2005 Activities - Supplemental Information for NWB Year-end Report

The following information is provided to supplement the year-end report form for 2005 activities at Cumberland Resources Ltd.'s Meadowbank Project as required under Part B, item 2 of the terms and conditions of NWB Water Use and Waste Disposal License NWB2MEA0507.

i. Water is used for both domestic and industrial purposes at the site. Domestic uses include: water required for cooking, cleaning, showers, etc. and averages 4.5 m^3 per day sourced from Third Portage Lake (See item ix below for further information on the calculation of this amount). A water flow meter, which will measure the volume of domestic water used, has been purchased and will be installed for use in 2006. This will provide a quantitative measurement of the volumes of raw water pumped from the source. The camp facilities were in operation for approximately seven months during 2005, which would equate to a total of approximately 945 m^3 of raw water used at the site for domestic purposes during the year.

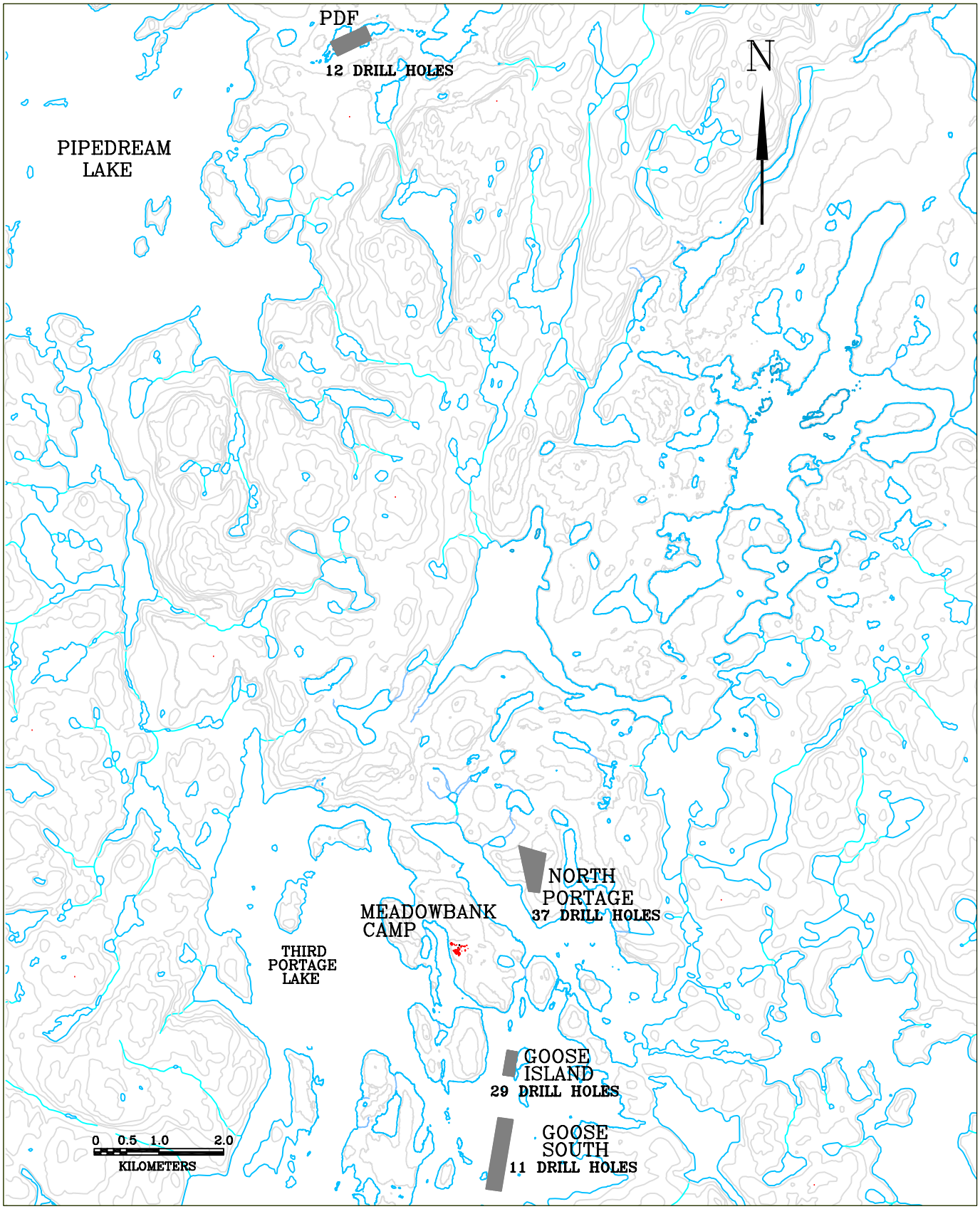
The water required for drilling operations is currently the only industrial water use at the site. Drilling utilizes approximately 27.5 m^3 per day per drill unit. Water required for drilling is sourced from lakes proximal to drill sites. All intake hoses have screens installed to prevent the entrapment of fish. The 2005 drill program was conducted in three phases. The phase I spring program utilized three drill rigs between April 21 and May 24; this equates to 99 drill days @ 27.5 m^3 per day, which equals 2,722 m^3 of raw water used. The phase II summer program utilized one drill between July 31 and Sept. 8; this equates to 39 drill days @ 27.5 m^3 per day, which equals 1,072.5 m^3 of water used. The phase III fall program utilized one drill rig between October 3 and October 29; this equates to 26 drill days @ 27.5 m^3 per day, which equals 715 m^3 of water used. Therefore, the total volume of raw water used in 2005 including both domestic and industrial purposes amounted to 5,455 m^3.

The raw water used during the 2005 program was sourced from several different lakes: Second Portage (drilling), Third Portage (drilling and domestic use) and PDF Lakes (drilling). In total, approximately 1,788 m^3 of water was sourced from Second Portage Lake, 578 m^3 of water from PDF Lake and 3,090 m^3 of water from Third Portage Lake.

ii. All solid waste, along with combustible garbage, is burned in diesel-fired incinerators on site and all residue from incineration and non-combustible refuse is sent to the land fill in Baker Lake for disposal. Grey water from camp operations (domestic uses) is deposited in a natural depression near the kitchen building. A grease trap has been installed in the drain line which removes the majority of the kitchen grease prior to release into the sump. It is estimated that 756 m^3 of grey water was deposited in the sump in 2005 (80% of the water intake). Drill water (for lake holes) is returned to the lake, after the removal of drill cuttings in a settling barrel, or is deposited in a natural depression on land.

iii. The 2005 drill program at the Meadowbank Project consisted of a total of 11,687 metres of diamond drilling in four main target areas: Goose Island, Goose South, North Portage (north of the Portage Deposit) and PDF. The reader is referred to the attached figure 1 for a map showing the location of the areas drilled in 2005. The drilling completed in these areas was broken down as follows: Goose Island area -

Figure 1



LEGEND

PROPOSED ROUTE

LAKESHORE

WORK AREAS

CONTOUR

CUMBERLAND RESOURCES LTD

MEADOWBANK PROJECT
Nunavut

2005
WORK AREAS

Scale: 8.5 x 11"	N.T.S. 66A,H	Date: Jan 05
Revised by: JT Kellner	I.O.L. BL-14	Map No.
Filename: 2005_haul..	Datum: NAD83Z14	

3,746 metres in 29 holes; Goose South area – 2,141 metres in 11 holes; PDF area – 1,888 metres in 12 holes; North Portage area – 3,912 metres in 37 holes.

iv. Construction of an airstrip to support exploration activities at the Meadowbank site was initiated in 2005, located approximately 500 m north of the camp. Approximately 750 metres of the strip was completed prior to the end of the field season. The reader is referred to figure 2 for an as-built drawing of the airstrip at the end of the 2005 season. This figure shows the location of intercept ditches, constructed to divert runoff water away from the working area of the airstrip, and collector ditches constructed to channel runoff water from the construction zone into five settling ponds. In addition sediment fences were installed across several of the drainages.

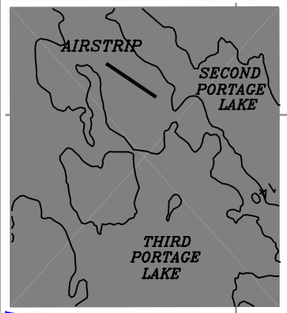
A report detailing the results of 2005 sampling and testing of the materials used in the construction of the airstrip was completed by Golder Associates Ltd. The report entitled "Geochemical Characterization of Meadowbank Airstrip Materials" was submitted to the Nunavut Water Board on January 12, 2006 as required under Part E: section 5 (i) to (v) of Cumberland's Water Use and Waste Disposal License NWB2MEA0507.

v. No unauthorized discharges occurred in 2005

vi. Both a revised Spill Contingency Plan, required under Part H, item 1 of NWB2MEA0507, and a revised Abandonment and Restoration Plan, required under Part I, item 1 of NWB2MEA0507, were submitted to the Nunavut Water Board in June 2005.

vii. Reclamation of the South Camp at Meadowbank continued in 2005. During the spring season, the Driller's shop, all remaining drilling supplies and equipment, the last storage tent and workshop were moved from the south camp and relocated in the north camp. During the summer months remaining scrap wood and other combustible materials were collected and incinerated, while scrap metal and other non-combustible materials were gathered for backhaul overland to Baker Lake in the spring of 2006. At this point, reclamation of the south camp is essentially complete. All that remains at the site is the core shack and drill core stored in the core racks. The core shack will be left intact at the site to facilitate processing of core from the racks, if required, and to provide a refuge station in the event of emergency. The site will be inspected during the summer of 2006, once the snow cover has melted, to make sure that no further reclamation work is required.

Photos of the north and south camps are included below. Photo A shows the condition of the south camp in 2004, and highlights the items which were removed and/or reclaimed during reclamation work in 2005. Photo B provides an aerial shot showing the layout of the north camp from the fall of 2005. A request for photographs detailing the reclamation work at the south camp was received from NWB on October 20, 2005. Unfortunately by that time the ground was snow covered so that no meaningful photographs could be taken. Photographs of the reclamation work completed at the site will be taken during the summer of 2006 and copies will be forwarded to the Water Board.



AIR 010
AIR 009
AIR 008
AIR 007
AIR 006
AIR 005
AIR 004
AIR 003
AIR 002
AIR 001

POWDER MAGZINE
637552.479 E
7214656.551 N
CUT
FILL
COLLECTOR DITCH
SETTLING POND
BORROW AREA
INTERCEPT DITCH
PIONEER AIRSTRIP ~764 m
SLOPE 0.4%
15.0m
WASTE PILE
CRUSHER
2015
59544
59545
638355.565 E
7214219.309 N
CORE SHACK
COVERALL
FUEL STORAGE
KITCHEN
CRUSHED ORE STOCKPILE AREA

SECOND PORTAGE LAKE

THIRD PORTAGE LAKE

7215000 mN
7214500 mN
7214000 mN
637000 mE
637500 mE
638000 mE
638500 mE

LEGEND

- LAKESHORE
- BUILDING
- CONTOUR
- ROAD
- SETTLING POND
- OVERBURDEN SAMPLE LOCATIONS
- ROCK SAMPLE LOCATIONS

REFERENCES

1) CUMBERLAND RESOURCES LTD, dated September 2005, File Name: LandUse-Appl_AirStrip

0 50 100 150 200 250
Scale in Meters

PROJECT
Cumberland Resources Ltd.

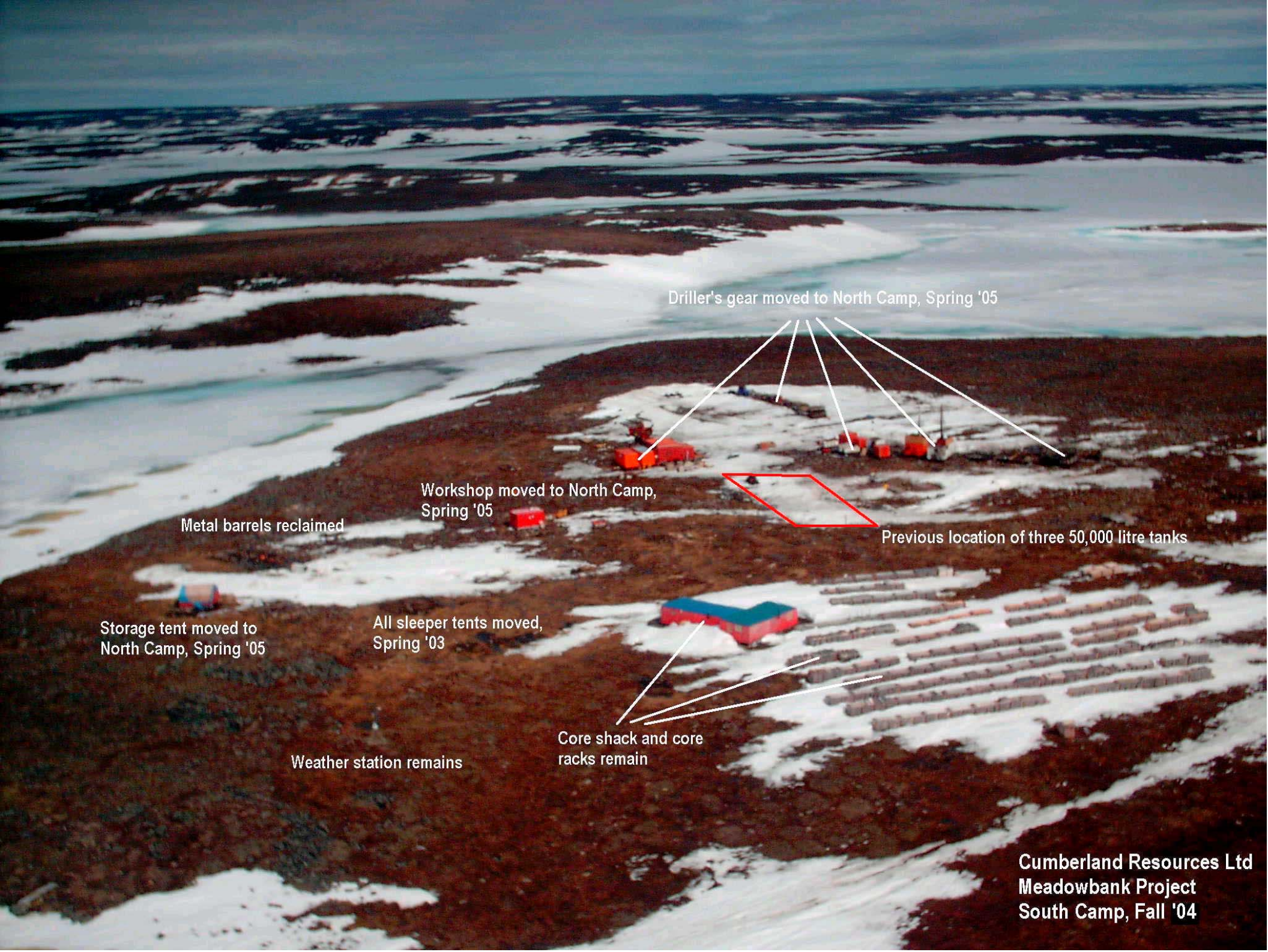
TITLE
AIRSTRIP OVERBURDEN AND ROCK SAMPLE LOCATIONS

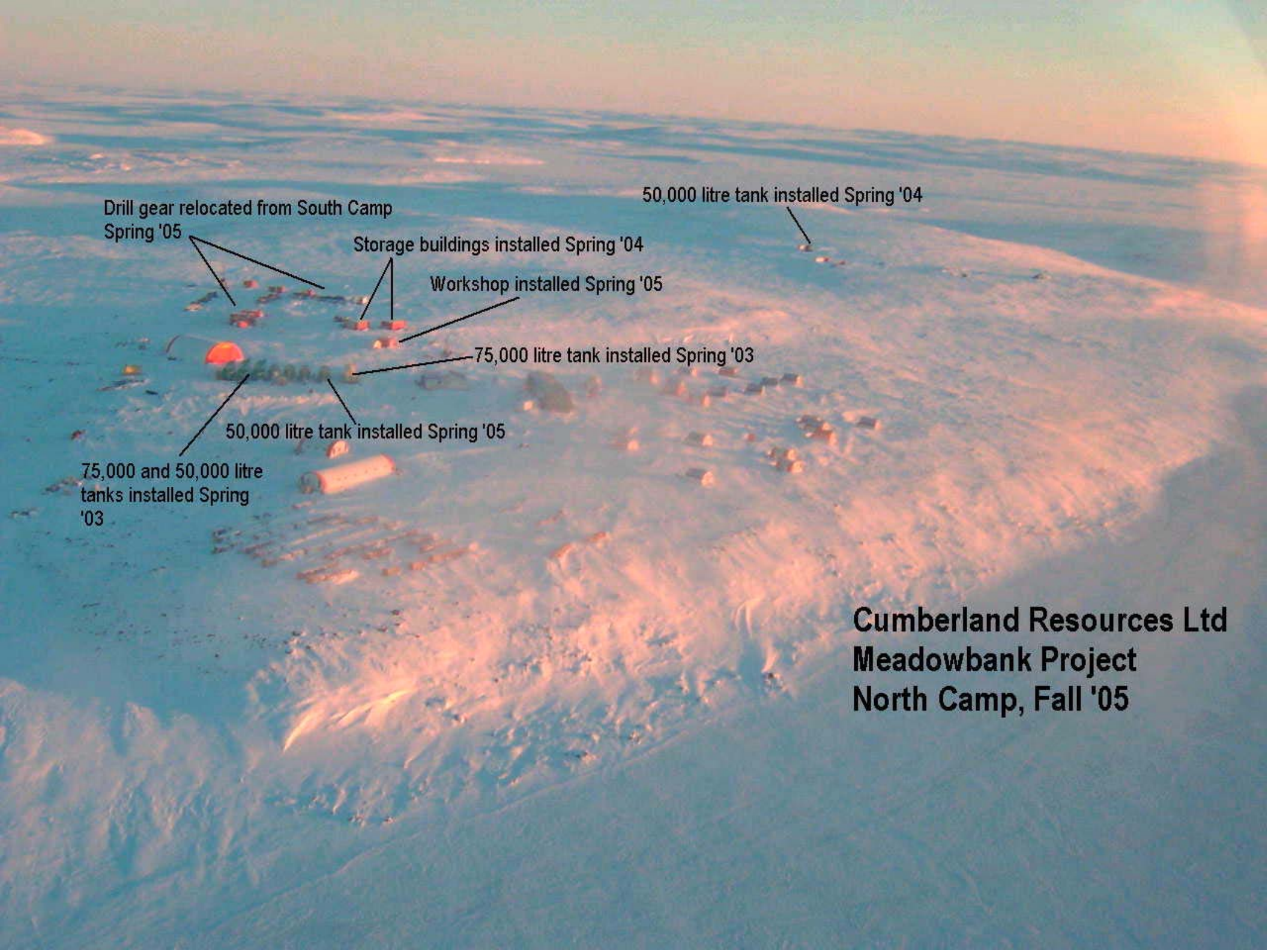
Golder Associates
OFFICE_PROV/STATE

PROJECT No.	PROJECT_NO		FILE No.		FILE_NO
DESIGN	DESIGN	DES_DATE	SCALE	SCALE	REV. REV
CADD	CADD	CAD_DATE			
CHECK	CHECK	CHK_DATE			
REVIEW	REVIEW	RVW_DATE			

FIGURE 2

CADD FILE: N:\Bur-Graphics\Projects\2005\1413\05-1413-0361\4100\Drafting\Cad\05141341OOSK01.dwg
REVISION DATE: 05/11/03 02:18PM By: LAbella


Driller's gear moved to North Camp, Spring '05
Workshop moved to North Camp, Spring '05
Metal barrels reclaimed
Previous location of three 50,000 litre tanks
Storage tent moved to North Camp, Spring '05
All sleeper tents moved, Spring '03
Core shack and core racks remain
Weather station remains
Cumberland Resources Ltd
Meadowbank Project
South Camp, Fall '04


Drill gear relocated from South Camp Spring '05
Storage buildings installed Spring '04
50,000 litre tank installed Spring '04
Workshop installed Spring '05
75,000 litre tank installed Spring '03
50,000 litre tank installed Spring '05
75,000 and 50,000 litre tanks installed Spring '03
Cumberland Resources Ltd
Meadowbank Project
North Camp, Fall '05

viii. The Meadowbank camp was inspected by representatives of INAC and the KIA during the summer of 2005. During these visits water samples were collected from the site. To date Cumberland has not received any analyses from these samples. A report on the hydrometric monitoring completed at the Meadowbank site by AMEC in 2004 is enclosed with this document, as per the information request from NWB received on October 20, 2005.

ix. The following covers items of additional information requested by NWB in a letter dated October 20, 2005.

Items for clarification from the 2004 annual report:

1. "Further information pertaining to the progressive reclamation practiced in the relocation of the 50,000 litre bulk diesel storage tanks. The board requests site photographs detailing any reclamation completed."

Unfortunately the request for photographs came too late in the season for pictures to be taken in 2005. Detailed photos of this reclamation work will be taken and forwarded to the NWB in the summer of 2006. During the decommissioning of the south camp, the 50,000 litre tanks were removed from the south camp and then transported to the north camp and re-installed. Each tank was installed on two gravel footings (one at either end of the tank). Timbers (8" x 12") were placed on top of the gravel footings and then the tank was placed on top of the timbers. The tanks are designed with two steel I-beams that run parallel to the long axis of the tank to provide a firm footing; these I-beams rest on the timbers.

The relocation of the tanks was completed during the winter when the tundra was frozen and snow covered. This helped to protect the tundra from damage during the relocation process and allowed the tank to be moved from the island to the north camp, located on the mainland. During relocation, the tank was dragged down off the footings (once emptied of fuel) and transported to the north camp. Once the tank was removed, the two timbers and the gravel from the footings was collected and re-used for the installation at the north camp. This same process was used in the relocation of each of the tanks. The tanks were then installed in the north camp using the same installation methods as were employed at the south camp.

2. "Site photographs with complimentary documentation detailing the water supply facilities, waste disposal facilities and general site."

Water for domestic use at the Meadowbank site is sourced from Third Portage Lake. The site Water Supply Facility consists of a 220 volt lake pump, rated at 3 gal/minute, which pumps water a distance of approximately 125 metres through a 1.5" diameter PVC pipe to a pair of 250 gal holding tanks located in the main kitchen/dry building. Water is then supplied to the kitchen and sinks and showers in the dry through a 220 volt pressure pump located near the holding tanks.

All domestic grey water is collected via drains and heat traced piping (to prevent the water freezing during winter operations) and discharged at the NW corner of the kitchen/dry building. The grey water passes through a heated grease trap constructed from a 45 gallon drum before being discharged approx. 60' away into a

boulder field (natural depression). This discharge location allows for approximately one kilometre of downstream percolation before encountering the lakeshore.

Solid waste (including kitchen and outhouse material) is collected and burned using two diesel-fired incinerators. Remnant ashes and unburned metal and glass are collected and sent to Baker Lake for disposal in the Baker Lake landfill. This reduces the volume of solid waste generated by the camp by 80 to 90%. Unless non-combustible material (scrap metal, etc) can be re-used on-site, it is collected and backhauled to Baker Lake for disposal.

A request for detailed photographs of the site including the water supply and waste disposal facilities was received too late to have the photos taken before the site was covered by snow. Photo C below provides an aerial view of the site which indicates the location of the water intake pump and water line, the grey water discharge line and the location of the incinerators. Detailed photos of the site will be taken during the summer of 2006 and forwarded to the NWB.

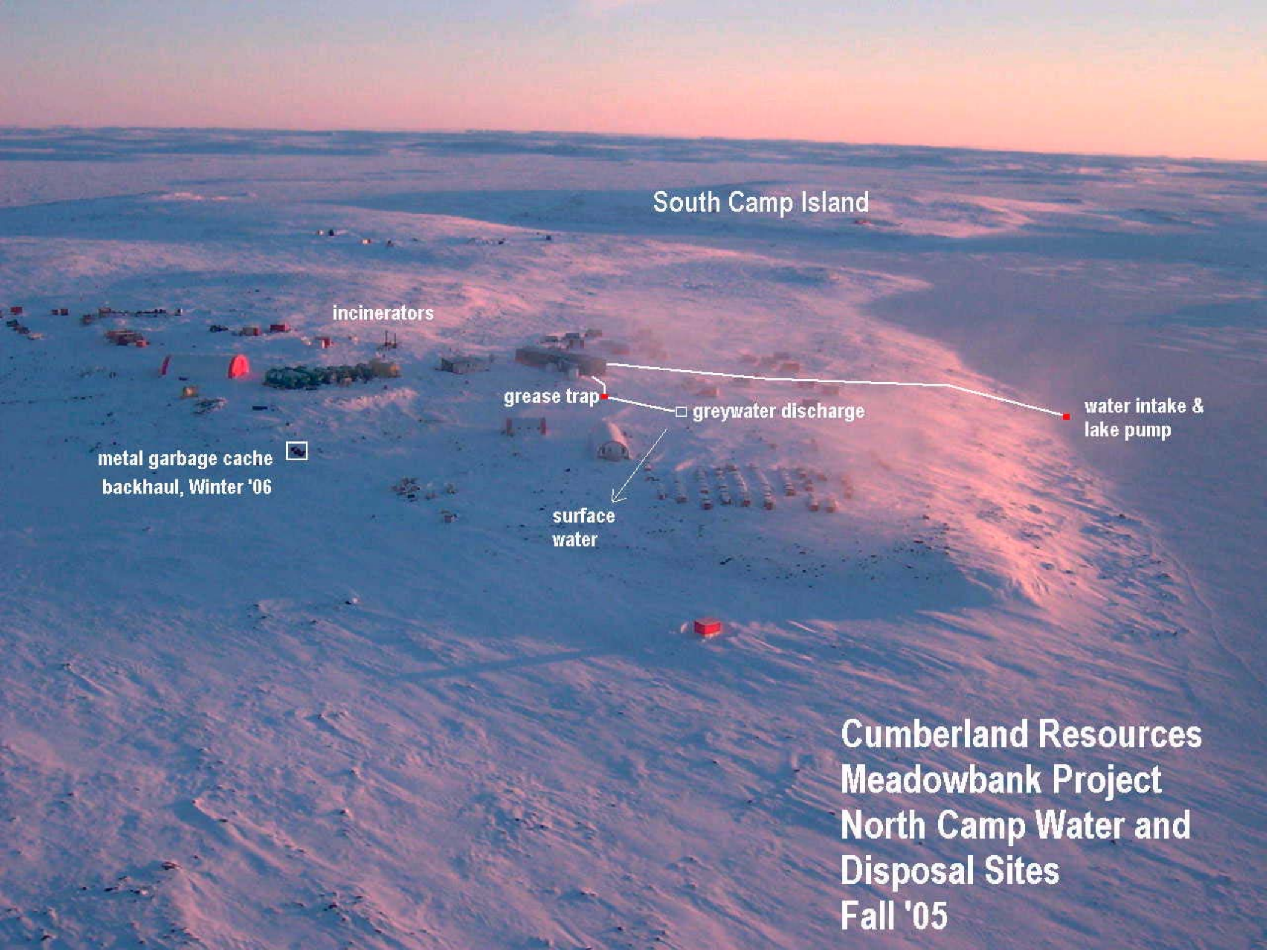
3. "Summary and quantitative details of the hydrometric monitoring completed by AMEC in 2004."

A copy of the report entitled "Meadowbank Gold Project Hydrologic Monitoring 2004 Data Report" completed by AMEC Earth and Environmental is included with this submission.

Items that require clarification from previous reporting (from Oct. 20/05 letter):

1. "The 2004 annual report shall provide the measured daily and annual cumulative volumes of raw water pumped from source. If this information is available from 2002 and 2003, then it shall be provided in a table in the 2004 annual report."

Camp occupancy during exploration programs averages approximately 30 persons per month. At present the camp is not equipped with a flow meter to measure the amount of water intake. A flow meter has been purchased and will be installed for use at the camp in 2006. The description below provides additional information as to how our estimated water usage is calculated. Fresh water for domestic use at the camp is held in two 250 gal. holding tanks inside the kitchen/dry building. Refilling of these tanks occurs three to four times per day, with the filling occurring from ¼ full to ¾ full using an automatic float valve. This indicates that each fill consists of approximately 250 gal of water, giving an average daily use of 750 to 1000 gal per day and a personal volume of up to 33 gal per person. A volume of 1000 gal equals 4546 litres or 4.5 m^3 per day, well below the 15 m^3 per day as permitted. The usage of 4.5 m^3 per day equates to 135 m^3 per month, which amounts to roughly 945 m^3 of water used over the seven months of operation of the facility, from March through to October (note: there are inactive periods at the site generally occurring in June due to break-up of lake ice, so actual water use over the year may be less). On average, the camp occupancy rate and periods of operation have remained constant over the past few years so that the above estimate of domestic use should be valid for previous years as well.


South Camp Island
incinerators
grease trap
greywater discharge
water intake &
lake pump
metal garbage cache
backhaul, Winter '06
surface
water
Cumberland Resources
Meadowbank Project
North Camp Water and
Disposal Sites
Fall '05

The drill rigs at the site use approximately 27.5 m^3 per day during drilling operations. The cumulative estimated water use provided below is based on 27.5 m^3 multiplied by the number of drill rigs in operation each day. Table 1 below provides the amounts of estimated daily and cumulative water use at the site for the period of 2002 to 2004.

Table 1: (Estimated Raw Water use)

Year	Season	Daily Volume (m^3)		Cumulative Volume (m^3)	
		Domestic	Drilling	Domestic	Drilling
2002	Spring	4.5	55	945	3300
	Summer	4.5	55		3630
2003	Spring	4.5	110	945	6655
	Summer	4.5	55		2310
2004	Spring	4.5	110	945	5858
	Summer	4.5	55		1320

2. "The 2004 Annual Report shall, as practically feasible, provide the volumes and location of waste water and solid waste generated."

The estimated daily volume of raw water used for domestic purposes at the site is 4.5 m^3 (see calculation in item one above). It appears reasonable to assume that 80% of the water used each day from the sinks and showers is returned to the drains. This equates to approximately 3.6 m^3 of grey water deposited in the camp sump each day. The sump is located approximately 50 metres northwest of the kitchen building at 65° 01' 15" N and 96° 04' 45" W.

The camp has an average occupancy of 30 persons per day. Human waste is calculated to be ¾ lb per person per day, this equates to approximately 22.5 lbs of waste generated each day. Other solid waste (i.e. from kitchen, workshop, etc) generated at the camp equals roughly 30 lbs per day, giving an average of 52.5 to 55 lbs of solid waste per day. This solid waste is incinerated, leaving 5 to 10 lbs of ashes and unburned material per day to be disposed of (an 80 to 90% reduction). This is roughly one half of a 12" by 12" by 16" cardboard box, or 0.67 cubic feet of material per day. This residue from incineration is sent to the Baker Lake landfill for disposal.

3. "The 2004 Annual Report shall contain any results from pre-release monitoring or water treatment."

At present water is not treated at the site. Samples of the water from Third Portage Lake have been collected, in close proximity to both the recharge (lake pump) and discharge areas (down slope from camp sump), by representatives of KIA and INAC. No results from this sampling have been received to date.

4. “The 2004 Annual Report shall contain more quantitative information regarding progressive reclamation activities.”

Reclamation activities at Meadowbank have focused on clean up and reclamation of the south camp site. At this time reclamation of the site is almost complete. All buildings and sleeper tents have been removed (with the exception of the core shack – see item vii above), along with all drill equipment and fuel storage facilities. Scrap wood and other combustible materials that were not re-useable have been collected and incinerated, while scrap metal and other non-combustible materials have been gathered together for backhaul to Baker Lake during the spring 2006 re-supply over the winter road. Site photos detailing the reclamation completed will be taken during the summer of 2006, once the snow cover has melted, and forwarded to the NWB as per the October 20, 2005 request.