



Abandonment  
And  
Restoration Plan  
Mary River Project  
December 2004



## **Introduction**

This Abandonment and Restoration Plan has been designed for the NWB2MRY0406 license and applies to the Mary River Project operated by Baffinland Iron Mines Corporation.

DIAND Land Use permit # 2004C0017 covers Crown land activities, specifically ML 2485 and the Qikiqtani Inuit Association (QIA) surface access license # Q04L2C03 is in place for land use activities on mining leases ML 2483 and 2484.

This abandonment and restoration plan has been prepared for the activities associated with the Mary River Project which includes a drill programme expected to consist of 5,000 metres in 2004 and 10,000 metres in 2005.

The project is at an advanced exploration stage and as such this document has been constructed following exploration efforts that have been designed to complete a feasibility study on the Mary River Iron Ore Deposits over the next three years.

It is expected that advanced exploration and development activities will occur beyond the 2004 and 2005 field seasons. However, a major decision point will be reached regarding the continuation of the project in the fall of 2005 and continued work will require a renewal or new licence and permit applications.

## **History**

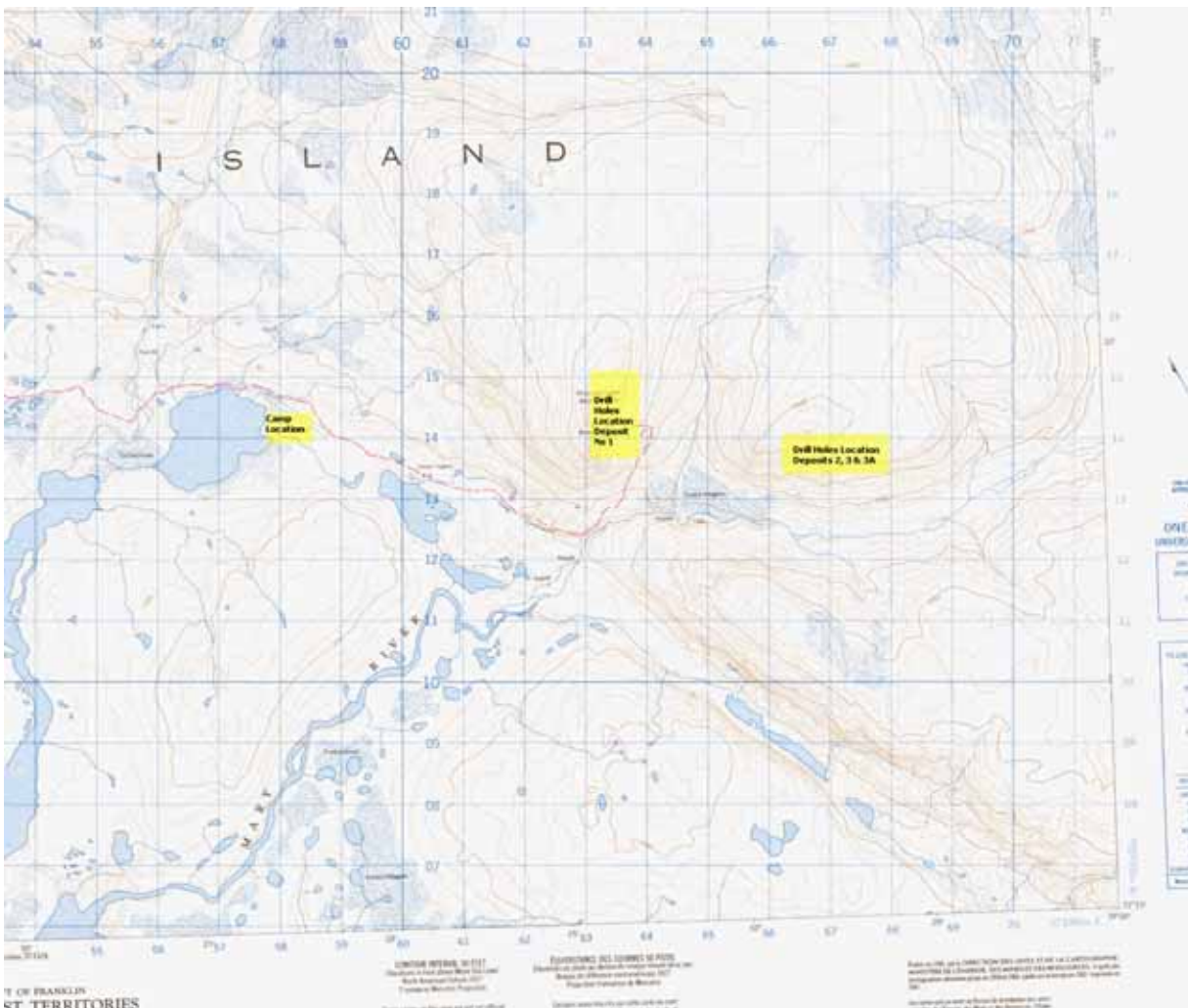
In 1962, Murray Watts and Ron Sheardown discovered the Mary River Iron Ore Deposits. Exploration in the period 1963 through 1965 outlined 5 deposits of high grade iron ore that are exposed for significant dimensions. In 1966, a feasibility study was completed and although the predecessor company Baffinland Iron Mines Limited (BIML) intended to return to continue exploration and development work, it never did.

An old camp with considerable equipment (drills, snowmobiles, trailers, bulldozers and other ancillary equipment) was left on site. Over the past forty years, clean-up efforts by the majority shareholder of BIML, Hudson Bay Mining & Smelting Co. Limited, were not particularly efficient or effective.



Figure 1: Old Mary River Campsite

It is the intention of Baffinland Iron Mines Corporation (Baffinland) to clean up this old site and other dump materials (old fuel caches) throughout the local area. This includes garbage (primarily fuel drums) located along the old tote road to Milne Inlet. Baffinland will also removed used and empty drums left on the Mary River airstrip by other companies and government agencies (Natural Resources Canada, Polar Continental Shelf) over the past forty years. The clean-up will be accomplished in conjunction with the field programmes over the two year period. The heavy machinery will be dismantled to allow backhauling to Pond Inlet and disposal in its dump site. Baffinland has established a camp approximately 50 metres to the south of the northwest end of the Mary River airstrip and has rehabilitated the Mary River airstrip to a current useable length of 4,200 feet and plans to repair the strip to 5,000 feet. The strip was originally constructed to a 6,000 foot length.



**Figure 2: Mary River Camp Location**

The location of the Mary River camp is approximately:

Latitude ~ 71° 18' 30" North  
Longitude ~ 79° 23' 30" West

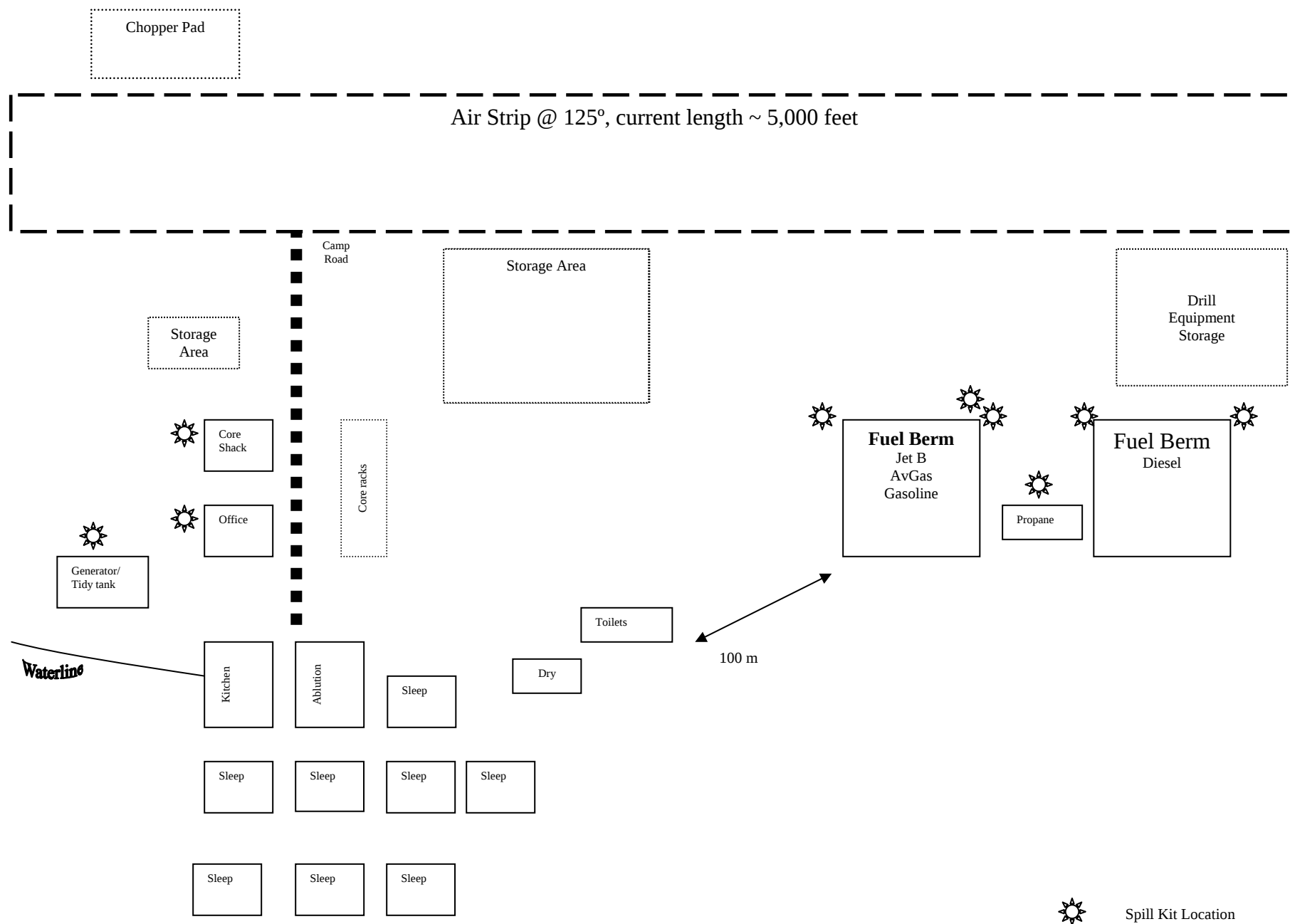
The Mary River camp will have a contingent of ~50-60 persons, varying throughout the field season. A recent photo of the camp is detailed below.



**Figure 3: A recent photo of the Mary River campsite.**

The camp will be used for the upcoming field season (June to September) and will be broken down and the majority of the camp demobilised in late September to early October. The exact dates for demobilisation will be dependent upon the level of productivity of the diamond drill programme. Two drills are on site and the 2005 programme will endeavour to complete 9,000 metres of large diameter core. An additional one (or possibly two) drill(s) will be brought in April and June 2005. The tents will remain standing. Large heavy and bulky items (generator drills) will be stored onsite. However, the majority of equipment will be demobilised and stored in Pond Inlet.

**Figure 4 Schematic of Mary River Camp**



Care will be taken to reduce the onsite fuel cache to minimal levels to be left on site over the winter. Approximately 20 drums of Jet A/B and 15 drums of diesel will be cached for emergencies and possible access prior to the start of the 2005 field season. Additional sleeper tents will be added in late 2004 and the kitchen and ablution tents will be expanded to deal with the expansion of the drill programme in 2005 to 9,000 - 10,000 metres.

### **Schedule for Abandonment and Restoration**

The abandonment and restoration of the campsite should take 10 – 14 days to complete and will take place after all exploration activities have ceased. If exploration activities dictate the finalization of the exploration project, it will be conducted between the 15 and 30 of September 2005 and no later than October 31.

The plan will be applied with the help of the project personnel under the supervision of the field supervisor.

### **Mary River Camp**

- 1) 2 wood frame tents
- 2) 8-12 Weatherhaven sleeper tents
- 3) 2-3 Weatherhaven kitchen/ablution tents
- 4) 2 Aluminium Frame tents/Coreshack\_logging facilities
- 5) 1 Generator
- 6) 1 wooden outhouse
- 7) Several small storage sheds

### **Final Abandonment and Restoration Plan**

(All references to Pond Inlet imply the Toonoonik Sahoonek Co-Op, Baffinland's expediting company warehouse and office site.)

### **Buildings and Content**

All the reusable equipment like tents, tent metal frames, stoves, mattresses, kitchen stove, refrigerator, other kitchen appliances and equipment, showers, hot water tank, etc...will be packaged and flown out to Pond Inlet or an alternative campsite. Some equipment may be donated or sold to either the Pond Inlet or other local communities. Wood structures like the dining hall, outhouse, dry, tent wood floors, bunk beds and table will be dismantled and wherever possible be reclaimed; otherwise it will be incinerated on site. Nails, screws, anchors and other non-combustible parts will be recovered, packaged and flow out to an approved municipal discharge.

## **Water System**

Pump, tanks and hoses will be drained, dismantled, packaged and flown out to Pond Inlet or an alternative campsite. Any wooden shed built to protect the pump will be incinerated as for the other wood structures.

## **Electrical System**

The generator shed will be inspected for remaining hazardous waste (oil, grease). The generator will be drained of its fuel. Remaining waste fuel and oil will be collected in the appropriately labelled containers, and removed offsite. The generator will be dismantled and flown out to Pond Inlet or an alternative campsite. The soil will be inspected for contamination.

Electrical wires, sockets, etc...will be taken down and flown out to Pond Inlet or an alternative campsite. Some equipment may be donated to the Pond Inlet community, if no further exploration work is completed by the company.

## **Fuel and Chemical Storage Facilities**

The fuel storage area will consist of segregated groups of drums with empties apart from full drums. At the end of the field season, an inventory of remaining fuel will be made and full drums will be inspected. Full and empty drums will be flown out to Pond Inlet or an alternative campsite. Some fuel may be donated to either the local communities. Contaminated soil will be removed and disposed in a licensed dump, probably in Pond Inlet.

Propane cylinders will be flown out to Pond Inlet.

Remaining waste fuel, stored in properly labelled drums will be flown out to a fuel outlet or discharge that accepts this type of fuel. Chemicals stored on site will consist of drill additives, oil, grease and household cleaners. All drill additives will be stored in or by the drill foreman shed.

Household cleaners will mainly be stored in the kitchen. Upon camp closure, any unused drilling additive, oil or grease will be returned to Pond Inlet and eventually shipped out via sealift to Toronto/Hailbury. Half empty containers will be taken off site to be properly disposed in an approved discharge. Empty containers will be disposed with regular garbage.

## **Waste Facility and Incinerator**

Once the camp is entirely dismantled, all remaining combustible waste stored at this site will be burned. The incinerator will be dismantled and shipped to Toronto/Hailbury.

## **Greywater Sump**

The kitchen-dry greywater sumps will be filled back and levelled.

## **Blackwater Sump**

The outhouses pit contents will be burned on a regular basis and/or covered with chloride of lime. At the end of the season the remaining pit will be filled back and levelled.

## **Airstrip**

The airstrip will be left for potential future use.

## **Helicopter pad**

The helicopter pad consists of a well-worn gravel patch. This area will be inspected for contamination.

## **Campsite**

The campsite will have a final inspection. Areas showing too much wearing evidences will be levelled. No plant life present exists at the campsite so no requirement is needed to promote any natural growth of flora. Drill core to be flown to Pond Inlet on a regular basis so that no core will be left on site.

## **Drilling areas restoration**

The drill will be dismantled into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. The drill will be flown out to another project, Pond Inlet or shipped to a storage site designated by the drilling contractor. All drill sites will be inspected for contamination. Any remaining waste will be taken to camp to be burned if possible or to be flown out to an approved municipal discharge. Greywater and sludge sumps will be filled and levelled.

As much as possible, drill sites will be restored immediately after the drill has been moved to the next site and sumps have drained enough to be levelled.

### **Documentation and Inspection**

Photos of camp and drill sites prior to building of drilling will be taken. Monitoring will be done during occupancy and photos taken. Once the site restored, it will again be documented with photos.

Any soil contaminated by hydrocarbons and unnoticed before abandonment will be treated as per the spill contingency plan.

The permit holder will organize a final site inspection visit with community representatives, Land Use Inspectors and in collaboration with Nunavut Water Board staff, if requested.

### **Seasonal Shutdown and Restoration Plan Buildings and Content**

All tent structures will be dismantled and/or secured for the winter. All the equipment like stoves, mattresses, kitchen stove, refrigerator, other kitchen appliances and equipment, showers, hot water tank and other heavy equipment will be left on site. However, much of the equipment will be stored in Pond Inlet over the non-field season. The camp will be secured. No food (including tinned food) will be left onsite. All remaining food will be donated to the Pond Inlet community.

### **Water System**

Pump, tanks and hoses will be drained and dismantled. Hoses will be rolled and stored in the work shed.

### **Electrical System**

The generator shed will be inspected for remaining hazardous waste (oil, grease) and will be drained of its fuel. Remaining waste fuel and oil will be collected in the containers labelled for that usage and used through the summer. The generator shed will be secured for winter. The soil will be inspected for contamination. Electrical wires, plugs and sockets will remain in their installed locations.

## **Fuel and Chemical Storage Facilities**

An inventory of remaining fuel will be made and full drums will be inspected and secured for the winter. Empty drums will be flown out to source. Empty propane cylinders will be flown out to Pond Inlet. Chemicals stored on site will consist of drill additives, oil, grease, drill salt and household cleaners. All drill additives and the remaining salt will be stored in the drill shed and secured for the winter. Drill salt is in impermeable bags and stored on pallets within the fuel berm for the winter. Empty containers will be disposed with regular garbage. The soil of the areas will be inspected for contamination.

## **Waste Facility and Incinerator**

Once the camp is shutdown and buildings secured, all remaining combustible waste stored at this site will be burned. The incinerator will be stored. The soil will be inspected for contamination.

## **Greywater Sump**

The greywater sump will be covered and secured for the winter.

## **Blackwater Sump**

The outhouses pit contents will be burned and covered with chloride of lime on a regular basis. The outhouse shack will be secured for the winter.

## **Airstrip**

The airstrip will be left for potential future use.

## **Helicopter pad**

The helicopter pad consists of a well-worn gravel patch. This area will be inspected for contamination.

## **Camp site**

Areas contaminated by hydrocarbons and unnoticed before abandonment will be treated as per the spill contingency plan. Drill core to be left on site will be properly stored and secured.

## **Drilling areas restoration**

The drills will be dismantled into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. The drills will be left on solid ground until next season. All drill sites will be inspected for soil contamination. Any remaining waste will be taken to camp to be burned if possible or be flown out to an approved municipal discharge. Greywater and sludge sumps will be filled and levelled. As much as possible, drill sites will be restored immediately after the drill has been moved to the next site and sumps have drained enough to be levelled.

## **Discovery of Contaminated Soils**

The old exploration site was inspected for contamination and as yet no contaminated soil or material has been discovered. Should any be discovered, it will be contained, collected and disposed of in the Pond Inlet approved containment site or if necessary, it will be airlifted to Pond Inlet and sea lifted and disposed in an approved containment site in Quebec.

## **Approved Municipal Discharge/Disposal of Spill Materials**

Impermeable plastic sacks able to contain 100 kg per sack are on site. Spilled material (up to 10 tonnes) will be put into the sacks and taken-flown to the approved disposal facility in Pond Inlet.

Should a large spill occur (> 10 tonnes), additional sacks will be purchased and all material will be stored in a bermed disposal site, until such time as a large aircraft (Hercules, Buffalo) may be mobilised to the site to remove the material from the Mary River Project site. This material will then be sealifted and disposed of in an approved containment site in Quebec.

## **Documentation**

Equipment and buildings left on site will be inventoried. Photos of camp and drill sites prior to building of drilling will be taken. Monitoring will be done during occupancy and photos taken. Once the site secured for the winter, it will again be documented with photos.