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

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

WATER LICENCE APPLICATION FORM

Application for: (check one)

_x_ New ___ Amendment ___Renewal ___Assignment

LICENCE NO:
(for NWB use only) NWB2DAR

1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE

Dr. Hamish A. Sandeman
626 Tumiit Building, P.O. Box 2319
Iqaluit, Nu X0A 0H0

Phone: (867) 979-3539
Fax: (867) 979-0708
e-mail: hsandema@nrcan.gc.ca

2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable)

Same as left

Phone:
Fax:
e-mail:

3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking)

Camp location: **Southeastern side of Lake 899 in NTS 56N (see Appendix 1)**

Latitude: 67°33.08'N Longitude: 92°40.40' W NTS Map No.: NTS 56N
Scale: 1:250,000

Study Area includes NTS 56N, 56O(N).

4. DESCRIPTION OF UNDERTAKING (attach plans and drawings)

Purpose: This is the first year of a proposed 3-year project in the Boothia Mainland region south of Taloyoak. The project will focus on documenting the bedrock geology and will upgrade the knowledge base for surficial materials (i.e. including those deposited by glaciers during the last ice age) and will provide baseline geological maps for the region. These investigations represent the first modern studies of their kind and the data obtained will be instrumental in helping to reduce the risk for mineral exploration. We are optimistic that this research will stimulate the mineral exploration industry and improve the job potential and socio-economic conditions in nearby communities.

Proposed duration of field work: The 2004 field season will begin on July 1st and end on August 25th.

Study area: The entire study area encompasses NTS 56N, 56O(N) and parts of 57A, B, C, D. During the 2004 field season, work will focus on the NTS 56N and NTS 56O(N) map sheets.

Activities: The work will be accomplished by ground traverses (on foot) from helicopter drop-off zones. Approximately 8 field researchers will set out in a helicopter from the base camp to their drop-off zones each morning; they will be picked up and returned to the base camp by helicopter in the evenings.

Base Camp: The base camp will consist only of canvas tents and light equipment (stove, refrigerator, generator etc.). There will be a total of 15 people stationed at the camp throughout the 2004 field season.

Transportation: Camp mobilization and demobilization will be accomplished through Twin Otter support. Movement of

people to and from their ground traverses will be accomplished through the use of a Bell 206L helicopter.

Fuel: The oven/stove, refrigerator and freezer will be powered by propane. The generator will be powered by gasoline and will serve only as a backup to the solar panels recharging batteries that will run the office equipment. Heaters and the helicopter will utilize Jet B fuel. Portable stoves and lanterns will use white gas.

Remediation: Sewage and grey water will be buried. Flammable garbage (organics) will be burned. Any non-flammable garbage such as metal cans and glass will be crushed and shipped at the cost of the project, to appropriate community-based, waste-storage facilities.

5. TYPE OF UNDERTAKING (A supplementary questionnaire must be submitted with the application for undertakings listed in **"bold"**)

___ Industrial
___ **Mine Development**
___ **Advanced Exploration**
___ **Exploratory Drilling**
___ **Remote/Tourism Camps**
___ **Municipal**
___ Power
_X_ Other (describe): Base camps for geological mapping

6. WATER USE

_X_ **To obtain water** for camp use
___ To modify the bed or bank of a watercourse
___ To alter the flow of , or store, water
___ To cross a watercourse
___ To divert a watercourse
___ Flood control
___ Other (describe): _____

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

300 litres per day for domestic use.

8. WASTE (for each type of waste describe: composition, quantity, methods of treatment and disposal, etc.)

_X **Sewage** Burial
_X **Solid Waste** Back Haul to
___ Hazardous
___ Bulky Items/Scrap Metal
___ Waste oil
_X **Greywater** Burial
___ Sludges
_X Other (describe): Organic wastes (e.g. food-scraps) will be burned.

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

Land Use Permit

DIAND	_X Yes	___ No	If no, date expected:
Kitikmeot Inuit Association	_X Yes	___ No	If no, date expected:
Commissioner	___ Yes	___ No	If no, date expected _____

10. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES (direct, indirect, cumulative impacts, etc.)

NIRB Screening ___ Yes ___ No If no, date expected _____

Minimal Impact

11. INUIT WATER RIGHTS

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?

Minimal Impact, if any at all.

11. (Continued)

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined?

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

N/A

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

N/A

14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN

Supplementary Questionnaire (where applicable: see section 5) _X Yes ___ No If no, date expected _____

Inuktitut/English Summary of Project _X Yes ___ No If no, date expected _____

Application fee $30.00 (c/o of Receiver General for Canada) _X Yes ___No If no, date expected _____

15. PROPOSED TIME SCHEDULE

___ Annual (or) X Multi Year

Start Date: July 1st, 2004 Completion Date: August, 2006 (approx.)

Office Manager

Name (Print) Hamish A. Sandeman Title (Print) Research Scientist Signature Hamish Sandeman

Date March 30, 2004

For Nunavut Water Board use only		
APPLICATION FEE	**Amount: $_____**	**Receipt No.:**
WATER USE DEPOSIT	**Amount: $_____**	**Receipt No.:**

>ᑎᐊ ᓄᓇᕗᖅᓂ ᑲᑎᒪᔨᓕᒃ ᓄᓇᒥ ᖃᐅᔨᓴᖅᑐᑦ: ᑭᓇᐅᔭᓕᕆᔨᑎᓄᑦ ᐱᑦᖃᐅᖅᓯᖅᓱᑦ ᐊᑐᖅᑐᒍ ᓄᓇᒥ ᐅᔭᕐᖅᓂᓗ ᓇᓗᓇᐃᖅᑐᐃᓂᖅ ᓄᓇᖅᓯᐊᖅᑎᒍᑦ ᐊᓪᓚᓗ ᓄᓇᐅᑦ ᖃᓄᖅ ᑭᓱᖃᐅᖅᓯᒪᓂᖅ ᐃᓕᓴᐅᕐᓂᖅ ᐊᐃᑭᑐᖅᑕᐅᑎᒃ

ᐊᖏᕐᒍᓐᓂ ᐱᖓᓱᓄᑦ ᖃᐅᔨᓴᖏᓂᐅᓕᐊᖅᑐᖅ ᓄᓇᒥ ᓄᓇᖅᓯᐊᖅᑐᒍᑦ ᓇᓗᓇᐃᖅᑐᐃᓂᐅᓕᓗᓂ ᑕᐅᑦᓂᖅ ᐃᒪᓕᒃ ᓄᓇᖓᓂ ᑕᓗᕐᔪᐊᑦ ᓂᕆᑎᐊᖓᓂ ᑕᒪᖅᓇᓗ ᐋᖅᑭᑕᐅᔨᓕᕐᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᖏᓪᓕᐅᑎᒍᑦ ᓄᓇᖅᓯᐊᖅᑎᒍᑦ ᓄᓇᐅᑦ ᖃᓄᐃᓕᐅᖅᓯᓕᖏᓂᖅᓱᖓ ᐊᒪᓗᓗ ᑕᒪᒃᑯᐊ ᐋᖅᑭᓕᖏᓪᓕᑦ ᓄᓇᐅᑦ ᖃᓄᖓ ᖃᐅᔨᓕᕐᔪᐊᕐᑕᐅᔪᑦ ᑐᓴᐅᓕᕐᔪᐅᓪᓗᓂ ᐅᕐᓂᖅ ᓄᓇᖅᓯᐊᖅᑎᒍᑦ NTS 1:250,000-ᐊᖏᑎᑎᕐᓗᒥ.

56N (ᑭᐱᐸᓂ ᑕᓕᖓ): 560 ᐅᐊᖅᓇᖓᓂ (ᐃᐅᐃᓕᓕᑦ ᑯᖓ): ᐊᒪᓗᓗ ᐃᓪᓕᖅᑎᑦ ᓄᓇᖅᓯᐊᖅᑎᒍᑦ 57A, B, C, D.

2004ᒥ ᖃᐅᔨᓴᖏᐅᓂᐊᖅᑐᑦ: 56N ᐊᒪᓘ 56O ᐅᐊᖅᓇᖅᑎᒥ

ᓄᓇᒥ ᐱᓕᕆᐊᖓᓂᐊᖅᑐᖅ: ᐋᓪᓚᐃ 1ᒥ ᐊᒃᑭᓕ 25, 2004ᒧᑦ. ᓄᑦᑎᓗᑎᒃ ᑕᐃᑯᖓ: ᐋᓪᓚᐃ 1-4. ᓄᓇᒥ ᖃᐅᔨᓴᓕᖅᑎᓗᑎᒃ: ᐋᓪᓚᐃ 4ᒥᑦ ᐊᒃᑭᓕ 20ᒧᑦ. ᐅᑎᖅᑎᑦᓯᓕᕆᓂᐊᓗᑎᒃ ᐊᒪᓘ ᓴᖅᓄᓪᓕᑎᒃ ᓄᓇᒥ: ᐊᒃᑭᓕ 21-25. ᐸᐅᒻᓪᓕᓕᖅᑎᓗᑎᒃ: ᐊᒃᑭᓕ 25.

ᐃᓂᒋᓂᐊᖅᑕᖓ: ᐅᖅᓯᖅᑐᖅ

ᑕᖓᒪᖅᓚᖓ: 13ᓂᒃ ᓯᓂᒡᐃᐅᖃᖅᑕᖅᓂᐊᖅᓂᒃ ᑐᐱᖅᑕᖅᓴᓄᓂ, ᒪᖅᑭᒃ ᓂᖅᑎᐅᐃᐅᓄᑎᒃ, ᑭᓯᖅᓄᓕᐅᒃᑯᐃᒃ ᐊᒪᓘᓗ ᑎᑎᕗᖅᓚᐅᓂᐊᖅᑐᒥᒃ ᑐᐱᖃᖅᑎᓄᑎᒃ ᑐᐊᕐᓵᖓᓂᕆᒥᒃ ᑕᓯᓐᓕᐅᓯᒪᖓᑦᑐᒥᒃ 180 ᑭᓄᖓᑕᕆᒥᒃ ᐅᖅᓯᓂᓂᖅᖃᖅᑐᖅ ᐅᖅᓯᖅᑐᒍᑦ ᓂᕆᐊᓂ (ᑕᑯᕆᐊᖅᓄᑕᒍ ᓄᓇᖅᓯᐊᖅ ᐃᓕᓴᐅᑎᓯᒪᔪᖅ ᑕᕐᓂᓂ). ᐊᐅᓕᐅᑎᒍᑦᑐᖅᑕ ᐅᑯᐊᖅᓂᐅᕆᔨᓄᑎᒃ: ᖃᓄᕐᒍᑦ (ᑕᓯᐅᑦ ᐅᖅᓯᓯᕗᓂᔨᓂᓂ ᐃᓂᖅᖃᐅᑦᑐᖅᑐᒥᒃ); ᕿᐊᖅᑕᐅᔨᓄᑎᒃ ᐊᐅᓕᐅᑎᑦ ᓄᑕᓕᐅᑕᐅᓂᖏᑦᑕ ᖃᐅᔨᐅᔨᓄᑦ ᑲᑦᓴᐃᓕᖅᑐᖅᑐᒥᒃ ᐊᑎᓕᖏᓐᓂᖅᑐᖅᑕ. ᐃᓂᓪᓕᓴᐃᑦᑎᐊᕆᔨᖅᑐᑦ ᐊᒪᓘᓗ ᐅᓯᓂᖅᓯᐃᑦᑎᐊᖃᓄᑎᒃ ᐱᑎᐊᓂᕆᑦᖅᑎᓪᓗᒍ ᖃᐅᔨᓴᖅᓂᖅ ᐊᒪᓘᓗ ᐃᓯᓂᑎᓪᓗᒍ. ᐊᒥᐊᖅᑯᐃᑦ (ᐅᖅᓯᐊᓗᖃᖅᐅᑎᐊᓂᕆᑦ, ᓴᓪᓕᒍᑦ, ᓴᓂᓪᓗ) ᐅᖅᓯᖅᑐᑦ ᐊᖅᑕᕆᔨᓴᒃᑲᓪᓚᕆᐊᖅᑐᑦ.

ᖃᐅᑕᒪᑦ ᐊᑐᖅᑕᐅᖃᑦᑕᓂᐊᖅᑐᑦ: ᐱᓯᓗᑎᑎᒃ ᑲᓂᒥᔪᓕᓂᒥᒃ ᐊᒪᓘᓗ ᐊᐃᓴᐅᖃᖅᑎᓂᒥᒃ; ᐅᓴᕐᐃᑦ ᐅᑭᑎᐃᐅᑦᑎᐊᕆᔨᖅᑕᕐᓂᑎᒃ ᖃᐅᔨᓴᖅᑕᕐᓂᒥᒃ (ᐊᖅᓚᒃ ᑎᐃᒥᒃᓴᑐᒃ ᐊᖓᑕᑎᓕᑎᒃ); ᖃᕆᓂᐅᔨᓂᑦ ᖃᐅᔨᓂᖅᑕᓕᕆᓂᐊᓴᑦ ᑲᑎᒪᔨᓴᖅᑐᑎᓪᓗᒍ; ᐃᒥᐅᓴᓐᓂᑦ ᐃᓕᓴᐅᑎᐅᓂᒃ ᐊᑐᓵᔪᖓᑦᑐᒍ.

ᑲᑎᒪᔨᒍ ᐊᑐᖅᑕᐅᓂᖓ: ᓂᐅᔨᐅᖃᖅᑕᕐᓂᑎᒃ ᐊᐅᔨᐅᖃᖅᑕᖅᓂᑎᒃᓗ ᖃᐅᔨᓴᖅᑎᑲᓂᐊᖅᑐᖅᑐᒍᑦ; ᖃᐅᔨᓴᖅᓱᑲᓂᓄᑦ ᓄᐊᑕᑭᐅᑦᑎᓪᓗᑎᒃ; ᐱᖁᑎ ᓯᓚᑦᑯᑕᐅᓪᓚᕆᐊᖅᑐᑎᒃ; ᐃᓅᖃᓚᐃᓕᓂᖅᑐᒥᒃ ᐊᑐᖅᑕᐅᓂᖅᑐᑦ.

ᑲᑎᒪᔨᒍ ᐊᑐᖅᑕᐅᓂᖓ: ᓂᐅᔨᐅᖃᖅᑕᕐᓂᑎᒃ ᐊᐅᔨᐅᖃᖅᑕᖃᓂᑎᒃᓗ ᖃᐅᔨᓴᖅᑎᑲᓂᐊᖅᑐᖅᑐᒍᑦ; ᖃᐅᔨᓴᖅᓱᑎᑲᓂᓄᑦ ᓄᓇᕗᑦᑎᓪᓗᑎᒃ; ᐱᖁᑎ ᓯᓚᑦᑯᑕᐅᓪᓚᕆᐊᖅᑐᑎᒃ; ᐃᓅᖃᓚᐃᓕᓂᖅᑐᒥᒃ ᐊᑐᖅᑕᐅᓂᖅᑐᑦ.

ᐅᖅᓯᐊᓗᓄᑦ: 140 ᓯᒥᑦᓯᒪᔪᑦ 205ᓂ ᖃᓪᓗᓂᑎᒍᓂᒃ ᐃᒪᖃᓕᑦ ᖃᑦᑕᐅᔨᑦ ᑲᑎᒪᔨᒍ ᒪᑭᓪᓗᓕᓕᒫᑦ ᑕᐃᑯᓐᖓᑕᐅᔪᓐᓇᖅᑐᑦ ᐅᖅᓯᖅᑐᒥ (2003ᒥ ᐅᒥᐊᑦᔪᐊᑯᑦ ᓂᐅᔨᐅᓂᑯᑦ) ᑕᐃᑯᖓ ᑕᖓᒪᑦᓴᐃᓂᐊᖅᑕᑦᑕᓂᖅᓄᖅ. ᐅᖅᓯᐊᓗᖃᖅᐃᓕᐅᑎᐅᔪᑦ ᑕᒪᒃᑯᓄᖓ ᖃᐅᔨᓂᖅᑕᐅᓂᖅᑐᑦ ᐃᓪᓚᖅᑐᖅᓂᑦ ᐊᐃᑦᑕᓐᓂᑦ. ᒪᑭᓂᕆᔪᒃᑯᑦ ᖃᓄᖓᑕᕆᔨᑦ ᐊᐅᔨᐅᖃᖅᑎᑦᑕ ᐅᖅᓯᖅᑐᒍᑦ ᐃᓪᓚᖅᑐᖅᓂᑦ ᐊᐃᑦᑕᓐᓂᑦ ᐅᖅᓯᖅᑐᒍᑦ ᐊᒪᓘᓗ ᓄᓇᕗᑦᑎᓪᓗᒍ ᐅᐸᓂᓪᓕᐊᓂᖅ ᐊᒪᓘᓗ ᐃᓯᓂᑎᓪᓗᒍ. ᐅᐸᓂᓪᓕᐊᓂᖅ ᐊᒪᓘᓗ ᐃᓯᓂᑎᓪᓗᒍ.

BOOTHIA MAINLAND INTEGRATED GEOSCIENCE PROJECT: ECONOMIC POTENTIAL THROUGH NEW BEDROCK MAPPING AND SURFICIAL GEOSCIENCE UPGRADING

This is a 3-year geological mapping project on the Boothia Mainland area immediately south of Taloyoak that is designed to evaluate the economic potential of the region through framework bedrock geological mapping and upgrading of the surficial geoscience information in the following NTS 1:250,000-scale map areas.

56N (Darby Lake): 56O north (Arrowsmith River): and parts of 57A, B, C, D.

2004 study area: 56N and 56O north

Field Work: July 1 to August 25, 2004. Move-in: July1-4. Field work: July 4-August 20. Restoration and Clean-up: August 21-25. Move-out: August 25.

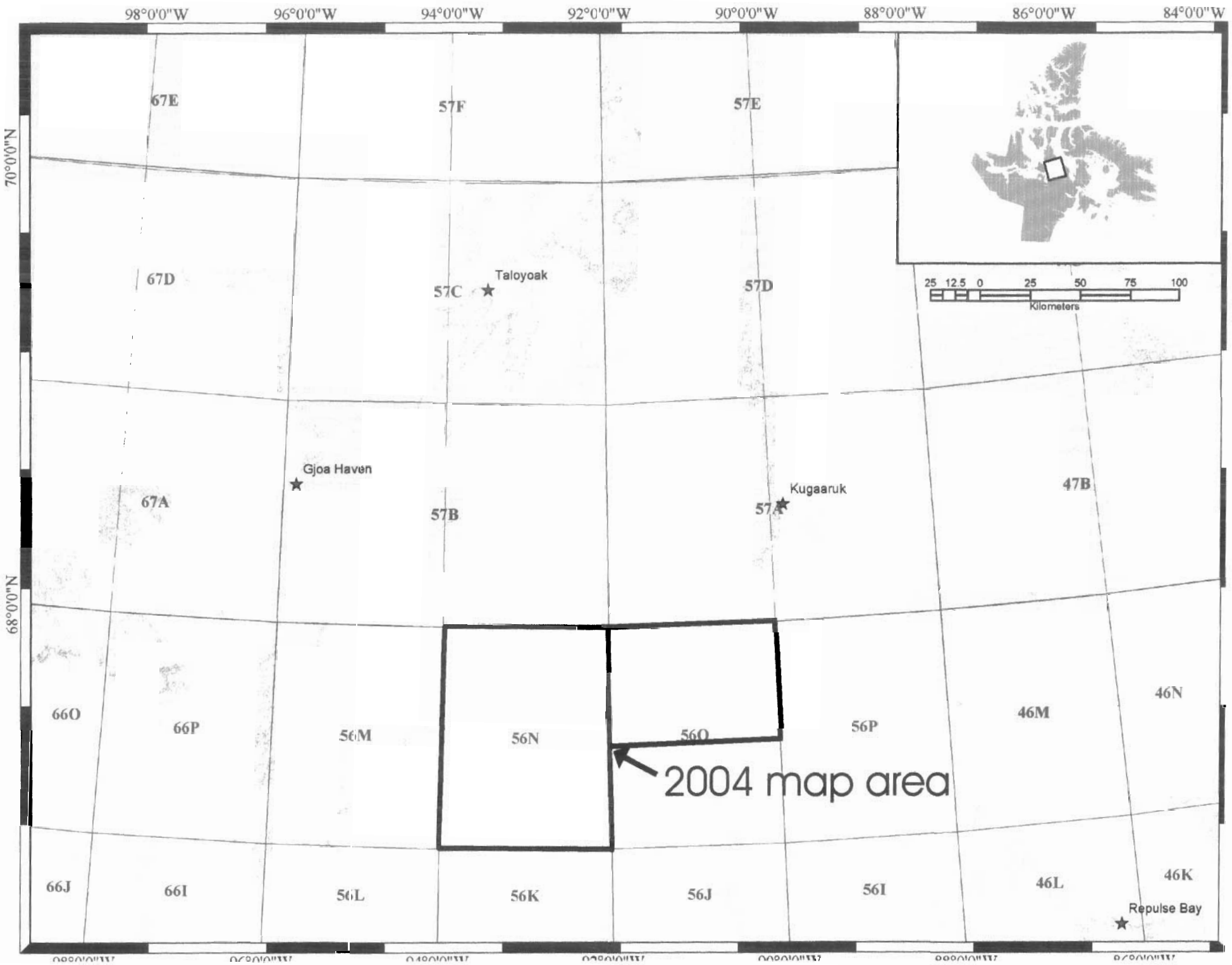
Staging area: Gjoa Haven

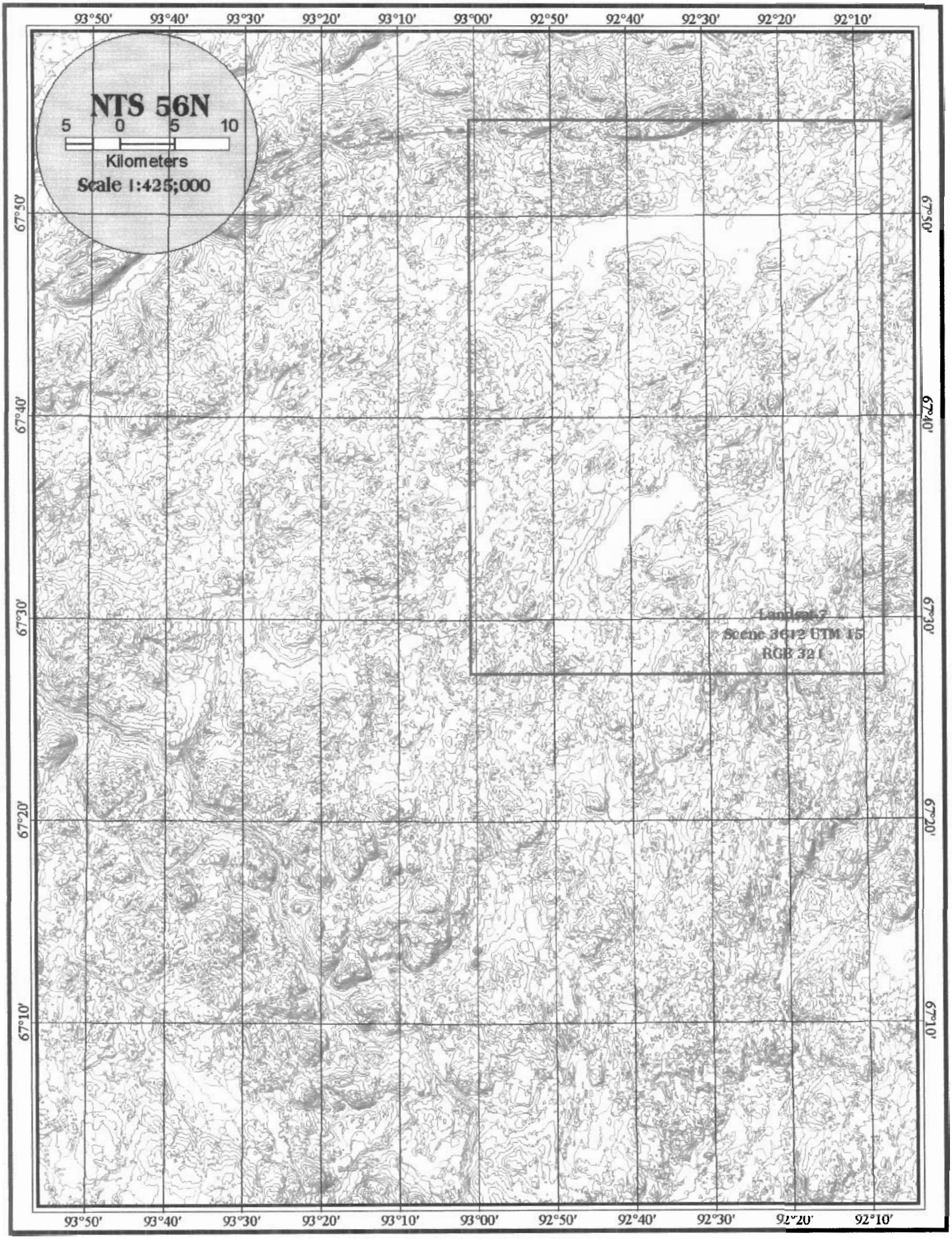
Base Camp: 13 sleeping tents, two kitchen tents, a storage tent and an office tent would be established on a gravel terrace on an unnamed lake 180 km southeast of Gjoa Haven (see attached map). Machinery is limited to: a helicopter (stationed well away from the lake); and Honda generators to power computers. The camp would be completely assembled and disassembled at the start and end of the field season. Refuse (fuel drums, propane cylinders, solid garbage) will be removed to the Gjoa Haven municipal garbage disposal facility.

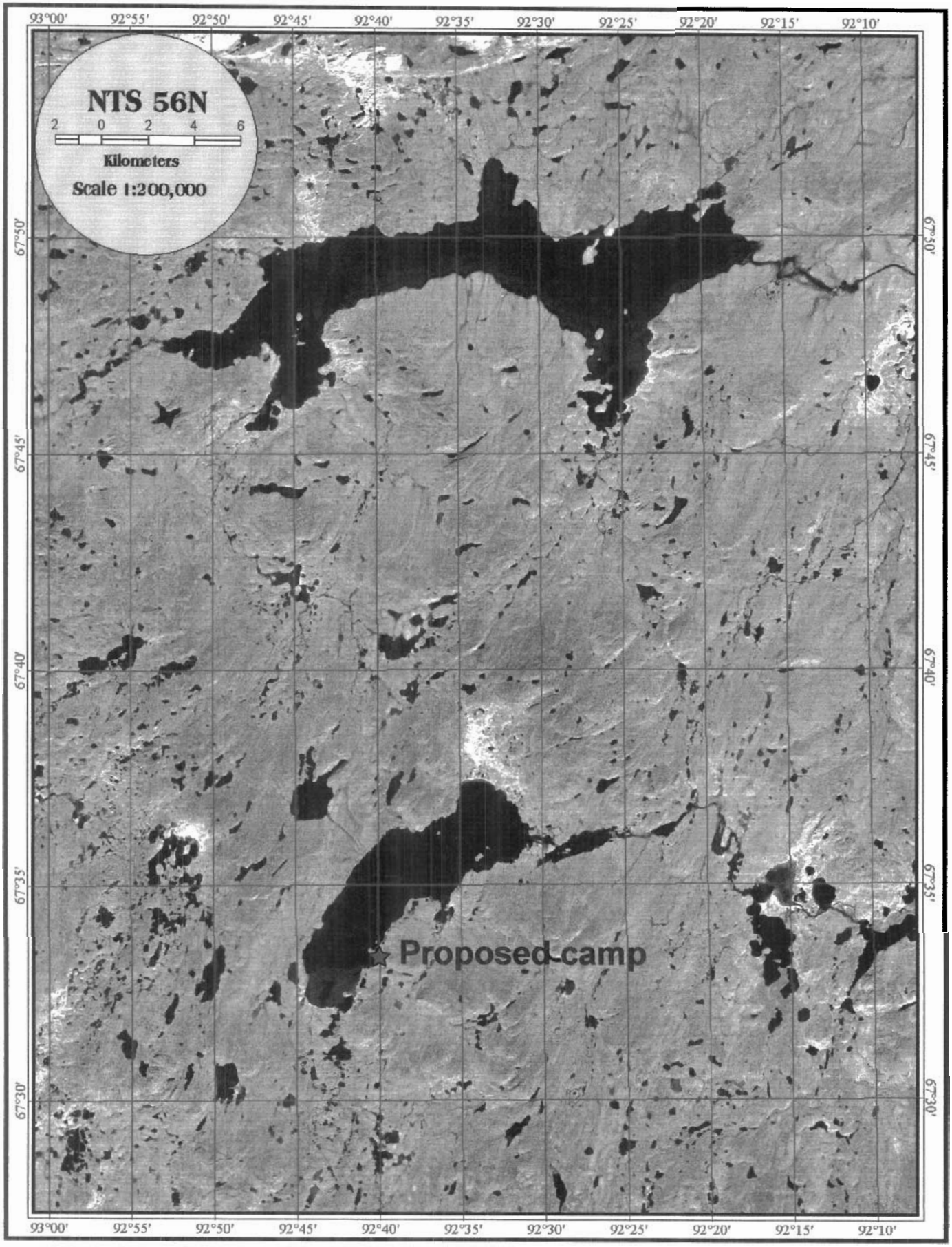
Daily activities: Foot traverses with helicopter drop-offs and pick-ups; bedrock sampling (fist-sized pieces); compilation of data with computers; no chemicals required.

Helicopter usage: Drop-offs and pick-ups of traverse teams; sample collection; equipment and supplies movement; personnel moves to/from main camp.

Fuel: 140 sealed 205 litre drums of helicopter fuel would be moved by Twin Otter from the airstrip at Gjoa Haven (sealift drop-off point 2003) to the main camp before the start of the season. Fuel drums would be stored away from any surface drainage on a gravel pad. All drums (empty and full) will be removed by Twin otter at the end of the field season and transported to Gjoa Haven for re-use or disposal.


98°0'0"W
96°0'0"W
94°0'0"W
92°0'0"W
90°0'0"W
88°0'0"W
86°0'0"W
84°0'0"W
70°0'0"N
68°0'0"N
67E
57F
57E
67D
57C
Taloyoak
57D
67A
Gjoa Haven
57B
57A
Kugaaruk
47B
66O
66P
56M
56N
56O
56P
46M
46N
66J
66I
56L
56K
56J
56I
46L
46K
Repulse Bay
25 12.5 0 25 50 75 100
Kilometers
2004 map area


NTS 56N
5 0 5 10
Kilometers
Scale 1:425;000
93°50'
93°40'
93°30'
93°20'
93°10'
93°00'
92°50'
92°40'
92°30'
92°20'
92°10'
67°50'
67°40'
67°30'
67°20'
67°10'
Landsat 7
Scene 3612 UTM 15
RGB 321


NTS 56N
2 0 2 4 6
Kilometers
Scale 1:200,000
93°00'
92°55'
92°50'
92°45'
92°40'
92°35'
92°30'
92°25'
92°20'
92°15'
92°10'
67°50'
67°45'
67°40'
67°35'
67°30'
Proposed camp