

*CUMBERLAND RESOURCES LTD.  
MEADOWBANK GOLD PROJECT, NUNAVUT*

*NUNAVUT WATER BOARD*

*WATER LICENSE AMENDMENT APPLICATION  
**NWB2MEA0507***

*MAY, 2006*

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

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[illegible]

## **Executive Summary**

Cumberland Resources Ltd. has been conducting 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 in resource growth with over \$41 million invested since 1995.

A feasibility study was completed in early 2005, and the economics of the mining plan was updated in December, 2005. The open pit mineral reserve consists of 2,890,000 ounces gold. A mine life of 8.1 years is envisaged with capital costs of US\$235 million.

During the past eleven years of operations at the Meadowbank site, significant improvements have been made to the camp facilities and transportation systems. The original Cumberland camp, now referred to as the south camp, was erected in 1995 on an island in Third Portage Lake in close proximity to the Third Portage and Goose Island Deposits. As the project advanced, more space was required to accommodate larger field crews so new kitchen and dry facilities were constructed. These improved facilities were constructed in a new location, on the mainland, approximately one kilometre north of the original campsite.

The new site was selected on the basis of its proximity to the proposed mill complex required for development of the Meadowbank Project. This location will allow the new camp to be used as a possible initial construction camp, should the project proceed to development. The new kitchen and dry facilities were completed in the summer of 2002, and the "North Camp" was occupied in August of that year. In the spring of 2003 new office and core processing facilities were constructed in the north camp. Decommissioning and progressive reclamation of the south camp was also initiated in 2003.

Fuel storage systems at the site now utilize four 50,000-l and five 75,000-l double walled fuel "vaults". Originally four 50,000-l tanks were installed in the south camp for diesel containment. These tanks have now been moved to the north camp and are installed next to the new 75,000-l tanks, installed in 2003, to provide storage for approximately 451,250 litres of diesel fuel and 71,250 litres of Jet-A. Transportation systems have also been upgraded to accommodate bulk fuel transport of both Diesel and Jet-A fuels, effectively negating the use of barrels for re-supply.

A proposal was made in the fall of 2003 for the construction of a single 5,000,000-l fuel tank at the Meadowbank site which would provide increased diesel storage capacity and allow for consolidation of the multiple tanks currently in use. This proposal was approved by NIRB in a letter dated March 31, 2004, subject to the approval of the KIA and NWB. The necessary steel and construction equipment required to build the tank was transported overland to the site in the spring of 2004, and construction of this tank is planned for 2006.

A 900m long airstrip, located immediately northeast of the camp, was partially constructed at the Meadowbank site during the summer of 2005. The strip is of a suitable length to accommodate use by small aircraft, as required, in support of exploration work at the site.

Exploration expenditures are planned at approximately \$4.0 million for 2006. Planned work will include approximately 10,000 m of diamond drilling in a two phased program, along with fuel tank construction which will have a budget of approximately \$1.8 million.

## Introduction

An application to construct a 5M litre fuel tank at Meadowbank, in support of ongoing exploration activities at the site, was submitted to the Nunavut Impact Review Board (NIRB) for screening in 2004. A letter from the NIRB, dated March 31, 2004, indicated that the proposed undertaking could proceed subject to certain terms and conditions. Cumberland intends to proceed with the installation of this fuel tank at the Meadowbank site in 2006 and is hereby applying for an amendment to our existing Water Use and Waste Disposal License (NWB2MEA0507) for the site to allow for the construction of the tank. A detailed project description for the installation of the fuel tank is provided below, along with a revised Spill Contingency Plan and a revised Abandonment and Restoration Plan. A geotechnical assessment of the proposed location, addressing the suitability of the proposed site for the installation of the fuel tank, and civil and geotechnical engineering design drawings both completed by Golder Associates are also included with this submission.

### *Construction of a New Fuel Storage Facility at Meadowbank:*

Cumberland has been conducting exploration programs at the Meadowbank site since 1995. Exploration activities since that time have intensified and these expanded activities have required the gradual expansion of fuel storage systems at the Meadowbank site. At present, the tank farm at Meadowbank consists of five 50,000 litre and four 75,000 litre double walled fuel vaults. The five 50,000 litre fuel vaults and three of the four 75,000 litre vaults are used exclusively for diesel storage with a total combined capacity of 451,250 litres, while the remaining 75,000 litre vault is used for Jet-A aviation fuel storage with a capacity of 71,250 litres. In 2006, Cumberland plans to replace the multiple small tanks currently in use at the site with a single five million litre tank. The construction of this tank will allow diesel fuel storage to be consolidated into a single tank, located in a lined and bermed enclosure, thereby reducing the environmental risk associated with fuel storage at the site. Jet-A aviation fuel will continue to be stored in the current 75,000 litre double-walled fuel vault in close proximity to the helicopter landing pad at the site.

In March 2004, Cumberland received a screening decision from the Nunavut Impact Review Board on the construction of the five million litre tank at the Meadowbank site after reviewing comments provided by representatives of Environment Canada, Indian and Northern Affairs Canada and the Government of Nunavut. A copy of this letter, dated March 31, 2004, is appended below (Appendix A). In their letter, the Nunavut Impact Review Board (NIRB) approved Cumberland's application to construct the five million litre tank, subject to the following terms and conditions:

- The footprint of the 5ML tank should not exceed that required for the construction of a single 5ML tank;
- All Nunavut Water Board (NWB) licensing requirements must be met;
- All KIA license or lease requirements related to environmental matters that arise from this 5ML tank, must be met;
- The fuel in this 5ML tank can only be used for exploration purposes, and in no way does this indicate in any way that any part of the Meadowbank project is approved or that any Part 5 Review procedure is or will be expedited related to the Meadowbank review;

- Appropriate regulatory plans must be filed and/or met including Spill Contingencies, Fuel Transport, and Plans for Berming and Lining which must meet industry standards as adapted for Northern conditions; and
- Once construction of the 5ML tank is completed, decommissioning and clean-up of the eight smaller tanks shall begin immediately.

Cumberland plans to construct this 5ML tank at the Meadowbank site during the summer of 2006. All of the equipment, steel and supplies necessary to complete this construction were transported overland to the site during the spring of 2004. The application to construct the tank this year has been approved by the KIA under commercial lease KVCL103H305. A copy of the letter of approval from the KIA is included with this document in Appendix B.

### **The Fuel Storage Facility**

The fuel storage facility shall provide nominal five million litres of diesel fuel storage capacity in a single tank 24.2 metres in diameter and 12.1 metres high. The dispensing, loading, and off-loading systems will be contained within a skid mounted module with basic, manual operation systems, with alarming and metering capabilities. The fuel storage facility will be contained within a lined and bermed area complete with the following:

- A granular base for the tank complete with a 60 mil HDPE liner system and granular dikes to suit the 5ML tank
- One 5ML tank complete with the required appurtenances such as stairs, base manholes, water draw offs, re-supply nozzle, suction nozzle, tank lighting, tank level monitoring, roof manhole, manual gauge hatch, tank temperature and P/V Vent
- Piping for unloading and loading
- Site lighting via fixtures mounted from the dispensing building
- One Re-supply/Dispenser Building for Off-Loading the fuel Truck and fuelling vehicles at Site. The fuel truck unloading rates will be up to 50 m<sup>3</sup>/hr (15HP). Fuel loading rates will be up to 50 m<sup>3</sup>/hr (15 HP) for large vehicles and up to 3 m<sup>3</sup>/hr (1.5HP) for small vehicles. This facility will be complete with temperature compensated metering system to manage fuel flows, safety valve to prevent loss of fuel from the fuel facility, fire extinguishers, building heating and ventilation systems, building lighting systems and controls systems for the pumps.
- A fuel dispensing pad area complete with a dispensing unit will be in a lined facility with a provision to capture any and all spills at the fueling area and direct it to the main containment area provided for the 5 ML tank.

The facility is designed to meet the following standards:

- As a general guideline the fuel facility will meet the GN standard "Design Rationale for Fuel Storage & Distribution Facilities 1998".
- National Fire Code 1995
- Proposed Federal Petroleum Products and Allied Petroleum Products Storage Tank System Regulations – 2003
- Canadian Council of Ministers of the Environment "Environmental Code of Practice of Aboveground Storage Tank Systems Containing Petroleum Products – 1994"

The required civil and geotechnical engineering design drawings for the above installation are appended in Golder Associates' report "Submission of Information Package for Water License Amendment Application to Allow Fuel Tank Farm Construction – Meadowbank

Project Site: May 1, 2006". Mechanical, electrical and instrumentation related drawings are currently being completed. These plans will be submitted to the Fire Marshall's Office for approval and will be forwarded to the KIA and NWB once complete.

### **Construction**

The planned ground works required for construction of the tank and the proposed tank location is shown in figure 1 below. More detailed maps for the location of the tank can be found in the appended Golder Associates report mentioned above.

In order to construct the tank, an access road approximately 625m long will be constructed from the current fuel storage area at the Meadowbank site to access the proposed tank pad location. A short spur road (approx. 100m long) will also be developed to access the proposed quarry site located to the north of the proposed tank location. A portable rock crusher will be erected adjacent to the quarry site to provide crushed rock of the appropriate size required for the construction of the tank pad. It is currently anticipated that approximately 8,000 m<sup>3</sup> of quarried material will be needed to for the construction of the pad.

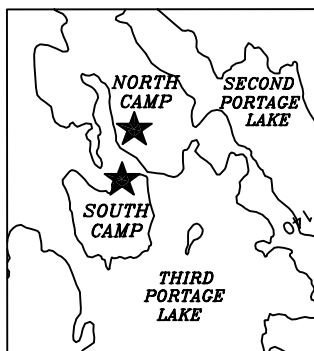
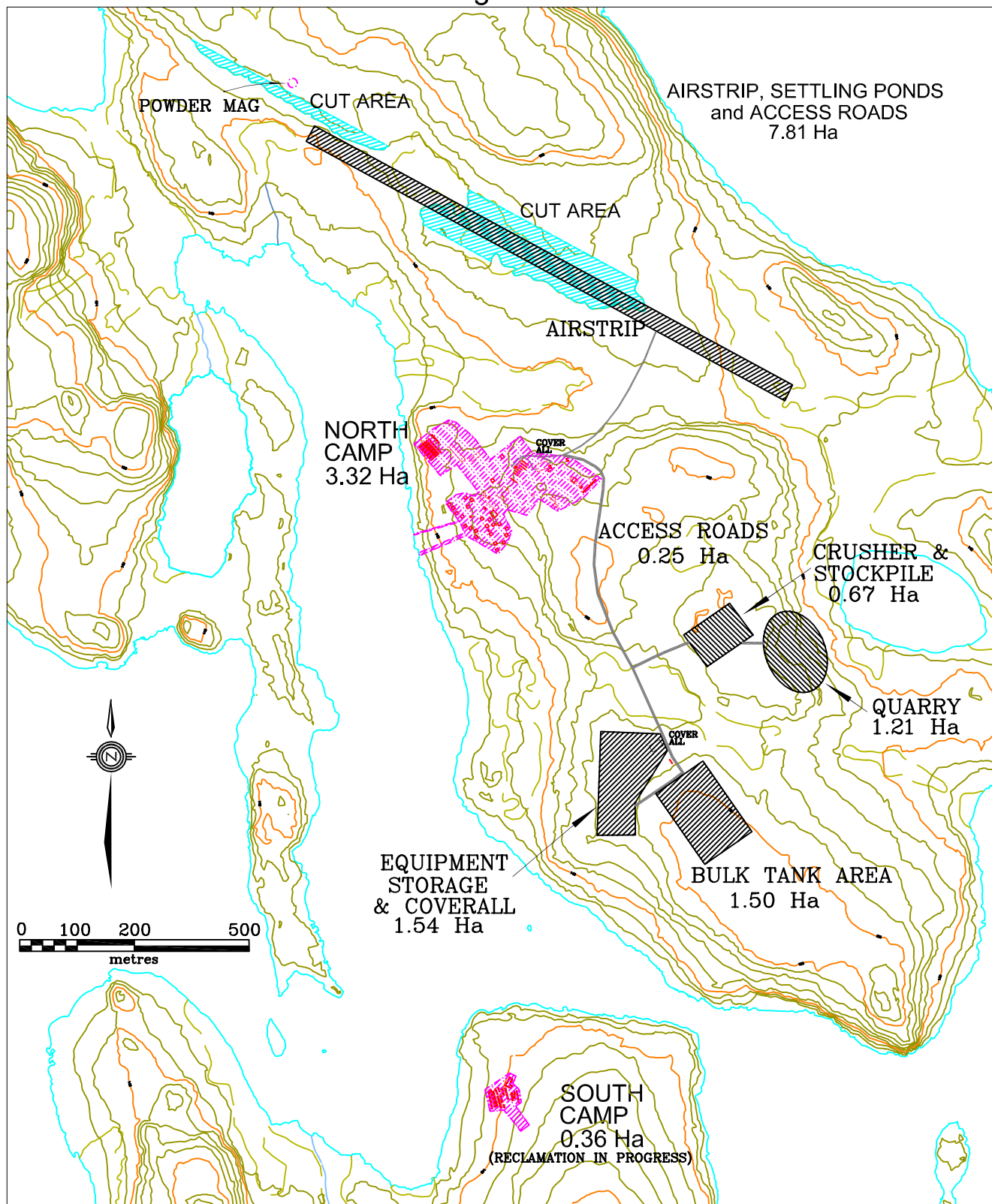
It is anticipated that the overall footprint for the tank construction will be within an approximately 100m x 100m area. This area will be stripped of overburden to expose bedrock and then the bedrock will be blasted as required to produce a level surface for the tank. This surface will be covered by a layer of crushed rock and capped by a sand cushion. The sand cushion is then covered by a geo-textile liner and the 60 mil high density polyethylene liner (HDPE) is installed on top. Finally the pad area is capped by a second sand layer to protect the liner. Once the liner has been installed, the tank is erected and the area is bermed to provide containment for 110% of the volume of fuel that the tank is capable of holding. The dispensing facility will hopefully be procured late this year and installed accordingly. The equipment used in the construction of the airstrip in 2005 is still at the site; this equipment will be used for the ground work for the tank installation. A complete list of the construction equipment available at the site is provided in table 1 below.

**TABLE 1 – EQUIPMENT FLEET FOR FUEL TANK CONSTRUCTION**

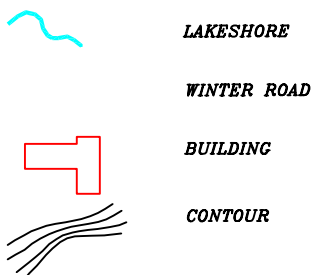
QUANTITY	TYPE	MAKE	MODEL	YEAR	PRESSURE PSI    BAR	
1	DOZER	CAT	D7H	1993	11	
1	COMPACTOR	BOMAG	BW124PDB	1998	428	295
1	BACKHOE	CAT	307B	1996	6	
1	BACKHOE	CAT	350L	1997		
3	ROCK TRUCK	CAT	773B	1993	90	
1	LOADER	CAT	966C	1985		
1	CRUSHING PLANT	Cedar Rapids	RC54 Cone			
2	MAN LIFTS	Simons				
3	SCISSOR LIFTS					



Figure 1



## LEGEND



**CUMBERLAND**  
RESOURCES LTD

**MEADOWBANK PROJECT**  
Nunavut

**2006**  
**LAND**  
**USE**

Scale: as shown	N.T.S. 66A,H	Date: Dec 2005
Revised by: JT Kellner	I.O.L. BL-14	Map No.
Filename: LandUse_2006	datum: NAD83Z14	

### **Construction Schedule**

It is currently anticipated that construction of the ground works for the tank installation will begin in early June and be completed by late September, 2006. A table showing the preliminary construction schedule, broken down by activity, is provided in table 2 below.

### **Environmental Impact Assessment**

The area for the proposed fuel storage is located in close proximity to the existing exploration camp and the airstrip constructed at the site in 2005. This area was assessed for possible impact on the following valued ecosystem components: aquatic, wildlife, vegetation, and archaeology. The results of the assessment indicate that the main impacts will be:

- 1) the loss of a small area of vegetation mapped in 1999 as upland heath tundra, and
- 2) runoff during construction.

Upland heath tundra represents the dominant vegetation in the area and as such the removal of a small area will not have a significant environmental impact. When the site is no longer required, it will be contoured and re-vegetated. Runoff during the construction will be collected by drainage ditches to prevent runoff from entering Third Portage Lake. The fuel storage facilities will be located in a lined and bermed enclosure so that runoff from the site should not be an issue during operation. Sedimentation ponds will be constructed as required and sedimentation fences and turbidity curtains will be maintained on site to address turbidity issues, if they arise during construction.

### **Aquatic Assessment**

The boundaries of the proposed fuel storage facility will be approximately 300 metres from the closest water body and therefore will not have a direct impact on the aquatic environment or habitat. Indirect impacts, although unlikely due to the distance from a water body, could result from run off during construction.

### **Aquatic Mitigation**

To mitigate the possible impact of run off from the area during construction, ditches will be constructed to direct any runoff away from Third Portage Lake.

### **Wildlife and Habitat Assessment**

Wildlife and habitat assessment was completed in 1999. The results of the survey indicate that there are no critical site specific wildlife values at risk due to mine development. Although the occasional small herd of caribou has been observed in the area, the critical calving grounds for the Beverly and Qamanirjuak caribou herds are more than 100 km away. In addition, the site is at least 100 km away from the nearest protected conservation area.

### **Wildlife and Habitat Mitigation**

During the short time (3 months) required for construction of the fuel tank facility, caribou will likely temporarily avoid the area, however once the construction is complete, caribou will be free to travel over the site. At all times during the construction and operation of the fuel facility, the Caribou Protection Measures will be followed.

[illegible]

### **Archaeological Assessment**

The results of the archaeological survey undertaken in 1999 indicated that there are no archaeological features in the area of the proposed fuel tank.

### **Archaeological Mitigation**

Due to the lack of archaeology sites in the area of construction, no mitigation is required.

### **Vegetation Assessment**

A vegetation survey conducted in 1999 mapped the site of the proposed construction as upland heath tundra, the dominant vegetation type in the area.

### **Vegetation Mitigation**

Given that upland heath tundra is the dominant vegetation type of the area, the loss of a small area due to the fuel storage construction will have a minimum impact on the overall quality of the vegetation in the area. As described in the engineering section when the site is no longer needed, the area will be contoured and re-vegetated.

### **Reclamation**

See attached revised abandonment and restoration plans for the Meadowbank site.

Reclamation of the south camp at Meadowbank is now virtually complete. The fuel storage facilities, including the 50,000 litre fuel vaults and empty fuel drums have been removed. All of the drill equipment and driller's shop have been repositioned at the North camp, and all sleep tents, generator shack, etc have been removed.

The core shack is now the only building structure that remains at the South Camp location. The core shack will remain intact at the south camp to facilitate processing of core samples from the core racks stored at the site, as well as to provide a refuge station in the event of an emergency.

Once the construction of the new five million litre fuel storage facility is completed, and the facility is in operation, decommissioning of the multiple smaller tanks currently in use at the North Camp will begin. This decommissioning should begin in early 2007.

### **Transportation**

Fuel and bulk goods transport is accomplished overland via Delta transporter from Baker Lake to the Meadowbank campsite during the frozen winter months. Diesel and Jet-A fuel is transported by bulk fuel tanks designed for the Delta transporters which are locally owned and operated by Peters Expediting Ltd. of Baker Lake. The winter haulage route has been used successfully for fuel and bulk supply transport over the past ten years without incident. In conjunction with overland transportation, some fuel and bulk goods may also be delivered to the site by Hercules aircraft, chartered from First Air, utilizing a landing strip on the lake ice near the camp.

## **Waste Disposal**

Daily garbage, sewage and other combustible waste products are burned on site in a diesel-fired refuse incinerator, originally installed at the Meadowbank campsite in 1999. A second diesel-fired refuse incinerator was installed in 2003 to provide additional burning capacity. Non-combustible refuse is backhauled to Baker Lake for disposal in the municipal dump. Greywater generated by the kitchen and shower facilities is deposited in a natural sump with is located over 100 metres from the lake shore.

## **Local Employment Opportunities**

At present there appear to be a number of potential positions available for qualified local interests relating to the construction of the planned earthworks required for the tank erection. These employment opportunities would include heavy equipment operators for the equipment at the site: bulldozer, dump trucks and loader, as well as the potential for at least one helper/labourer for the crushing plant. This represents 30-50% of the planned workforce required for the earthworks at the site. These positions will be posted at the Meadowbank site, Cumberland's Baker Lake Office and the KIA office in Rankin Inlet 30 days in advance of construction.

## **Contractors used:**

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

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

### **Diamond Drilling:**

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

### **Helicopter:**

**Heli-Max Ltd.  
3650 Boul. de l'Aéroport  
Trois Rivières, Que. G9A 5E1  
Tel. (819) 377-3344**

### **Construction:**

**Tercon Construction  
100 - 2079 Falcon Road  
Kamloops, B.C. V2C 4J2  
Tel. (250) 372-0922**

**Tank Fabrication:**

**Gem Steel**

**9060 – 24 Street**

**Edmonton, Alberta T6P 1X8**

**Tel. (780) 449-0000**

APPENDIX A

CUMBERLAND RESOURCES LTD.  
MEADOWBANK GOLD PROJECT, NUNAVUT

NIRB SCREENING LETTER





March 31, 2004

Mr. Craig Goodings  
Mgr. of Environmental and Regulatory Affairs  
Cumberland Resources Ltd.  
Suite 950 – 505 Burrard St  
Box 72, One Bentall Centre  
Vancouver B.C. V7X 1M4

*via fax (604) 608-2559*

Dear Mr. Goodings:

Re: Application to build a 5ML fuel tank at Meadowbank Exploration Site

The Nunavut Impact Review Board (NIRB or Board) has reviewed your application through your counsel Mr. Donihee on March 5, 2004, for exemption under section 12.10.2 of the Nunavut Land Claims Agreement (NLCA) relative to the above. The Board has now received comments from the parties including Mr. Donihee, and is prepared to grant the exemption under section 12.10.2(b) such that any approvals or licenses related to the construction of the 5ML tank can be issued.

NIRB makes this decision, i.e., that the activity to construct the 5ML tank can proceed without a review, but makes this decision *subject to* the following terms and conditions:

1. the footprint of the 5ML tank should not exceed that required for the construction of a single 5ML tank;
2. all Nunavut Water Board (NWB) licensing requirements must be met;
3. all KIA license or lease requirements related to environmental matters that arise from this 5ML tank, must be met;
4. the fuel in this 5ML tank can only be used for exploration purposes, and in no way does this exemption indicate in any way that any part of the Meadowbank project is approved or that any Part 5 Review procedure is or will be expedited related to the Meadowbank project review;



5. appropriate regulatory plans must be filed and/or met including Spill Contingencies, Fuel Transport, and Plans for Berming and Lining which must meet industry standards as adapted for Northern conditions; and
6. once construction of the 5ML tank is completed, decommissioning and clean-up of the eight smaller tanks shall begin immediately.

On a related matter, the Board is aware of press statements released last week suggesting that Cumberland's mine development will now be postponed due to feasibility study results. The Board is concerned with this statement inasmuch as it may affect project review timing. Accordingly, the Board would like you to respond to this concern in writing on or before April 9, 2004. At that time, and once we have reviewed your updated plans, the Board will notify parties who will have an opportunity to comment, and then we make a decision or at least report to the Minister if necessary on whether or not this delays or affects NIRB's review and subsequent hearing process.

Sincerely,



Stephanie Briscoe  
Executive Director

cc: Minister Mitchell  
Board

APPENDIX B

CUMBERLAND RESOURCES LTD.  
MEADOWBANK GOLD PROJECT, NUNAVUT

KIA WORK PLAN APPROVAL LETTER



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**Kivalliq Inuit Association**

ᐱᐱᐱᐱᐱᐱᐱᐱ/P.O. Box 340, ᐅᐱᐱᐱᐱᐱᐱᐱ Rankin Inlet, ᐃᐱᐱᐱᐱᐱᐱᐱᐱ Nunavut X0C 0G0  
ᐱᐱᐱᐱᐱᐱ/Tel: (867) 645-2800 ᐱᐱᐱᐱᐱᐱ/Fax: (867) 645-2348 Toll free: 1-800-220-6581

March 15, 2006

Cumberland Resources Ltd.  
Suite 950-505 Burrard St.  
Box 72, One Bentall Centre  
Vancouver BC  
V7X 1M4

Attention: Mr. Roger March

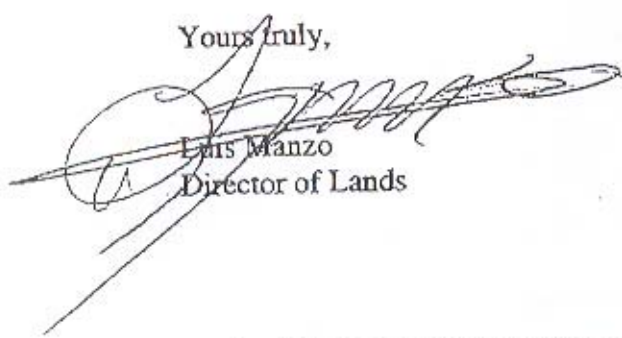
**Work Plan- 2006**  
**Commercial Lease, Schedule B-Work Plan Authorization**  
**Meadowbank Gold Project**

The Kivalliq Inuit Association (KIA) has reviewed Cumberland Resources Ltd. (CRL) Work Plan for calendar year 2006 and is satisfied with the information provided.

KIA would like to ensure CRL follows the terms and conditions identified by the Nunavut Impact Review Board (NIRB) in the letter dated March 31, 2004 as well as provide KIA with the engineering design drawings as soon as they are available. In addition, CRL should contact the KIA Lands Department for an appropriate Quarry Permit to construct the access road and bedding material for the 5 M Liter tank. The fee schedule is outlined in Appendix B of the KIA Application to Access IOL's and Water Use.

If you have any further questions or concerns please feel free to contact the undersigned at your earliest convenience.

Yours truly,

  
Luis Manzo  
Director of Lands

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ᐱᐱᐱᐱᐱᐱᐱᐱ-WHALE COVE/ᐱᐱᐱᐱᐱᐱᐱᐱ-CORAL HARBOUR/ᐱᐱᐱᐱᐱᐱᐱᐱ-REPULSE BAY/ᐱᐱᐱᐱᐱᐱᐱᐱ-ARVIAT