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**March 2004**

SENT VIA Mail

Mr. Phillippe di Pizzo
Executive Director
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0E 1J0

**RE: License Number NWB2CHU0305 2003 Annual Report, Churchill Project**

Please accept the following Annual Report covering the 2003 exploration work under Nunavut Water Board licence number NWB2CHU0305 (2 copies). The work was completed by APEX Geoscience Ltd. on behalf of Shear Minerals Ltd.

Please contact me at the above numbers should there be any further questions, comments or further requested information regarding the enclosed document and maps.

Sincerely,

Johanna Tuck
Project Geologist, I.T.

NTS 55J, K, N, O

# NUNAVUT WATER BOARD ANNUAL REPORT (2003)
# CHURCHILL PROJECT
# LICENCE NUMBER NWB2CHU0305
# SHEAR MINERALS LTD.

| | |
|---|---|
| **Company Name:** | Shear Minerals Ltd. |
| **NWB License Number:** | NWB2CHU0305 |
| **Nature of Report:** | Drilling |
| **Dates Fieldwork Performed:** | June 3, 2003 to September 14, 2003 |
| **Location of Claims:** | Kivalliq Region, Nunavut Territory |
| **Lat./Long:** | 63°00' N 91°30' |

**APEX Geoscience Ltd.**

March, 2004

Johanna Tuck
Neal van Steenis

# NUNAVUT WATER BOARD ANNUAL REPORT (2003)
# CHURCHILL PROPERTY
# LICENSE NUMBER NWB2CHU0305
# SHEAR MINERALS LTD.

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# NUNAVUT WATER BOARD ANNUAL REPORT (2003)
# CHURCHILL PROPERTY
# LICENCE NUMBER NWB2CHU0305
# SHEAR MINERALS LTD.

## Introduction

APEX Geoscience Ltd. (APEX) was retained as consultants to conduct exploration on behalf of Shear Minerals Ltd., operator of the Churchill property, and its joint venture partners. Work was completed between June 3, 2003 and September 14, 2003. Fieldwork consisted of exploration diamond drilling. The work was conducted under water license number NWB2CHU0305 granted to Shear Minerals Ltd.

## Location of Land Use Area

The area covered by the 2003 exploration programs focused on NTS map sheets 55J, 55K, 55N and 55O. This property is located between approximately 30 and 90 kilometres northeast of Rankin Inlet, Nunavut and between approx. 62°30' N / 92°00' W and 64°05' N / 92°16' W. Exploration crews stayed in Rankin Inlet and were transported to the field daily by helicopter (Kitikmeot Helicopters, Cambridge Bay, Nunavut and Great Slave Helicopters, Yellowknife, Northwest Territories) for the entire field season.

## Summary of 2003 Field Activities

Exploration diamond drilling consisting of twenty-eight (28) holes totaling 2206m was completed between June 3, 2003 and September 14, 2003.

## Land Use Considerations

Water for drilling came from local lakes and was collected using a submersible pump with a filtered intake. Usage was estimated at approximately 5.5$m^3$ per day for a period of 65 days for a total of 357.5$m^3$, based on a 10% fresh water-90% recycled water system.

Drill Sites were selected so that there would be minimal damage to the environment (Appendix 1). Natural depressions of adequate size to contain all potential drilling

water/fluids and cuttings were used as sumps. Bio-degradable drilling fluids were used and were disposed of according to regulations and land use permit requirements. All waste material was removed from the drill site. Each site was cleaned, raked and any removed vegetation was placed back on the drill site area to promote rehabilitation of the disturbed area. Drip pans and/or absorbent matting was placed beneath any equipment that required petroleum products, drilling additives, etc. to prevent accidental spillage or contamination of these materials to the environment.

All drill holes were plugged immediately upon completion, to eliminate any hazard to wildlife. The remaining casing was cut off to ground level or below and capped.

No camp was constructed during the 2003 exploration programs.

Please see the attached Environment Procedure Plan, Spill Contingency Plan and Abandonment and Restoration Plan for a more comprehensive report on land use considerations.

Respectfully Submitted,

Johanna Tuck

Neal van Steenis

March, 2004

## Appendix 1
## Churchill Drill Hole Locations

## 2003 Drill Hole Summaries, Churchill Property

| | UTM Collar NAD 27, Zone 15 | | | | |
|---|---|---|---|---|---|
| **Drill Hole ID** | **Easting** | **Northing** | **Az.** | **Dip** | **EOH (m)** |
| CD-001 | 584025 | 6980701 | 0 | -90 | 99.7 |
| CD-002 | 583273 | 6985725 | 0 | -90 | 66.16 |
| CD-003 | 583224 | 6985729 | 0 | -90 | 65.49 |
| CD-004 | 586371 | 6986073 | 0 | -90 | 51.83 |
| CD-005 | 586758 | 6982706 | 0 | -90 | 87.5 |
| CD-006 | 584153 | 6979478 | 0 | -90 | 97.56 |
| CD-007 | 586298 | 6976881 | 0 | -90 | 88.39 |
| CD-008 | 588655 | 6982174 | 0 | -90 | 41.76 |
| CD-009 | 583990 | 6979976 | 0 | -90 | 105.77 |
| CD-010 | 594468 | 6988878 | -90 | 0 | 109.73 |
| CD-011 | 598639 | 6987334 | -90 | 0 | 57 |
| CD-012 | 598647 | 6987337 | -45 | 314 | 75.9 |
| CD-013 | 614257 | 6990753 | -90 | 0 | 84.53 |
| CD-014 | 610591 | 6992770 | -90 | 0 | 93.57 |
| CD-015 | 609184 | 6995975 | -90 | 0 | 71.63 |
| CD-016 | 610535 | 6992791 | -90 | 0 | 32.61 |
| CD-017 | 604850 | 6994463 | -90 | 0 | 82.3 |
| CD-018 | 607608 | 6992529 | -90 | 0 | 38.1 |
| CD-019 | 608488 | 6994165 | -90 | 0 | 24.99 |
| CD-020 | 606077 | 6994132 | -90 | 0 | 90.53 |
| CD-021 | 608649 | 6993360 | -90 | 0 | 100.6 |
| CD-022 | 590010 | 6990909 | -90 | 0 | 60.05 |
| CD-023 | 585692 | 6999561 | -90 | 0 | 28.09 |
| CD-024 | 606847 | 7007821 | -55 | Grid North | 128.63 |
| CD-025 | 606799 | 7008097 | -55 | Grid South | 129.54 |
| CD-026 | 610351 | 7012003 | -55 | Grid South | 141.73 |
| CD-027 | 586043 | 6984538 | 0 | -90 | 51.74 |
| CD-029 | 556532 | 7005298 | -45 | Grid East | 100.89 |
| | | | **Total Meterage Drilled** | | 2206.32 |

# Appendix 2
# Abandonment and Restoration Plan

## Shear Minerals LTD.

## Abandonment and Restoration Plan

Upon completion of the land use operation and exploration of the Churchill Diamond Project, the flowing steps and procedures will be implemented to allow proper abandonment and reclamation of the area. This plan will be updated on a yearly basis and/or when changes to the exploration plan warrant it.

Greywater sumps and sewage pits at the camp(s) will be back filled.

All remaining garbage will be incinerated in an incinerator or modified burn drum.

All wood (tent floors, frames etc.) will be removed from the site to an approved landfill site or will be burned along with all other combustible material in an incinerator or modified burn drum. If the wood and/or combustible material is burned on site, the coals and ashes will be raked for non- combustible items, which will then be collected and removed from the site to an approved landfill site. The remaining coals and ashes will be buried.

All camp materials, fuel drums, and drilling equipment will be removed from the site.

All drilling sumps will be backfilled, burying the unused cutting and drill waters.

Each drill site will be inspected prior to departure to make sure all garbage has been removed and any disturbed ground will be reclamated.

The above procedures have been put in place to ensure that once Shear Minerals Ltd. is off site, there has been minimal impact to the environment.

# Appendix 3
# Environmental Procedure Plan

# ENVIRONMENTAL PROCEDURE PLAN FOR EXPLORATION AND REMOTE CAMPS

**Shear Minerals Ltd.**

December 2003

## ENVIRONMENTAL PROCEDURE PLAN FOR EXPLORATION AND REMOTE CAMPS

### Table of Contents

The following Environmental Principles have been developed by Shear Minerals Ltd..

These principles form the guiding base for the Environmental Operating Procedures that apply to all of our exploration activities within the Nunavut Territory.

- Environmental management is an integral component of our exploration programs and is the responsibility of all program personnel.
- Any potential environmental impact from our activities will be assessed and minimized.
- Environmental standards and quality of work will be continuously improved and maintained in conjunction with effective exploration.
- All relevant government laws and regulations for the protection of the environment will be known and complied with.
- All contractors and employees will be informed of our Environmental Policy, Environmental Principles, Environmental Management Standards, Environmental Operating Procedures and their designated environmental responsibilities.
- Effective communication and a close liaison will be maintained with nearby communities and regulatory authorities.
- Exploration activities will be conducted with due regard for the protection of wildlife, flora and sites of natural, cultural and historical significance.
- Programs will be established to recycle and conserve resources.

## Environmental Operating Procedures

### INTRODUCTION

Shear Minerals Ltd. is committed to maintaining high standards in environmental practices.

Exploration activities generally have a very low degree of impact upon the environment. We work in remote and relatively pristine areas, with particularly sensitive ecosystems and challenging environmental and climactic conditions. We must be diligent and innovative in the management of our activities to ensure minimal impact to the environment.

### 1. PLANNING

Exploration programs will be carefully planned to minimize disturbance and effectively manage environmental risks.

**Risk Assessment**
The activities associated with the proposed exploration program will be assessed for environmental risks and impacts. Variables such as topography, climate, fauna, vegetation and stakeholders must be considered. Procedures and/or processes will be implemented to manage and mitigate the identified environmental risks and impacts.

**Emergency Preparedness**
A Spill Contingency Plan has been established for exploration programs and remote camp locations. The plan includes contingencies for probable environmental emergencies as a result of natural occurrences and/or as a result of program activities.

**Expenditure / Budget**
Activities such as site clearance surveys, environmental training, and rehabilitation will be included in the program budget. These are a genuine program costs and must be treated as such. Good environmental planning and management will minimize environmental damage.

**Due Diligence**
The environmental status of land will be reviewed prior to acquisition and any potential environmental liabilities recognized. This may involve discussions with landholders or joint venture partners, on-site inspections, reviewing maps, photographs arid previous reports of the area. This process will be continued during the life of the program and will include mapping or photographing of possible sensitive sites.

**Legislative Requirements**
All relevant legislation will be known, communicated and complied with.

**Approvals**
Any stakeholders of the land that will be explored will be notified. Relevant approvals from stakeholders and regulatory authorities will be obtained before exploration commences.

**Responsibilities and Accountabilities**
Environmental responsibilities will be assigned and communicated to all members of the program team. This includes employees, contractors and sub-contractors. Contractor responsibilities will be outlined in the environmental schedule of the contract. The primary responsibility for protecting the environment from impacts related to program activities is assigned to the Program Supervisor.

**Induction and Training**
Field employees and contractors will undergo an environmental induction that includes relevant regulations.

**Contractors**
Preference will be given to contractors who display high standards of environmental management and performance.

**Closure Planning**
The short term and long term environmental implications of our activities must be considered and plans developed to eliminate or mitigate these impacts upon program closure.

## 2. STAKEHOLDERS

A stakeholder is an individual or group (i.e. landholder, local group, regulatory authority, community, etc.) concerned with or potentially affected by our exploration activities. Stakeholders will be identified for each program. Regular communication will be maintained with these stakeholders for the duration of the program, and afterwards in some cases. Any agreement made with stakeholders should be documented.

**Cultural and Heritage Issues**
Cultural objects, remains and sites of spiritual, archaeological, anthropological or historical significance will be protected.

- Surveys may be required to identify sites of sacred, heritage and cultural significance. The results of these surveys must be documented.
- Any additional sites encountered during exploration will be left undisturbed and reported to the appropriate authority.
- Any discussions with local communities or traditional owners should be documented.

## 3. FLORA AND FAUNA

All reasonable care will be taken to avoid interference with rare or endangered species of native flora or fauna.

**Flora**

- All reasonable care will be taken to avoid unnecessary impacts to flora and to mitigate required impacts.

**Fauna**

- Hunting is prohibited.
- Firearms and domestic animals are not permitted unless special permission has been obtained from the Exploration Manager.

## 4. AIRBORNE OPERATIONS

Our exploration activities require airborne support due to the remote locations. Additionally, due to the lack of serviceable airstrips in the region, this support involves aircraft equipped for off-strip operations (float planes, helicopters). These types of aircraft have a minimal potential impact upon the environment. The potential impacts include: petroleum product spill and disturbance of fauna and people from low altitude flying and frequent landings/take-offs. The likelihood of disturbing or disrupting people is considered low due to the remote locations of the activity. All stakeholders will be contacted prior to the commencement of operations. The requests of all stakeholders will be respected.

**Airstrips**

Only existing airstrips will be used.

**Helipads**

Helicopter landings and take-offs have little impact upon the flora or ground surface. However, helicopters require an area clear of obstructions that allows for safe maneuverability of the aircraft. The size of this area is dependant upon the aircraft type. The vast majority of our operations to date have been north of the tree line where the clearing of vegetation for landing site preparation is unnecessary.

- Landing sites will be selected, whenever possible that have a competent ground surface and are naturally free of vegetation or marginally covered.
- Landing sites that are designated for repetitive use which are blanketed by ground cover vegetation must have a helipad constructed.
- Helipads will be constructed in such a way as to minimize surface contact with vegetation.
- Helipads will be constructed using dimensional lumber unless trees that have been cleared for the landing site are suitable for use.
- Vegetation clearing will be conducted as per the relevant section under "Land Disturbance" of this document.

**Fuel**

Aviation fuel at exploration operations is contained in 205 litre steel drums for ease of handling. These drums are stored horizontally on the, ground with the bungs positioned at the mid-way point. This storage method prevents contact of surface water with the bungs and possible contamination of the fuel and keeps the bung seals submerged in fuel, which prevents the seals from drying out and leaking.

- Fuel drums will be stored at a distance of no less than 100 metres from any surface water source (e.g. lake, stream, pond, etc.)
- Remote fuel storage locations (e.g. outside of camp) will be plotted on a suitable

topographic map and the GPS positions will be recorded. An updated inventory of the fuel used will be maintained.

- Regular visual inspections will be conducted of all fuel caches
- Empty or otherwise no longer required fuel drums will be retrieved from all locations. Empty drums will be returned to the fuel supplier for recycling.
- Full fuel drums will not be stored remotely for more than one year.
- Fuel storage locations will have a suitable spill response kit.
- Refuelling locations will have a suitable fire extinguisher.
- Spill prevention measures will be implemented prior to refuelling (e.g. drip pan).

## 5. LAND DISTURBANCE

All necessary permits and permissions will be obtained prior to conducting any land disturbance. Great care will be taken to avoid and/or minimize land disturbance such as earthmoving and vegetation clearing. When clearing is unavoidable, it must be carried out in a manner that does not promote erosion. Whenever possible, areas that are naturally free of vegetation will be selected for logistical support sites (e.g. campsite, heli-pad). Operations requiring vehicle access will be conducted during the winter-spring period in order to take advantage of ice-covered waterways and frozen snow-covered ground to prevent disturbance of the soil and ground cover vegetation.

### Supervision

Earth moving and clearing activities will be supervised at all times by a Shear Minerals Ltd. representative who should clearly define the area to be disturbed using temporary markers.

### Earthmoving

Earthmoving is limited to the construction of small pits and sumps for the collection and disposal of benign waste (e.g. ashes/coals from burnt garbage, drill fluids, greywater and sewage).

Topsoil (or surface material useful for regeneration or re-vegetation) will be removed and stockpiled separately from subsoil. Topsoil should be returned as soon as possible (preferably within six months) to maintain seed viability, nutrient quality and microbial activity.

### Clearing Vegetation for Vehicle Access

Since all operations requiring vehicle access will be conducted during the winter-spring period, the only vegetation clearing that may be necessary involves the removal of trees. This should only be done if access cannot be obtained via frozen waterways, natural and/or existing clearings and existing tracks.

- Keep the track width to a minimum.
- Weave around large trees and avoid creating long straight stretches.
- Use naturally cleared areas and consider the thickness of vegetation.
- Tracks should be positioned along ridges.
- Whenever possible, avoid clearing on steep slopes, side hills and drainage banks.

### Clearing Vegetation in General

- Determine the exact requirements to avoid unnecessary and excessive clearing.
- Lop branches in preference to felling trees.
- Leave felled timber in a manner acceptable to the authorities. Otherwise, stockpile the cleared vegetation for subsequent re-spreading over the track. This is to protect exposed soil from erosion and to enable seed stocks to regenerate. Do not place felled vegetation where it will alter or disturb natural drainage channels.

### Geochemical Sampling

When taking soil/ till samples, areas naturally free of vegetation (frost boils) will be selected whenever possible. When this is not possible the organic layer and any topsoil should be put to one side and replaced after the sample is collected.

## 6. TRAVERSING

### Gridding

- Foot accessible grid lines for geophysics, geochemistry and geology will be at minimal width.
- No large trees are to be felled. Branches will be cut to allow foot access and line of sight.
- The blazing of trees will be avoided unless required by government regulations.
- Do not leave pointed stakes that will endanger humans or animals.
- Wooden survey pegs will be used in preference to steel.
- Steel markers will only be used as permanent survey points and where possible will be positioned where they will not cause injury to animals or people, or interfere with vehicle movement.
- Care will be taken to ensure all pegs are removed at the completion of exploration.
- Flagging tape and spray paint will be used sparingly. If possible, biodegradable items will be used.
- Hip-chain line will be broken after crossing a track or trail and care taken to ensure that the line has fallen clear of the right of way.

### EM Induction Surveys

Wires will be watched, if practicable, during surveys to avoid endangering animals or people in the area. If potential exists for other people to be present in the area, warning signs will be erected. At no time are wires or cables to be left unattended.

## 7. DRILLING OPERATIONS

Contracts for exploration drilling services will stipulate adherence to the environmental component of the Shear Minerals Ltd. Responsibly Policy and these Environmental Procedures and include penalties for non-compliance.

### Drill Sites

- Select sites to minimize damage to the environment.
- Sites should be as small as practicable but include enough area for fire protection.
- Avoid locating drill sites on steep slopes.
- Prepare sites as per the guidelines in section 5 (Land Disturbance).

### Sumps

- Natural depressions will be used in preference to excavation.
- Ensure the number and size of sumps is adequate to contain all potential drilling fluids.
- Sumps should be positioned down slope of drill collars to ensure run-off flows into the sump.
- If excavation is required, the organic layer and any topsoil should be stockpiled separately for replacement during backfilling.
- Excavated sumps should be fenced or barricaded until they have been backfilled.
- Excavated sumps should be allowed to dry out (by evaporation) prior to burial.

### Drilling Fluids

- Bio-degradable drilling fluids will be used at all times where possible.
- Drilling fluids will be contained in sumps or by another suitable and approved method (e.g.

tank).
- Fluids will be disposed of according to regulations.

**Groundwater**
- If encountered, artesian water flow will be controlled to prevent erosion of the ground surface and the silting of watercourses.

**Waste**
- Receptacles will be provided for rubbish at drill sites. No waste of any description will litter the site.
- Food waste will be removed from drill sites daily.
- Waste will be disposed of according to regulations and land use permits.

**Reverse Circulation/Percussion**

When handling drill samples (cuttings), care will be taken to prevent mixing of sub-soil with topsoil if they are significantly different from each other. A tarp or similar device should be placed around the hole to contain drill cuttings and to prevent contact with the ground surface. Water injection should be used to control dust. On completion of the hole, all cuttings not required for analysis or storage will be poured back into the hole or otherwise disposed of according to regulations.

**Drilling on Ice**

Drilling fluids and cuttings will be contained to prevent contact with the ice surface or water. A method to clean up an accidental spill of this material will be devised and the required equipment made available prior to the commencement of operations. Fluids and/or cuttings will be disposed of on land in a natural depression or excavated sump or otherwise in accordance with the land use permit.

**Spill Prevention**

Methods will be implemented for the handling and care of petroleum products, drilling additives, etc. so as to prevent accidental spillage of these materials. Drip pans will be placed under leaking equipment and, if practicable, the leaks will be repaired as soon as possible.

**Core Cutting**

Wastewater from core sawing will be controlled to prevent erosion of the ground surface and the silting of watercourses. Where practicable, it should be contained and recycled through the core saw,

Cuttings from sulphide-rich core have the potential to acidify any soils with which they contact. All cuttings and unwanted core off-cuts or pieces will be contained and disposed of by burial or otherwise disposed of according to regulations.

**Capping of Drill Holes**
- All holes will be temporarily plugged immediately upon completion, using whatever safe means available (e.g. rocks), to eliminate any hazard to wildlife.
- Prior to, or on completion of the program, all open holes will be plugged with a proper down-hole plug and the area above the plug filled in.
- If later relocation of the hole is not required, casing will be removed whenever possible.
- Remaining casing will be cut off to ground level or below and capped.
- Any excess drill chips will be poured back down the hole.
- Any holes with flowing water will be permanently sealed unless written instruction from the relevant authority indicates otherwise.

## 8. CAMP SITE SELECTION AND DESIGN

To prevent disruption to flora and fauna, camps, wherever possible, will be located in naturally clear areas, not on migration routes (e.g. esker trails) and at least 50 metres from surface water.

To mitigate potential impacts, decisions regarding site selection and the type of structures and facilities to be established must consider the following criteria:

- Number of people to be accommodated.
- Duration of the camp.
- Activities to be undertaken at the camp.
- The time of year.
- Land use permit stipulations.

**Fire Protection and Prevention**

- Fire regulations will be observed at all times and permits obtained if necessary.
- The use of open fires will be avoided. Fires should be only be used for general garbage disposal and will be contained in an excavated pit or in a steel container, such as an empty fuel drum. Embers should be buried or transported from site to an approved landfill location.
- Personnel will be advised that disposing of cigarettes onto the ground is prohibited.
- Additional precautions such as prohibiting smoking and open flames will be implemented for areas of greater risk.

## 9. WATER MANAGEMENT

Precautions will be taken throughout our operations to prevent direct or indirect pollution of watercourses.

- Used water will be contained in excavated sumps or natural depressions. Water flow will be controlled to prevent erosion of the ground surface and the silting of watercourses.
- Proposed potable water should be tested for water quality.
- Regular water monitoring should be considered for areas of advanced exploration or semi-permanent camps.

## 10. HAZARDOUS MATERIALS

Whenever possible, the use of hazardous materials will be avoided. Other methods or non-hazardous substitutes will be employed.

- Exploration sites will have procedures in place for the storage, handling and disposal of hazardous materials.
- Whenever a substance is taken from its primary container and placed into a secondary container, the secondary container will be adequately labeled as to its contents.
- Material Safety Data Sheets (MSDS's) will be available for all hazardous materials on site.
- Fuels, oils and chemicals must be properly contained and stored at a minimum distance of 130 metres away from surface wafer unless expressly authorized by a land use permit or in writing by an inspector.
- Bulk tanks of fuel will be equipped with secondary containment that is capable of holding 110% of the primary tank.
- Flammable materials will be stored in cleared areas or in a metal storage cabinet that is segregated from combustible material.
- Disposal of hazardous materials will occur off-site at an authorized facility.

**Spill Response**

- Spills will be cleaned up promptly.
- All spills will be reported internally to the appropriate company representatives.
- All governmental reporting requirements will be adhered to.
- Spill kits or absorbent material will be available at all fuel storage locations and remote areas of significant machinery activity (e.g. drill-sites, road building).

The following responses are suitable for fuel/petroleum product spills in different environmental media:

**Spills on Land (gravel, rock, soil and vegetation)**

- Trench or ditch to intercept or contain flow of fuel or petroleum products on land, where feasible (loose sand, gravel and surface layers of organic materials are amenable to trenching/ditching; trenching in rocky substrates is typically impractical and impossible).
- Construct a soil berm down slope of the spill. Use of synthetic, impervious sheeting can also be used to act as a barrier.
- Recover spills through manual or mechanical means including shovels, heavy equipment and pumps.
- Absorb petroleum residue with synthetic absorbent pad materials.
- Recover spilled and contaminated material, including soil and vegetation.
- Transport contaminated material to approved disposal or recovery site. Equipment used will depend on the magnitude and location of the spill.
- Where safe, disposal can be done through controlled in-situ combustion with the approval of government authorities and fire/safety consultants.
- Land based disposal is only authorized with the approval of government authorities.

**Spills on Snow**

- Trench or ditch to intercept or contain flow of fuel or petroleum products on snow, where feasible (ice and snow are amenable to trenching/ditching)
- Compact the snow around the outside perimeter of the spill area.
- Construct a dike or dam out of snow, either manually with shovels or with heavy equipment such as graders and dozers where available.
- If feasible, use synthetic liners to provide an impervious barrier at the spill site.
- Locate the low point of the spill area and clear channels in the snow, directed away from waterways, to allow non-absorbed material to flow into the low point.
- Once collected in the low area, options include shoveling spilled material into containers, picking up with mobile heavy equipment; pumping liquids into tanker trucks or using vacuum truck to pick up material,
- Where safe, disposal can be done through in-situ combustion with approval from government authorities,
- Liquid oil wastes, oil contaminated snow and debris and oil residues left after controlled, in-situ burning will be picked up and disposed of at a land disposal site approved by government authorities and fire/safety consultants.
- Transport contaminated material to approved disposal site. Equipment used will depend on the magnitude and location of the spill.

**Spills on Ice**

- Contain material spill using methods described above for snow if feasible and/or mechanical recovery with heavy equipment.
- Prevent fuel/petroleum products from penetrating ice and entering watercourses.
- Remove contaminated material, including snow/ice as soon as possible.
- Containment of fuel/petroleum products under ice surface is difficult given the ice thickness and winter conditions. However, if the materials get under ice, determine area where the