

*PROPOSED EXPLORATION PROGRAM  
CUMBERLAND RESOURCES LTD.  
MEADOWBANK PROJECT, NUNAVUT*

*APPLICATION TO AMEND WATER USE AND WASTE DISPOSAL  
LICENCE # NWB2MEA0204*

*FEBRUARY 2003*

Cumberland Resources Ltd.  
950-505 Burrard Street  
Vancouver, British Columbia  
V7X 1M4



## Executive Summary

Cumberland Resources Ltd. has been operating exploration activities at the Meadowbank Gold Project, located 70 km north of Baker Lake, since 1995. The project is located on Inuit owned surface lands (IOL BL-14) and as such access is subject to licensing and permit approval by the Kivalliq Inuit Association and the Nunavut Water Board. The project has seen steady advancement with over \$23 million invested since 1995.

Pre-feasibility studies were completed in 2000, which focused on the economics of potential development of four closely spaced gold deposits located near Third Portage Lake. The results of this study indicated that increased resources or improved gold prices were required to advance the project.

Subsequently, a new deposit, named the Vault, was discovered approximately 5 km north of the existing deposits at Meadowbank. Independent resource estimates indicate that the Vault is host to an inferred resource of 936,700 ounces gold. The addition of the Vault increases the total project resource base to over 3 million ounces gold. A final feasibility study is currently underway to assess the economics of gold production from the Meadowbank site. This study should be completed prior to the end of 2003. It is anticipated that activity levels on the project will increase in 2003.

The 2002 exploration program included over 16,000m of diamond drilling, an RC sampling program and geological mapping and prospecting. Diamond drilling was targeted on the Vault, North Portage and PDF Deposits, located both on NTI exploration concessions acquired in late 1999 as well as grandfathered crown mining leases. The reverse circulation drill program tested the overburden and shallow bedrock in the area between the Vault and North Portage and was followed up with a mapping and prospecting program during the summer.

Cumberland conducted a wide variety of baseline environmental studies during 2002, including: fish and aquatics, wildlife, vegetation and terrestrial habitats, hydrology and acid rock drainage. These studies were necessary to add to our baseline information about the project and gather further information required to complete a Project Description Report. The Project Description Report will summarize the environmental impacts of possible development at Meadowbank, and initiate the mine development review process.

Health and safety programs for the Meadowbank project were upgraded during the 2002 field season in recognition of both increased activity levels and an increase in the personnel required on the project. The project maintained a good safety record during activities in 2002. Most incidents were limited to minor cuts and bruises and treated by on site first-aid attendants. Several medivac flights to Baker Lake were required, due to accidents at the site, although no significant injuries resulted.

Total expenditures (including exploration, engineering and environmental studies) on the Meadowbank project for 2002 approximated \$7.0 million of which \$1.4 million (approx. 20%) was expended directly in Baker Lake and/or Kivalliq. Local employment levels averaged 20-30% of total on-site personnel during the 2001 season. Local employees were dominantly residents of Baker Lake, however several employees were also hired from Chesterfield Inlet, Arviat and Rankin Inlet.

Over the past 6 years significant improvements to camp facilities and transportation systems have been completed. Fuel storage systems include 50,000-l double walled tanks and transportation systems have been upgraded to bulk transportation systems effectively negating the use of diesel fuel barrels. In addition, a diesel-fired refuse incinerator has been installed on site.

Site expenditures are planned at approximately \$6.5 million for 2003. Planned work will consist of 16,000 m of diamond drilling, a small RC drill program, a trenching program and further geological mapping and prospecting.

## Introduction

Cumberland Resources Ltd. currently has a valid Water Use and Waste Disposal Permit for the Meadowbank Project (NWB Licence no. NWB2MEA0204) which expires on December 31, 2004. However, due to additions in the exploration plans for the project for the 2003 field season Cumberland is applying for an amendment of it's existing licence. Exploration plans for 2003 include a trenching program for the Vault and Third Portage Deposits and the installation of additional double – walled fuel vaults, in addition to the continuation of the diamond and RC drill programs similar to those permitted in 2002. Included with this amendment application is an updated copy Cumberland's Abandonment and Restoration Plan for the Meadowbank site and an update of the Fuel Transportation and Storage Management Plan, which has been updated to account for the proposed installation of the new fuel vaults contained in this amendment. Details of Cumberland's exploration plans for 2003 are provided below.

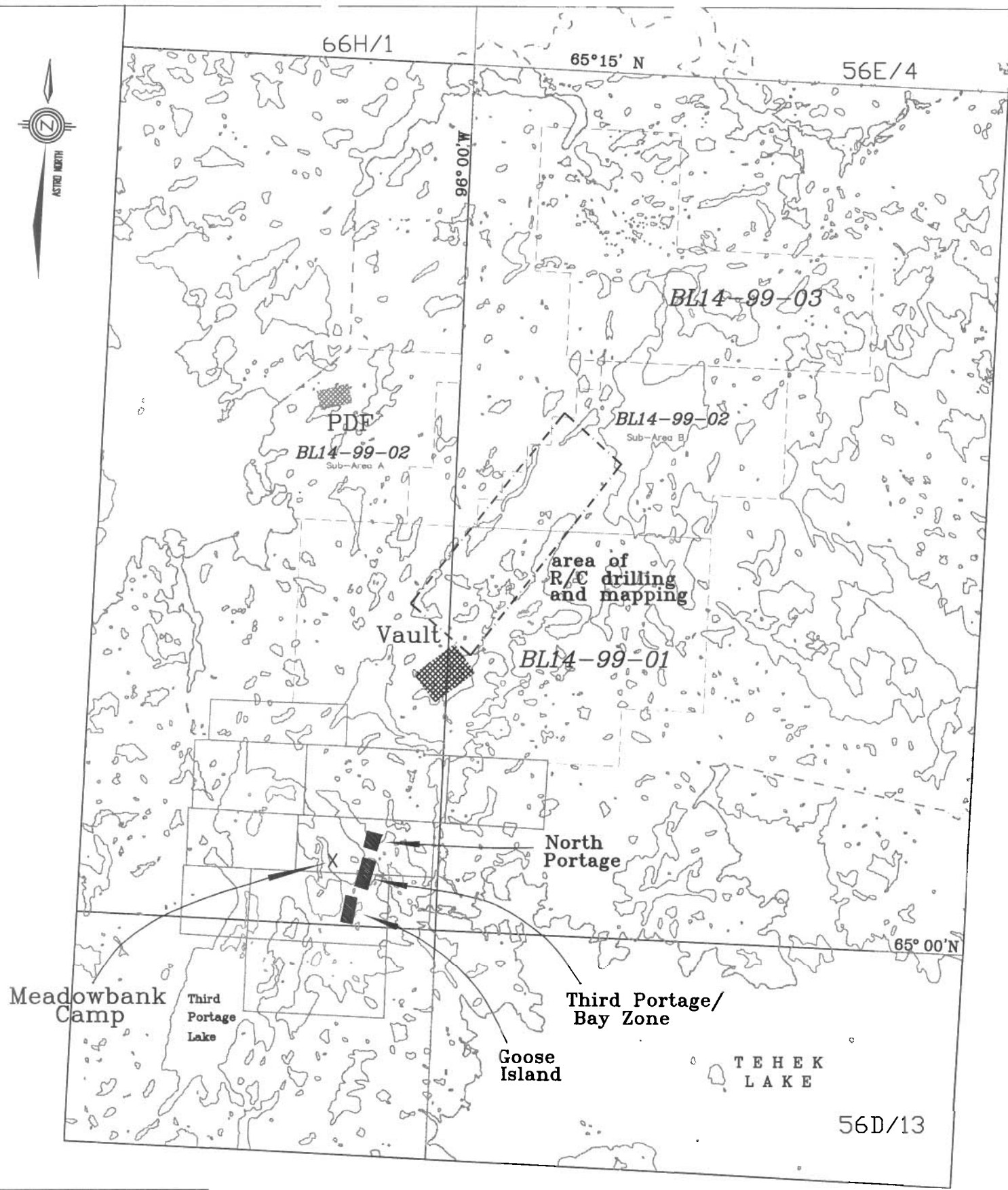
## Project activities for 2003 would include:

**Diamond Drilling:** The current proposed diamond drill program is estimated at 16,000 meters. The areas of proposed work are outlined in **Figure 1** and are generally areas that have been drilled in previous years. Surface gridding will be required to provide control for the placement of drill collars. The first phase of the drill program is expected to begin in late March and be completed by early June. A second phase would take place during the summer between July and September.

The drilling contractor will be Boart Longyear, based in Saskatchewan. Three fly-able drill rigs will be required. Drill moves would be supported by a skidder/dozer in the winter months and by helicopter in the summer months (Helicopter contractor yet to be determined). Drill core will be transported to the Meadowbank camp for storage.

**Overburden (RC) Drilling:** Current plans call for a proposed 5000 meter program designed to sample glacial till and shallow bedrock in a grid pattern focused on the area northeast of the Vault Deposit (**figure 1**). This program is planned as a continuation of the RC drill program completed in 2002, and would assist in expanding our geological knowledge to the north of the Vault Deposit. The program is planned for the spring season, so that the data derived from these short reverse circulation drill holes could be used to target possible diamond drilling in the summer.

Boart Longyear of Saskatoon, Saskatchewan will also be the contractor for the RC drill program. It is envisioned that the program would utilize a small mobile RC rig that would be



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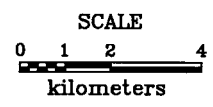
**MEADOWBANK PROJECT**  
Nunavut / NWT

**FIGURE 1**  
**Meadowbank Region**  
**2002**  
**Work Areas**

Scale as shown	BL14	SSA-D: 54E	Date
Revised by: J. Kallner	U/L: BL14		Jan 2003
Planned by: Dep2002_BJ	Map No.	UTM	NAD 83

**LEGEND**

- EXPLORATION PERMITS
- GRANDFATHERED CLAIMS
- NTI BL14 BOUNDARY
- 2002 MAPPING
- LAKESHORE
- WORK AREAS



moved using a small bulldozer. All drilling would be conducted on land and away from any bodies of water and will be conducted in April – May on the frozen active layer.

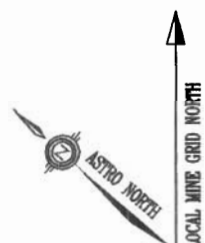
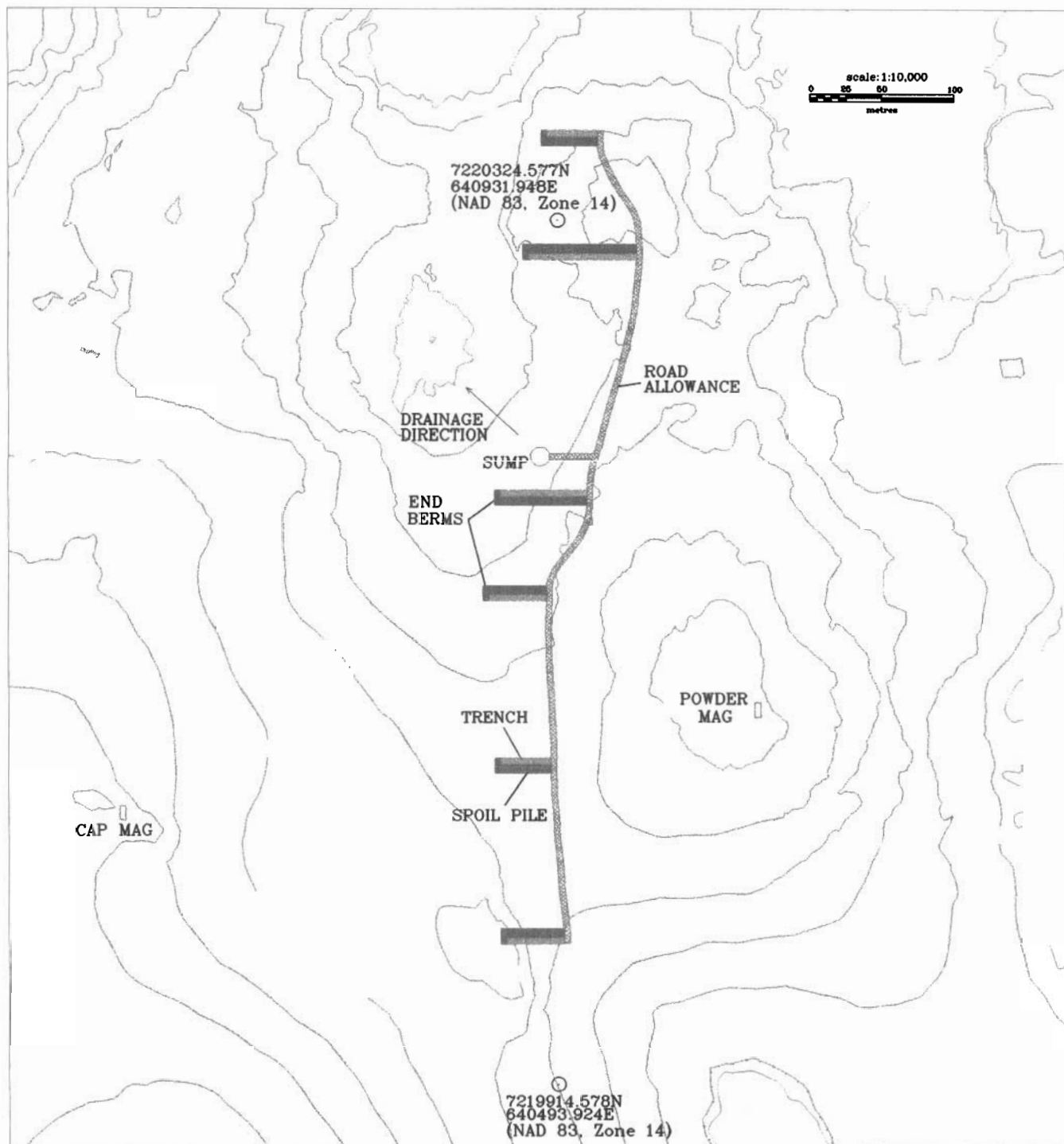
**Emergency Shelters:** Current plans call for two emergency shelters to be set up in support of the drill programs. A 14'x16' Weatherhaven tent will be moved up to the Vault area from camp, to be used as an emergency shelter in event of a white-out, etc. This tent is a temporary structure, but it is planned that the tent will remain at the site in support of future programs as well. A portable structure will also be taken up to the PDF area to support the drill program. Depending on the results of this drilling, it is probable that this structure may also remain at the site for the year.

**Fuel Caching:** Temporary fuel caches may be required for safety purposes and logistical reasons at both the Vault, located approximately 5 km north of camp, and at the PDF Deposit, located approximately 10 km north of Vault. The fuel cached in the Vault area will be utilized for both diamond drilling and the proposed RC program, while the fuel cached at PDF would be used to support the diamond drilling on that deposit. Approximately 30 to 50 barrels (205 litres each) of diesel fuel should be cached at each site. All drums will be removed once they are emptied during the exploration program.




**Trenching:** At present a trenching program is being planned for the 2003 field season. The main focus of the trenching program would be at the Vault Deposit, where trenches would be located to expose mineralization where it is projected to reach surface and thus provide a higher degree of confidence in the resources in that deposit. A smaller program of trenching is also proposed for Third Portage. This program would expose additional surface mineralization as a continuation of the trenching program carried out in that area in 1999. Trenching will adhere to all protocols established and used successfully during the previous trenching program at Third Portage. All trenches would be located on higher ground at least 30m from the high water mark of any bodies of water.


Vault Deposit: At present six trenches are proposed for the Vault area, covering approximately 300 linear metres, and involving the displacement of approximately 5700 cubic metres of overburden material (Table 1). A map showing the proposed locations of the trenches is provided in **figure 2**. The trenches are expected to be 1.0 to 3.0 metres deep and all material removed to expose bedrock will be piled near the trenches for easy reclamation. The area of surface disturbance for the trenches (including the trenches themselves and waste piles) will be approximately 0.30ha, with approximately 0.25 ha of secondary disturbance needed for roadways to allow the movement of tracked vehicles. Currently, the Vault trenching is planned to begin in late spring (May), prior to the lake ice breakup, with the final clean up and "mucking out" of the trenches occurring during the summer. This will allow the excavator and other heavy equipment to be moved south to Third Portage for trenching work during the summer.

Third Portage Deposit: At the Third Portage Deposit, trenching is planned to expose additional surface mineralization and enhance our understanding of both the continuity of the ore and structural controls on the geometry of the mineralization. The trenching program for Third Portage would consist of one trench approximately 75 metres long which would follow the ore zone and connect trenches "D" and "E" completed in 1999. See **figure 3** for a map showing the location of the proposed Third Portage trench. The excavation of this



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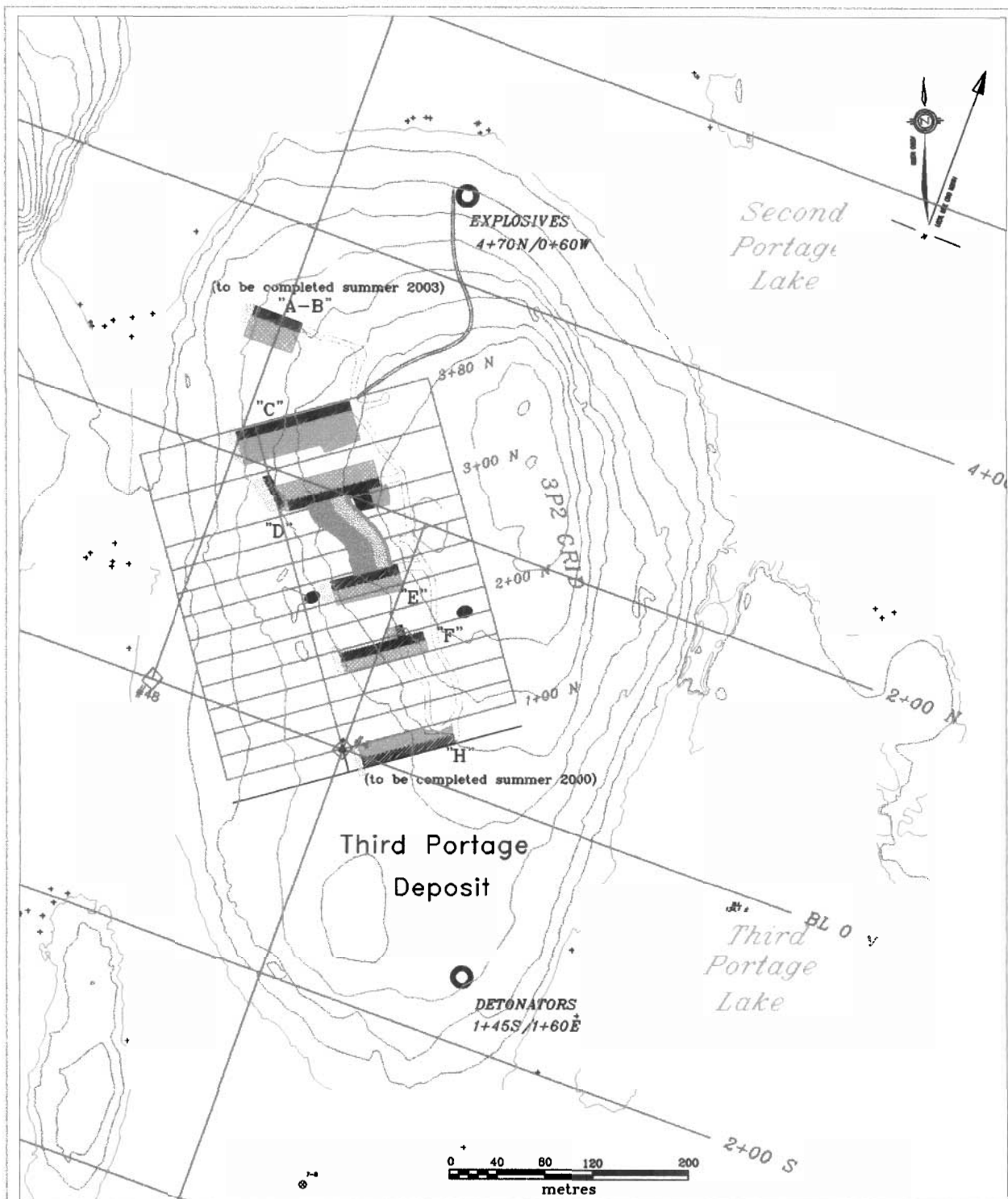
-  TRENCH
-  WASTE ROCK
-  ROAD ALLOWANCE

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<b>FIGURE_2:</b> <b>VAULT</b> <b>PROPOSED</b> <b>TRENCHES</b>			
Scale:	as shown	N.T.S.	Date:
Revised by:	J. Kellner	1:02	BL-14
Filename:	VL02TOPO	Datum:	mine grid
			Map No.
			Feb 6 / 03









### LEGEND

- |  |                       |  |                 |
|--|-----------------------|--|-----------------|
|  | EXISTING TRENCH       |  | PROPOSED TRENCH |
|  | WASTE ZONE 1          |  | NEW WASTE ZONE  |
|  | WASTE ZONES 2 & 3     |  |                 |
|  | EXISTING VEHICLE ROAD |  |                 |
|  | QUAD TRAIL            |  |                 |
|  | EXISTING SUMPS        |  |                 |
|  | 2m CONTOUR INTERVAL   |  |                 |



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**FIGURE 3:**  
**THIRD PORTAGE**  
**TRENCH & EXPLOSIVES**  
**LOCATION MAP**

Scale: as shown	N.T.S. 66A.H	Date: Feb 6 / 03
Revised by: JTK	Lo.L. BL-14	Map No.
Filename: Trench_loc	Datum: UTM NAD 83	



trench would involve the displacement of approximately 5250 cubic metres of overburden material (Table 2). The proposed work at Third Portage would require approximately 0.26 ha of surface disturbance for the trench and waste pile (secondary disturbance for tracked vehicles would utilize existing roadways from the 1999 program). It is currently proposed that this work at Third Portage would take place in July – August, 2003.

**Fuel Vault Installation:** Plans call for the installation of four 75,000 liter double-walled fuel vaults in the north camp, adjacent to those installed in 2002. Three of the tanks will be used for diesel containment, while the fourth would be used for Jet-B helicopter fuel. The use of these tanks should help reduce the need for drummed fuel at the site. Tank installation will adhere to the procedures successfully used in the installation of the existing five tanks currently installed at the site.

The installation of the tanks is planned for early March. The location of the proposed installation site is provided in **figure 4**.

**Camp Construction:** Current plans call for several new temporary Weatherhaven structures to be erected in the north camp. These structures include a new 24' x 32' office tent, a 24' x 84' core shack tent and two 14' x 16' sleeper tents. These tents will be erected in early March, prior to the beginning of the spring exploration program. Plans also call for a 42' x 70' temporary "Cover-all" building to be erected in the north camp which will be used as a garage to store heavy equipment and perform required maintenance.

**Environmental Baseline Studies:** Continued environmental studies are planned for 2003. Further environmental studies are required in order to complete the Environmental Impact Assessment required for the project prior to permitting the project for development. Studies will include continued aquatic and terrestrial biological studies, water quality studies, archeological studies and continued traditional knowledge investigations.

### **Community Consultation**

Representatives of the Community Land and Resources Council (CLARC), Hunters and Trappers Organization (HTO), KIA, Hamlet Council of Baker Lake, and a group of Elders from Baker Lake were updated on the plans and progress of the exploration program at joint meetings held on May 2<sup>nd</sup> and 3<sup>rd</sup>, 2002 in Baker Lake. Residents of Baker Lake were also invited to attend these meetings. The company plans to hold further public meetings in Baker Lake in the spring of 2003.

### **Water Quality**

All activities related to water use and water management will be consistent with the regulatory guidelines and requirements set out by the Nunavut Water Board. Baseline water chemistry and preliminary field tests of exposed mineralized rock indicate that there are no concerns associated with oxidation and metal leaching of rock exposed during the exploration programs (submitted 1999 Appendix III).

### **Fuel Transport**

Fuel transportation from Baker Lake to the Meadowbank campsite will be accomplished via bulk tank designed for Delta transporter locally owned and operated by Peters Expediting Ltd. of Baker Lake. The winter haulage route has been successfully used for fuel and bulk



0 25 50 100  
metres

NORTH  
CAMP

existing bulk  
fuel tanks

four new bulk  
fuel tanks

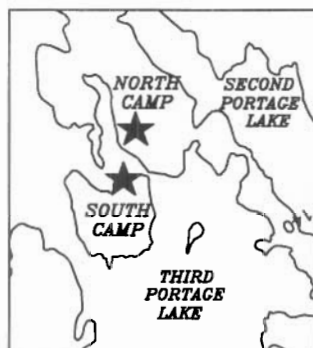
COVER-ALL

area of  
disturbance

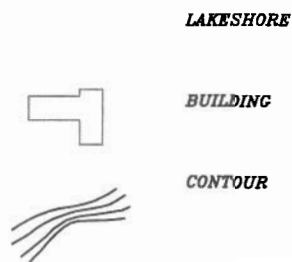
water out

water in

boat launch



## LEGEND



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Nunavut

## FIGURE 4: PRESENT NORTH CAMP LOCATION

Scale: as shown

N.T.S. 66A,H

Date:

Feb 2003

Revised by: JT Kellner

L.O.L. BL-14

Map No.

Filename: north\_camp

Datum: NAD83Z14

supply transport over the past seven years without incident. A full compliment of fuel spill kits is kept on site.

### **Waste Disposal**

Daily garbage and other combustible waste products are burned on site in a diesel-fired refuse incinerator, installed at the Meadowbank campsite in 1999. Non-combustible refuse is backhauled for disposal in Baker Lake. Plans are in place to install a second diesel-fired incinerator during the spring of 2003.

### **Local Employment**

Seven local employees from the Kivalliq region (dominantly Baker Lake) supplemented project staff on a day to day basis in 2002. However, when staff hired for camp construction and indirect employment provided by contractors on site, this total increased to approximately 30 different local personnel working on site. Duties ranged from cook's helper, survey and geological technicians, heavy equipment (D-6) operators and construction labourers and tradesmen. Activity levels are expected to remain constant and possibly increase, as the project moves through the feasibility study in 2003.

### **Contractors used:**

#### **Overland Transportation of Bulk fuel and supplies from Baker Lake:**

**Mr. Peter Tapatai**  
**Peters Expediting Limited**  
**PO Box 74**  
**Baker Lake, N.T**  
**Tel: (867) 793-2703 Fax: (867) 793-2988**

### **Diamond / RC Drilling:**

**Boart Longyear Inc.**  
**403-47<sup>th</sup> Street East**  
**Saskatoon, Sask., S7K 5H4**  
**Tel. (306) 931-4466 Fax: (306) 931-1150**

**Helicopter: Contract not yet awarded**

**Trenching: Contract not yet awarded**