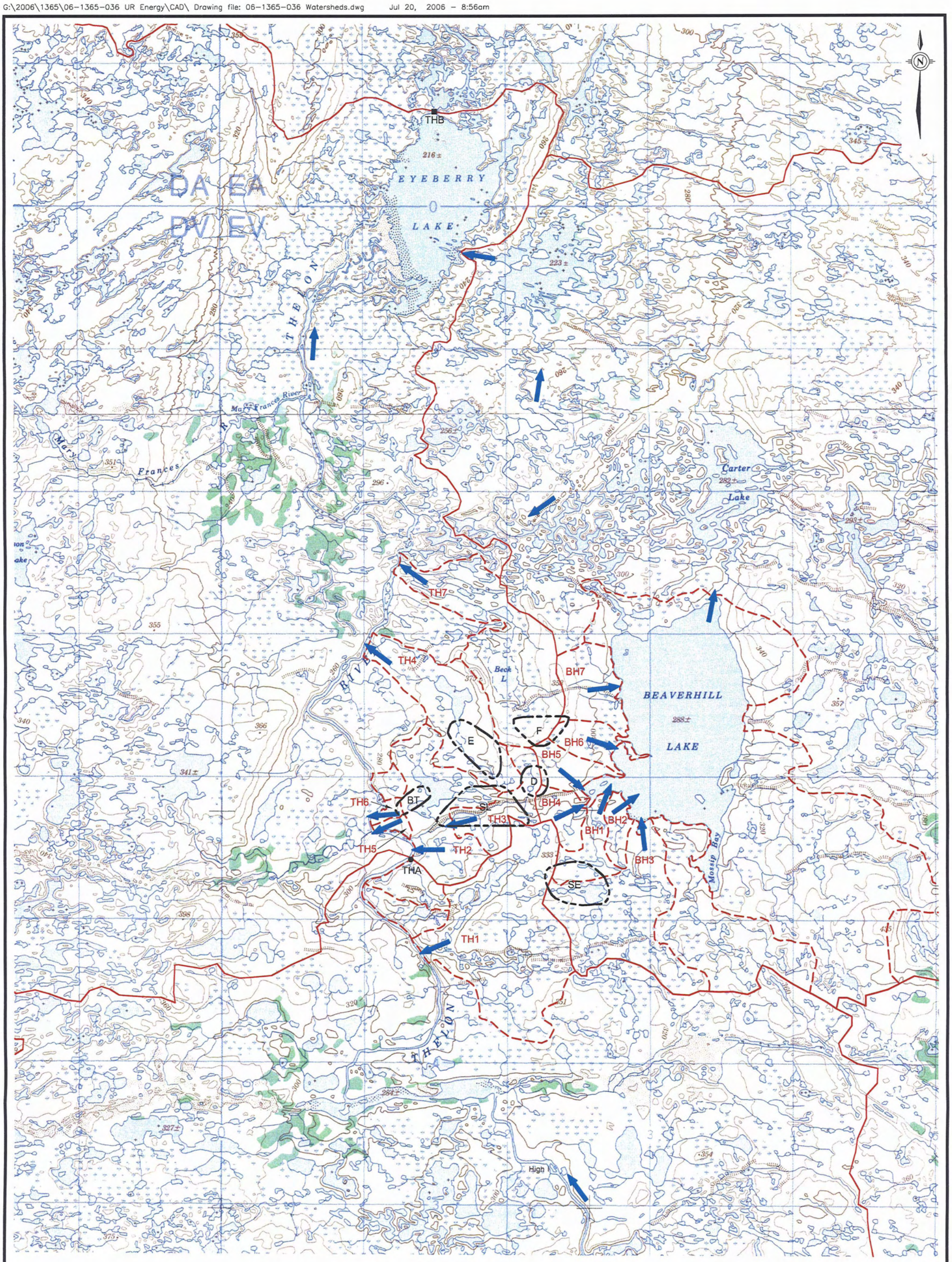
TITLE
SCREECH LAKE LOCATION WITHIN THELON RIVER DRAINAGE BASIN

Golder Associates
Saskatoon, Saskatchewan

PROJECT		06-1365-036	FILE No.	
DESIGN			SCALE AS SHOWN	REV. 0
GIS	JRC	05/03/06		
CHECK				
REVIEW	DB	19/07/06		

FIGURE: 3-1

G:\2006\1365\06-1365-036 UR Energy\CAD\ Drawing file: 06-1365-036 Watersheds.dwg Jul 20, 2006 - 8:56am



Watershed Areas	
Basin	Area (km^2)
THA	17963
THB	26985

Sub-Basin Areas	
Sub-Basin	Area (km^2)
TH1	96.9
TH2	44.3
TH3	20.8
TH4	48.0
TH5	2.4
TH6	2.2
TH7	68.7

Sub-Basin Areas	
Sub-Basin	Area (km^2)
BH1	14.3
BH2	7.3
BH3	62.2
BH4	10.7
BH5	12.0
BH6	11.8
BH7	21.8

Legend
- Flow Direction
- Watershed Boundary
- Sub-Basin Boundary
- Study Areas

5 0 5
SCALE 1:250,000 KILOMETRES

NAD 83, Zone 13

PROJECT
Ur-ENERGY INC.
SCREECH LAKE SCREENING STUDY

TITLE
WATERSHED BOUNDARIES AND FLOW DIRECTIONS

Golder Associates
Saskatoon, Saskatchewan

PROJECT	06-1365-036		FILE No.	
DESIGN			SCALE AS SHOWN	REV. 0
CADD	JDS	17/07/06	FIGURE: 3-2	
CHECK				
REVIEW	DB	19/09/06		

All drainages in the Screech Lake Program area drain to the Thelon River system. Drainage areas and flow direction for sub-basins in the vicinity of the Screech Lake Program area are shown in Figure 3-2. From Figure 3-2, the TH prefixed sub-basins drain directly to the Thelon River while those with a BH prefix drain to Beaverhill Lake prior to the final discharge to the Thelon River. Fourteen sub-basins drain the local study area; seven sub-basins drain directly to the Thelon River and the remaining seven sub-basins drain to the Thelon River by way of Beaverhill Lake. Figure 3-2 also provides the areas of each sub-basin. Table 3-4 indicates which sub-basins drain the proposed drilling areas. The discharge records from Hanbury River and the Thelon River hydrometric stations were used to develop a long-term unit area discharge record for the local study area. The long-term unit area discharge record was used to determine monthly and annual average discharges from each sub-basin. The average calculations were based only on those years in each hydrometric record that contained a full year of data and only on full years available in each data set. The average calculations were based on 1978 to 1981, 1983, 1984, 1986, 1990 to 1996, 2000, and 2002.

Table 3-4
Drill Target Area Drainage Basins

Target	BH1	BH2	BH3	BH4	BH5	BH6	BH7	TH1	TH2	TH3	TH4	TH5	TH6	TH7
BT									X			X	X	
SL								X	X	X	X			
SE	X		X					X						
D				X	X					X	X			
E											X			
F					X	X	X							X

Discharge volumes from sub-basins which may contain drill operations have been estimated (Table 3-5). Potential drilling areas are detailed in Figure 3-2 and designated as target areas SL, BT, SE, D, E, and F. These areas may contain drilling targets although drilling activity is primarily expected to occur in only the Screech Lake area.

Table 3-5
Sub-basin Monthly and Annual Average Discharge Volumes (m^3/s)

Sub-basin	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean
TH1	0.077	0.064	0.058	0.059	0.198	2.132	1.204	0.695	0.632	0.416	0.179	0.096	0.484
TH2	0.052	0.043	0.039	0.040	0.133	1.432	0.808	0.466	0.424	0.279	0.120	0.065	0.325
TH3	0.035	0.029	0.026	0.027	0.090	0.974	0.550	0.317	0.289	0.190	0.082	0.044	0.221
TH4	0.038	0.032	0.029	0.029	0.098	1.055	0.596	0.344	0.313	0.206	0.088	0.048	0.240
TH5	0.002	0.002	0.001	0.001	0.005	0.052	0.029	0.017	0.015	0.010	0.004	0.002	0.012
TH6	0.002	0.001	0.001	0.001	0.004	0.048	0.027	0.016	0.014	0.009	0.004	0.002	0.011
TH7	0.055	0.045	0.041	0.042	0.140	1.512	0.853	0.492	0.448	0.295	0.127	0.068	0.343
BH1	0.011	0.009	0.009	0.009	0.029	0.314	0.177	0.102	0.093	0.061	0.026	0.014	0.071
BH2	0.006	0.005	0.004	0.004	0.015	0.161	0.091	0.053	0.048	0.031	0.014	0.007	0.037
BH3	0.050	0.041	0.037	0.038	0.127	1.369	0.773	0.446	0.406	0.267	0.115	0.062	0.311
BH4	0.009	0.007	0.006	0.007	0.022	0.235	0.133	0.077	0.070	0.046	0.020	0.011	0.053
BH5	0.010	0.008	0.007	0.007	0.024	0.264	0.149	0.086	0.078	0.051	0.022	0.012	0.060
BH6	0.009	0.008	0.007	0.007	0.024	0.260	0.147	0.085	0.077	0.051	0.022	0.012	0.059
BH7	0.017	0.014	0.013	0.013	0.044	0.480	0.271	0.156	0.142	0.094	0.040	0.022	0.109

Note: Since sub-basin TH3 flows into TH2, the estimated flow at TH2 is cumulative.

Flows listed in Table 3-5 are estimates of monthly and annual mean discharges under baseline conditions. Table 3-6 provides an estimate of monthly annual mean discharges in the Thelon River at the point where flows from the TH sub-basins and the BH sub-basins enter the Thelon River. Discharges at these locations were calculated based on Thelon River data collected upstream of Beverly Lake with volumes prorated upstream according to the contributing drainage area at the point where the sub-basins discharge to the Thelon River. Discharges from the BH sub-basins (BH1 through BH7) report to the Thelon River system at Eyeberry Lake (Figure 3-2), while flows from the TH sub-basins (TH1 through TH7) report to the Thelon River at several locations over a distance of approximately 30 km (river length). While flows in the Thelon River would increase slightly between the upstream sub-basin discharge point (TH1) and the downstream discharge point (TH7), the increase would be negligible. Thus, a single Thelon River flow value is assigned for the section of river which receives flow from the TH sub-basins.

Table 3-6
Thelon River Discharges in the Vicinity of the TH and BH Sub-basin Discharges
(m^3/s)

Discharge Points	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Mean
THA	14.3	11.8	10.7	11.0	36.6	395.2	223.1	128.8	117.2	77.1	33.1	17.9	89.7
THB	21.5	17.8	16.1	16.5	55.0	593.7	335.2	193.4	176.0	115.8	49.8	26.8	134.8

By comparing sub-basin outflows from Table 3-5 with Thelon River flows at THA and THB (Table 3-6 and Figure 3-2), it can be seen that inflow from the Screech Lake Program area is very small compared with flows in the Thelon River at the receiving locations. The largest inflow (TH1) contributes approximately 0.5% of Thelon River flow while the smallest drainage would contribute only 0.01% (TH6). The BH sub-basins discharge to Beaverhill Lake prior to discharging to the Thelon River. The maximum contributing flow (BH3) would account for 0.2% of Thelon River flows at Eyeberry Lake.

Based on the above assessment, drainage from sub-basins in the vicinity of the Screech Lake Program comprises a very small portion of Thelon River flows. The target areas where drill holes may be located involve small portions of the sub-basins and would contribute even smaller proportions of Thelon River flows.

3.7 Air Quality and Noise

3.7.1 Assumptions and Data Development

The current exploration Program description indicates that the proposed drilling activities will be conducted in a very remote location (approximately 350 km east of Lutsel'ke). Based on the remoteness of the Project area and the Program description, it has been assumed that current air quality is minimally affected by existing local sources. The single "major" source of air and noise emissions associated with the Program is expected to be the portable drill. The Program description indicates the probable use of a Longyear LF-70 or comparable drill. According to vendor specifications, this drill typically uses a 106 horsepower diesel engine. Emissions based on this engine size have been calculated using the United States Environmental Protection Agency AP-42 emission factors and the Screen 3 dispersion model has been used to estimate downwind concentrations of airborne compounds. Likewise, noise emissions from this unit were also estimated using published data for diesel powered equipment.

3.7.2 Results

3.7.2.1 Air Quality

Table 3-7 shows the results of the screening level air quality assessment. Based on "worst-case" meteorology, ambient concentrations of the following compounds are presented:

- sulphur dioxide (SO_2);
- nitrogen dioxide (NO_2);
- carbon monoxide (CO); and
- total suspended particulate.

The predicted ambient concentrations presented in the table are also compared to the applicable NWT air quality criteria. The distance from the source to maximum ground-level concentration where ambient concentrations are 10% or less of the applicable criteria is also presented. All predicted ground-level concentrations are less than half of the applicable criteria.

Table 3-7
Predicted Ambient Air Concentrations ($\mu g/m^3$) of SO_2, NO_2, CO and PM for Screech Lake Target Site and Distance where Concentration is 10% of Air Quality Criteria

Emissions Source	SO_2 [1-Hr]	NO_2 [1-Hr]	CO [1-Hr]	PM [24-Hr]
Predicted Ambient Concentration [$\mu g/m^3$]l	1.9	185.7	590.9	28.0
Percent of the Criteria	0.4	46.4	3.9	23.3
Ambient Air Quality Criteria [$\mu g/m^3$]	**450**	**400**	**15,000**	**120**
Distance to 10% of the Criteria [m]	< 25	2100	< 25	200

3.7.2.2 Noise

Noise levels are not expected to exceed 94 dBA[1] at 10 m (Cowan 1994). While there are no published noise criteria in the NWT, the Alberta Energy and Utilities Board remote area criteria of 40 dBA at 1500 m from activity is often used. When general distance and atmosphere attenuation factors are considered (ISO 9613), noise from drilling activity will attenuate to approximately 26 dBA at 1500 m.

[1] The "volume" of a sound or noise is expressed on a logarithmic scale, in units called decibels (dB). Sound emissions and noise levels also have a "frequency". Environmental noise levels are usually presented as "A-weighted" decibels (or dBA), which incorporates the frequency response of the human ear.

4.0 BIOLOGICAL ENVIRONMENT

4.1 Aquatic Resources

4.1.1 Data Collection Process

The fish community and fish habitat screening was conducted to identify possible environmental impacts of the Program to fish and fish habitat. Fisheries resources in Screech Lake and the local study area were determined so that issues and possible mitigation measures might be addressed.

The fisheries resources component of the screening study included an examination of existing data in Ur Energy literature, web accessible databases from Federal and Territorial sources, and conservation officer information for the local study area. The information included fish community composition, fish habitat, water quality, sediment quality, and the potential for environmental impacts to these aquatic components.

Topographical maps (1:50,000) were examined for the presence of fish bearing water ways. Local, territorial, and regulatory agencies were contacted to further verify listed species. Listed species identified in the region were cross-referenced with Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and protected under *Species at Risk Act* (SARA).

4.1.2 Results

4.1.2.1 Fisheries Resources

While the reviewed literature does not specifically identify aquatic species in Screech Lake, the Thelon River is well known to support aquatic life. Lakes of similar (approximately 38 ha) and smaller size located 400 km north of Screech Lake do support several sport fish species (Urangesellschaft Canada Limited [UCL] 1989). The species reported in these lakes were primarily lake trout (*Salvelinus namaycush*), arctic grayling (*Thymallus arcticus*) and round whitefish (*Prosopium cylindraceum*) (UCL 1989), none of which are endangered or at risk (COSEWIC 2006). During a more recent site visit conducted by Ur Energy, arctic grayling and small lake trout were observed within Screech Lake (Jack Charlton pers. comm. 2006).

4.1.2.2 Fish Habitat

The Screech Project Area is located approximately 500 km east of Yellowknife. The proposed drill permit area is approximately 14 km^2 in size and covers all of Screech Lake in addition to several smaller lakes and streams surrounding Screech Lake (Figure 2-1). Screech Lake and the surrounding area was the focus of a wide variety of surveys completed between 1976 and 1978 (UCL 1978 Annual Report). Screech Lake is a spring-fed, relatively small and shallow lake approximately 1.5 km in length and 300 m wide with an average depth of 1 m to 2 m. However, parts of the lake can reach up to 5 m in depth (UCL 1978).

A water sample Program was carried out on Screech Lake in 1977 (UCL 1978). During the investigation it was observed that the conductivity was very high while the pH averaged 5, which appears to be consistent with the local area (UCL 1978). In addition to an underwater radiometric survey, sediment samples were collected in 1978. The underwater survey identified several springs located at the bottom of the lake. Quick flowing, cold milky water was observed emerging from within trenches and craters in the lake that averaged a depth of 3 m and had steeply sloped walls (UCL 1978).

Water and sediment samples were also collected from Screech Lake during a second study conducted in 1979 (UCL 1981). Sediment samples collected during this study consisted mainly of grey-brown clay intermixed with organic material (UCL 1981). Water samples collected from Screech Lake had an average pH of 6.4 which was more alkaline than other surrounding water with an average pH of 5.5.

Additional areas of potential exploration consist of those designated as target areas BT, SE, D, E and F (Figure 2-1). All potential sites are located between 6 km to 10 km from Screech Lake and range in size from 2.75 km^2 (BT) to 10.75 km^2 (SE). All sites incorporate a water body in the form of a stream, river or lake, and they reside to the east of the Thelon River with the closest site being approximately 1 km to the east of the Thelon River. The larger lakes will likely support fish species such as lake trout, arctic grayling, round whitefish, longnose sucker (*Catostomus commersoni*) and burbot (*Lota lota*). In smaller lakes it is expected that lake chub (*Couesius plumbeus*) and slimy sculpin (*Cottus cognatus*) would be found and possibly arctic grayling on a seasonal basis only.

The Thelon River flows north-easterly from the headwaters near the Saskatchewan border to the south and from the east of Great Slave Lake, across the main central barrens area to Baker Lake. With the exception of a 65 km stretch of the Thelon River that flows through a dense spruce forest, it is located several hundred kilometres north of the tree line and flows primarily through open tundra (Giberson and Shaverdo 2003). The Thelon

River bed substrate consists generally of sand and silt-embedded cobble (Giberson and Shaverdo 2003). Although no sport fishing lodges exist on the Thelon River it is known to support lake trout, round whitefish (Indian and Northern Affairs Canada [INAC] 1979), humpback whitefish (*Coregonus pidschian*), cisco (*Coregonus artedii*), slimy sculpin, spoonhead sculpin (*Cottus ricei*), and lake chub (Canadian Heritage Rivers System [CHRS] 2006).

Although information on Looksok Lake was not located, its size and proximity to the Thelon River suggests that it would be a fish bearing water body. Lake trout have been caught in Looksok Lake (J. Charlton pers. comm. 2006).

4.2 Terrestrial Resources

4.2.1 Data Collection Process

An investigation of existing baseline data for terrestrial resources such as wildlife, soils, and vegetation was conducted. An effort to focus particularly on federal and terrestrial listed plant and wildlife species was made. Key issues that were attempted to address included: identification of environmentally sensitive habitats, identification of federal and territorial plant and wildlife species listed (COSEWIC 2006) and protected under the SARA and the *NWT Wildlife Act*, non-listed wildlife species that may occur in the area, and classification of soils, vegetation, and wildlife habitat.

4.2.2 Results

4.2.2.1 Wildlife

Riparian areas of the Thelon River valley contain habitats unique to the inland Arctic region. Typical wildlife species of the area include barren-ground caribou (*Rangifer tarandus groenlandicus*), moose (*Alces alces*), muskox (*Ovibus moschatus*), grizzly bear (*Ursus arctos*), wolverine (*Gulo gulo*), wolf (*Canis lupus*), arctic fox (*Alopex lagopus*), red fox (*Vulpes vulpes*), and a variety of waterfowl, shorebirds, and songbirds.

According to the Land Use Information Series (INAC 1979), Screech Lake is located within important nesting and staging areas for waterfowl, geese, swans and cranes. The area also contains important denning habitat for wolves and fox. The Thelon River valley is considered the single most important wildlife zone of the eastern barrens (INAC 1979). Other important wildlife habitat within 10 km of Screech Lake identified by the Land Use Information Series map include areas commonly used by grizzly bears, year-round moose habitat and eskers with denning red foxes.

Twenty-eight terrestrial mammals may occur in or near the Screech Lake Program area (Department of Resources and Economic Development [RWED] 2000). Table 4-1 summarizes these species and identifies their designations. Below is the general biology and life histories of key wildlife species likely to occur in or near the Screech Lake Program area.

Table 4-1
Terrestrial Mammalian Species with Potential to be Located within the Screech Lake Project Area

Common Name	Latin Name	Territorial Status	COSEWIC Status[a]
Moose	*Alces alces*	Secure	NL
Muskox	*Ovibus moschatus*	Secure	NL
Barrenland Caribou	*Rangifer tarandus groinlandicus*	Secure	NL
River Otter	*Lutra Canadensis*	Sensitive	NL
Grizzly Bear	*Ursos arctos*	Sensitive	SC
Arctic Fox	*Alopex lagopus*	Secure	NL
Gray Wolf	*Canis lupus*	Secure	NL
Wolverine	*Gulo gulo*	Secure	SC
Marten	*Martes Americana*	Secure	NL
Lynx	*Lynx Canadensis*	Secure	NL
Ermine	*Mustela erminea*	Secure	NL
Least Weasel	*Mustela nivalis*	Secure	NL
Mink	*Mustela vison*	Secure	NL
Red Fox	*Vulpes vulpes*	Secure	NL
Coyote	*Canis latrans*	Undetermined	NL
Masked Shrew	*Sorex cinereus*	Secure	NL
Barrenground Shrew	*Sorex ugyunak*	Undetermined	NL
Arctic Hare	*Lepus arcticus*	Secure	NL
Northern Flying Squirrel	*Glaucomys sabrinus*	Sensitive	NL
Northern Red-Backed Vole	*Clethrionomys rutilus*	Secure	NL
Brown Lemming	*Lemmus sibiricus*	Secure	NL
Meadow Vole	*Microtus pennsylvanicus*	Secure	NL
Muskrat	*Ondrata zibethicus*	Secure	NL
(Eastern) Heather Vole	*Phenacomys intermedius (ungava)*	Secure	NL
Arctic Ground Squirrel	*Spermophilus parryii*	Secure	NL
Red Squirrel	*Tamiasciurus hudsonicus*	Secure	NL
Perry Land Collared Lemming	*Dicrostonyx groenlandicus*	Undetermined	NL
Richardson's Lemming	*Dicrostonyx richardsoni*	Undetermined	NL

Note: a = Committee on the Status of Endangered Wildlife in Canada; NL = not listed; SC = Special Concern.

Caribou

There are four subspecies of caribou in the NWT. They include the barren-ground, woodland, Peary caribou, and Grant's caribou. Barren-ground caribou are the most widely distributed and occur throughout much of the NWT and Nunavut. Although caribou herds that migrate through the local study area are not a federal or territorial listed species, barren-ground caribou are an important species in the ecosystem, and have high economic and cultural value.

Barren-ground caribou are migratory. Most herds winter in forested habitats below the tree-line; however, the Cape Bathurst and Ahiak herds may over-winter on the tundra (Environment and Natural Resources 2006). Pregnant cows begin the spring migration from over-wintering areas to traditional calving grounds in March and April. Calves are usually born within a few days of each other during the first two weeks of June. After calving, cows and calves begin their southward migration to over-wintering areas. The rut occurs in October and lasts for two to three weeks.

Barren-ground caribou have been separated into seven herds based on the location of their traditional calving grounds. These herds include the Cape Bathurst, Bluenose west, Bluenose east, Bathurst, Ahiak (Queen Maud Gulf), Beverly, and Qamanirjuaq. The Screech Lake Program area is used extensively by the Beverly herd. Their traditional calving grounds include central portions of the Thelon Wildlife Sanctuary and extend northeast into Nunavut. Data provided by the Beverly and Qamanirjuaq Caribou Management Board (BQCMB) suggest that the Screech Lake Program area is located in the spring range of the Beverly herd and is used between mid-March and late May. Specifically, the data indicate that the Screech Lake Program area is situated within a primary migratory corridor and congregation area. Other herds known to occur in the area include the Qamanirjuaq, Bathhurst, and Ahiak.

Traditional calving grounds of the Bathurst and Ahiak herds are located to the northwest and northeast of the Program area respectively. However, the winter range of the Ahiak herd includes the Screech Lake Program area. Data obtained from satellite collars indicate that some caribou of the Bathurst herd over-winter near the Screech Lake Program area (Environment and Natural Resources 2006).

The traditional calving grounds, post-calving ranges, migration corridors, and concentration areas of the Qamanirjuaq herd occur mainly east of the Screech Lake Program area in Nunavut. However, some may use habitats near the Screech Lake Program area during spring/fall migration and the post-calving period (BQCMB 2006).

Muskox

In Canada, muskoxen are most abundant on the Arctic Islands, particularly Banks, Ellesmere, Melville, and Victoria islands. Mainland populations occur north of Great Bear Lake, around the Queen Maud Gulf, and the Thelon Wildlife Sanctuary southwest to Artillery Lake. The muskox is not a federal or territorial listed species. In the NWT, muskoxen are harvested under quota on three areas of the Arctic islands and four areas on the mainland. Some local communities and aboriginal groups sell a portion of their quota as guided hunts.

Muskoxen typically inhabit low-lying coastal or inland plains and river valleys where shrubs are abundant. Breeding occurs between August and September. Calves are born from the first week of April until mid-May. Herd size and composition is a function of season, range condition, and the number of bulls in a given population. After the breeding season, herd size tends to increase to an average of 15 individuals. Muskoxen do not undertake long migrations, but some populations utilize distinct summer and winter ranges up to 160 km apart.

Grizzly Bear

Grizzly bears occur throughout much of the NWT, and are listed as a "species of special concern" by COSEWIC (2006). Actions are currently being taken to revise the federal listing of grizzly bears from Schedule 3 to Schedule 1 under the SARA. Grizzly bears are listed as "sensitive" by the GNWT (RWED 2000).

Grizzly bears utilizing tundra habitats require large home ranges of up to 6,700 km^2 for males and 2,100 km^2 for females (Environment and Natural Resources 2006). Their diet is varied ranging from plants and berries to caribou. Breeding occurs in June and July and cubs are born between January and March. In the arctic, grizzly bears hibernate for approximately seven months. McLoughlin *et al.* (2002) found that grizzly bears select eskers for den sites significantly more than expected based on the availability of esker habitat, but the proportion of dens located in eskers was lower relative to other habitats. For example, of the 56 dens located during the study, 12.5% (7 dens) were found on eskers, while 41.1% (23 dens) were found in heath tundra habitat, 19.6% (11 dens) were in heath tundra/boulder habitat, and 14.3% (8 dens) were located in riparian tall shrub and birch seep habitats (McLoughlin *et al.* 2002).

In the NWT, grizzly bear populations are managed primarily by controlling the resident and non-resident hunting seasons. Currently, resident hunters can only harvest grizzly bears from the Mackenzie Mountains and are allowed one bear per lifetime. Non-resident hunters must use the services of a licensed outfitter. Subsistence hunting of grizzly bears by Aboriginal people is permitted. On the barren grounds, some Aboriginal communities have established small harvest quotas (Environment and Natural Resources 2006).

Wolverine

The wolverine is sparsely distributed across western and northern Canada. It occupies a variety of habitats including mountainous regions of British Columbia, Alberta, Yukon, and the NWT, northern forested habitats of Alberta, Saskatchewan, and Manitoba, and the Tundra regions of the Yukon, NWT, and Nunavut. The western population of wolverine is listed as a "species of special concern" COSEWIC (2006), and actions are currently being taken to revise the listing from Schedule 3 to Schedule 1 under SARA. The GNWT lists the wolverine as "secure" (RWED 2000).

The home range of wolverines varies from 50 km^2 to 400 km^2 for females and 230 km^2 to 1,580 km^2 for males (Environment and Natural Resources 2006). Wolverines are omnivorous and opportunistic. Food items range from roots and berries to carrion. Breeding occurs between April and September and young are born between March and April.

4.2.2.2 Birds

The Screech Lake Program area and surrounding habitats are likely to support populations of the tundra peregrine falcon (*Falco peregrinus tundrius*), gyrfalcon (*Falco rusticolus*), rough-legged hawk (*Buteo lagopus*), bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), and a variety of waterfowl, shorebirds, and passerines.

The GNWT (Environment and Natural Resources) maintains a data base of all known raptor nests. None were identified in or near the Screech Lake Program area (Carriere pers. comm. 2006).

One-hundred bird species may breed in or near the Screech Lake Program area (RWED 2000; Smith *et al.* 2005; UCL 1989; CWS 2006). Table 4-2 lists these species and their territorial or federal designations.

Table 4-2
Bird Species with Potential to Breed within Screech Lake Project Area

Common Name	Latin Name	Territorial Status	COSEWIC Status[a]
Northern Pintail	*Anas acuta*	Sensitive	NL
Oldsquaw	*Clangula hyemalis*	Sensitive	NL
Lesser Scaup	*Aythya affinis*	Sensitive	NL
Greater Scaup	*Aythya marila*	Secure	NL
White-winged Scoter	*Melanitta fusca*	Sensitive	NL
American Wigeon	*Anas americana*	Secure	NL
Blue-winged Teal	*Anas discors*	Secure	NL
Green-winged Teal	*Anas crecca*	Secure	NL
Northern Shoveler	*Anas clypeata*	Secure	NL
Mallard	*Anas platyrhynchos*	Secure	NL
Greater White-fronted Goose	*Anser albifrons*	Secure	NL
Ross's Goose	*Anser rossii*	Secure	NL
Snow Goose	*Anser caerulescens*	Secure	NL
Canada Goose	*Branta canadensis*	Secure	NL
Bufflehead	*Bucephala albeola*	Secure	NL
Common Goldeneye	*Bucephala clangula*	Secure	NL
Tundra Swan	*Cygnus columbianus*	Secure	NL
Common Merganser	*Mergus merganser*	Secure	NL
Red-breasted Merganser	*Mergus serrator*	Secure	NL
Eskimo Curlew	*Numenius borealis*	At risk	END
Least Sandpiper	*Calidris minutilla*	Sensitive	NL
Wilson's Snipe	*Gallinago delicata*	NL	NL[b]
Semipalmated Sandpiper	*Calidris pusilla*	Sensitive	NL
Common Snipe	*Gallinago gallinago*	Sensitive	NL
Red-necked Phalarope	*Phalaropus lobatus*	Sensitive	NL
American Golden Plover	*Pluvialis dominica*	Sensitive	NL
Lesser Yellowlegs	*Tringa flavipes*	Sensitive	NL
Baird's Sandpiper	*Calidris bairdii*	Secure	NL
Pectoral Sandpiper	*Calidris melanotos*	Secure	NL
Herring Gull	*Larus argentatus*	Secure	NL
California Gull	*Larus californicus*	Secure	NL
Mew Gull	*Larus canus*	Secure	NL
Bonaparte's Gull	*Larus philadelphia*	Secure	NL
Common Tern	*Sterna hirundo*	Secure	NL
Arctic Tern	*Sterna paradisaea*	Secure	NL
Spotted Sandpiper	*Actitis macularia*	Undetermined	NL
Stilt Sandpiper	*Calidris himantopus*	Undetermined	NL

Table 4-2
Bird Species with Potential to Breed within Screech Lake Project Area Continued

Common Name	Latin Name	Territorial Status	COSEWIC Status[a]
White-rumped Sandpiper	*Calidris fuscicollis*	Secure	NL
Semipalmated Plover	*Charadrius semipalmatus*	Undetermined	NL
Long-tailed Jaeger	*Stercorarius longicaudus*	Undetermined	NL
Parasitic Jaeger	*Stercorarius parasiticus*	Undetermined	NL
Belted Kingfisher	*Ceryle alcyon*	Secure	NL
Tundra Peregrine Falcon	*Falsco peregrinus tundrius*	May Be At Risk	SC
Golden Eagle	*Aquila chrysaetos*	Sensitive	NL
Northern Goshawk	*Accipiter gentilis*	Secure	NL
Rough-legged Hawk	*Buteo lagopus*	Secure	NL
Sharp-shinned Hawk	*Accipter striatus*	Secure	NL
Northern Harrier	*Circus cyaneus*	Secure	NL
Merlin	*Falco columbarius*	Secure	NL
Gyrfalcon	*Falco rusticolus*	Secure	NL
Bald Eagle	*Haliaeetus leucocephaluse*	Secure	NL
Rock Ptarmigan	*Lajopus mutus*	Sensitive	NL
Spruce Grouse	*Dendragapus canadensis*	Secure	NL
Willow Ptarmigan	*Lagopus lagopus*	Secure	NL
Common Loon	*Gavia immer*	Secure	NL
Pacific Loon	*Gavia pacifica*	Secure	NL
Red-throated Loon	*Gavia stellata*	Secure	NL
Yellow-billed Loon	*Gavia adamsii*	Undetermined	NL
Sandhill Crane	*Grus canadensis*	Secure	NL
Northern Shrike	*Lanius excubitor*	Secure	NL
American Pipit	*Anthus rubescens*	Sensitive	NL
Olive-sided Flycatcher	*Contopus cooperi*	Sensitive	NL
Blackpoll Warbler	*Dendroica striata*	Sensitive	NL
Black-capped Chickadee	*Poecile atricapillus*	Secure	NL
Boreal Chickadee	*Poecile parus*	Sensitive	NL
American Tree Sparrow	*Spizella arborea*	Sensitive	NL
Harris's Sparrow	*Zonotrichia querula*	Sensitive	NL
Bohemian Waxwing	*Bombycilla garrulus*	Secure	NL
Common Redpoll	*Carduelis flammea*	Secure	NL
Ruby-crowned Kinglet	*Regulus calendula*	Secure	NL
Eastern Phoebe	*Sayornis phoebe*	Secure	NL
Tree Swallow	*Tachycineta bicolor*	Secure	NL
Cliff Swallow	*Petrochelidon phyrrhonota*	Secure	NL
Gray-cheeked Thrush	*Catharus minimus*	Secure	NL

Table 4-2
Bird Species with Potential to Breed within Screech Lake Project Area Continued

Common Name	Latin Name	Territorial Status	COSEWIC Status[(a)]
Swainson's Thrush	*Catharus ustulatus*	Secure	NL
Common Raven	*Corvus corax*	Secure	NL
Yellow-rumped Warbler	*Dendroica caerulescens*	Secure	NL
Yellow Warbler	*Dendroica perechia*	Secure	NL
Horned Lark	*Eremophila alpestris*	Secure	NL
Dark-eyed Junco	*Junco hyemalis*	Secure	NL
White-winged Crossbill	*Loxia leucoptera*	Secure	NL
Savanna Sparrow	*Passerculus sandwichensis*	Secure	NL
Gray Jay	*Perisoreus canadensis*	Secure	NL
American Robin	*Turdus migratorius*	Secure	NL
White-crowned Sparrow	*Zonotrichia leucophrys*	Secure	NL
Lapland Longspur	*Calcarius lapponicus*	Undetermined	NL
Smith's Longspur	*Calcarius pictus*	Undetermined	NL
Hoary Redpoll	*Carduelis hornemanni*	Undetermined	NL
Fox Sparrow	*Passerella iliaca*	Undetermined	NL
Pine Grosbeak	*Pinicola enucleator*	Undetermined	NL
Snow Bunting	*Plectrophenax nivalis*	Undetermined	NL
European Starling	*Sturnus vulgaris*	Exotic	NL
Rusty Blackbird	*Euphagus carolinus*	Sensitive	NL
Northern Flicker	*Colaptes auratus*	Sensitive	NL
Three-toed Woodpecker	*Picoides tridactylus*	Secure	NL
Snowy Owl	*Nyctea scandiaca*	Secure	NL
Great-horned Owl	*Bubo virginianus*	Secure	NL
Boreal Owl	*Aegolius funereus*	Secure	NL
Northern Hawk Owl	*Surnia ulula*	Secure	NL
Short-eared Owl	*Asio flammeus*	Sensitive	SC

Note:

a = Committee on the Status of Endangered Wildlife in Canada; END = Endangered; NL = not listed, SC = Special Concern.

b = Smith *et al.* (2005) list species as a breeding bird and the Birds of North America indicate that it breeds near the Screech Lake Program area.

The following sections provide a summary of the general biology and life histories of key bird species likely to occur in or near the Screech Lake Program area. Federal and territorial listed bird species have also been identified.

Peregrine Falcon

Two sub-species of peregrine falcon occur in the NWT. The *anatum* subspecies occurs south of the tree line and is most abundant in the Mackenzie River valley. The tundrius subspecies is found north of the tree line up to the Arctic coast and islands. The tundrius subspecies, which may occur in the Program area, is listed by COSEWIC (2006) as a "species of special concern" under Schedule 3 of SARA (2006). The GNWT lists the tundra peregrine as "may be at risk" (RWED 2000).

Peregrines typically nest on cliff ledges near water and have home ranges that extend up to 27 km from the nest (Environment and Natural Resources 2006). Peregrines begin nesting between May and June and lay two to four eggs. Both parents incubate eggs for an average of 36 days. Chicks fledge at approximately 35 days to 40 days after hatching; however, adults continue to feed the chicks for an additional five to six weeks. Prey consists of waterfowl, passerines, shorebirds, and small mammals.

Eskimo Curlew

The Eskimo curlew was once an abundant shorebird. Currently, if not extinct, the world population is likely less than 100 birds (Environment and Natural Resources 2006). The last confirmed sighting of an Eskimo curlew was in Galveston Island, Texas in 1962. In the NWT, the last unconfirmed sighting was in July 1992. The Eskimo curlew is listed as "endangered" under Schedule 1 of SARA (2006), and the GNWT lists the bird as "at risk" (RWED 2000).

Eskimo curlews over-wintered in South America and migrated to Arctic regions during April and May to breed. Historical breeding grounds were located northwest of the Screech Lake Program area. Population densities were highest east of the Anderson River along the Arctic coast to Kugluktuk and south to Snare Lake. Nesting began in mid to late June and an average of four eggs was laid. Hatching occurred in July. Food consisted of berries and various insects.

Short-eared Owl

The short-eared owl is listed by COSEWIC (2006) as a "species of special concern" under Schedule 3 of SARA (2006). The GNWT lists the short-eared owl as "sensitive" (RWED 2000).

In the NWT, short-eared owls occur throughout the tundra. Breeding can begin in April and may extend into August. Duration of the breeding season is influenced by prey species abundance (Environment and Natural Resources 2006). Short-eared owls nest on the ground and lay an average of six eggs that are incubated for 24 to 28 days. Chicks fledge 24 to 28 days after hatching. Prey species consist of small mammals and birds. Short-eared owls over-winter in southern Canada and the United States.

4.2.2.3 Reptiles and Amphibians

Six species of amphibians and two species of reptiles inhabit areas of the NWT. All species found in the NWT represent the northernmost extent of their range in North America. Information reviewed for this screening study suggests that reptiles and amphibians are limited to habitats south of the tree line. Subsequently, amphibians and reptiles are not expected to occur in or near the Screech Lake Program area.

4.3 Soils and Vegetation

4.3.1 Data Collection Process

Vegetation classification was conducted as a desktop exercise using remote sensing data. Landsat Thematic Mapper satellite imagery was collected for the Program area in early 2006. A supervised vegetation classification of the imagery was undertaken by a trained remote sensing analyst using regional training areas. The vegetation classes and general descriptions were taken from regional reports including UCL (1987) and De Beers (2002). No ground truthing of the remote sensing exercise was conducted.

4.3.2 Results

The proposed Screech Lake Program is situated entirely within the Kazan River Upland Ecoregion of the Taiga Shield Ecozone (EC 2005). The Taiga Shield Ecozone is characterized by a mosaic of lakes, wetlands, and open forests where underlying Precambrian bedrock is often exposed. Permafrost is discontinuous but widespread (EC 2005). Within this ecozone, trees are small and tree coverage is generally low. Jack pine are found in low densities along hilltops in association with small black spruce, reindeer lichen and exposed bedrock.

The typical vegetation in the Kazan River Upland Ecoregion consists of open, very stunted stands of black spruce and tamarack with some white spruce, a shrub layer of dwarf birch, willow, and ericaceous shrubs, and a ground cover of cottongrass, lichen, and moss. Drier sites can be dominated by open stands of white spruce, ericaceous shrubs, and a ground cover of mosses and lichens. Poorly drained sites usually support tussock vegetation of sedge, cottongrass, and sphagnum moss. Low shrub tundra vegetation, consisting of dwarf birch and willow, is also common (EC 2005).

4.3.2.1 Soils

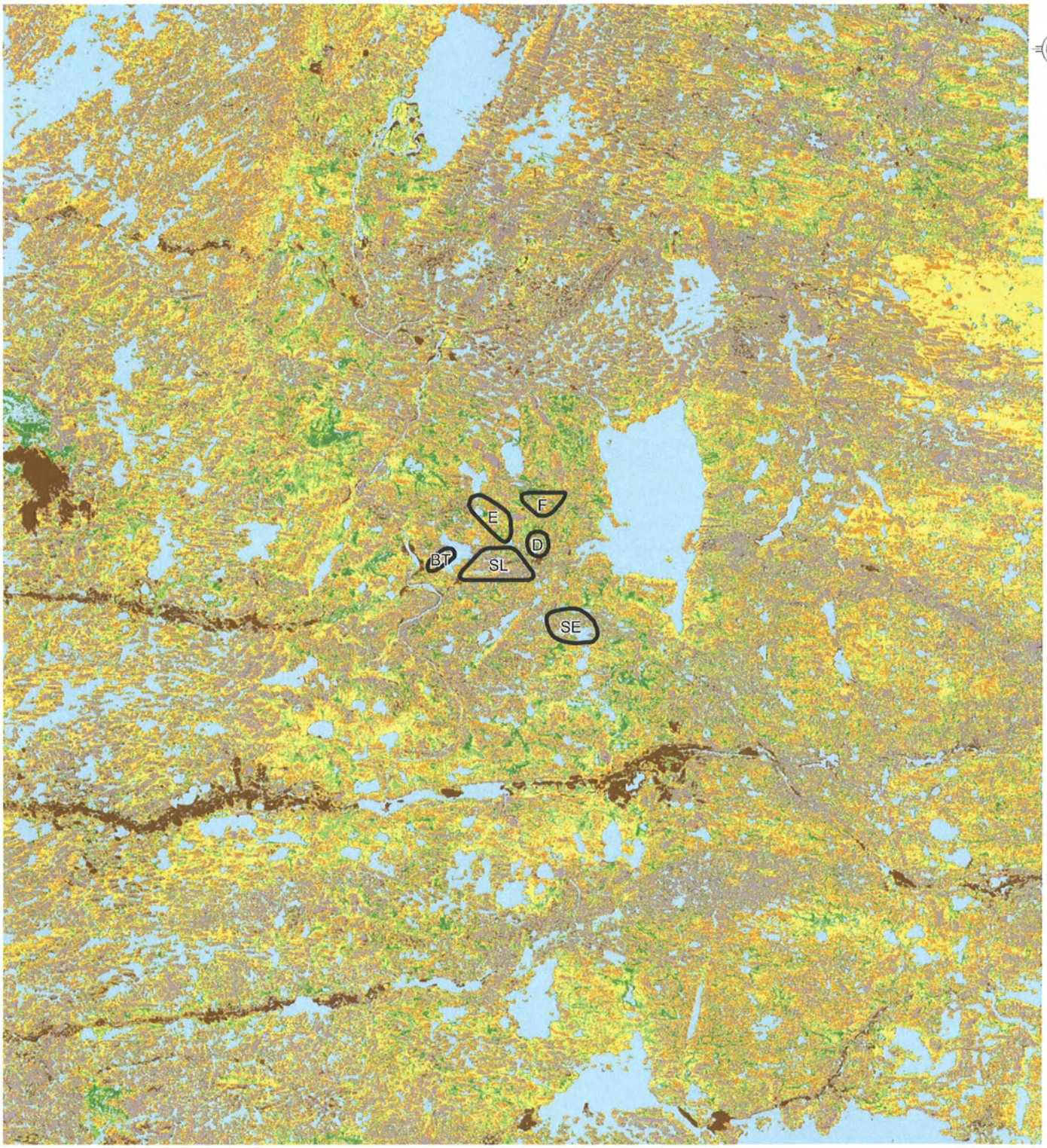
Ridged to hummocky bedrock outcrops covered with discontinuous acidic, sandy, granitic till are characteristic of the area. Prominent eskers and small to medium-sized lakes are common. Dystric Brunisols commonly occurring on sandy eskers are the dominant soils. However, Turbic Cryosolic soils are common in permanently frozen sites, and Organic Cryosols are typical of wetlands. Patterned ground is widespread, and mineral soils exhibit discontinuous or distorted soil horizon development. Permafrost is often discontinuous and has low to medium ice content (EC 2005).

Detailed soil information is not available for the Project area. However, a survey conducted northeast of the Project described primarily Static Cryosols developed on sandy loam textured soils (UCL 1989). It is expected that concerns of operations on permafrost will be the primary focus in the study area.

4.3.2.2 Vegetation

A total of six vegetation types were delineated from the remote sensing data. Since there has been no field Programs conducted on this site, descriptions of these vegetation types are derived for existing regional reports (UCL 1987 and De Beers 2002). Vegetation types are shown in Figure 4-1. The vegetation types are:

- ***Cloud-Bare Ground***: This vegetation type includes areas of exposed bedrock and associated lichen communities. Vegetation is concentrated in cracks and crevasses in the bedrock where there is some soil and moisture can accumulate. Small vascular plants such as bog bilberry, bearberry, and crowberry can be expected, along with various lichen species. This class also includes small areas where data could not be collected due to cloud cover.
- ***Conifer – Closed***: This vegetation type occurs on deeper soils with mesic nutrient regime and a mesic moisture regime. This type is characterized by a black spruce canopy and scattered white spruce and jackpine on drier sites. Canopy closer is greater than 30%. Sphagnum mosses, grass and shrubs such as Labrador tea and cloudberry are expected in the understory.



LEGEND

- Water
- Deciduous - Tall Shrub
- Bare Ground
- Tundra
- Conifer - Closed
- Mixed Wood
- Conifer - Open
- Study Areas

10 0 10

SCALE 1:500,000 KM

NAD 83, ZONE 13

PROJECT

Ur-ENERGY INC.
SCREECH LAKE SCREENING STUDY

TITLE

VEGETATION CLASSIFICATION IN THE SCREECH LAKE AREA

Golder Associates
Saskatoon, Saskatchewan

PROJECT		06-1365-036	FILE No.	
DESIGN			SCALE AS SHOWN	REV. 0
GIS	JRC	05/03/06		
CHECK			FIGURE: 4-1	
REVIEW	DB	19/07/06		

G:\2006\1365\06-1365-036 UR Energy\GIS\06-1365-036-Fig 4-1 Veg Classification Revised.mxd

- ***Conifer Open***: This type is characterized by open, stunted black spruce and jackpine with canopy closure less than 30%. Open conifer stands can occur on a variety of conditions ranging from swallow soils on exposed bedrock to wetland transition areas. Labrador tea is expected to dominate the understory. This type may also include tree fen and bogs.
- ***Deciduous Tall Shrub***: This type is expected to occur along the margins of wetlands and lakes and in riparian areas along active streams. Shrubs such as birch, willow species, and green alder are expected. These sites can have good understory development, with dwarf raspberry, cloudberry, grasses, sedges, club mosses, and common horsetail expected. This type may also include areas of fens and marshes.
- ***Tundra***: The tundra vegetation type is a closed mat plant community that grows on moderate to well drained soils. Plants generally belong to the heath or *Ericacea* family. Low shrubs such as dwarf birch and Labrador tea are common with lingonberry, blueberry, crowberry, alpine milk-vetch and alpine azalea expected.
- ***Mixed Wood***: The mixed wood vegetation type is typically characterized by a birch and black spruce overstory developed on deep, relatively rich soils. Shrub species may include Labrador tea and black current. This type may also include wetland areas with tall willow species and black spruce.

The areas and proportions of the vegetation types classified in the region are summarized in Table 4-3. Tundra and mixed wood classes comprise about 45% of the region. Water (*i.e.*, lakes, ponds and rivers) compose about 18% of the region.

Table 4-3
Total Area of Vegetation Types in the Region

Vegetation Class	Area (ha)	Percent
Water	183,903	18.4
Cloud - Bare Ground	31,199	3.1
Conifer - Closed	41,708	4.2
Conifer - Open	123,610	12.3
Deciduous Tall shrub	172,328	17.2
Tundra	258,625	25.8
Mixed Wood	189,659	18.9
Total	1,001,033	100

The areas and proportions of the vegetation types classified in the Screech Lake area, BT area and SE area are summarized in Table 4-4. Tundra is the most common vegetation type in the Screech Lake area (40.2%) and the SE area (29.5%), while the most common vegetation type in the BT area is Deciduous Tall shrub (24.6%).

Table 4-4
Distribution of Vegetation Classes in the Screech Lake, BT, and SE Designated Areas

Vegetation Class	Screech Lake Area		BT Area		SE Area	
	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
Water	136	9.9	70	25.5	288	26.8
Cloud - Bare Ground	38	2.7	3	0.9	13	1.3
Conifer - Closed	68	4.9	10	3.7	53	4.9
Conifer - Open	152	11.0	21	7.8	133	12.4
Deciduous Tall shrub	251	18.2	68	24.6	150	14.0
Tundra	552	40.2	65	23.6	317	29.5
Mixed Wood	179	13.0	38	13.9	121	11.2
Total	1,375	100	275	100	1,076	100

The areas and proportions of the vegetation types classified in D area, E area, and F Area are summarized in Table 4-5. Deciduous Tall Shrub (23.9%) and Tundra (22.0%) are the most common vegetation type in the D area, while the most common vegetation types in the E and F areas are Deciduous Tall shrub (24.2% and 25.8%) and Conifer-Open (22.3% and 22.8%).

Table 4-5
Distribution of Vegetation Classes in D, E, and F Designated Areas

Vegetation Class	D Area		E Area		F Area	
	Area (ha)	Percent	Area (ha)	Percent	Area (ha)	Percent
Water	28	8.7	80	9.5	3	0.5
Cloud - Bare Ground	5	1.6	3	0.4	1	0.2
Conifer - Closed	45	13.8	67	7.9	74	13.2
Conifer - Open	58	18.0	189	22.3	129	22.8
Deciduous Tall shrub	77	23.9	204	24.2	145	25.8
Tundra	71	22.0	120	14.2	109	19.2
Mixed Wood	39	12.1	182	21.5	103	18.3
Total	324	100	846	100	564	100

4.3.2.3 Rare Plants

A preliminary list of rare and sensitive plant species potentially occurring in the Project area was developed using information presented in the RWED, Government of the NWT website (RWED 2005 website) (Table 4-6). This list includes plant species listed by RWED (2005) as "sensitive", "may be at risk", "at risk" or "undetermined". None of these species are currently listed under COSEWIC (2006).

Table 4-6
Territorial Listed Vascular Plant Species Potentially found within Vegetation Communities in the Taiga Shield Ecozone

Family	Scientific Name[a]	Common Name	Habitat	RWED 2005 NWT Status Rank[b]
Brassicaceae	*Arabis drummondii*	Drummond rock cress	rich herbmat slopes	Undetermined
Apiaceae	*Cicuta bulbifera*	bulb – bearing – water hemlock	marsh lake shores, stream banks	Sensitive
Asteraceae	*Cirsium drummondii*	Drummond's thistle	dry meadows and disturbed areas	Sensitive
Orchidaceae	*Coeloglossum viride (Habenaria viridis var. Bracteata)*	long-bracted green orchid	moist, sandy places in mixed woods	Undetermined
Potamogetonaceae	*Potamogeton obtusifolius*	Blunt-Leaf Pondweed	Shallow lakes and ponds	May be at risk
Potamogetonaceae	*Potamogeton robbinsii*	Flatleaf Pondweed	aquatic	May be at risk
Juncaceae	*Juncus dudley*	Dudley's Rush	wet, calcareous, lowland meadows and river banks	Sensitive
Juncaceae	*Juncus stygius*	Moor Rush	wet margins of woodland bog pools	Sensitive
Juncaceae	*Juncus vaseyi*	Vasey Rush	lowland slough-margins, moist shores	Sensitive
Potamogetonaceae	*Potamogeton foliosus*	Leafy Pondweed	Shallow still waters	Sensitive
Orchidaceae	*Cypripedium acaule*	stemless lady's-slipper	moist moss or sandy woodland bogs	Undetermined
Dryopteridaceae	*Dryopteris carthusiana (D. spinulosa)*	spinulose wood fern	rich woods	May be at risk
Scrophuluriaceae	*Limosella aquatica*	mudwort	wet, muddy or sandy pond margins	May be at risk
Cyperaceae	*Schoenoplectus tabernaemontani (Scirpus validus)*	soft stemmed bulrush	in water up to 1m deep, sheltered lake shores	Undetermined
Acoraceae	*Acorus americanus (A. calamus)*	Several Vein Sweetflag	wetlands	Undetermined
Liliaceae	*Maianthemum canadense*	False Lily-of-the-Valley	sandy pine woods and rich woodland	Undetermined
Najadaceae	*Najas flexilis*	Slender Naiad	Shallow lakes and ponds	Undetermined

Table 4-6
Territorial Listed Vascular Plant Species Potentially found within Vegetation Communities in the Taiga Shield Ecozone Continued

Family	Scientific Name[a]	Common Name	Habitat	RWED 2005 NWT Status Rank[b]
Potamogetonaceae	*Potamogeton praelongus*	White-Stem Pondweed	still waters 1 to 2m deep	Undetermined
Potamogetonaceae	*Potamogeton strictifolius*	Straightleaf Pondweed	na	Undetermined
Potamogetonaceae	*Potamogeton zosteriformis*	Flatstem Pondweed	na	Undetermined
Scheuchzeriaceae	*Scheuchzeria palustris*	Pod Grass	pools on quaking bogs	Undetermined
Polypodiaceae	*Polydodium virginianum*	Rock Polypody	cliffs and rock slopes, on a variety of subsrates	Undetermined
Dryoptericaceae	*Gymnocarpium disjunctum (Dryopteris disjuncta)*	Pacific Oak Fern	rich and mainly deciduous woods	Undetermined
Isoetaceae	*Isoetes tenella (echinospora) (Isoetes muricata)*	Spiny-spored Quillwort	silty bottom of shallow bays and small lakes or ponds	Undetermined
Alismaceae	*Sagittaria cuneata*	Arrowhead spp	shallow water along calcareous, muddy shores	Undetermined
Valerianaceae	*Valeriana dioica var. V. eptentrionalis*	northern valerian	fens and lake shores	Sensitive

Note:

a = Scientific Name - many species have experienced name changes and several species listed in this table have been updated with the newer scientific names (the older names have been retained in parentheses).

b = RWED definitions:

May Be at Risk = species that may be at risk of extinction or extirpation, and are therefore candidates for detailed risk assessment. These species are ranked with the highest priority for a more detailed assessment by COSEWIC or a jurisdiction.

Sensitive = species that are not at risk of extinction or extirpation but may require special attention or protection to prevent them from becoming at risk. These species are ranked with a medium priority for further consideration.

Undetermined = species for which insufficient information, knowledge, or data is available to reliably evaluate their general status.

Not Assessed = potentially included species which have not been examined to date.

5.0 HERITAGE RESOURCES

5.1 Data Collection Process

Screening of heritage resources included review of available NWT heritage inventories for previously recorded locations and their significance relative to the study area. Existing public and government access literature was reviewed and known heritage locations were identified on 1:50,000 scale NTS maps relative to the target area.

5.2 Results

5.2.1 Previous Research in the Upper Thelon Basin

5.2.1.1 Early Published Accounts of the Upper Thelon

The earliest published descriptions of the Upper Thelon River basin relate to the first European explorers and fur traders. The accounts provide evidence that humans occupied this region from the earliest times before the presence of European traders and explorers. One of the earliest and most famous reports was that of Samuel Hearne on his trek from Fort Prince of Wales on the Hudson Bay coast at the mouth of the Churchill River to the mouth of the Coppermine River and back (Hearne 1796, 1958). Although the exact route is unknown, he crossed the Thelon basin somewhere in the upper reaches of the River.

A few years later, another Hudson's' Bay Company employee, Philip Turnor had a native guide draw a map for him showing the passage from Great Slave Lake to the Hanbury River, a tributary of the Thelon (Tyrrell 1934). Some years later, Richard Back travelled from Great Slave Lake over the Back River to the Arctic Ocean. His native guide drew a route for him indicating how to access the Thelon River (Back 1836). Richard King, a member of Back's crew, also had a First Nation informant draw up a travel route for him, this time from Lake Athabasca, a trip he never completed (King 1836). Clearly, First Nations groups had a substantial geographic knowledge of the Thelon River and the interconnecting creeks and lakes, an indication of the importance of the River in pre-European times.

Although European traders and explorers had known of the Upper Thelon River through their First Nations guides, it wasn't until the turn of the century that the First Europeans actually entered this system. David Hanbury made a journey from Chesterfield Inlet upstream to what is now known as the Hanbury River, which he ascended eventually making his way to Great Slave Lake (Hanbury 1900, 1904). He passed through the area again heading the opposite direction in 1901 (Hanbury 1903, 1904). At the confluence of the Hanbury and Thelon, Hanbury notes that they were well into the hunting grounds of the First Nations from Great Slave Lake.

Shortly after Hanbury's first trip up the Thelon and Hanbury Rivers, the Tyrrell brothers made a detailed survey of the Thelon in 1900 (Tyrrell 1901). Tyrrell's survey included a stretch of the Thelon River which boarders Ur Energy's proposed exploration area. Tyrrell made camp on August 6 on the west banks of the Thelon. Throughout the survey, Tyrrell documented evidence of native encampments including a "Very Old Indian Camp" 16 km south of Screech Lake (Figure 5-1).

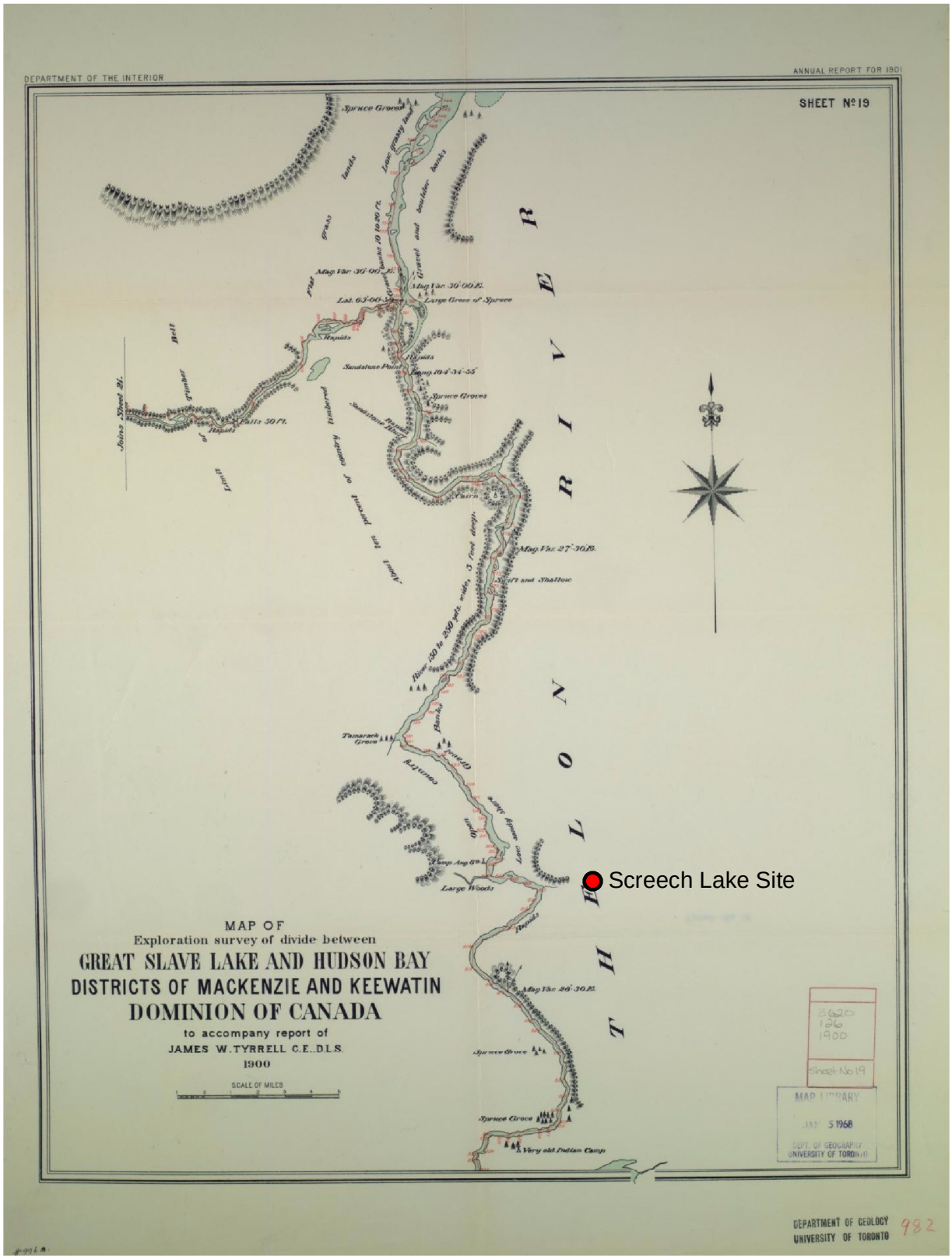
In 1914, Charles Camsell of the Geological Survey of Canada, travelled by canoe from Lake Athabasca to Great Slave Lake (Camsell 1916). He observed several known native canoe routes that meet at the headwaters of the Thelon. Camsell states, "[a]ll the canoe routes converge at a point on the edge of the Barren Grounds about the headwaters of the Thelon River, and the Indians from Lake Athabasca, Great Slave Lake, and the Slave River are in the habit of congregating in that locality in August every year to hunt caribou, which are said to pass there in thousands" (Camsell 1918: p212).

5.2.1.2 Archaeological Survey on the Upper Thelon

Although the importance of Upper Thelon River for human habitation was well known from the 18th to early 20th centuries, it was not until after World War II that any archaeological reconnaissances were conducted. One of the first archaeological Programs undertaken in the Great Slave Lake region was by Richard MacNeish (1951). Subsequent to that in the 1950s, reconnaissances were made of the Dubawnt River and the Middle and Lower Thelon Rivers (Harp 1959, 1961). This was followed up by work at Grant and Aberdeen Lakes (Irving 1968; Wright 1972).

The recorded archaeological resources of the Upper Thelon are known primarily through the work of Bryan Gordon (1975, 1996). Throughout the 1970s and into the early 1980s, Gordon examined much of the Thelon and several lakes and streams that are part of the headwaters of the Thelon and Dubawnt Rivers. Gordon provides archaeological evidence for the cultural importance of the Thelon River throughout the last 8,000 years.

Review of existing information from the Prince of Wales Northern Heritage Centre (PWNHC) archaeological database was completed for the study region. The closest heritage resources on file are located approximately 20 km upstream from the Screech Lake Program area (Figure 5-2).



Note: Scanned image; not to scale.

PROJECT

Ur-ENERGY INC.
SCREECH LAKE SCREENING STUDY

TITLE

J.W. TYRRELL 1900 MAP SHOWING LOCATION OF THE Ur-ENERGY PROJECT AREA

Golder Associates
Saskatoon, Saskatchewan

PROJECT		06-1365-036	FILE No.	
DESIGN			SCALE AS SHOWN	REV. 0
GIS	JRC	03/05/06		
CHECK				
REVIEW	DB	19/07/06		

FIGURE: 5-1

G:\2006\1365\06-1365-036 UR Energy\GIS\06-1365-036 Fig 5-1 Heritage Scan Map.mxd

These eight sites were recorded in 1976 during a reconnaissance of the Elk River branch of the Thelon from Damant Lake to Warden's Grove (Gordon 1996). The sites are represented primarily by surface finds along sandy exposures in what is known as "Camp Lake". KdNb-1 contains the remains of Tyrrell's camp during his 1900 survey. KdNb-2 was identified as an old Dené encampment (Table 5-1). The remaining sites are precontact campsites that date back to approximately 6500 years ago (Gordon 1996).

Table 5-1
Archaeological Sites Recorded within a 50 km Radius of Screech Lake Project Area

Borden	Site Size	Classification	Type	Features
KdNb-1	50 m x 15 m.	indigenous historic, & historic	campsite	tent ring, cairn
KdNb-2	3 m x 3 m.	indigenous historic	campsite	cut wood lithic scatter
KdNb-3	75 m x 30 m.	prehistoric	campsite	lithic scatter
KdNb-4	10 m x 5 m.	prehistoric	campsite	lithic scatter
KdNc-1	4 m x 5 m.	prehistoric	campsite	lithic scatter
KdNc-2		prehistoric		lithic scatter
KdNc-3	3 m x 3 m.	prehistoric	campsite	lithic scatter
KdNc-4	3 m x 3 m.	prehistoric	campsite	lithic scatter

5.2.2 Data Gaps

Although the general history of the Upper Thelon is known from several archaeological sites located both up and downstream, the Screech Lake Program area itself has never been examined by an archaeologist. As a result, it is not known whether archaeological resources exist in the proposed Program areas identified by Ur Energy.

6.0 TRADITIONAL AND NON-TRADITIONAL KNOWLEDGE

6.1 Data Collection Process

Available databases and publications were reviewed to determine traditional land use around the Screech Lake area. Government regulators, hunter trapper organizations, and local outfitters were consulted to identify hunting and trapping activities in the Screech Lake area.

6.2 Results

6.2.1 Access

Screech Lake is located approximately 320 km east of Lutsel K'e, and approximately 500 km east of Yellowknife. Access to Screech Lake is limited to travel by aircraft equipped with floats or skis or by snowmobile from Lutsel K'e. There is no winter road access, and the nearest airstrip is located in the community of Lutsel K'e (Dilley pers. comm. 2006).

6.2.2 Traditional Land Use

Traditionally, the region surrounding the Thelon River has been used by Dogrib and Chipewyan Dene and by Métis. The name "Thelon" is derived from a Chipewyan word meaning, "last wood river on the barren-lands" (Raffan 1992).

A region extending from the Lockhart River and Artillery Lake to the Thelon River and the treeless land in-between was used by the Dene and Chipewyan, many of which families are now settled in the community of Lutsel K'e (Raffan 1992; Lutsel K'e Dene First Nation [LKDFN] 2001). An extensive investigation by Raffan (1992) documented fishing, hunting, and trapping from Great Slave Lake deep into the Thelon watershed, including Beaverhill Lake by a number of Chipewyan families. The lower Thelon River was also traveled by Inuit now settled in Baker Lake (Raffan 1992).

Traditional land use throughout the area used by the Dene in the NWT (including what is now Nunavut) was documented by the Dene Mapping Project. This information is proprietary to the Dene Nation, and is only released with their permission. Permission to use this information has not yet been received, as of March 23, 2006. A similar land use mapping Program by the Lutsel K'e Dene First Nation has recorded two traditional traplines, which cross Beaverhill Lake (LKDFN 2003), the nearest point of which is 7 km east of Screech Lake.

6.2.2.1 Recent Traditional Land Use

Little has been publicly documented regarding recent traditional hunting, trapping or fishing in and around the Screech Lake. Aboriginal trappers do not have to register their trap lines in the NWT (Acton pers. comm. 2006). However, trapping and hunting out of the community of Lutsel K'e appears to span out as far east as Beaverhill Lake (LKDFN 1999). According to the Land Use Information Series, no hunting or trapping activity has been reported in the years leading up to the production of the Series (INAC 1979), although one currently used trapline from Artillery Lake (approximately 150 km west of Screech Lake) to Beaverhill Lake and an associated camp/campsite at the end of the trapline on the north end of Beaverhill Lake (approximately 20 km northeast of Screech Lake) has been documented (LKDFN 2003).

Berry species likely to be found directly within the Screech Lake area include cloudberries, crowberries, lingonberries, bog and mountain cranberries, bearberry, and blueberries (Weisman 2001). Traditional resource users collect plants for food and medicines along the Thelon River (Department of Sustainable Development 2000), although exact areas are not clearly defined. As it is only accessible by air during the berry season and there is no documented habituation within 100 km of Screech Lake (it is unlikely that the Screech Lake region is currently used for berry picking.

6.2.2.2 Traditionally Significant and Sacred Areas

The Thelon River, which is considered a sacred area by the Dene, and is described as the place "where God began when he created the world" (Raffan 1992). However, no specific information on traditionally significant and sacred areas near Screech Lake was identified.

6.2.3 Non-Traditional Land Use

Non-traditional land use includes land use by non-aboriginal users. It may include similar activities to traditional land use, such as subsistence hunting, fishing and trapping, sport hunting and fishing, and also includes activities such as mineral extraction, recreation, and tourism.

6.2.3.1 Domestic Trapping

The Thelon region was extensively trapped by white trappers beginning in the early 1900s. James Stark was the first white trapper to enter the region, basing his traplines around Artillery Lake. Artic Fox were plentiful and valuable, and by 1925 there was so much trapping activity in the region that the Hudson's Bay Company established a new post at Lutsel K'e, then known as Snowdrift (Pelly 1996). Some trappers, such as Gus D'Aoust, spent two or three decades trapping in the Thelon (Raffan 1992). White trappers were present in the area up until the creation of the Wildlife Sanctuary in 1927. Traplines operated by non-Aboriginal trappers must be registered in the NWT, and none are registered within a 50 km radius of Screech Lake (Acton pers. comm. 2006).

6.2.3.2 Domestic Hunting and Fishing

The range of dates for the hunting seasons Wildlife Management Unit U (which includes Screech Lake) is outlined in Table 6-1. Actual hunting seasons for resident, non-resident, and non-resident aliens fall within these dates (*i.e.*, these dates represent the range of dates within which hunting is permitted). Domestic hunting and fishing information is unavailable (Acton pers. comm. 2006).

Table 6-1
Range of Hunting Seasons in Wildlife Management Unit U

Species	Range of Hunting Season
Barren-ground Caribou	15 August to 30 April
Black Bear	15 August to 30 June
Arctic and Snowshoe Hare	1 July to 30 June
Moose	1 September to 31 January
Muskox	15 June to 30 April
Ptarmigan and Grouse	1 September to 30 April
Wolf	15 August to 31 May
Wolverine	15 July to 30 April

6.2.3.3 Sport Hunting and Fishing

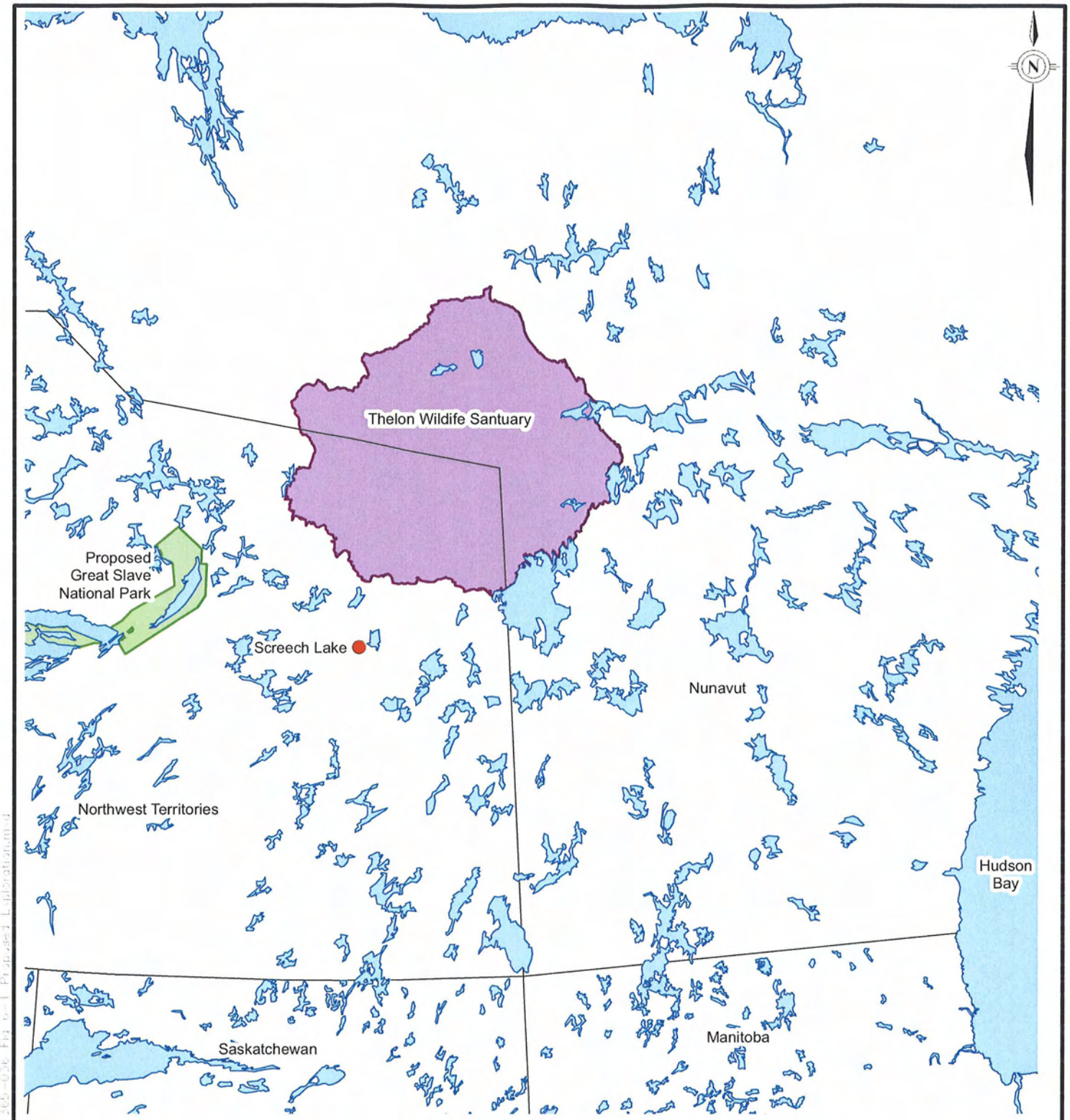
The nearest fishing lodges to the Screech Lake property are the Lynx Tundra Lodge on Lynx Lake (approximately 80 km southwest of Screech Lake), Whitefish Lake Lodge (approximately 90 km west of Screech Lake), and Mosquito Lake Lodge (approximately 80 km east of Screech Lake. Each of these lodges offer lake trout, northern pike, whitefish, and grayling fishing. The Lynx Tundra Lodge on Lynx Lake caters to between 20 and 40 people per season (Wettlaufer pers. comm. 2006). The Whitefish Lake lodge is operated by Great Canadian Fishing Adventures, and is open from July until September (Great Canadian Fishing Adventures 2006). The Thelon River contains trophy lake trout, arctic char, and grayling. Although there are no sport fishing lodges on the Thelon River, fish species present in this river include humpback and round whitefish, cisco, slimy and spoonhead sculpin, and lake chub (CHRS 2006). Fishing season is effective all year round with limit restrictions placed on catch and possession only.

The nearest big game hunting camp is on Artillery Lake, approximately 150 km west of Screech Lake. Bathurst caribou are the main attraction for sport hunting, but wolf and wolverine are also harvested, usually opportunistically during caribou hunts (Courvette pers. comm. 2006).

6.2.3.4 Existing Protected Areas

The NWT Protected Areas Secretariat (PAS) was developed to, among other things, provide a framework and set of criteria to guide the work of identifying and establishing protected areas in the NWT (NWT PAS Committee 1999).

The nearest protected area to the Screech Lake property is the Thelon Wildlife Sanctuary (located in the NWT and Nunavut), approximately 60 km north of Screech Lake at it's nearest point (see Figure 6-1). The Sanctuary was intended as a permanent protection measure for muskox, the hides of which became a valuable commodity following the decline of the plains bison in southern Canada. An Order in Council established the Thelon Game Sanctuary in 1927, and in 1930, it was an expanded to its current boundaries (Pelly 1996).



Legend

- Screech Lake Site
- Thelon Wildlife Sanctuary
- Proposed Great Slave National Park

NAD 83, ZONE 13

PROJECT

Ur-ENERGY INC.
SCREECH LAKE SCREENING STUDY

TITLE

SCREECH LAKE PROPOSED EXPLORATION AREAS IN RELATION TO THE THELON WILDLIFE SANCTUARY

Golder Associates
Saskatoon, Saskatchewan

PROJECT		06-1365-036	FILE No.	
DESIGN			SCALE AS SHOWN	REV. 0
GIS	JRC	05/03/06	FIGURE: 6-1	
CHECK				
REVIEW	DB	19/07/06		

6.2.3.5 Proposed Protected Areas

In 2005, the Lutsel K'e Dene First Nation and the Akaitcho First Nations moved to obtain an interim withdrawal of areas within their land claims region, as they step towards a land claims agreement (News North 2005). The withdrawal of lands would temporarily restrict any further land dispositions, such as leases or sales, but existing interests at the date of the withdrawal will not be affected (INAC 2006). The purpose of the interim land withdrawal is to provide reassurance and clarity towards the long-term goal of a land claims agreement (INAC 2006). Although the boundaries of the withdrawn areas are currently under negotiation and will not be made public until they are official, Screech Lake lies within an area, which may be withdrawn. However, third party rights, such as mineral claims, would not be directly affected by such a withdrawal (Byrne pers. comm. 2006; Lawrance pers. comm. 2006).

Expansions to the Thelon Wildlife Sanctuary have been proposed. The Thelon Wildlife Sanctuary Management Plan has called for extensions to the sanctuary in the northeast and southwest directions. Although the plan was approved by Nunavut, it was not approved in the NWT as some of the areas in question are subject to land claims. Presently, the proposed extensions to the Sanctuary are not part of any process (such as the Protected Areas Strategy) for implementation (Boutilier pers. comm. 2006).

6.2.3.6 Heritage River Status

The CHRS designates heritage rivers based on the interest expressed by a community or a group able to illustrate the value of the river and community support of the nomination. Prior to designation, a management plan must be submitted to the Board describing the management area and the actions that need to be carried out to fulfill CHRS requirements. Once the plan is accepted, yearly reports outlining the condition of the river are prepared, and a State-of-the-River report is compiled every ten years (last completed in 2000, see Department of Sustainable Development 2000). The Thelon River between the junction with the Hanbury River and its mouth at Baker Lake is considered a Heritage River by CHRS, approximately 100 km north of Screech Lake at its nearest point (CHRS 2006). Consideration has been given to expanding this to include the upper Thelon River, which passes within 3 km of Screech Lake, but these expansion proposals have been shelved until the negation of the Akaitcho land claims is complete (Department of Sustainable Development 2000). Regardless, heritage river status would not place direct regulations on mineral extraction.

6.2.3.7 Mineral Exploration

A mineral exploration camp exists on Boomerang Lake, approximately 15 km to the southwest of Screech Lake. The Boomerang Lake camp is operated by Uravan Minerals Inc. Another inactive mineral exploration camp is located approximately 45 km northwest of Screech Lake on Goodwin Lake.

A series of active mineral claims surround Screech Lake, which are owned by Ur Energy or Uravan Minerals Inc. Uravan Minerals also owns six contiguous mineral leases in the area, the nearest section of which is approximately 8 km southwest of Screech Lake. In addition, prospecting permits owned by Diamonds North Resources Ltd. exist for an area 20 km west of Screech Lake. No surface dispositions, linear LUPs, pending mineral claims, or lapsed mineral claims were identified within 20 km of Screech Lake (Spatial Information for DIAND [SID] 2006).

The nearest mineral exploration activity identified was at Boomerang Lake (NORMIN showing ID 075INE00) located approximately 15 km west of Screech Lake. Drilling yielded uranium, gold, copper, nickel, and vanadium. Drilling at this site began in 1983, and at least 51 holes totaling 5,536.7 m have been drilled between 1983 and 1992. The best results obtained to date from a single hole contained silver at 22.4 g/t, gold at 12.3 g/t and uranium 308 at 5,003 ppm (NORMIN 2006).

Two other locations have been drilled for uranium approximately 50 km northwest of Screech Lake, known as Muskox Hill (NORMIN showing ID 075PSE001) and Thelon River (NORMIN showing ID 075PSE002), within approximately 3 km of one another, and both within an active Ur Energy mineral claim as of January 2005 (NORMIN 2006). Uranium-bearing mineralization is found in the rock at these sites. Two holes were drilled at Muskox Hill, intersecting minor pitchblende mineralization at 19.93 m to 20.07 m. Pitchblende is found on the surface at the Thelon River site (the best assay returned 10.4% uranium over 5 m), but drilling failed to detect any mineralization at depth (NORMIN 2006).

No mineral exploration has proceeded beyond the drilling stage within 100 km of Screech Lake to date (NORMIN 2006).

6.2.3.8 Tourism and Recreation

Screech Lake is located approximately 3.5 km east of the Thelon River. The Thelon River is a popular recreational area during the summer months, visited by canoeists and fishing enthusiasts (Raffan 1992). The first recreational canoe trip down the Thelon River was in 1962. Since then, the river has been a popular destination. The most common starting point for recreational canoeists is the junction of the Thelon and Hanbury Rivers, approximately 100 km north of and downstream from Screech Lake (Pelly 1996).

There are only three outfitters licensed to operate tours on and around the Thelon River (Canoe Arctic, Great Canadian Ecoventures, and the Bathurst Inlet Lodge, Courvette pers. comm. 2006). Great Canadian Ecoventures reported bringing approximately 200 people through the upper Thelon River each year, which includes the locally named "Double Barrel Lake" located less than 15 km south of the Screech Lake area (Faess pers. comm. 2006). Independent travelers and several unlicensed operators also canoe the upper Thelon River; however, these groups are difficult to track (Courvette pers. comm. 2006). The area primarily attracts ecotourists interested in wildlife photography, canoeing, and kayaking. With the exception of canoeing, the overall recreation potential of the area has been described as limited (INAC 1979).

7.0 SOCIO-ECONOMIC ENVIRONMENT

7.1 Data Collection Process

This section describes the socio-economic setting that may be affected by the proposed Program. The methods utilized in this screening level socio-economic assessment consists of: 1) describing the socio-economic baseline conditions within the Program study area; and, 2) identifying potential socio-economic effects from the Program and forecasting Program impacts.

Demographic information was primarily sourced from Statistics Canada and from the Government of NWT Bureau of Statistics. Other resources reviewed include community profiles from INAC and the De Beers Snap Lake Diamond Project, Environmental Assessment (EA) Report.

7.2 Results

7.2.1 Background and Assumptions

The Lutsel K'e Dene community is identified as the primary study community. The Program may be located on traditional lands of the Lutsel K'e community. Given it's proximity to the Program, is expected to declare an interest and will be invited to be involved in Program consultations.

7.3 Lutsel K'e: Existing Conditions

7.3.1 Overview

The First Nations community of Lutsel K'e ("place of small fish") is located on the south shore near the eastern end of Great Slave Lake. First established as a Hudson Bay Company Post in 1925, Lutsel K'e is the most northern of the Chipewyan (Denesuline) communities. In 1954, houses were erected on the current site and in 1960, a primary school was built. Just over 400 people now live in the community of Lutsel K'e, although there are 671 registered members (INAC 2006). There are no roads leading to the community; there is a daily flight to Yellowknife and community members travel to neighbouring communities by snowmobile or, in the summer, by boat. The community has a school with a gym, community hall, Catholic Church, general store, police station, nursing station and adult education centre. There is also a senior's housing facility, community freezer to preserve country foods and a community sauna (Weitzner 2006).

Many families have built smoking tipis next to their houses, where they smoke meat and fish. In a recent GNWT Bureau of Statistics (2004), 68% of households indicated that most or all of the meats they consume are country foods such as moose, caribou, ptarmigan, grouse, and fish. Lutsel K'e has maintained the tradition of sewing, beading, and moccasin-making. The local economy is based on traditional livelihood activities, tourism, such as sports fishing, and more recently, mining.

Lutsel K'e belongs to the Akaitcho Treaty 8 Dene First Nations, which is engaged in Treaty Entitlement negotiations with the governments of Canada and the NWT with respect to land, resources, and governance issues. Representatives of Lutsel K'e were scheduled to participate in negotiations in June 2006. Aside from treaty entitlement negotiations, Lutsel K'e is negotiating on a potential new hydroelectric development that would service mines in the area and with Parks Canada on terms for the establishment of a proposed national park that is close to the community and ancestral territory (Weitzner 2006).

There have been a number of Traditional Knowledge (TK) Studies undertaken by Lutsel K'e including a TK study on Community Health (1997) and a study in the Kache Tue Region (2002). These reports document traditional and current land uses and ecological knowledge of Lutsel K'e elders. This knowledge, by definition, is passed on from generation to generation and is grounded in the language of the community, Dene Suline (Chipewyan). Preserving language and thus, knowledge, is a fundamental community priority. The number of Lutsel K'e that can speak Chipewyan has dropped by 20% since the early 1980's (GNWT Bureau of Statistics 2004).

TK studies illustrate that the Dene relationship with the land is symbiotic and is based on mutual reciprocity. Their continued reliance on the land and traditional livelihood activities has led Lutsel K'e to participate in a community-based monitoring Program assessing associated changes within the community from mineral development since 1997. General concerns and observations made with regards to mining development have included effects on caribou and traditional land use activities, training Programs and employment for youth, increased stress on families due to rotational work and various effects associated with a wage economy. Although no official consultation has occurred between Ur Energy and Lutsel K'e, a review of consultation documents from the Snap Lake Diamond Project suggests that Lutsel K'e may be interested in more employment and training targeted to youth and the establishment of working arrangements and/or partnerships to develop businesses to serve the mining sector. They have also expressed concern to see that traditional activities such as hunting, trapping, and fishing, remain viable and sustainable.

7.3.2 Population

Lutsel K'e's population grew by 24% between 1991 and 2000. Recent growth rates are lower, however, and the NWT Bureau of Statistics projects a slight population decline in future years. Population data is summarized in Table 7-1.

Table 7-1
Lutsel K'e Population by Age and Gender

Age (Years)	1991	2000	2004
0-4	34	50	37
5-9	27	38	34
10-14	40	34	37
15-24	59	48	59
25-44	90	125	149
45-59	32	31	53
60 & Over	22	51	38
Total	304	377	407
Male	162	198	233
Female	142	179	174

Source: GNWT Bureau of Statistics 2000, 2004.

The number of births per year has ranged from three in 2002 to 16 in 2001. Teen births have been low for Lutsel K'e, with between one and fourteen births per year between 1999 and 2003. Death rates have remained constant at between one and three deaths per year between 1994 and 2002, with no deaths reported for 2000 and 2002 (GNWT 2000, 2004)

7.3.3 Households and Families

Housing statistics show that Lutsel K'e households have steadily become smaller over the last two decades. For example, in 1981, 44.4% of the population had more than six people in their households. By 2004, only 10.4% of households had more than six people. This dramatic decline may indicate success in increasing the number of dwellings in Lutsel K'e. However, a shortage of housing is still sited as an issue that prevents Band members from living in the community.

The percentage of Lutsel K'e households in Core Need[2] has remained relatively unchanged and high in the past several years despite increases in employment and income. Table 7-2 summarizes data for Lutsel K'e and for comparison purposes, NWT as a whole.

Table 7-2
Lutsel K'e Households in Core Need

% of Households in Core Need	Lutsel'K'e	Northwest Territories
1996	44.0	19.7
2000	48.5	20.3
2004	46.4	16.3

Source: GNWT Bureau of Statistics 2004.

In 2001, the community of Lutsel K'e had a total of seventy families. Of these, twenty-five, or 35% were classified as lone parent families. The figure is 21% for the NWT.

7.3.4 Education

According to socio-economic information drawn from the Snap Lake Diamond Project's social impact assessment, Lutsel K'e is showing a trend in increased educational attainment. More youth are attending college or university (De Beers 2002), a trend that may be attributed to increased exposure and interest in mining related careers. Statistics summarized from 1991 to 2004 are summarized in Table 7-3.

[2] The GNWT Bureau of Statistics reports the percentage of "Households in Core Need". If a household has any one housing problem (suitability, adequacy, or affordability) or a combination of housing problems in addition to a household income below the Community Core Need Income Threshold, the household is considered to be in core need. The core need income threshold is the income limit for each community that represents the income needed to be able to afford the cost of owning and operating a home or renting in the private market without government assistance.

Table 7-3
Percentage of the Population with High School or Post Secondary

Year	Lutsel K'e (%)	NWT (%)
1991	37.8	59.9
1994	32.7	63.2
1996	28.6	63.5
1999	45.9	66.1
2001	40.0	64.8
2004	38.3	67.5

Source: GNWT Bureau of Statistics 2004.

7.3.5 Employment

The labour force participation rate for Lutsel K'e was 63.4% in 2004. Between 1989 and 1991, the labour force participation rate increased from 44.6% to 62.2% and has remained relatively steady between 1991 and 2004, averaging approximately 62.5% for the duration.

The unemployment rate has fluctuated significantly in the last decade. In 1994, the unemployment rate was at a high of 31.7%. Then, in 1996, it dropped to 13%. In 1999, however, unemployment increased again to approximately 28%. The most recent unemployment rate is for 2004 and is reported to be 14.6%.

Income Support Cases have dropped in recent years, from 29 to 13 from between 2003 and 2004. While this decrease may be explained by increases in employment opportunities, without further information on closed files, caution must be exercised in interpreting this trend.

7.3.6 Income

Average personal income has risen in Lutsel K'e in recent years, as has average employment income and family income. Income data are summarized in Table 7-4.

Table 7-4
Lutsel K'e Average Income by Year

Year	Average Income ($) *	Average Employment Income ($) **	Average Family Income ($)
1996	17,627	13,954	29,729
1997	20,039	16,506	34,425
1998	18,547	15,950	30,167
1999	21,053	19,369	37,067
2000	22,139	20,407	41,863
2001	25,286	21,442	44,650
2002	28,614	24,965	53,300
2003	27,600	25,572	49,978

Source: GNWT Bureau of Statistics 2004.

* Average income received from all sources.

** Average income received by persons 15 years of age and over for any employment.

7.3.7 Traditional Activities

Involvement in traditional activities has widely fluctuated for the Lutsel K'e population. However, in comparison with NWT as a whole, Lutsel K'e participate in traditional livelihood activities to a much greater degree. Table 7-5 provides summary data. The column on the far right shows 2003 statistics for the NWT.

Table 7-5
Percentage of Population Participating in Traditional Activities

	Lutsel K'e				NWT
	1988	1993	1998	2003	2003
Hunt/Fish (%)	53.1	31.8	73.8	73.6	36.7
Trap (%)	33.8	8.5	33.6	24.1	5.9

Source: GNWT Bureau of Statistics 2001, 2004.

7.3.8 Crime

The Lutsel K'e detachment of the Royal Canadian Mounted Police has maintained crime statistics for the Government of NWT Bureau of Statistics. Those statistics relevant to the Lutsel K'e community are presented below in Table 7-6. Other than an almost doubling in violent crimes for years 2001 and 2002 no other trends are apparent and the crime frequency has remained inconsistent.

Table 7-6
Annual Crime Rate for Lutsel K'e Community

Type of Crime	1999	2000	2001	2002	2003	2004
Violent Crimes	19	19	43	35	26	24
Property Crimes	27	32	20	23	20	27
Other-Criminal Code	47	44	53	83	54	56
Total	93	95	116	141	100	107

8.0 ENVIRONMENTAL SCREENING

This environmental screening study was conducted to provide a cursory description of the physical and biological environments of the Screech Lake target area. Additional information assessed included heritage, traditional and non-traditional land use, and socio-economic environment. The evaluation could then used to determine the potential impact that would occur from the proposed exploration drilling Program. Thus, by means of environmental diligence and pro-active planning on the part of Ur Energy an attempt could be made to restrict the scale of disturbances commonly associated with this type of mineral exploration Program. The issues addressed during the evaluation of potential environmental impacts included:

- changes to air quality and noise pollution;
- changes to surface and ground water;
- surface disturbance to soil and vegetation, and increased erosion potential;
- disturbance to local wildlife populations and habitats;
- disturbance to sensitive plant and animal species;
- potential changes to fish and fish habitat;
- changes to current land use practices (*e.g.,* trapping, forest harvesting);
- disturbance to unknown heritage resource sites;
- changes to socio-economic conditions; and,
- potential for cumulative environmental effects.

8.1 Impact Assessment Methods

To assess potential residual effects and impacts of the mineral exploration Program on any particular element of the physical, biological, cultural, and socio-economic components of the existing environment, specific impact description criteria were employed. These anticipated effects or residual effects were defined in terms of direction, magnitude, duration, geographic extent, and frequency for each potentially impacted component.

Direction is defined as positive, neutral, or negative with respect to beneficial or adverse effects from the exploration Program on the existing environment.

Magnitude can be described as negligible (*i.e.,* no measurable impact), minor, moderate, or major with respect to the degree of change to occur as the Program proceeds. Definition of degrees of magnitude is difficult because a minor, moderate and major impact could be defined differently for each environmental component and often differently within various aspects of one component. Thus, general guidelines for the terms were utilized to qualify relative differences in magnitude of the potential impacts.

- ***Negligible*** - no measurable effect on the natural population or physical component.
- ***Minor*** - affects a number of individuals within but not entire natural population.
- ***Moderate*** - a portion of a natural population (or physical component) is affected where a change in abundance or distribution of that natural population may result. However, the integrity of the population (or physical component) is unaffected.
- ***Major*** - a natural population or an entire physical component (*e.g.,* topography, surface water or ground water quality and quantity) is affected in sufficient magnitude to cause a change that affects the integrity of the population or physical component.

Duration – determined as the length of time the environmental effect occurs and reversible nature of impact when disturbance is removed (*i.e.,* reclamation of disturbed areas). Short-term impact is confined to the period of construction of drill pads and access trails. Medium-term impact is equivalent to the lifespan of the exploration Program (*i.e.,* includes construction and drilling activities). Long-term impact implies disturbance continues past Program decommission.

Occurrence - frequency of disturbance over the specified duration and described as: infrequent (one occurrence), frequent (periodic occurrences), and continuous. Occurrence may also refer to the probability of an event happening and is described as very unlikely, unlikely, likely, and very likely. This latter use of occurrence is regarding risk context only, in accident related activities (*e.g.,* spills).

Geographic Extent - refers to affected area and is defined as site specific (restricted to the target sites), local, regional, or provincial.

Since much of the proposed exploration Program activities would involve only one active drill pads at any one time (*e.g.,* no access routes needed), each environmental component was first assessed according to the above criteria. The overall environmental consequence of the impact was then evaluated and determined as:

- ***Negligible*** - if negligible to minor magnitude, short- to medium-term duration, infrequent to frequent occurrence, and site-specific or local geography.

- ***Low*** - if minor to moderate in magnitude, short- to long-term in duration, infrequent to continuous occurrence, and site-specific or local geography.

- ***Moderate*** - if moderate to high magnitude, short- to long-term duration, frequent to continuous occurrence, and do not extend beyond the local area.

- ***High*** – if moderate or major magnitude, medium- to long-term duration, frequent to continuous occurrence, and extends into the regional area.

8.2 Potential Environmental Impacts and Proposed Mitigation

The Project Description presented in this document (Section 2.0) is limited at this time by drilling requirement uncertainties. Ur Energy is proposing to develop five drill pads among a possible six target areas, to a total depth of 3,400 m. A maximum of 20 drill holes may be developed over the course of the two year Program should results prove positive. Core samples may be located on or adjacent to the drill pads or transferred to the base camp. Access trails are currently not expected to be constructed as all movement of equipment and personnel will be done through use of helicopter. Although the location and distribution of the pads are unknown at this time, it is assumed that the drilling component will account for the majority of disturbance from this Program. The drilling activities are also going to be conducted during the winter months to help minimize any negative impact on the local environment.

8.2.1 Air Quality and Noise

Air Quality

Based on the modelling predictions and on our professional experience, the air quality impacts that could result from this Program will be minor in magnitude, local, of short duration and reversible. The overall impact to air quality is expected to be negligible.

Noise

As the noise levels are not expected to exceed 94 dBA at 10 m beyond the drill rig in this remote area, and noise from drilling activity will be well below the any current regulatory criteria, the overall impact is considered negligible. Furthermore, the proposed activity is local, of short duration and the impact is reversible.

8.2.2 Topography

Access in and out of the target areas will be conducted by helicopter. Furthermore, all activities are proposed to be conducted during the winter months when the ground is frozen so topographic disturbance beyond the actual drill target area will potentially be minimized. To provide safe and accurate drilling conditions the drill rig must be level. Best efforts will be made to establish drill pads on the most suitable surface location identified in the target areas. In doing so the amount of grading required will be reduced and thus enhance reclamation efforts.

Potential impacts to topography as a result of the Project are anticipated to be minor in magnitude, and medium-term in duration as grading of drill pads may be required throughout exploration. As disturbances will be infrequent (grading will occur once for each pad) and limited to the drill pads (site-specific), the impacts are anticipated to have a negligible environmental consequence.

8.2.3 Hydrology

Use of water from the Screech Lake target area is estimated to be in the order of less than $1/100^{th}$ of 1% of the total drainage into the Thelon River basin. Anticipated impact that the exploration Project will have on the local area is negligible in magnitude will occur frequently but over a short-term period and will be site specific. It is therefore of the understanding that the overall environmental consequence of this disturbance would be negligible.

8.2.4 Fish and Fish Habitat

Little is known about local fish and aquatic organism that populate Screech Lake. Visual observations of Screech Lake conducted in June 2006 have shown that the entire lake is shallow and likely less than 3 m deep. All proposed exploration sites are located on or adjacent to potential fish bearing waters. Ur Energy will use a helicopter for the transport of personnel and relocation of drill rigs so it is anticipated that residual impacts to stream crossings and habitat will be limited. The collection of water from any lake or stream will involve the use of appropriate screens over the intake pipe in accordance with the Fisheries and Oceans Canada Freshwater Intake End-of-pipe Fish Screen Guidelines (1995). This will include pumping activities related to both drilling and camp site use. The elimination of grey water will be carefully monitored to prevent access to any streams, rivers or lakes, and drill water will be contained by re-circulating it and holding it in manageable drums (when necessary). Furthermore, the routine nature of this winter drilling Program would suggest that impacts to fish habitat are unlikely.

Residual impacts to fish and fish habitat as a result of the Project are anticipated to be minor in magnitude, and medium-term in duration as it will happen throughout exploration. Disturbances will be infrequent (drawing of water), the potential for contaminating local water is unlikely, and the area involved will be limited to the drill and campsites (site-specific). Thus, it is anticipated that this Program will have negligible environmental consequence to fish and fish habitat.

8.2.5 Soil and Vegetation

No access trails will be required between the camp site and the exploration target areas resulting in no removal or replacement of topsoil. Furthermore, all drilling activities are planned for the winter months to reduce impact on soil and vegetation. To limit soil loss and disturbance at the drill pad locations the rigs and associated equipment will be moved by helicopter and surface grading required for level safe drilling practices will be kept to a minimum. Remediation of drill areas will be carried out promptly after the Program to minimize erosion potential.

Some access to the drill pads will be achieved by following low-grade trails and clearing of new access trails will not be carried out. Clearing requirements may be expected to safely accommodate drilling rigs but any activity of this nature will be minimized to reduce impact on the existing vegetation.

Due to the sized of the drill rig being proposed for the exploration Program and the small number of holes being considered for the target area it is anticipated that impact will be minor in magnitude and medium-term in duration. The limited clearing requirements and the intention to carry out activities during the winter months will mean an impact of frequent occurrence but on a site specific geography. Thus, the overall environmental impact to soil and vegetation is anticipated to be negligible.

8.2.6 Wildlife and Wildlife Habitat

It is likely that the target area provides year-round and seasonal habitat for many species during the spring through autumn seasons. As much of the exploration activities will occur during winter months a low residual impact is anticipated for wildlife. While potential migration routes exist within the target area mitigation measures throughout the drilling Program will be taken to reduce the interaction and disturbance of any migratory animals, local birds, and vegetation within the target area.

Noise, lights and dust generated by drilling activities may cause temporary displacement and stress on individuals of wildlife species that utilize habitats within and adjacent to the target areas. The geographic extent of the disturbance will depend on the location of the drill pads as well as the physical presence of machinery and workers. The use of mufflers and best work practices should partially mitigate these effects.

The residual impacts to wildlife and wildlife habitat as a result of the Project are anticipated to be minor in magnitude, and medium-term in duration as it will happen throughout exploration. Disturbances will be frequent, while the area involved will be limited to the drill and campsites (site-specific). Thus, the overall impacts are anticipated to have a negligible environmental consequence.

8.2.7 Heritage

Ur Energy is proposing minimal disturbance techniques during the exploration phase. Prior to commencement of this Program, a License Agreement will be executed between Ur Energy and the PWNHC. All Archaeological/Historical/Cultural and Burial sites within the land pertaining to this LUP application will be documented. A helicopter will be utilized to move heavy equipment around the target areas. Resulting surface disturbances will be localized and are anticipated to be minor. Should any archaeological materials be inadvertently disturbed or discovered, it is recommended that they be immediately reported to the PWNHC.

8.2.7.1 Heritage Assessment Requirements

A heritage assessment was anticipated based on several factors: presence of known archaeological resources, type of Program and the resulting disturbance, and the potential for significant undocumented archaeological resources to be present. The proposed exploration activities at Screech Lake were reviewed by the PWNHC. Given the small scale of the proposed Program and the limited surface disturbance resulting from the drilling and temporary camp, it was determined that a heritage assessment was not required (Letter from Tom Andrews to Adrian Paradis, March 22, 2005).

The PWNHC does observe that the Program is in a location considered to have the potential to contain unrecorded archaeological sites. If exploration activities are expanded beyond those described in the permit application an archaeological assessment may then be warranted. The PWNHC remarks that numerous archaeological sites are documented amongst the many small lakes south of the Screech Lake Program area. Indeed, numerous projectile points have been reported from Beaverhill Lake, approximately 10 km east of Screech Lake (Raffan 1992). Accordingly, any proposed expansion to the number and location of the proposed holes beyond that described in the 2005 LUP Application must be forwarded to the PWNHC for review to determine the need for a Heritage Assessment.

Regarding heritage, the negative effects will be minor in magnitude, will occur for a medium duration, and has the potential to likely uncover an archaeological presence at the site-specific target area. Thus, the environmental consequence is predicted to be negligible.

8.2.8 Traditional Land Use

As presented earlier hunting and trapping activities occur within the region of the target area. Some traplines are unknown (Dene) while others (Lutsel K'e) have been recorded as spanning from Artillery Lake through to Beaverhill Lake. While negative changes to traditional land use could be anticipated through potential disruption of trapline activity, mitigation measures will involve no hunting or trapping and no disturbance of any identified traps and trails linked to these activities. Also, provisions will be flown into the camp and any garbage will be removed and burned on a regular schedule. Thus, negative impacts from the exploration Program on current traditional land use will be negligible in magnitude and short-term in duration. The occurrence of any disruption will be unlikely and would be confined to the site-specific so the overall environmental consequence would be negligible.

8.2.9 Non-Traditional Land Use

Non-traditional traplines are not registered within 50 km of Screech Lake and so interruption of these activities by the exploration Program is unlikely. Domestic and sport hunting is commonly conducted through Artillery Lake located about 150 km west of Screech Lake. Although the hunting season for most species is during the anticipated drilling Program, it is anticipated that the winter exploration activity will reduce any disturbance of hunting activity even with the large distance between the target site and non-traditional land use. Mitigation measures similar to those instituted for Traditional Land Use should also help reduce any negative impacts.

Much of the fishing activity is centered around a couple of northern lodge camps located about 100 km from Screech Lake. These outfitter lodges are situated on much larger lakes to accommodate trophy sport fishing and visitors are less likely to travel such a distance to fish smaller, and less productive, lakes. Furthermore, the proposed exploration activity is scheduled for winter, during which time sport fishing is minimal. It is anticipated that exploration activity will have negligible effect on this industry.

The exploration Program is predicted to have a minor impact on the current aesthetics within the target area. Mitigation includes applying site restoration and reclamation to disturbed areas. Depending on the location of drill pads, the impact will be restricted to an area within or adjacent to the target sites. In addition, the majority of the drill pads are anticipated to be concealed by forest cover and are far removed from any known trapping and hunting areas or nearby communities.

Overall, the negative effect of the exploration Program on traditional and non-traditional land use is anticipated to be minor in magnitude and medium-term in duration. It is unlikely to occur during fishing times but is likely to happen during potential hunting and trapping times. However, this is countered by the effect being site-specific. The environmental consequence is predicted to be negligible on land use within the target area.

8.2.10 Socioeconomic

As the Program will be conducted over several months, there will be a need to purchase supplies from Northern communities. Although the workforce will be specialized and may not required assistance from local communities in order to complete the Program, Ur Energy will look for opportunities to employ local residents. Due to the remote nature of the target site there will be little demand for local services (*e.g.,* restaurants and hotels) with the exception of short times prior to and following camp mobilization. Even so, it is anticipated that any effects to socio-economics resulting from the Program would be considered to be positive, but localized to the cities and towns where Ur Energy chooses to use as a base for departing to the target site.

Upon initiation of the exploration Program, little to no contact with the community is anticipated. At the present time, there is no firm plan to recruit labour from the Lutsel K'e although employment opportunities will be considered. Project impacts of a socio-economic nature are anticipated to be minor in magnitude, be of medium-term duration, with likely occurrence but will extend regionally to the larger centers. It is thus proposed that environmental consequence to socio-economic elements will be negligible.

8.3 Site Remediation

By using helicopter for most of the movement of equipment and personnel, Ur Energy anticipates minimal disturbance from drilling and construction activities. This combined with the proposed winter month activity will minimize negative effects to soil, vegetation, wildlife, and aquatic resources.

The camp will be dismantled upon completion of the exploration Program. All garbage, reserve fuel, empty drums, spill matting, propane bottles *etc.* will be returned to Yellowknife throughout the Program and during final decommissioning. Combustible materials will be incinerated at the campsite using an approved incinerating device. Each drill site will be inspected upon completion by the camp supervisor. If additional clean up is required, the personnel will be instructed to do so. Effort will be made to return each site to its natural state upon completion.

Upon completion of the drill holes, the casing will be removed and if unable to do so, it will be cut off at ground level. Furthermore, all holes will be filled with bentonite or cement (need clarification if possible from Ur Energy) to the surface. Before leaving the site, each hole will also be marked with a noticeable stake to identify the purpose and designation of the drill hole.

9.0 CUMULATIVE EFFECTS

The Canadian Environmental Assessment Agency (CEAA) defines cumulative effects as the sum of residual effects from all past, current, and reasonably foreseeable Projects and/or activities on the physical, biological, cultural, and socio-economic components of the environment. In addition to Project activities, cumulative effects also occur as a result of natural disturbances such as fire, floods, insects, disease, and climate change. Incremental effects from Project related, and traditional and non-traditional activities (*e.g.,* hunting, trapping, fishing, forestry, agriculture) can also influence habitat associations, and the abundance and distribution of aquatic, wildlife, and plant populations that exist on the landscape.

The assessment of cumulative effects from the Ur Energy exploration Program was based on the Cumulative Effects Assessment Practitioners Guide developed for the CEAA (1999).

9.1 Spatial and Temporal Boundaries

The Practitioners Guide (CEAA 1999) recommends defining a study area that is large enough to include all of the relevant potential cumulative effects on environmental components, but not too large so that the effects are diluted. Subsequently, the defined study area for the assessment of cumulative effects included a radius of 25 km surrounding Screech Lake. This area contains all of the past, current and reasonably foreseeable human-related activities that may have cumulative impacts on the environment.

The temporal boundary for the cumulative effects assessment included the period from 1979 through September 2007. Even though the current application is the first attempt at a drilling Program for Ur Energy, this temporal boundary was chosen because the previous land claim owner (UCL) conducted a single drill hole in 1979. Exploration was terminated early due to financial limitations. This temporal boundary includes related activities being conducted by Uravan Minerals Limited LUP MV2006C0008 (*i.e.,* past and present). Currently, these two Programs are the only known geophysical activities being conducted in the study area.

9.2 Assessment

Following the framework of the Practitioners Guide (CEAA 1999), a linkage analysis was conducted to identify those residual impacts from the proposed exploration Program that have the potential to overlap, spatially and temporally, with residual impacts from other past, current and reasonably foreseeable activities in the study area. Linkage analysis suggests that cumulative effects would be negligible based on the size of the Ur Energy exploration Program and the Program being conducted by Uravan Minerals Ltd, and the distance between Programs. Concurrent Projects by Ur Energy and Uravan Minerals are being conducted during the winter months when impacts to physical components (*e.g.,* water, soil, vegetation, wildlife habitat) within the study area would be negligible. Most wildlife species, particularly birds, will have migrated south of the study area and will not be affected by drilling activities. The distance between drilling Programs (15 km) should result in negligible cumulative effects to other species (*e.g.,* caribou, wolverine, wolves, hares, and foxes) that may be temporarily exposed to these activities. Because the extent of residual impacts from each Program are predicted to be site-specific and of low magnitude, animals that are disturbed by one Program should recover before being exposed to activities at the other Program. The scale of both drilling Programs is anticipated to be small, and therefore, the cumulative influence on socio-economic conditions in communities is expected to be negligible.

9.3 Mitigation

Mitigation for the Ur Energy exploration Program is described in Section 2.2. In addition, a site remediation plan is outlined in Section 8.3.

9.4 Evaluation of Environmental Consequence

Residual impacts to all physical, biological, and socio-economic components of the environment were predicted to be negligible (Table 9-1). As a result, residual impacts from the proposed exploration Program are not predicted to overlap spatially with impacts from the Uravan drilling Program, and consequently, the potential for cumulative effects is negligible.

Table 9-1
Classification of Residual Impacts of Exploration Drilling Project on Risk Categories

Element at Risk	Direction	Magnitude	Duration	Occurrence	Geographic Extent	Environmental Consequence
Air and Noise Quality	negative	minor	medium-term	frequent	site specific	negligible
Topography	negative	minor	medium-term	frequent	site specific	negligible
Hydrology	negative	negligible	medium-term	frequent	site specific	negligible
Fish and Fish Habitat	negative	minor	medium-term	infrequent	site specific	negligible
Soil and Vegetation	negative	minor	medium-term	frequent	site specific	negligible
Terrestrial	negative	minor	medium-term	frequent	site specific	negligible
Heritage	negative	minor	medium-term	likely	site specific	negligible
Traditional Land Use	negative	minor	medium-term	unlikely	site specific	negligible
Non-Traditional Land Use	negative	minor	medium-term	unlikely	site specific	negligible
Socioeconomic	positive	minor	medium-term	likely	regional	negligible

9.5 Follow-up

Following completion of the exploration Program, Ur Energy will prepare and submit a closure report to regulatory agencies. The closure report will summarize how the Program was completed and detail any unforeseen situations or events that occurred as a result of the exploration activities. Furthermore, any unanticipated environmental impacts that occurred will be documented and a description of the mitigation measures implemented to reduce the impacts will be provided. The closure report will also summarize the site reclamation efforts that were or will be completed following exploration activities.

10.0 COMMUNITY CONSULTATION

Community visits were held to provide local residents an opportunity to learn about the proposed exploration Programs and voice any concerns or issues. Ur Energy held two public meetings, the first with the Deninu Kue First Nation (DKFN) Chief and Council on June 6, 2006 in the Fort Resolution Council Chamber and the second with the LKDFN Land and Environment Committee on June 7, 2006 at the Land and Environment Office.

The DKFN prepared and distributed an Exploration Agreement - a document meant to assist in the development of a relationship with Ur Energy detailing their concerns and issues. The DKFN indicated that they were in favour of development and would support the proposal once the Exploration Agreement was signed. A transcript of the questions and answers arising from the meeting are documented in Appendix 1.

The Lutsel K'e expressed concerns about impingement of aboriginal hunting and trapping; safety of mining operations and regulatory processes; and requested ongoing consultation, involvement in the TK Studies and training for their members. All questions and answers arising from the meeting are detailed in Appendix 2.

11.0 CLOSURE

We trust that the above information meets the requirements of the scope of work for this contract. Golder appreciates the opportunity to complete this work on behalf of Ur Energy. Should you have any further questions please do not hesitate to contact the undersigned.

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APPENDIX I

QUESTION AND ANSWERS TRANSCRIPTS

Transcript of the meeting between the Deninu Kue First Nation Chief and Council with Ur-Energy 6 June 2006, Fort Resolution Council Chambers

Present

DP Dave Pierrot, Councilor
IN Irene Norn, Senior Administrative Officer
JV Jim Villeneuve, Councilor
LB Louis Basillie, Councilor
PB Paul Boucher, DKFN Negotiator
RM Ruth Mandeville, Administrator
RS Robert Sayine, Chief of Fort Resolution

JC Jack Charlton, Ur-Energy Inc.
EC Eric Craigie, Ur-Energy Inc.
Rick Rick Schryer, Golder Associates Ltd.
DGP Damian Panayi, Golder Associates Ltd.

Meeting brought to order at 12:15 pm. Ur-Energy took questions during and following the presentation. All questions and responses are summarized below.

Questions

DP – What happened with the Urangellshaft drill Program?
JC – They didn't go deep enough, only to 450 m. The target minerals are probably at 500 m to 600 m.

PB – What is the size of Screech Lake property?
JC – 240 km^2.

IN – Has surface work been done?
EC – Surface geophysical has been completed.

PB – Are you going into Thelon Sanctuary?
JC – The camp is 70 km SW of the Thelon Sanctuary.

DP – Noted that drums in photo were too close to the water. Suggested that they be moved to higher ground.
JC – Only heating fuel drums will be near the tents. All other fuel drums will be kept on higher ground, out of the photo.

PB – What is a radon survey?

JC – Looking for radon which comes out of the ground naturally. Instruments are set out on the ground and picked up 2 days later.

JV – Where is the staging area?
JC – Yellowknife.

JV – Will there be an independent inspection?
EC – INAC will probably conduct an inspection.

DP – What safety precautions are in place for drillers dealing with radioactive cores?
Rick – Disposable coveralls and gloves will be used. Drill waste material goes back down hole. There are no NWT guidelines, so Saskatchewan Guidelines for Uranium will be used. CNSC (Canadian Nuclear Safety Commission) oversees.

DP – Worked in Norman Wells where camp was cleared when using radioactive equipment.
EC – The oil exploration industry occasionally uses highly radioactive material in their equipment. This is unlike drilling for uranium, where radiation levels are low.

PB – Using the Saskatchewan regulations gives cause for concern, as they had the problems at Uranium City.
EC – Uranium City occurred before the current regulations.

PB – Does CNSC inspect?
Rick – CNSC only regulates at the operations stage, but regulations are in place for shipping samples.

DP – Will you be using local workers?
JC – Small camp, so we can only foresee one or two positions.
EC – Will be using local contractors wherever possible.

PB – Exploration is within Fort Resolution traditional territory, want to see responsible industry. Have drafted an Exploration Agreement.
- Paul circulated a document entitled Exploration Agreement.
- The DKFN always asks how their rights will be affected, and how they can be compensated.
- This document is to develop a relationship.
- Works on the principal of co-existence.
- Government and industry changes but the residents of Fort Resolution stay.
- Happy to see development, but Fort Resolution need to be part of it.
- Old mines have destroyed some areas.
- Will work with developers, but want something back in return.

IN – Document can be tweaked. Once signed, Fort Resolution will support application.
JV – Don't want another Pine Point. The MVLWB dictate permits, which puts them at odds with the DKFN.
EC – Uranium is an emotional topic. Uranium existence does not produce emissions. US coal plants produce 10% of global CO_2. Switching to Uranium would remove this. It's a clean source of energy.
RS – Danger to humans if not handled properly.
Rick – Worked with active and decommissioned Uranium mines. Rabbit Lake has been in operation for 30 years, and has a good record. They also have 50% aboriginal hires. Good environmental mitigation in place. The CNSC provide heavy regulations. Far more stringent than diamonds.

PB – Could we see the Saskatoon guidelines for uranium exploration?
Rick – They are good because these regulations have been tried and tested. Will email them.

PB – Would like a copy of the presentation. Once we get to a stage where we are comfortable, the DKFN would like a second presentation for our members.
EC – Ur is talking to communities first, then will make an application to the MVLWB.
Rick – Screening study of the Project has been completed, and will be appended to the application.
EC – Odds of maybe 1 in 100 of this deposit being financially viable.

RS – 20 or 30 years ago, we would have told you to go back where you came from. But we are starting to become more open to development on our land.

End of meeting.

Transcript of the meeting between the Lutsel K'e Dene First Nation Land and Environment Committee with Ur-Energy 7 June 2006, Lutsel K'e

Present

AE August Enzo, Land and Environment Committee
CC Charlie Catholique, Elder
EB Enest Boucher, Land, and Environment Committee
FC Florence Catholique, Councilor
GA Gilbert Abel, Councilor
HB Henry Basil, Community Member
JM Joe Michel, Elder
MK Monica Krieger, Administrator with the LKDFN
PE Pete Enzo, Land and Environment Committee
SD Stan Desjarlais, Treaty Entitlement Negotiations Department
SE Steve Ellis, Treaty 8 Tribal Council
PC Pierre Catholique, Elder

EC Eric Craigie, Ur-Energy Inc.
JC Jack Charlton, Ur-Energy Inc.
RS Rick Schryer, Golder Associates Ltd.
DP Damian Panayi, Golder Associates Ltd.

Meeting brought to order at 1:00 pm at the Lutsel K'e Dene First Nation Land and Environment Office. Ur-Energy took the following questions during and after their presentation.

Questions

CC – What year did original drilling occur?
JC – 1979.

FC – Is the camp near Thelon Sanctuary?
EC – Approximately 70 km to the SW of the Sanctuary.

FC – What happens to the drill silt? Will there be a settling sump?
JC – Cuttings from drill hole go back down the hole.

HB – If you found diamonds would you continue?
EC – Will mine anything economic.

SE – What factors would make a mine viable there? Grade and size?

EC – Ur-Energy estimates that approximately 50 million pounds of uranium, 1% ore grade, 15 million tons of ore would be economically viable.

SE – Would a road be required?
EC – Ore would be processed on site. Access by winter road.
SE – A road was built through northern Saskatchewan, for mining.

SE – How do you transport yellowcake?
EC – Yellowcake isn't that radioactive. Daughter products are more radioactive. Daughter products end up in tailings. Uranium oxide is shipped to an upgrading facility.

HB – What is the life of mine? Will there be an airstrip? Don't want an airstrip left behind for others.
EC – Minimum mine life of 10 to 20 years. Would decommission afterwards.

HB – Would there be local employment at a mine?
JC – As much as possible.

SE – Are there NWT guidelines for uranium exploration and mining?
EC – Federal guidelines only. No NWT guidelines yet.
RS – Would also use Saskatchewan guidelines for exploration, which have been developed over 30 years.

CC – What happens to hole after its been drilled?
JC – Fill hole with cement. Remove drill casing.

CC – Uranium is dangerous and poisonous. Once mined, it will be there forever. We depend on the wildlife around there. An environmental assessment is required because we live off the land.
RS – If a mine is proposed, an EA would take place.

CC – Are there any artifacts in the area?
EC - Rusty traps and trapper's cabin were found.

HB – Golder doing any work this summer?
RS – No. Drilling going ahead during the winter. No need yet.

SE – Ur-Energy and Uravan are proposing small low impact Projects. However, the two small Projects near each other. The impact is low if considered in isolation, but Lutsel K'e (LK) has a broader mandate on what they want to consider.

- This Project originally was referred to EA because uranium is not well understood. Someone has responsibility to explain uranium to community.
- Amount of interest by the exploration and mining industry in Thelon leads to concerns about aboriginal treaty rights. Development may impinge on the right of aboriginals to hunt and trap. Drybones Bay refused by minister for these reasons.
- People need to understand effects of exploration. Requested a study from INAC to study these potential impacts.
- Would prefer if study of development on aboriginal treaty rights was conducted before a decision is made on the permitting of this Project.
- Have prepared generic access agreements. If LK were to support this Project, it would come through this agreement. Puts employment, mitigation, and treaty rights in one document.

HB – The Circle Lake mine south of LK has not been cleaned up. Think it has caused some of the cancer we have seen. We get our water from the Thelon. Want it to be clean. What will the uranium be used for?
EC – Uranium will be used for nuclear power. 40% of Saskatchewan uranium goes to France. Canada will not sell if not for power/medical uses. Federal government monitors and controls use.

EB – Has done lots of seismic ever since 16 years old. Knows all the companies. Wants to hear why Ur is here. Ur comes and makes money and destroys land and families. And then Ur will leave.

FC – Would like Golder to start baseline data collection. Summer would be a good time to start baseline data collection. Baseline should include TK studies. LK would work with Golder on this. Glad that INAC study on uranium is going ahead. She personally is not interested in seeing uranium development, but realizes there are other points of view.

FC – Ur should take community members to the site to conduct a TK study.
RS – Have budgeted for a site visit this year. 4 to 6 people.
EC – Will have people on site this summer. Could fly in people from LK then.

SE – A site visit would identify local features, land use, and sensitive wildlife areas.

FC – Who would inspect when the Program is over? The access agreement proposes that someone from LK could come in to conduct inspection with INAC.

SE – Agreement would see monitors come in during and after Program to inspect the Project. The inspection could be conducted by a site employee.
EC – That would be fine.

EB – Was a monitor in Region Bay/Star Lake, worked for 4 years. Didn't like what was happening there, and doesn't want to see that again.

FC – The Federal government and GNWT is slow to respond. LK needs education on uranium mining and exploration. Recommend a visit to an existing uranium mine, which would help LK to learn about uranium mining.

PC – Was chief back in 1970's. Developers came in and didn't consult back then, but they do now. Wants to stress that the consultation has to continue. Keep LK in the loop. Consultation must be open and honest. Community members require training so they can get work. If something goes wrong, tell us, and we will help find a solution.

End of meeting.