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# SPILL CONTINGENCY PLAN

# CHIDLIAK AND ADJOINING QILAQ PROPERTY, AND CUMBERLAND PROSPECTING PERMITS BAFFIN ISLAND, NU,

## (including both Crown Land and IOL Parcels)

## PEREGRINE DIAMONDS LTD.

**Revision 6: 17 January 2011**

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Revision 3: 29 May 2009
Revision 4: 25 March 2010
Revision 5: 07 May 2010
Revision 5b: 27 September 2010
Revision 6: 17 January 2011

(*NOTE 1: Revisions are identified in the text with a superscript number at the end of the revised or added sentence, phrase or paragraph. Superscript numbers appear as* [2], [3], [4], [5] *or* [6] *)*

*(NOTE 2: Revisions denote changes such as programme or date changes, change of phone number, change or addition of personnel, addition of equipment or products, new or adjusted maps and new appendices.)*

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## INTRODUCTION

The Spill Contingency Plan for "Chidliak and Adjoining Qilaq Property, and Cumberland Prospecting Permits[5]" of Peregrine Diamonds Ltd. (Peregrine), found on the following pages, shall be in effect from the current date (January 2011[6]) until the end of September 2011[5], and is subject to revision as required. The Chidliak Project programme for the current year will occur between mid-February (construction of the new North Camp) [6] and September 2011[6] and is expected to be comprised of airborne geophysical surveying, ground geophysics and a lake-based drill programme, extraction of a mini-bulk sample or samples, core drilling of land-based targets utilising two heliportable drills, one small waterless North Span reverse-circulation rig, a surficial sediment sampling programme, prospecting and environmental surveys. Sunrise and North Camp will be in operation in winter-spring 2011[6], with Sunrise also in operation through summer 2011[6]. Discovery Camp will be in operation only in summer.[6] Both Sunrise and Discovery can accommodate a camp population of 24 people. The new[6] proposed third camp would accommodate 20 people. Support services come from Iqaluit, approximately 60km W of the southwest corner of Chidliak[2]. The Chidliak property is comprised of 25[2] Prospecting Permits and 581[2] claims located across 18 mapsheets in NTS 26A, 26B, 25O and 25P. Qilaq is comprised of 61[2] Prospecting Permits. This Spill Plan will be in effect for both properties[2], for any sampling or drilling on IOLs, and for helicopter-borne surficial sediment sampling conducted on the new Cumberland Prospecting Permits.[5] It also must be noted that Peregrine properties[2] are remote; no communities are nearby, and thus no persons other than the camp population of Peregrine geologists and geophysicists, geophysical personnel, helicopter pilots, drillers, cook/first-aider (Level II certification or higher), medic, camp managers[2] and attendant(s), environmental/bear monitors[2], and potentially local assistants for the ground geophysics, environmental[2] and sediment-sampling programmes would be affected in the event of an incident. In the case of the Cumberland Peninsula sampling project, Pangnirtung is only 11km W of the closest sample site, so special attention was given to co-ordinating activities with local land-use.[5]

All employees, whether permanent or casual, and programme contractors, are required to be trained in Peregrine procedures, field and wildlife safety, spill and fire procedures and environmental awareness prior to engaging in work at a Peregrine site. Peregrine is keenly aware that planning for an emergency situation is not an option but an obligatory activity, equal in importance to the exploration programme itself. This Contingency Plan will be posted in camp and at each worksite or office of each project[2] and will be distributed to supervisory personnel for dissemination to staff and contractors.

## BASIC STEPS – SPILL PROCEDURE

A spill is classified as the discharge of petroleum products or other dangerous substances into the environment. Potential hazards created by the spill for humans, vegetation, water resources, fish and wildlife vary in severity, depending on several factors, including nature of the material, quantity spilled, location and season. Refer to the detailed *Spill Contingency Plan – Chidliak Project* for specific response information. The general emergency response to be followed in the event of a spill at the Chidliak Project, the Qilaq Project[4], adjoining IOLs[2] or the Cumberland Project[5], is:

*Protect people* - prevent personnel from approaching the site and keep them at a distance sufficiently removed that they will not be injured by, or cause, a fire or explosion

*Identify the product and its source* - check container design, warning labels, markings, Material Safety Data Sheets, etc., to enable prompt and appropriate response.

*Stop the flow at the source* - reduce or terminate the flow of product without endangering anyone

*Assess the seriousness of the spill* - assess potential dangers of the spill to human health and safety, the aquatic environment, wildlife, ground water, vegetation and other land resources.

R*eport the spill* – complete a NU Spill Report Form and contact the NU 24-hour Spill Report Line. Provide information on the form to the Environment Canada officer by phone/FAX or e-mail[3], including location of spill, (company) name of polluter, type and amount of material spilled, date and time of the spill, any perceived threat to human health or the environment, and remedial actions taken and planned.

*Clean up the spill* - follow procedures appropriate for the location, environment, material and time of year.

*Evaluate and learn* – after the emergency has passed, evaluate the incident and the cleanup with the goal of continuous improvement in prevention and response; train or re-train personnel and ensure a practice incident-and-response drill is held at least once per field season *(cf. Appendix - "Spill Response: Practice Drill")*.

24-Hour Spill Report Line: (867) 920-8130 or fax (867) 873-6924

Environment Canada Enforcement: 24-Hour Emergency Line: (867) 920-8130
Indian and Northern Affairs (INAC) Water Resources Officer
(Iqaluit): (867) 975-4298
INAC Lands Administrator (Iqaluit): (867) 975-4275
INAC Manager of Field Operations (Iqaluit): (867) 975-4295

## PERMITS AND AUTHORISATIONS

The Chidliak and Qilaq[4] properties total over 1.8 million[2] ha; the Cumberland property totals 1 484 568.08 ha[5]. Most of Chidliak-Qilaq is on Crown land, but 12 surface parcels of Inuit-Owned Lands (IOLs) intersect the properties at the north, northeast and south[2]. This Spill Plan also will be in effect on any IOL parcels where activity is conducted in 2010[2] or 2011[5], as well as on the Cumberland Prospecting Permits[5].

Peregrine holds a Class A Land-Use Permit *#N2008C0005* from Indian and Northern Affairs Canada (INAC) and Type B Water Licence *#2BE-CHI0813* from the Nunavut Water Board (NWB). Peregrine also holds Qikiqtani Inuit Association (QIA) Land Licence *#Q10L1C008*[5] to conduct mineral sampling on the adjoining surface IOLs[2] and *#Q10L1C014*[5] to conduct mineral sampling on IOLs within the Cumberland property.

## SPILL-RESPONSE TEAM LEADERS

The following are in charge of the Chidliak sites[3], in respect of management or control of contaminants.

Peter Holmes, VP – Exploration: (604) 408-8880; 24-hour mobile: (250) 830-4443.

Shirley Standafer-Pfister, Manager, Regulatory and Environmental Affairs[2]:
(604) 408-8880[3], (604) 408-8881 (FAX); 24-hour mobile: (250) 686-1769.[3]

Operations Manager: Sunrise camp phone **(604) 759-0323, -0324, -0325.** [2] Discovery camp phone numbers: **(604) 759-3367 and -3369.**[4] (Number to be provided for third camp when the camp is established in early 2011. [5])

Project Manager, Al O'Connor[6]: Camp phones (above) or 24-hour mobile: (604) 379-0998.[6]
Project Manager-Cumberland: Phone number to be provided. [6]

Name and address of proponent in charge of the projects[2] noted in this Plan:
Peregrine Diamonds Ltd.
Suite 201-1250 Homer Street
Vancouver, BC V6B 1C6

## FACILITY DESCRIPTION

Facility – Seasonal tent camps, two of which can accommodate up to 24 persons each, and a third camp which will accommodate up to 20 persons.[5] All have or will have above-ground fuel storage in 205L drums (diesel, Jet-B, petrol/gasoline) and propane in 45kg cylinders.
Location – Discovery camp and natural-gravel airstrip: 64° 14' 25" N. lat. – 66° 20' 45" W. long. [3] Sunrise camp[2] on unnamed lake to the east: 64° 14' 16" N lat. – 66° 07' 38" W long.[3] New North Camp[6] at: 64° 36' 33" N. lat. – 66° 34' 36" W. long.[5] Fuel: stored on flat, gravel/cobble area at each camp[2], a safe distance from the tents and well away (>30m) from waterbodies. Large caches[3] and tent drums[6] are bermed in secondary containment. [3]

**Table 1: Projected Fuel and Oil Use for 2011[6] Exploration Activities**

| Fuels | No. of Containers | Capacity of Containers | |
|---|---|---|---|
| Diesel for camp stoves, equipment | 250[5] drums | 205L | (incl. 3rd camp) [5] |
| Aviation turbine fuel (Jet-B) | 600[4] drums | 205L | |
| Aviation turbine fuel (Jet-B) – Cumberland[5] | 500 drums | 205L | (if req'd) |
| Unleaded petrol (gasoline) | 15[5] drums | 205L | |
| Propane | 60[5] cylinders | 45kg | |
| Oxygen (medical) | 3[5] cylinders | 10kg | |
| | | | |
| Oils/lubricants/cleaners | 150[5] | 1L to 5L (typical sizes) | |

Empty drums (crushed), cylinders regularly backhauled.

**Table 2: Contents of Spill Kits – Spring/Summer 2011**[5]

**Fuel Cache/Heli Area and Airstrip**[3]**–Spill-Kit Drums – 1 per Cache**[2] **and 1 per Airstrip**[3]
1 complete drum kit will be supplied at each fuel cache,[2] at the Chidliak gravel airstrip and also at the Chidliak on-ice temporary airstrips[5] with (as a minimum) absorbents, socks, disposal bags. (Kits at all three camps[5] will contain the following: safety goggles, rubber gloves, absorbents, socks, sealant putty and a plastic disposal bag.*) [Note: On-ice cleanup measures are discussed on Pages 37-38].*

Auxiliary kits (*e.g.*, approximately 130L-136L size) will be deployed around cache areas, as required. [2]

**Camps – Spill-Kit Drums – 1 (Full Size**[6]**) per Camp (as a Minimum)** [6]

Location: Stationed at gen-shed in camp, but can be deployed where required: 1 complete drum kit will be supplied with (as a minimum) absorbents, socks, disposal bags. (Kits at all three camps[5] will contain the following: safety goggles, rubber gloves, absorbents, socks, sealant putty and a plastic disposal bag.*)*

**Drillshack – Spill-Kit Drums – 1 per Drillsite**[6]
**Trenching Site – Spill-Kit Drums – 1** [2] **(if trenching were to occur)** [4]
**Fuel Cache (on Land) proximal to Lake-Based Drillsite – Spill-Kit Drums – 1** [4]
Location: Moves with drillshack [2] or cache: 1 complete drum kit will be supplied with (as a minimum) absorbents, socks, disposal bags, whether the hole is land-based or ice-based. [3]

At all locations, additional bundles of absorbents will be present in addition to the spill kits.

**Table 3: General Response Inventory – Spring/Summer 2011**[5] **– Chidliak Property**

- Fire extinguishers (valid/recharged) in each structure: Tents, sheds.
- Water pump and spare at camp; hoses and fittings
- Hammers, assorted weights, at core shack or storage shed [2]
- Cat 247B2 Multi-Terrain Loader (Bobcat-type heavy equipment available to move drums or other loads) [3] and Kubota Sub-Tractor (for snow-clearing on lakes) [6]
- Assorted 10L-20L plastic pails; galvanised metal pails (approx. 10L each)
- Ice auger (gas-powered) c/w extensions (for spring conditions)
- 121L plastic garbage bags (boxes of 20 each) – kitchen and latrine
- Plastic tarps – assorted sizes
- Extra bundles of absorbents
- Fuel-transfer pump and spare at each [2] camp
- Refuge drums (empty drums for containing spilt substances).

**TRAINING AND PRACTICE DRILLS**

All members of the programme response team – as well as members of the general team, such as the Regulatory/Environment Manager[2] and the Expeditor – will be familiar with the spill-response resources at the worksites (including their location and how to access them), this Spill Plan, and appropriate spill-response methods. Involvement of other personnel may be required, from time to time. This familiarity will be acquired through:

1. Initial or refresher training (practice drills), as appropriate, provided once per field season *(cf. Appendix - "Spill Response: Practice Drill").*

2. Regular inventory updates, provided in list form to all team members. Information to be reported includes listing of resources, number of items and locations, condition, date of last inspection and any comments (*e.g.*, expiry dates, under whose authority they may be accessed and special handling instructions, if any).

**FUEL SPILLS: RISK ASSESSMENT AND PREVENTIVE MEASURES**

The possibility of a fuel spill on Peregrine projects will vary, depending on a number of factors, including human error, mechanical failure, route conditions, weather.

Risk Assessment & Preventative Measures

| POTENTIAL PROBLEM | IMPACT | PROBABILITY | PREVENTATIVE MEASURES |
|---|---|---|---|
| Diesel or Oil Major leak from drums | High | Low | Training/refresher training for site personnel who handle fuels.<br>Daily inspections and monitoring will take place during the programme by designated site personnel.<br>Placement of drums in a suitable area (e.g., depression, vegetation-free and boulder-free), with natural drainage pattern away from water, and the required setback from shoreline.<br>Berming with peat bales or snow.<br>Secure drums in use on proper stands or racks. |
| A spill from a valve left open or a break in a transfer hose. | High | Moderate | Daily inspections to ensure all valves are either closed (when not needed), or that a catch pail is installed beneath valves, *e.g.*, at tents, drillshacks, or that an enviro-tainer is in use.<br>Fuel transfer hoses will have a double locking mechanism and undergo daily inspection as part of the routine work cycle, to check for soundness and wear.<br>Markers around all fuel transfer lines. |
| | | | |
| Pump Failure | Low | Low | Pumps are to be inspected weekly and - serviced monthly. |

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Risk Assessment & Preventative Measures (cont.)

| POTENTIAL PROBLEM | IMPACT | PROBABILITY | PREVENTATIVE MEASURES |
|---|---|---|---|
| Diesel or Oil Major leak from drums | High | Low | Training/refresher training for site personnel who handle fuels.<br>Daily inspections and monitoring will take place during the programme by designated site personnel.<br>Placement of drums in a suitable area (e.g., depression, vegetation-free and boulder-free), with natural drainage pattern away from water, and the required setback from shoreline.<br>Berming with peat bales or snow.<br>Secure drums in use on proper stands or racks. |
| A spill from a valve left open or a break in a transfer hose. | High | Moderate | Daily inspections to ensure all valves are either closed (when not needed), or that a catch pail is installed beneath valves, e.g., at tents, drillshacks, or that an enviro-tainer is in use.<br>Fuel transfer hoses will have a double locking mechanism and undergo daily inspection as part of the routine work cycle, to check for soundness and wear.<br>Markers around all fuel transfer lines. |
| | | | |
| Pump Failure | Low | Low | Pumps are to be inspected weekly and - serviced monthly. |
| Power Outages | Low | Low | In case of gen-set failure/power loss, any refuelling or maintenance under way in the gen-shed will cease immediately and the spare gen-set will be brought on line before refuelling or maintenance resumes. |
| Broken Or Blocked Drill Sludge Lines | Low | Moderate | Lines are inspected daily as part of the routine work cycle. |

Risk Assessment & Preventative Measures (cont.)

| POTENTIAL PROBLEM | IMPACT | PROBABILITY | PREVENTATIVE MEASURES |
|---|---|---|---|
| Chemical Spills | Low – High | Low | Training in the handling of chemicals will take place to ensure safe handling.<br>Chemicals will be stored in their original labelled drums, bottles, canisters or packages.<br>Chemicals will be stored in such a way as to protect from the weather or spillage, and be in non-reactive trays, underlain with liner material or absorbents to prevent chemicals coming into contact with soil or tent floors.<br>Regular inspections will take place of stored chemicals.<br>Inventory controls in place. |
| | | | |
| | | | |
| Gases (oxygen, acetylene, propane, argon, carbon dioxide) | | | Training/refresher training for site personnel who handle gases.<br>Stored in designated areas until required, secured upright.<br>Daily checks of cylinders in use, including gas-detector monitoring, as necessary. |

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## FIGURE 1: Updated NWT-Nunavut Spill Report Form

Northwest Territories | Nunavut | Canada

# NT-NU SPILL REPORT

OIL, GASOLINE, CHEMICALS AND OTHER HAZARDOUS MATERIALS

NT-NU 24-HOUR SPILL REPORT LINE
TEL: (867) 920-8130
FAX: (867) 873-6924
EMAIL: spills@gov.nt.ca

REPORT LINE USE ONLY

| | | | | |
|---|---|---|---|---|
| A | REPORT DATE: MONTH – DAY – YEAR | REPORT TIME | ☐ ORIGINAL SPILL REPORT, OR | REPORT NUMBER |
| B | OCCURRENCE DATE: MONTH – DAY – YEAR | OCCURRENCE TIME | ☐ UPDATE # TO THE ORIGINAL SPILL REPORT | - |
| C | LAND USE PERMIT NUMBER (IF APPLICABLE) | WATER LICENCE NUMBER (IF APPLICABLE) | | |
| D | GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM THE NAMED LOCATION | REGION ☐ NWT ☐ NUNAVUT ☐ ADJACENT JURISDICTION OR | | |
| E | LATITUDE DEGREES MINUTES SECONDS | LONGITUDE DEGREES MINUTES SECONDS | | |
| F | RESPONSIBLE PARTY OR VESSEL NAME | RESPONSIBLE PARTY ADDRESS OR OFFICE LOCATION | | |
| G | ANY CONTRACTOR INVOLVED | CONTRACTOR ADDRESS OR OFFICE LOCATION | | |
| H | PRODUCT SPILLED | QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES | U.N. NUMBER | |
| | SECOND PRODUCT SPILLED (IF APPLICABLE) | QUANTITY IN LITRES, KILOGRAMS OR CUBIC METRES | U.N. NUMBER | |
| I | SPILL SOURCE | SPILL CAUSE | AREA OF CONTAMINATION IN SQUARE METRES | |
| J | FACTORS AFFECTING SPILL OR RECOVERY | DESCRIBE ANY ASSISTANCE REQUIRED | HAZARDS TO PERSONS, PROPERTY OR ENVIRONMENT | |
| K | ADDITIONAL INFORMATION, COMMENTS, ACTIONS PROPOSED OR TAKEN TO CONTAIN, RECOVER OR DISPOSE OF SPILLED PRODUCT AND CONTAMINATED MATERIALS | | | |

| | | | | | |
|---|---|---|---|---|---|
| L | REPORTED TO SPILL LINE BY | POSITION | EMPLOYER | LOCATION CALLING FROM | TELEPHONE |
| M | ANY ALTERNATE CONTACT | POSITION | EMPLOYER | ALTERNATE CONTACT LOCATION | ALTERNATE TELEPHONE |

**REPORT LINE USE ONLY**

| | | | | | |
|---|---|---|---|---|---|
| N | RECEIVED AT SPILL LINE BY | POSITION **Station operator** | EMPLOYER | LOCATION CALLED **Yellowknife, NT** | REPORT LINE NUMBER **(867) 920-8130** |

LEAD AGENCY ☐ EC ☐ CCG ☐ GNWT ☐ GN ☐ ILA ☐ INAC ☐ NEB ☐ TC | SIGNIFICANCE ☐ MINOR ☐ MAJOR ☐ UNKNOWN | FILE STATUS ☐ OPEN ☐ CLOSED

| AGENCY | CONTACT NAME | CONTACT TIME | REMARKS |
|---|---|---|---|
| LEAD AGENCY | | | |
| FIRST SUPPORT AGENCY | | | |
| SECOND SUPPORT AGENCY | | | |
| THIRD SUPPORT AGENCY | | | |

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## FIGURE 2: Instructions for Completing the NT-NU Spill Report Form

### Instructions for Completing the NT-NU Spill Report Form

**This form can be filled out electronically and e-mailed as an attachment to spills@gov.nt.ca. Until further notice, please verify receipt of e-mail transmissions with a follow-up telephone call to the spill line. Forms can also be printed and faxed to the spill line at 867-873-6924. Spills can still be phoned in by calling collect at 867-920-8130.**

| | |
|---|---|
| **A. Report Date/Time** | The actual date and time that the spill was reported to the spill line. If the spill is phoned in, the Spill Line will fill this out. **Please do not fill in the Report Number**: the spill line will assign a number after the spill is reported. |
| **B. Occurrence Date/Time** | Indicate, to the best of your knowledge, the exact date and time that the spill occurred. Not to be confused with the report date and time (see above). |
| **C. Land Use Permit Number /Water Licence Number** | This only needs to be filled in if the activity has been licenced by the Nunavut Water Board and/or if a Land Use Permit has been issued. Applies primarily to mines and mineral exploration sites. |
| **D. Geographic Place Name** | In most cases, this will be the name of the city or town in which the spill occurred. For remote locations – outside of human habitations – identify the most prominent geographic feature, such as a lake or mountain and/or the distance and direction from the nearest population center. **You must include the geographic coordinates** (Refer to Section E). |
| **E. Geographic Coordinates** | This only needs to be filled out if the spill occurred outside of an established community such as a mine site. Please note that the location should be stated in degrees, minutes and seconds of Latitude and Longitude. |
| **F. Responsible Party Or Vessel Name** | This is the person who was in management/control/ownership of the substance at the time that it was spilled. In the case of a spill from a ship/vessel, include the name of the ship/vessel. Please include full address, telephone number and e-mail. Use box K if there is insufficient space. **Please note that, the owner of the spilled substance is ultimately responsible for any spills of that substance, regardless of who may have actually caused the spill.** |
| **G. Contractor involved?** | Were there any other parties/contractors involved? An example would be a construction company who is undertaking work on behalf of the owner of the spilled substance and who may have contributed to, or directly caused the spill and/or is responding to the spill. |
| **H. Product Spilled** | Identify the product spilled; most commonly, it is gasoline, diesel fuel or sewage. For other substances, avoid trade names. Wherever possible, use the chemical name of the substance and further, identify the product using the four digit UN number (eg: UN1203 for gasoline; UN1202 for diesel fuel; UN1863 for Jet A & B) |
| **I. Spill Source** | Identify the source of the spill: truck, ship, home heating fuel tank and, if known, the cause (eg: fuel tank overfill, leaking tank; ship ran aground; traffic accident, vandalism, storm, etc.). Provide an estimate of the extent of the contaminated/impacted area (eg: 10 $m^2$) |
| **J. Factors Affecting Spill** | Any factors which might make it difficult to clean up the spill: rough terrain, bad weather, remote location, lack of equipment. Do you require advice and/or assistance with the cleanup operation? Identify any hazards to persons, property or environment: for example, a gasoline spill beside a daycare centre would pose a safety hazard to children. Use box K if there is insufficient space. |
| **K. Additional Information** | Provide any additional, pertinent details about the spill, such as any peculiar/unique hazards associated with the spilled material. State what action is being taken towards cleaning up the spill; disposal of spilled material; notification of affected parties. If necessary, append additional sheets to the spill report. Number the pages in the same format found in the lower right hand corner of the spill form: eg. "Page 1 of 2", "Page 2 of 2" etc. **Please number the pages to ensure that recipients can be certain that they received all pertinent documents.** If only the spill report form was filled out, number the form as "Page 1 of 1". |
| **L. Reported to Spill Line by** | Include your full name, employer, contact number and the location from which you are reporting the spill. Use box K if there is insufficient space. |
| **M. Alternate Contact** | Identify any alternate contacts. This information assists regulatory agencies to obtain additional information if they cannot reach the individual who reported the spill. |
| **N. Report Line Use Only** | **Leave Blank**. This box is for the **Spill Line's use only**. |

## PRODUCT CATEGORIES

The materials in this Spill Contingency Plan are generally divided into five categories:

Flammable Immiscible Liquids
Soluble Solids/Oxidisers
Flammable Compressed Gases
Soluble Liquids
Toxic Solids

### Flammable Immiscible Liquids

These substances are all hydrocarbon-based and will ignite under certain conditions.

Petrol (gasoline) and aviation fuels pose the greatest fire and safety hazard and are not recoverable when spilled on water.

### Action Plan Steps

Confirm that a spill has occurred. It may not be obvious if a spill has occurred - look for:

pooled liquid.
damage to equipment/tanks.
smell of fuel or chemicals and
leaks from hatches, valves or other fixtures

### Assess the Situation

Before initiating response actions, take the time to determine the nature of a spill and to collect some or all of following facts:

potential risk of fire, explosion and environmental damage.
extent of injuries to co-workers or the public.
source and approximate size of the spill.
possible methods to stop the flow of product; and
proximity to water.

### Take Action

Eliminate ignition source(s) if safe to do so.
Shut off spill source if safe to do so.
Attend to any injured persons.
Restrict personnel to the spill site using barriers or marker tape.
Warn others in the area of the spill.
Use an explosion meter to monitor atmospheric gas concentrations.
Report spill to Peregrine management.
Transport Spill Kit to the spill site.
Control spreading and minimise impacts.

**Spill Containment and Recovery**
Special care should be taken to ensure that spilled material does not reach waterbodies where recovery is more difficult. Ice augers (under appropriate conditions) can be effective in terms of locating and exposing oil for burning or pumping off.

**Waste Disposal**
At the Chidliak camps[2], all combustibles will be incinerated on a daily basis. This includes food scraps, office garbage, etc.

Non-hazardous solid "inert" waste generated (*i.e.*, scrap metal, pipe, wood, plastics, liners, Styrofoam) will be transported off site for disposal according to its nature.

All hazardous wastes and waste items that cannot be incinerated (including items which might be present at a remote fuel cache) are securely packaged, flown out on aircraft backhauls, and disposed of in designated locations off-site.

Prior to disposal, the hazardous waste will be properly packaged, labelled, and stored and manifested in a Transportation of Dangerous Goods (TDG) approved shipping container. (Peregrine's government-issued waste generator number for Nunavut projects will be written on manifests accompanying outbound waste shipments[2]).

The container will have the appropriate hazardous waste labels.

All Federal and Territorial regulations will be adhered to.

**Used Container Disposal**
To ensure the proper disposal of used containers that have contacted, collected or contained a hazardous or regulated substance (*e.g.*, paint cans, oil cans, acid containers, aerosol cans).

Containers having contacted, collected or contained an acute hazardous material, corrosive or reactive substance will be triple washed with water prior to disposal. (Contaminated wash-water can report to labelled refuge drums).

Metal containers can be disposed of as scrap metal and flown off-site for disposal. Any free liquid in the container will be disposed of properly, and the residual material allowed to dry or solidify.

**Used Drum Disposal**
The majority of used fuel drums (205L) for Jet-B fuel, diesel[2] and unleaded petrol are returned to the supplier for refund or crushed[5]. However, during operations, some drums will be set aside for usage as refuge drums, for storage of other "used" products (*i.e.*, used glycol, used oil, spilt materials, oil filters, *etc*). These drums will be properly labelled and stored prior to acceptable removal and disposal, usually off-site at an approved facility.

## RESPONSE ORGANISATION

On rare occasions, additional company and outside resources may need to be brought in to support the spill cleanup. For a major incident, the Project Manager (*cf. Page 3*) in co-operation with[2] the Project Manager – Operations[3] or the specific Project Manager, if not Chidliak[5], would mobilise Peregrine, contractor and outside expertise for the response.

## GENERAL RESPONSIBILITIES

The following provides a general guide to the Spill Response Organisation responsibilities. In some cases, certain Peregrine personnel may fill dual roles, depending upon the circumstances of the incident.

In most incidents, the Site Supervisor, working with the site Spill Response Team, will handle the initial response, containment and cleanup. In larger incidents, Peregrine management will play a more active role. In all cases, Peregrine management will be notified immediately of a spill and will be responsible for notifying the 24-hour Spill Line or assigning this task to a designate.

Other contractors and specialists may be brought in to assist in response to a major incident.

### Individual Discovering Incident

- Assess the initial severity of the spill and safety concerns.
- Identify the source of the spill
- Report all spills to Supervisor.
- Determine the size of the spill and stop or contain it, if possible.

### Spill Response Team

- Conduct the cleanup of spills under the direction of the Supervisor.
- Deploy booms, absorbents and other equipment and materials as required.
- Take appropriate response measures.
- Continue the cleanup as directed by the Supervisor or until relieved.

### Supervisor

- Assist in initial and ongoing response efforts.

- Supervise the Spill Response Team.

- With work crew, take initial action to seal off the source and contain spill.

- Decide with Peregrine management if mobilisation of additional equipment is required.

- Assess whether burning is a viable cleanup measure. Consult regulatory agency (Environment Canada on Spill Line can provide initial guidance).

- Ensure co-ordination of equipment and manpower as needed (Peregrine and contractors)

- Ensure expeditious response and cleanup of the spill site and impacted area.

**Additional Resources – Support Team to the Spill-Response Team**

- Provide assistance to Supervisor as required.

- Responsible for mobilising additional Peregrine support staff, security and other contractors as required.

**Peregrine Management**

- Records the time of the report, source of information and details on location, size, type of spill and any other information available on the Spill Report Form.

- Ensures that the spill is reported to the Nunavut 24-Hour Spill Report Line.

- Oversees or directs the cleanup operation until it is satisfactorily completed.

- Together with the Supervisor, decides if additional equipment is required to contain and cleanup spills.

- Maintains contact with Supervisor to ensure final inspection and sign-off on the spill.

- Notifies internal company departments.

- Initiates Mutual Aid Agreements if so required.

- Oversees completion and distribution of the Spill Report.

- Ensures investigation identifies measures to prevent similar spills.

- Provides cleanup advice to the Supervisor.

- Assists with preparation of press releases.

- Provides advice on storage and disposal options.

- Ensures that there are followup reports prepared on the spill event, cleanup and environmental impacts.

- Takes action, as necessary, to prevent a recurrence.

- Liaises with government agencies (as required)

**Response Resources**

A wide variety of spill control/recovery equipment and material exists for dealing with spills of petroleum products and chemical reagents (*cf. Page 4*).

**Response Equipment Deployment**

All equipment is stored in such a manner as to be readily available on short notice.

The Supervisor would immediately respond to a reported spill site by notifying site personnel to move into place material necessary to provide control and cleanup (*e.g.*, shovels, refuge drums, tarps, etc.). Emergency spill containment and recovery materials and supplies will be available on site for immediate mobilisation at any time. (In the case of the Qilaq Project[2] or activity on IOLs, or the Cumberland sampling project[5] where there is no associated camp, a fully-equipped spill kit will be positioned at an easily-accessible central point or fuel cache within the programme area [2]).

PEREGRINE DIAMONDS LTD.

**CONTACT LIST – SPILL RESPONSE/ASSISTANCE**

| | | |
|---|---|---|
| **Mobile Emergency Spill Response Unit Canadian Northern Oil (Shell Canada Bulk Plant, Yellowknife)** | | |
| | Matthew Wasserman | 867) 873-3337 (during business hours) |
| | Peter Lane | (867) 669-1459 (24-hour mobile number) |
| **Qikiqtaaluk Corporation Expediting/Logistics** | qc@nunavut.com | (867) 222-1020 [3]<br>(867) 979-8433 (FAX) |
| **Discovery Mining Services**[3] | **logistics@pdiam.com** | (867) 445-1644 (24 hours) [3]<br>(867) 222-3630 (Iqaluit mobile) |
| **Environment Canada** | 24-hour line | (867) 766-3737 |
| **Manager, Field Operations** [4]**, Indian and Northern Affairs Canada** | | |
| | Nunavut (Iqaluit Office) | (867) 975-4295 [4] |
| | Peter Kusugak | (867) 975-6445 (FAX) |
| **Water Res. Officer Indian and Northern Affairs (Iqaluit)** | | (867) 975-4298 |
| **RCMP, Iqaluit detachment** | Emergencies only: | (867) 979-1111 |
| **RCMP, Pangnirtung detachment** | Emergencies only: | (867) 473-4111 |
| **Iqaluit Fire Department** | | (867) 979-4422 (emergency) |
| **24-hour spill line: (867) 920-8130** [2] | | **spills@gov.nt.ca** [2] |
| **Qikiqtani Inuit Association** | Iqaluit Office | (867) 979-5391 |
| **Environ. Conserv. Officer** | GN-DOE- Iqaluit Office | (867) 975-7700 |
| **Workers' Compensation Board –Occupational Health and Safety (Iqaluit Office)** | | (877) 404-4407 |
| **Workers' Compensation Board-Exploration Site Accident Reports** | | **(800) 661-0792 (24hr)** |

## SPILL RESPONSE ACTIONS: BY PRODUCT

At the Peregrine projects under this Plan[2], "safety first" is the abiding principle which will guide response: Spills and products are to be handled as/if safety permits.

After adequate safety precautions, effort will be concentrated on stopping or eliminating the source of ignition.

**Diesel**

| | |
|---|---|
| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | |
| APPEARANCE: Clear, Yellow or Red FLASH POINT: 40°C (Minimum)<br>ODOUR: Petroleum POUR POINT: -50° to -6°C<br>SOLUBILITY: Insoluble VISCOSITY: Not Viscous<br>VAPOUR DENSITY: Will Sink to Ground Levels SPECIFIC GRAVITY: Floats on Water (0.8 – 0.9) | |
| SAFETY MEASURES | |
| WARNING | Vapours are heavier than air and form easily at high temperatures.<br>Empty containers can contain explosive vapours.<br>Toxic gases form upon combustion.<br>Eye contact causes irritation.<br>Material can accumulate static charges.<br>Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness. |
| PERSONAL PROTECTION | Always wear impervious, chemica1-resistant clothing, gloves, footwear, and goggles; nitrile and PVC are suitable materials (DO NOT USE NATURAL RUBBER or NEOPRENE.)<br>Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA. |
| PRECAUTIONS | Monitor for explosive atmosphere.<br>Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone and peroxides. Eliminate ignition sources.<br>Restrict access and work upwind of spill. |

| RESPONSE TO FIRES | |
|---|---|
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA in confined areas.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, and alcohol foam or water fog.<br>Use water to cool containers exposed to fire. |

**Hydraulic Oil**

| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | | | |
|---|---|---|---|
| APPEARANCE: | Straw-Yellow Liquid | FLASH POINT: | 215°C (Minimum) |
| ODOUR: | Petroleum | POUR POINT: | -25°C |
| SOLUBILITY: | Generally Insoluble | VISCOSITY: | Medium (265 x ST, 15°C) |
| VAPOUR DENSITY: | Few Vapours Emitted | SPECIFIC GRAVITY: | Floats on Water (0.9) |

| SAFETY MEASURES | |
|---|---|
| WARNING | Vapours are heavier than air but are unlikely to form.<br>Toxic gas can form in fire and at high temperatures.<br>CO, $CO_2$, and dense smoke are produced upon combustion.<br>Oil mist or vapour from hot oil can cause irritation of the eyes, nose, throat and lungs. |
| PERSONAL PROTECTION | Always wear impervious, chemical -resistant clothing, gloves, footwear, and goggles; PVC, nitrile, and Viton are suitable materials (DO NOT USE NATURAL RUBBER).<br>Use of organic vapour cartridge respirator is highly unlikely. |
| PRECAUTIONS | Avoid excessive heat, which can cause formation of vapours.<br>Avoid contact with strong oxidisers, such as nitric acid, sulphuric acid, chlorine, ozone, and peroxides.<br>Eliminate ignition sources.<br>Restrict access and work upwind of spill. |

| RESPONSE TO FIRES | |
|---|---|
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA in confined areas.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, alcohol, foam or water fog.<br>NOTE: water or foam may cause frothing.<br>Use water to cool containers exposed to fire. |

**Lubricating Oil**

| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | | | |
|---|---|---|---|
| APPEARANCE: | Amber Liquid | FLASH POINT: | 190° to 2220°C |
| ODOUR: | Petroleum | POUR POINT: | -35° to -40°C |
| SOLUBILITY: | Generally Insoluble | VISCOSITY: | Medium (255 xST, 15°C) |
| VAPOUR DENSITY: | Few Vapours Emitted | SPECIFIC GRAVITY: | Floats on Water (0.9) |

| SAFETY MEASURES | |
|---|---|
| WARNING | Vapours are heavier than air but are unlikely to form.<br>Toxic gas can form in fire and at high temperatures.<br>CO, $CO_2$, and dense smoke are produced upon combustion.<br>Oil mist or vapour from hot oil can cause irritation of the eyes, nose, throat and lungs. |
| PERSONAL PROTECTION | Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton are suitable materials (DO NOT USE NATURAL RUBBER).<br>Use of organic vapour cartridge respirator is highly unlikely. |
| PRECAUTIONS | Avoid excessive heat, which can cause formation of vapours.<br>Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, and peroxides.<br>Eliminate ignition sources.<br>Restrict access and work upwind of spill. |

| | |
|---|---|
| RESPONSE TO FIRES | |
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA and eye protection when responding to lube oil fires.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, alcohol foam or water fog. NOTE: water or foam may cause frothing.<br>Use water to cool containers, exposed to fire. |
| ON LAND | Prevent additional discharge of oil.<br>Do not flush into ditch/drainage systems.<br>Block entry into waterways.<br>Contain spill by diking with earth, snow or other barrier.<br>Remove minor spills with absorbent and/or peat moss.<br>Remove large spills with pumps or vacuum equipment.<br>Spill can also be mechanically removed if oil is too viscous to be pumped. |
| ON WATER | Use booms to contain and concentrate spill.<br>Remove spill using absorbents or skimmer.<br>Protection booming can be considered for water intakes. |
| STORAGE & TRANSFER | Store closed, labelled containers in cool, and ventilated areas away from incompatible materials. |
| DISPOSAL | Segregate waste types.<br>Place contaminated materials into marked containers.<br>Consult with environmental authorities during fina1 disposal. |
| FIRST AID | |
| EYES | Flush eyes immediately with fresh, warm water (NOT HOT) water for 20 minutes, while holding the eyelids open.<br>Remove contact lenses, if exposed to vapours or liquid.<br>Get prompt medical attention. |
| SKIN | Remove and launder contaminated clothing.<br>Wash skin thoroughly with soap and water.<br>Get medical attention.<br>Discard saturated leather articles. |
| INHALATION | Move victim to fresh air.<br>Perform CPR if victim not breathing.<br>Provide oxygen if victim is having difficulty breathing.<br>Get prompt medical attention. |
| INGESTION | DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.<br>Get prompt medical attention. |

**Waste Oil**

| | |
|---|---|
| ON LAND | Prevent additional discharge of oil.<br>Do not flush into ditch/drainage systems.<br>Block entry into waterways.<br>Contain spill by diking with earth, snow or other barrier.<br>Remove minor spills with absorbent pads and/or peat moss.<br>Remove large spills with pumps or vacuum equipment.<br>Spill can also be mechanically removed if oil is too viscous to be pumped. |
| ON WATER | Use booms to contain and concentrate spill.<br>Remove spill using absorbents or skimmer.<br>Protection booming can be considered for water intakes. |
| STORAGE & TRANSFER | Store closed, labelled containers in cool, ventilated areas away from incompatible materials. |
| DISPOSAL | Segregate waste types.<br>Place contaminated materials into marked containers.<br>Consult with environmental authorities during fina1 disposal. |
| FIRST AID | |
| EYES | Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open.<br>Remove contact lenses, if exposed to vapours or liquid.<br>Get prompt medical attention. |
| SKIN | Remove and launder contaminated clothing.<br>Wash skin thoroughly with soap and water.<br>Get medical attention.<br>Discard saturated leather articles. |
| INHALATION | Move victim to fresh air.<br>Perform CPR if victim not breathing.<br>Provide oxygen if victim is having difficulty breathing.<br>Get prompt medical attention. |
| INGESTION | DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.<br>Get prompt medical attention. |

**Petrol (Unleaded Gasoline)**

| | |
|---|---|
| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | |
| APPEARANCE: Colourless Liquid (Can Be Dyed) FLASH POINT: -50°C<br>ODOUR: Gasoline/Petroleum POUR POINT: -60°C<br>SOLUBILITY: Insoluble VISCOSITY: Not Viscous (<1 cSt)<br>VAPOUR DENSITY: Will Sink to Ground Level SPECIFIC GRAVITY: Floats on Water (0.7 - 0.8) | |
| SAFETY MEASURES | |
| WARNING | Vapours form instantaneously, and are heavier than air.<br>Empty containers can contain explosive vapours.<br>Vapours can travel to distant sources of ignition and flash back.<br>Eye contact causes irritation.<br>Material can accumulate static charges.<br>Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness. |
| PERSONAL PROTECTION | Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton and PVC are suitable materials (DO NOT USE NATURAL RUBBER or NEOPRENE).<br>Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear positive pressure SCBA, if circumstances warrant. |
| PRECAUTIONS | Monitor for explosive atmosphere.<br>Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides. Eliminate ignition sources.<br>Restrict access and work upwind of spill. |
| RESPONSE TO FIRES | |
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA in confined areas.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, alcohol foam or water fog.<br>Use water to cool containers, exposed to fire. |

| | |
|---|---|
| ON LAND | ELIMINATE IGNITION SOURCES.<br>Do not flush into ditch/drainage systems.<br>Block entry into waterways.<br>Contain spill by diking with earth, snow or other barrier.<br>Remove minor spills with peat moss and/or absorbent pads.<br>Cover pools with foam to prevent vapour evolution if gasoline presents a fire hazard; otherwise allow vapours to dissipate. |
| ON WATER | ELIMINATE IGNITION SOURCES.<br>DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.<br>Protection booming can be considered for water intakes. |
| STORAGE & TRANSFER | Store closed, labelled container in cool, ventilated areas away from incompatible materials.<br>Electrically ground containers and vehicles during transfer. |
| DISPOSAL | Place contaminated materials into segregated marked containers.<br>Consult with environmental authorities during final disposal. |
| FIRST AID | |
| EYES | Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open.<br>Remove contact lenses, if exposed to vapours or liquid.<br>Get prompt medical attention. |
| SKIN | Remove and launder contaminated clothing.<br>Wash skin thoroughly with soap and water.<br>Get medical attention.<br>Discard saturated leather articles. |
| INHALATION | Move victim to fresh air.<br>Perform CPR if victim not breathing.<br>Provide oxygen if victim is having difficulty breathing.<br>Get prompt medical attention. |
| INGESTION | DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.<br>Get prompt medical attention. |

**Jet-B (JP-4) OR Jet-A Fuel**

| | |
|---|---|
| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | |
| APPEARANCE: White or Pale Yellow Liquid FLASH POINT: -20°C to -25°C<br>ODOUR: Gasoline/Petroleum POUR POINT: -50°C<br>SOLUBILITY: Negligible VISCOSITY: Not Viscous (<7 cSt)<br>VAPOUR DENSITY: Will Sink to Ground Level SPECIFIC GRAVITY: Floats on Water (0.75 - 0.8) | |
| SAFETY MEASURES | |
| WARNING | Vapours instantaneously form, and are heavier than air.<br>Low-lying areas can trap explosive vapours.<br>Vapours can travel to distant sources of ignition and flash back.<br>Eye contact causes irritation.<br>Material can accumulate static charges.<br>Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness. |
| PERSONAL PROTECTION | Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton and PVC are suitable materials (DO NOT USE NATURAL RUBBER or NEOPRENE).<br>Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear positive pressure SCBA, if circumstances warrant. |
| PRECAUTIONS | Monitor for explosive atmosphere.<br>Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides.<br>Eliminate ignition sources.<br>Restrict access and work upwind of spill. |
| RESPONSE TO FIRES | |
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA in confined areas.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, alcohol foam or water fog.<br>Use water to cool containers, exposed to fire. |

| | |
|---|---|
| ON LAND | ELIMINATE IGNITION SOURCES.<br>Do not flush into ditch/drainage systems.<br>Block entry into waterways.<br>Contain spill by diking with earth, snow or other barrier.<br>Remove minor spills with peat moss and/or absorbent pads.<br>Cover pools with foam to prevent vapour evolution if gasoline presents a fire hazard; otherwise allow vapours to dissipate. |
| ON WATER | ELIMINATE IGNITION SOURCES.<br>DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS.<br>Protection booming can be considered for water intakes. |
| STORAGE & TRANSFER | Store closed, labelled containers in cool, ventilated areas away from incompatible materials.<br>Electrically ground containers and vehicles during transfer. |
| DISPOSAL | Place contaminated materials into segregated marked containers.<br>Consult with environmental authorities during final disposal. |
| FIRST AID | |
| EYES | Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open.<br>Remove contact lenses, if exposed to vapours or liquid.<br>Get prompt medical attention. |
| SKIN | Remove and launder contaminated clothing.<br>Wash skin thoroughly with soap and water.<br>Get medical attention.<br>Discard saturated leather articles. |
| INHALATION | Move victim to fresh air.<br>Perform CPR if victim not breathing.<br>Provide oxygen if victim is having difficulty breathing.<br>Get prompt medical attention. |
| INGESTION | DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.<br>Get prompt medical attention. |

**Fuel Dye**

| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | |
|---|---|
| APPEARANCE: Dark Red Liquid FLASH POINT: -28°C<br>ODOUR: Aromatic Hydrocarbon POUR POINT: -45°C<br>SOLUBILITY: Negligible VISCOSITY: Not Viscous<br>VAPOUR DENSITY: Will Sink to Ground Level SPECIFIC GRAVITY: Floats on Water | |
| SAFETY MEASURES | |
| WARNING | Vapours instantaneously form, and are heavier than air.<br>Low-lying areas can trap explosive vapours.<br>Vapours can travel to distant sources of ignition and flash back.<br>Eye contact causes irritation.<br>Material contains xylene, benzene and ethyl benzene.<br>Inhalation of vapours can cause nausea, headache and dizziness. |
| PERSONAL PROTECTION | Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; PVC, Nitrile, and Viton are suitable materials (DO NOT USE NATURAL RUBBER or NEOPRENE OR PVC).<br>Wear full-face organic vapour cartridge respirator where oxygen is adequate; otherwise wear positive pressure SCBA, if circumstances warrant. |
| PRECAUTIONS | Avoid breathing vapours or mist.<br>Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides.<br>Eliminate ignition sources.<br>Restrict access and work upwind of spill. |
| RESPONSE TO FIRES | |
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA in confined areas.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, AFFF foam or water fog.<br>Use water to cool containers, exposed to fire. |

**Propane**

| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | |
|---|---|
| APPEARANCE: Colourless Gas FLASH POINT: -104°C<br>ODOUR: Natural Gas Odour POUR POINT: -190°C<br>SOLUBILITY: Insoluble VISCOSITY: N/A<br>VAPOUR DENSITY: Will Sink to Ground Level SPECIFIC GRAVITY: Liquid Floats on Water | |
| SAFETY MEASURES | |
| WARNING | Vapours form instantaneously, and are heavier than air.<br>Vapours can travel to distant sources of ignition and flash back.<br>Eye contact causes irritation.<br>Material can accumulate static charges.<br>Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness. |
| PERSONAL PROTECTION | Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; Nitrile: and Viton are suitable protective materials (DO NOT USE NATURAL RUBBER, NEOPRENE, OR PVC).<br>Avoid frostbite bum to skin and eyes from contact with propane.<br>Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA. |
| PRECAUTIONS | Monitor for explosive atmosphere.<br>Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides.<br>Eliminate ignition sources.<br>Restrict access and work upwind of spill. |
| RESPONSE TO FIRES | |
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA in confined areas.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, alcohol foam or water fog.<br>Use water to cool containers, exposed to fire. |

| | |
|---|---|
| ON LAND | ELIMINATE IGNITION SOURCES.<br>DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS. |
| ON WATER | ELIMINATE IGNITION SOURCES.<br>DO NOT ATTEMPT TO CONTAIN OR REMOVE SPILLS. |
| STORAGE & TRANSFER | It is not possible to collect released material. |
| DISPOSAL | Consult with environmental authorities if the disposal of any contaminated materials is required. |
| FIRST AID | |
| EYES | Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open.<br>Remove contact lenses, if exposed to vapours or liquid.<br>Get prompt medical attention. |
| SKIN | Remove and launder contaminated clothing.<br>Wash skin thoroughly with soap and water.<br>Get medical attention.<br>Discard saturated leather articles. |
| INHALATION | Move victim to fresh air.<br>Perform CPR if victim not breathing.<br>Provide oxygen if victim is having difficulty breathing.<br>Get prompt medical attention. |
| INGESTION | DO NOT INDUCE VOMITING; if victim is conscious; give milk or water to drink. If vomiting begins, keep victim's head below hips to prevent aspiration.<br>Get prompt medical attention. |

**Acetylene**

| | |
|---|---|
| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | |
| APPEARANCE: Colourless Gas FLASH POINT: -18°C<br>ODOUR: Garlic-Like POUR POINT: -82°C<br>SOLUBILITY: Slightly Soluble VISCOSITY: N/A<br>VAPOUR DENSITY: Will Sink to Ground Level SPECIFIC GRAVITY: Liquid Floats on Water (0.06) | |
| SAFETY MEASURES | |
| WARNING | Vapours form instantaneously, and are heavier than air.<br>Empty containers can contain explosive vapours.<br>Vapours can travel to distant sources of ignition and flash back.<br>Eye contact causes irritation.<br>Material can accumulate static charges.<br>Inhalation of vapours can cause irritation of the respiratory tract, headache, vomiting, and unconsciousness. |
| PERSONAL PROTECTION | Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; use suitable protective materials (DO NOT USE NATURAL RUBBER, NEOPRENE, OR PVC).<br>Wear full-face organic vapour cartridge respirator where oxygen is adequate, otherwise wear positive pressure SCBA. |
| PRECAUTIONS | Monitor for explosive atmosphere.<br>Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, and peroxides.<br>Eliminate ignition sources.<br>Restrict access and work upwind of spill. |
| RESPONSE TO FIRES | |
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA in confined areas.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, alcohol, foam, or water fog.<br>Use water to cool containers, exposed to fire. |

**Antifreeze (Ethylene Glycol)**

| TYPICAL PHYSICAL AND CHEMICAL PROPERTIES | |
|---|---|
| APPEARANCE: Colourless Liquid FLASH POINT: 111°C<br>ODOUR: Slight; Undetectable <25 ppm POUR POINT: -13°C (48% Solution)<br>SOLUBILITY: Soluble in All Proportions VISCOSITY: Not Viscous (=22 cSt)<br>VAPOUR DENSITY: Will Sinks to Ground Level SPECIFIC GRAVITY: Same as Water (1.0) | |
| SAFETY MEASURES | |
| WARNING | Vapours are heavier than air.<br>Ingestion of significant quantities can be lethal.<br>Eye contact causes irritation.<br>Skin contact can cause intoxication due to absorption.<br>Inhalation of vapours can cause intoxication, headache, vomiting, unconsciousness with convu1sions, and even death<br>Avoid inhaling vapours, particularly in enclosed places. |
| PERSONAL PROTECTION | Always wear impervious, chemical-resistant clothing, gloves, footwear, and goggles; neoprenes, nitrile, PVC are suitable protective materials. |
| PRECAUTIONS | Monitor empty containers for explosive atmosphere.<br>Avoid contact with strong oxidizers, such as nitric acid, sulphuric acid, chlorine, ozone, peroxides.<br>Eliminate ignition sources.<br>Restrict access and work upwind of spill. |
| RESPONSE TO FIRES | |
| CONSIDER ACTION ONLY IF SAFETY PERMITS! | Wear SCBA in confined areas.<br>Shut off fuel supply.<br>Extinguish fire with $CO_2$, dry chemical, alcohol foam or water fog. (Note: Water or foam may cause frothing).<br>Use water spray to cool containers exposed to fire. |

| | |
|---|---|
| ON LAND | Block entry into waterways.<br>Do not flush into ditch/drainage systems.<br>Contain spill by diking with earth, snow or other barrier. Remove minor spills with universal type absorbent.<br>Remove large spills with pumps or vacuum equipment. |
| ON WATER | Ethylene glycol sinks and mixes with water; contain spill by isolating contaminated water through damming or diversion. |
| STORAGE & TRANSFER | Store closed, labelled containers in cool, ventilated areas away from incompatible materials |
| DISPOSAL | Segregate waste types.<br>Place contaminated materials into marked containers.<br>Consult with environmental authorities during final disposal. |
| FIRST AID | |
| EYES | Flush eyes immediately with fresh, warm water (NOT HOT WATER) for 20 minutes, while holding the eyelids open.<br>Remove contact lenses, if exposed to vapours or liquid.<br>Get prompt medical attention. |
| SKIN | Remove contaminated clothing.<br>Wash skin thoroughly soap and water.<br>Get medical attention. |
| INHALATION | Move victim to fresh air.<br>Perform CPR if victim not breathing Provide oxygen if victim is having difficulty breathing.<br>Get prompt medical attention. |
| INGESTION | INDUCE VOMITING IMMEDIATELY if victim is conscious;<br>Get prompt medical attention. |

## SPILL PLANNING AND LOGISTICS

The feasibility of containing and recovering a spill will be generally determined by its location and the rate of release, spreading, transport and evaporation. These rates should be compared with the total time needed to deploy response equipment in order to evaluate whether or not containment, and/or absorbent and skimming operations can be effectively implemented. The pre-assembly of spill cleanup kits will expedite response and reduce the total deployment time needed, including:

Equipment and support material mobilisation time.
Personnel mobilisation time, including transit and assembly.
Actual equipment setup and deployment time.

a. Determine Whether or not a spill has entered a waterway and whether or not access by land or water to control points is possible so that booms, absorbents and skimmers can be deployed. Check maps and consult with personnel familiar with the spill area.
b. Establish priorities to optimise use of personnel and gear needed for all cleanup phases (containment, removal, storage, transfer and disposal) at selected sites.
c. Allow additional time for adverse weather and flying.

## MONITORING SPILLS

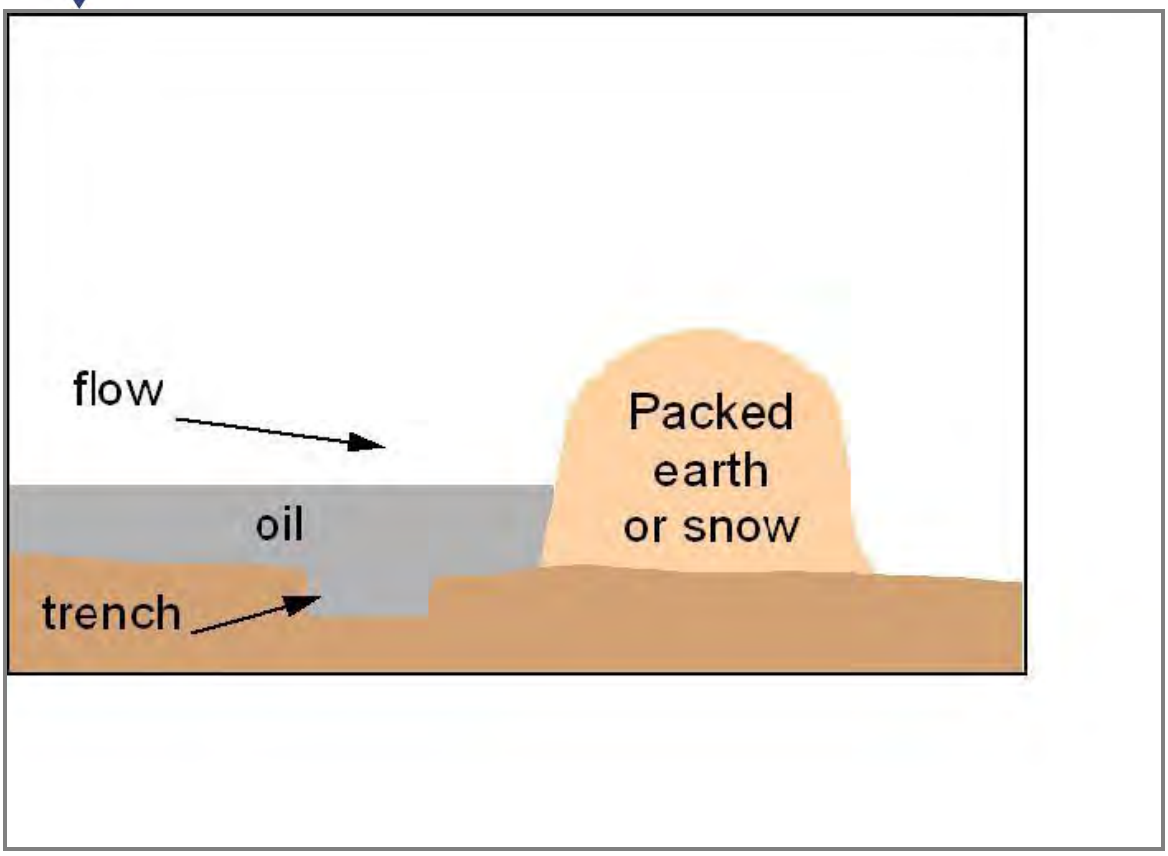
Peregrine will monitor spills throughout the response to ensure safety and to direct cleanup efforts:

Explosive gas concentrations in the atmosphere using an explosion meter.
Spill movement and behaviour, in order to properly direct response efforts.
All threats to the safety of people, property and the environment.

## SPILLS ON LAND

Spills on land should be contained as close to the source as possible, if safety allows. Peregrine will make every effort to ensure that a spill does not reach water, where its containment and recovery (after breakup) are more difficult and the potential environmental impacts are greater. Containment can be achieved using:

A berm or dyke around the spill source.
A trench or ditch downslope of the spill source.



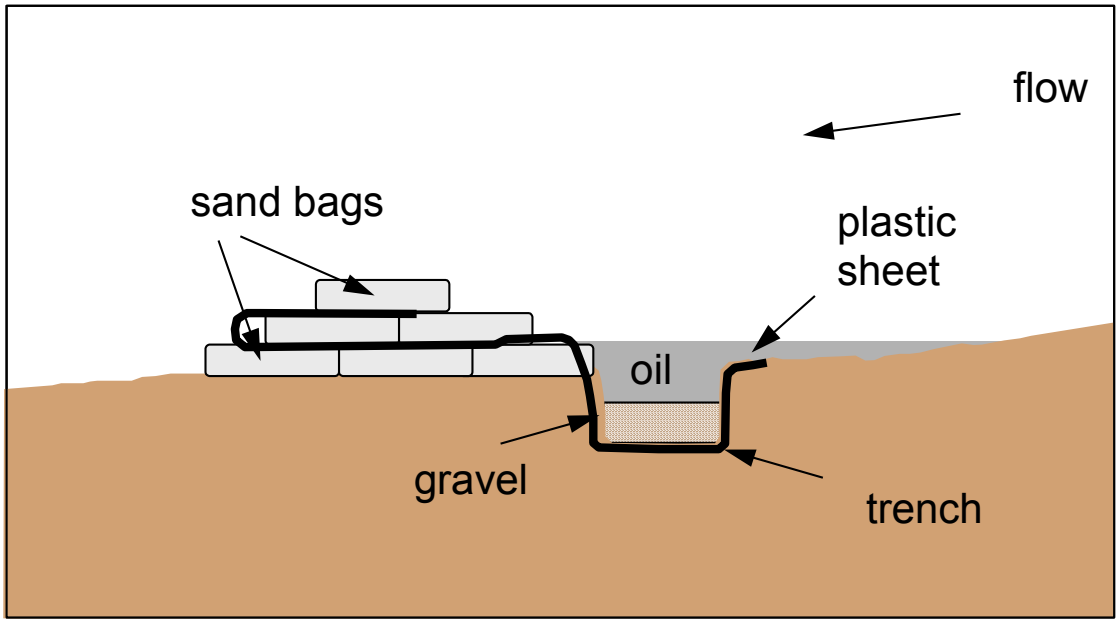

**Earthen Berm/Trench**

If possible, locate the berm/trench sufficiently downslope of the release point to complete its construction before the spill arrives. Dig the trench along a natural drainage contour.

It should be approximately 0.5 m deep with a relatively flat bottom. The excavated material can then be combined with other available material to build the berm.

**Sand Bag Berm/Trench**

Sand bags can be used where available and if the earth is too hard or frozen and cannot be excavated or compacted. A plastic liner can be used to seal the trench and bags should be anchored with gravel or rocks and be woven between layers of bags.




**Spills on Muskeg**

Muskeg is generally poorly drained, wet and spongy. Internal drainage is usually slow and the depth of peat over mineral soil varies greatly. Muskeg is also highly acidic and low in nutrients, making biodegradation very slow, even during the summer months.

It is recommended that small oil spills in muskeg be mixed with peat moss and allowed to degrade during the summer months, since more damage can be done by attempting cleanup using mechanical removal methods.

In the event of a small spill, it is important to weigh the advantages or cleanup versus the potential negative impacts on the terrain. Both personnel and equipment on wet or sensitive areas can cause considerable damage. In many cases, the best solution may be to add nutrients to the contaminated area and monitor the site to ensure that the spill does not migrate to an adjacent sensitive area. In all cases, appropriate environmental advisors and regulatory authorities should be consulted.

## SPILLS ON WATER

Containing spills in water is often difficult because oil quickly spreads. In turbulent water, oil and chemicals are likely to mix into the water column, making recovery impractical. For these reasons, it is important that if the spill reaches water, that containment be attempted as close to the source as possible, and that the spill be prevented from reaching a flowing stream.

Spills in lakes should be contained, if possible, before reaching outlets where containment and recovery can be difficult and dangerous.

Efforts to contain spills in large streams should be limited to land-based operations where the oil might pool in accessible back eddies. The recovery of water-soluble chemicals is not possible.

In flowing streams, oil travels at the same speed as the surface current. On larger rivers or in open lake areas, slicks are also transported at 3.5% of the wind speed. Although a comparatively small effect, it can be an important factor if the wind is at right angles to the water flow and if the water surface is extensive. The wind can force the spill to the sides of the river where flows are slower or the shore of a lake. Long reaches of the river may become contaminated, although containment and recovery might also be possible.

In smaller streams, the wind will have less impact and the slick speed can be easily estimated. Placing a small stick in the middle of the stream and determining the length of time required to travel a given distance, typically 10 m. This information can be quickly converted to speed (36/time (sec) = km/h) to determine the estimated travel time to a confluence or other sensitive area.

### Containment Strategies for Spills on Water

Determining the best strategy for containment will depend on a number of factors:

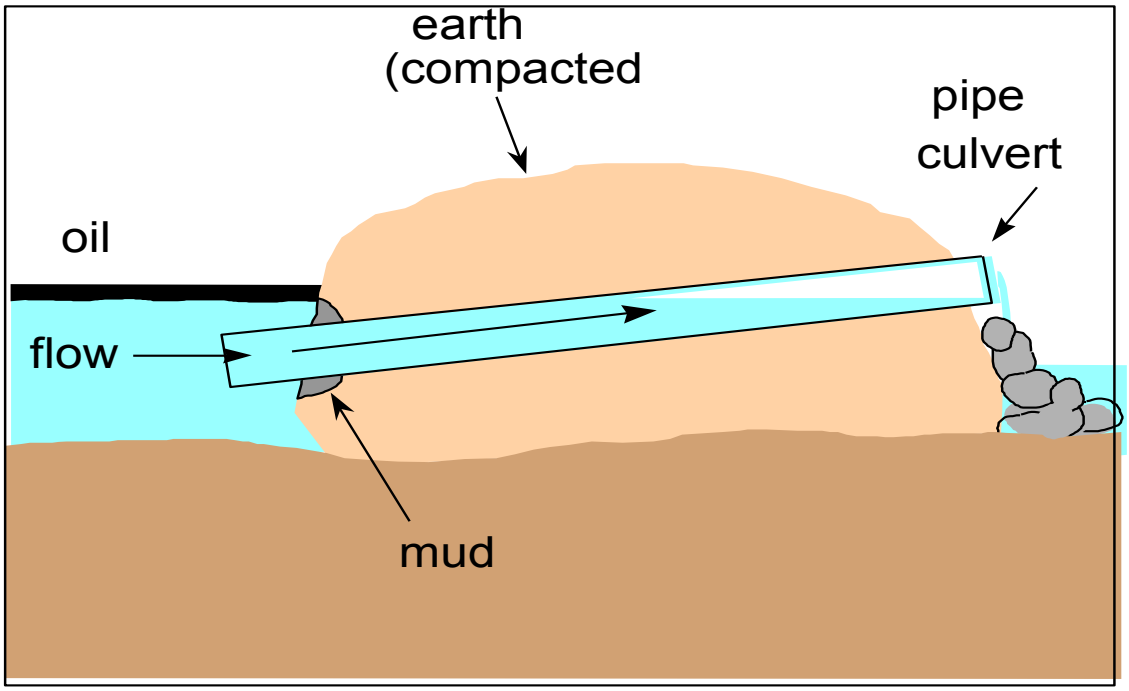
Speed of oil-slick travel
Location of possible containment sites
Availability of personnel and equipment
Location of sensitive areas
Safety of operations

Spills on water can be contained by using floating booms (absorbent or non-absorbent) or by constructing a temporary berm or inverted weir. The objective is to build a barrier against which the (normally floating) oil will pool whilst allowing the underflow of water.

**Inverted Weir:**

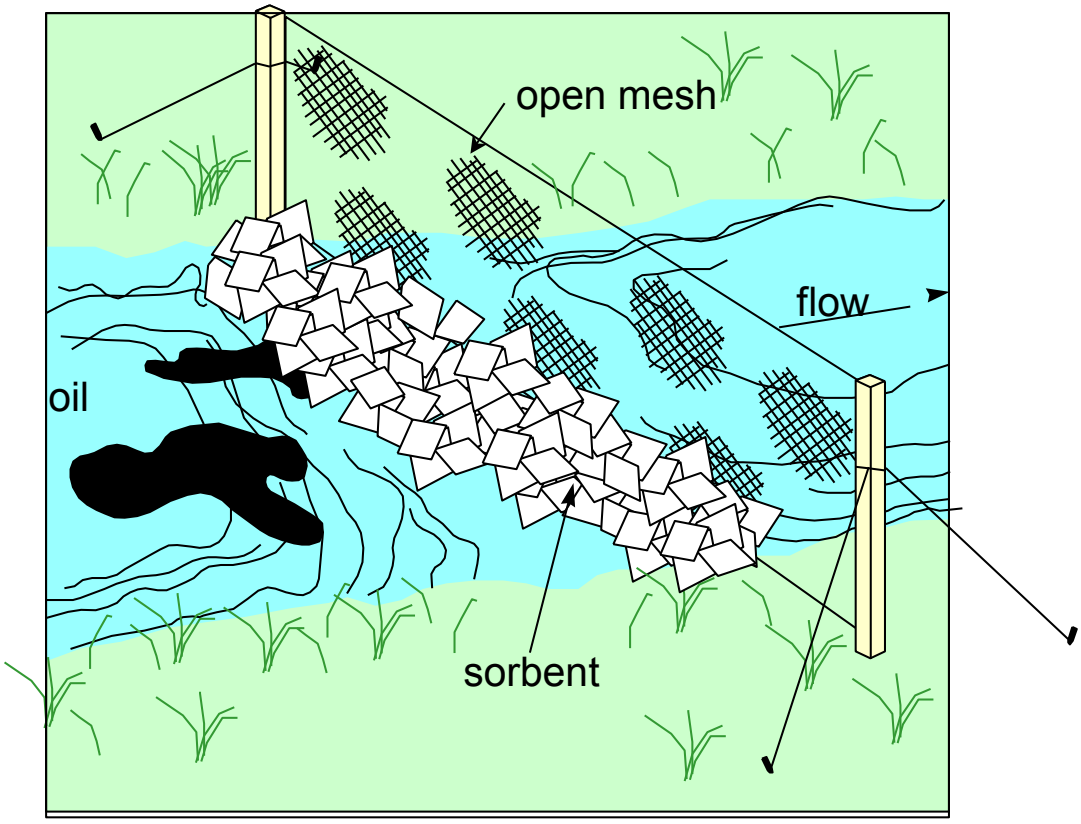
**Booms**

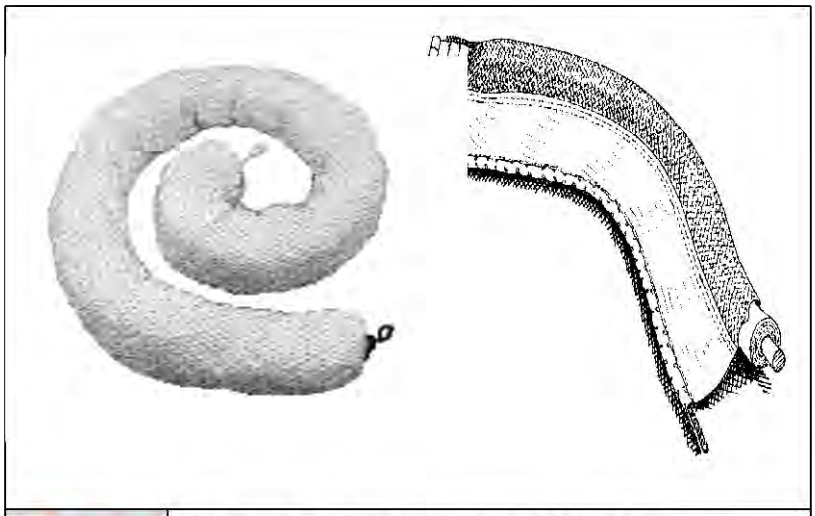
Booming with either absorbent or non-absorbent booms can also be an effective means of containing spills on slow-moving waters and in lakes. Effective containment using conventional booming techniques will be difficult in streams or rivers where currents exceed 0.7 knots (0.4m/s). At these speeds, oil will become entrained in the water flowing under the boom, resulting in significant Losses. Some improvements can be achieved in waters flowing at 1-2 knots (0.5-1 m/s) if the boom is deployed at an angle of less than 90 degrees to the direction of the flow.




Absorbent booms or socks can also be used to provide a barrier to floating oil. These types of booms should be checked regularly to ensure that they do not become saturated with either water or oil, since they will tend to float very low in the water or even sink and release oil downstream.

**Filter Fence:**





| | |
|---|---|
| **Booms** | 10 ft (3 m) by 6-10in(15-25 cm) used to contain spills in calm water |

**SPILLS ON ICE AND SNOW**

Oil can remain relatively fresh, i.e., in an unweathered state under snow and ice for several months or more after a spill.

Evaporation rates will still be high when oil is ultimately exposed to the atmosphere, except in very low temperatures. Oil can also move up and down small hills (several metres high) due to the capillary action of the snow.

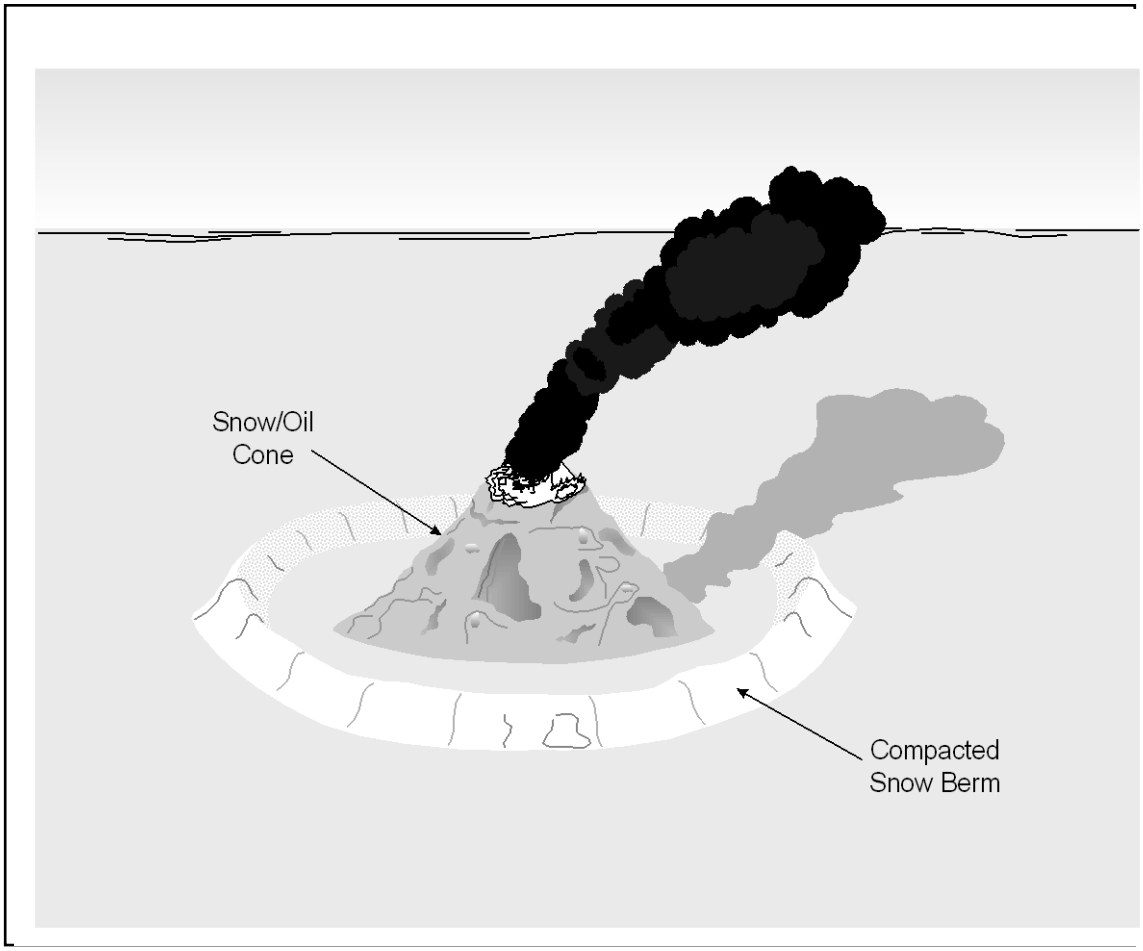
**Containment**

Snow and ice can be used to create berms to keep spills from spreading. In frozen rivers, angled slots about 1 m wide or holes can be cut in the ice, where safety permits, to allow possible spill recovery. The oil will rise up into the openings where it will concentrate and be available for recovery using skimmers or pumps.

**Disposal**

Oil spills in snow and ice can sometimes be burned if the spill can be isolated from the source. Although there is generally a reduced fire hazard, due attention to safety of operations is still required. If burning is not effective, recovered contaminated material will be collected and transported to a designated disposal/treatment facility.

**Burning Snow Cone:**



**Recovery**

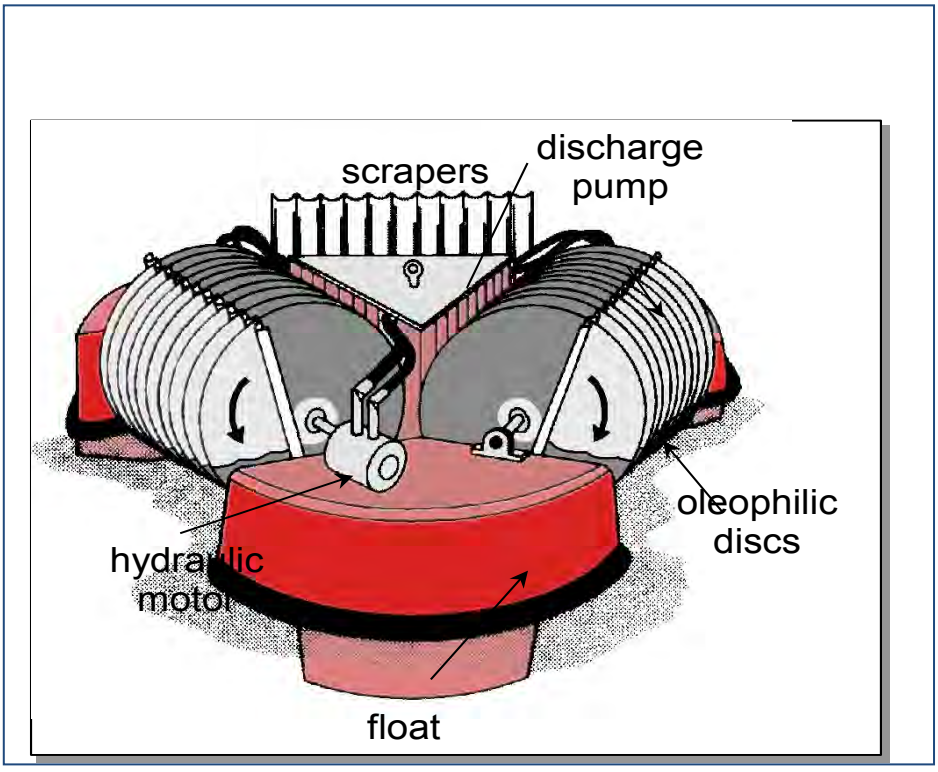
When large volumes of oil have been contained either through natural or mechanical containment, it will be necessary to remove or recover the accumulated oil. This will generally occur in excavated trenches or adjacent to berms or natural barriers and occasionally in slow running streams or quiet ponds.

Vacuum trucks are not feasible at fly-in sites, but would be suitable for sites served by a seasonal or winter road and where a large volume of oil has pooled that is generally free of water. The truck must be positioned at a safe distance so that there is no possibility of fire or explosion.

Oleophillic devices, such as disc or drum skimmers, can selectively recover oil in water, and are better suited to applications where the oil has formed a distinct layer on top of quiet water. Accumulations adjacent to an inverted weir are an example. A vacuum truck would be largely ineffective in this instance, since it would recover large amounts of water, particularly in a thin layer of oil with water flowing through the pipe or culvert.

When using disc or drum skimmers, ensure that small items of debris are periodically removed from the scrapers to ensure their efficient operation.

**Disc Skimmer**



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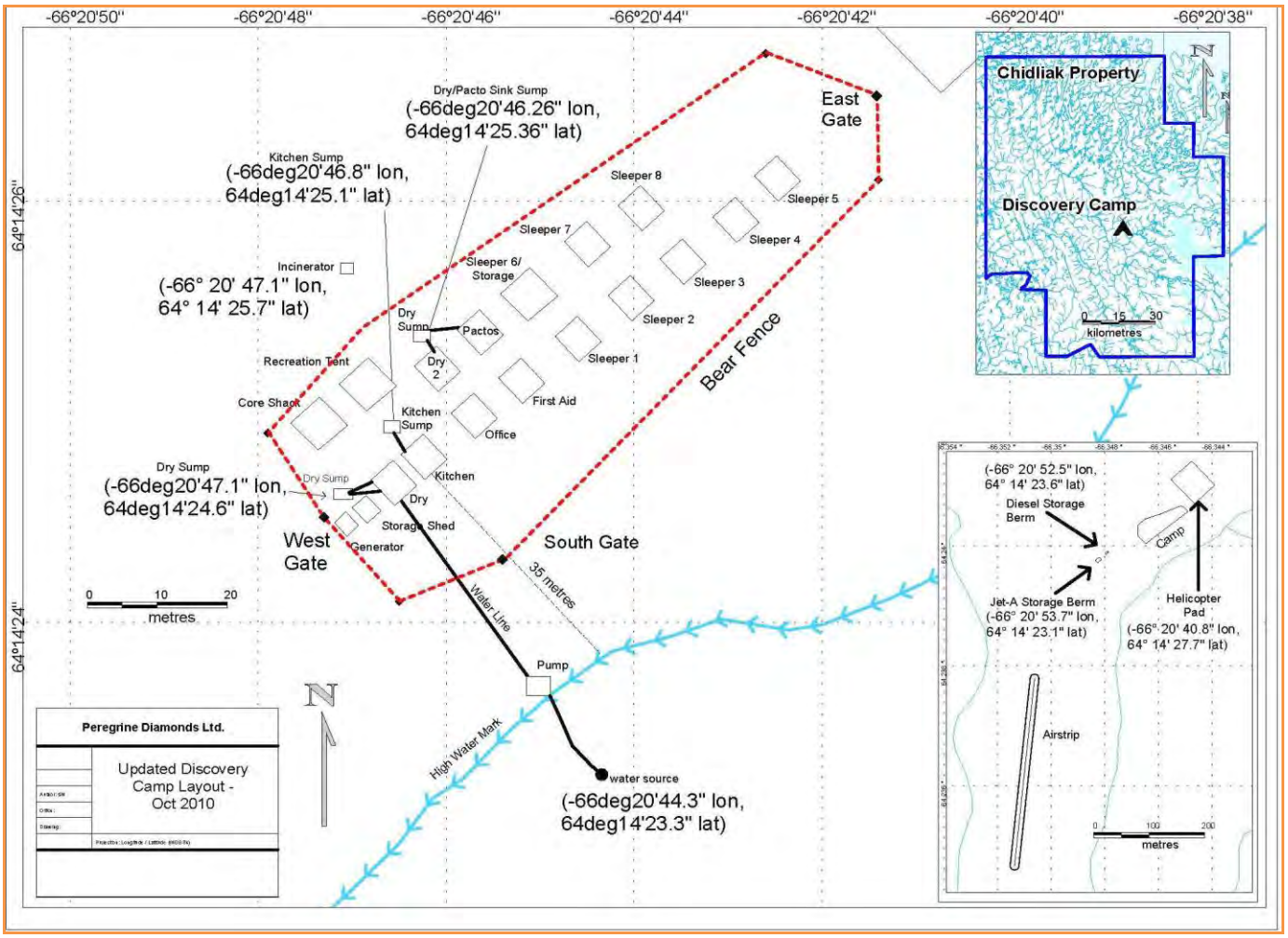
## MAP 1[6]




**Discovery (Summer-Use) Camp - Layout**

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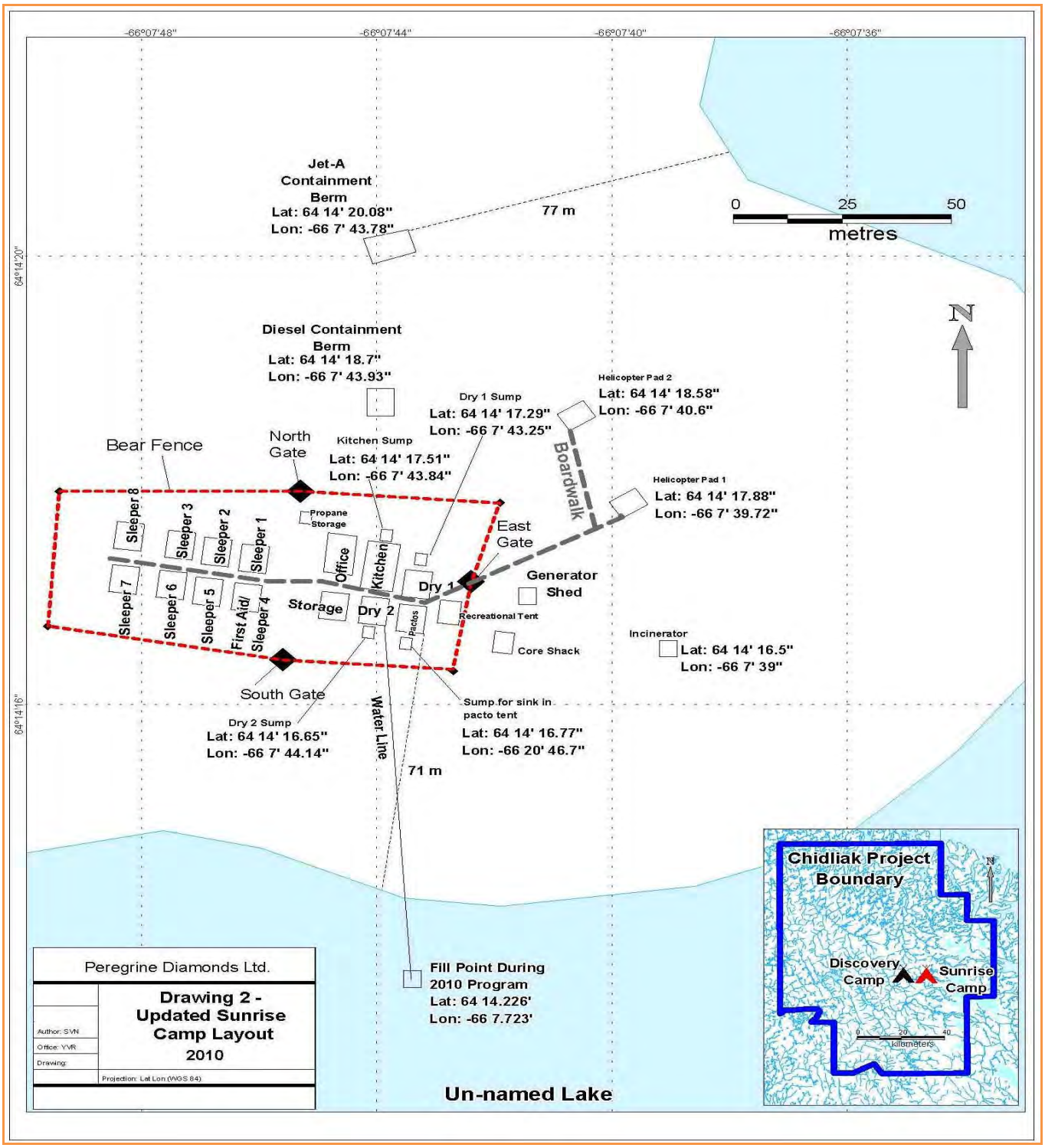
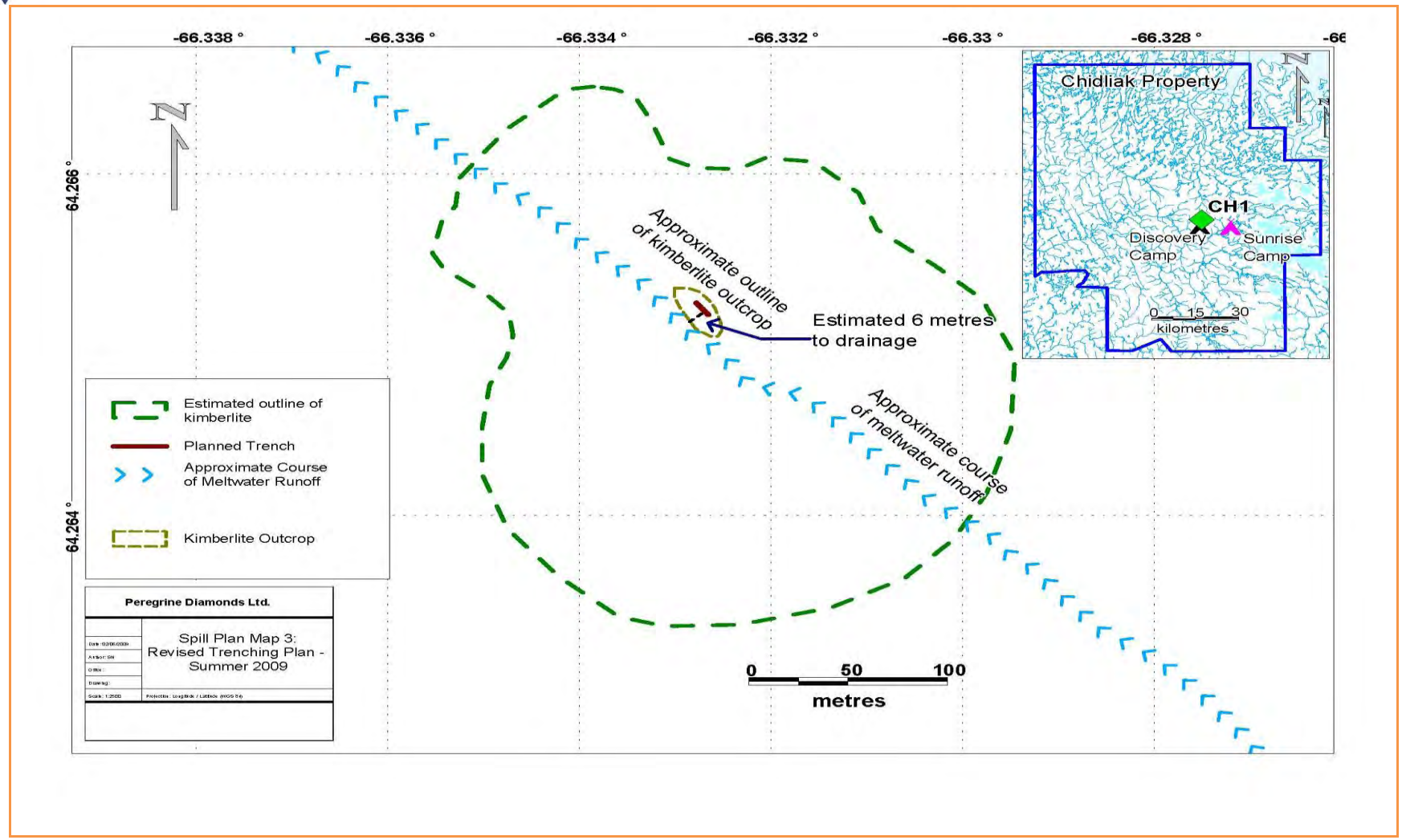
## MAP 2[6]




**Sunrise (Winter-Use and Summer-Use) Camp - Layout**




**MAP 3**

**Trenching plan was approved for CH-1 kimberlite but has not yet occurred as of 2011**[6]

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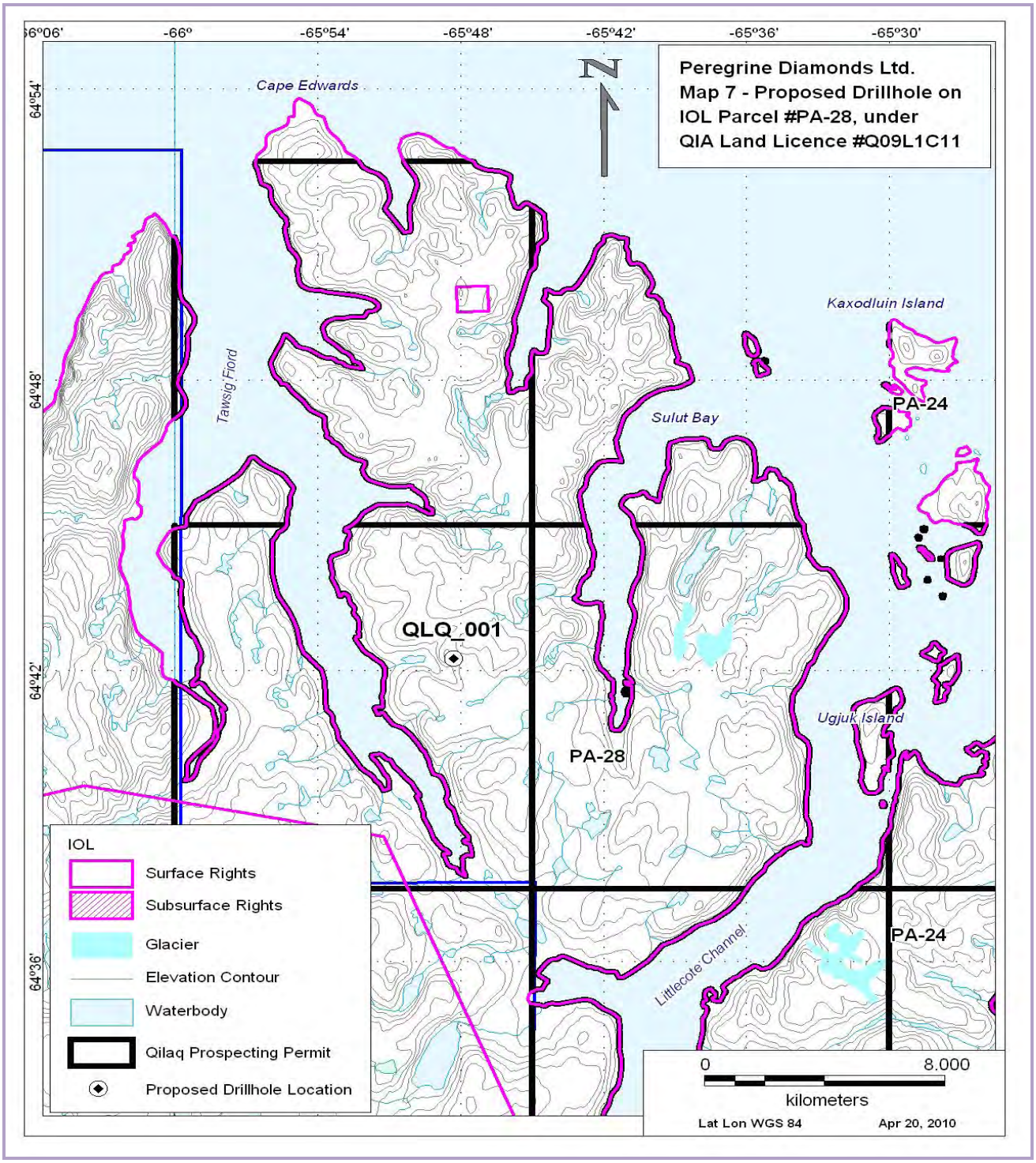
## MAP 4[5]




**Proposed Drillhole Location on IOL Parcel *PA-28 (not yet drilled in 2010)*[6]**

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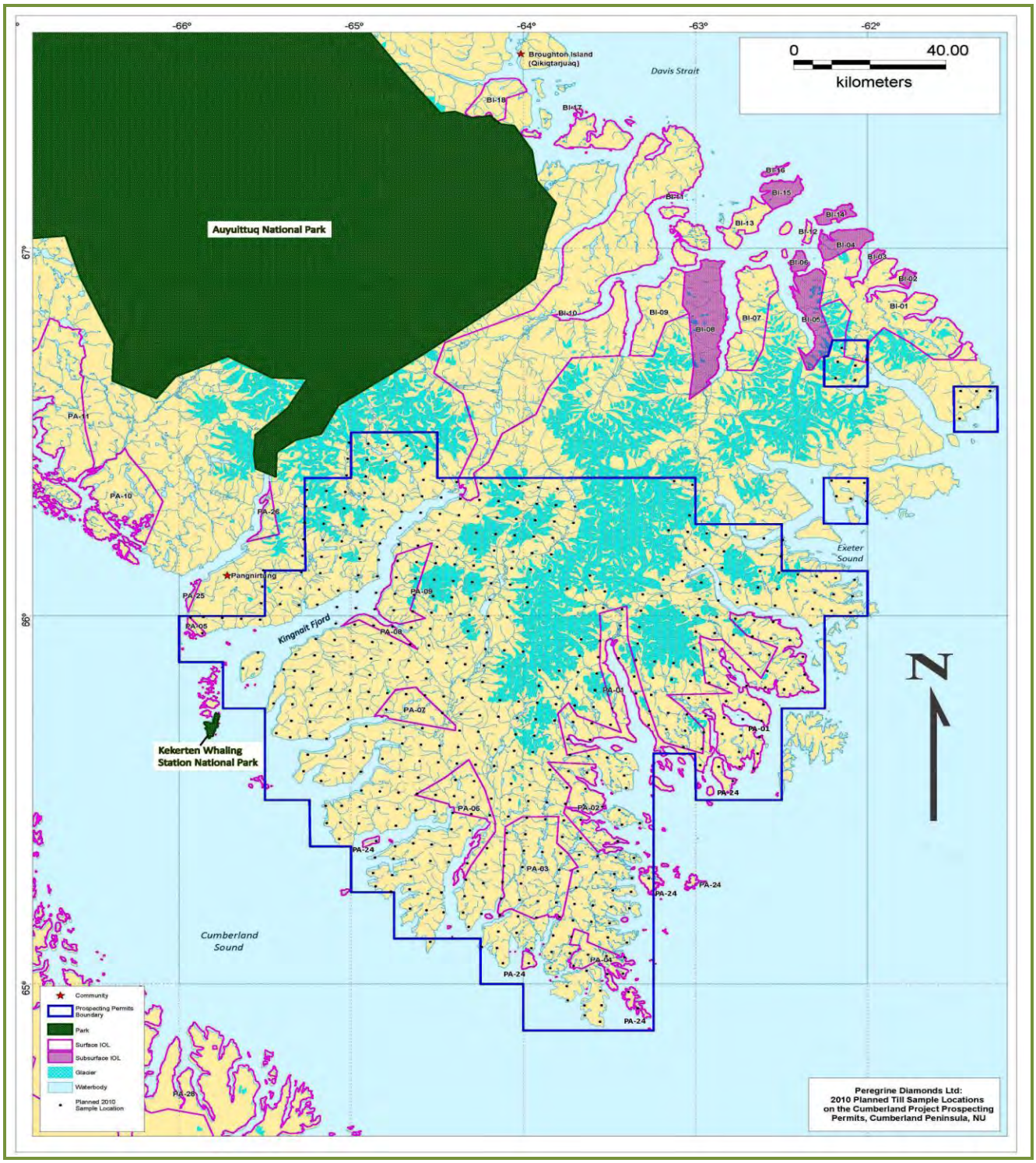
## MAP 5[5]




**Sample Plan (Completed) for Cumberland Project Prospecting Permits in 2010[5]**

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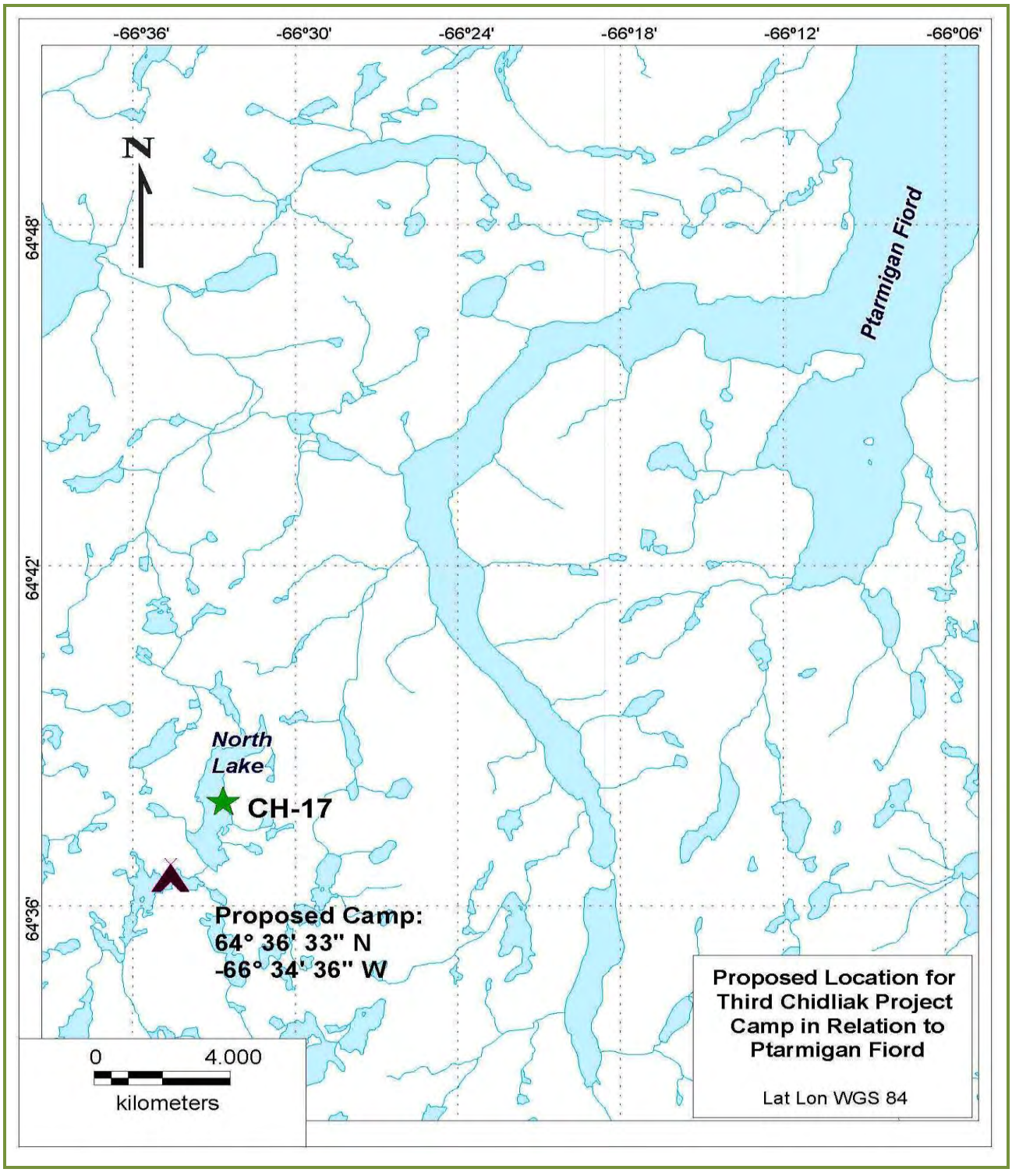
**MAP 6**[5]




**Location of Third Camp, Chidliak Project, approx. 50km N of Existing Camps**[6]

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**APPENDIX TO SPILL CONTINGENCY PLAN – CHIDLIAK AND QILAQ PROPERTIES[4] AND IOLs AND CUMBERLAND PROJECT[5]**

# MATERIAL SAFETY DATA SHEETS (MSDS)

***(See MSDS on updated CD provided to regulators in June 2010)***
***Those products will remain in effect for 2011.*** [6]

# MATERIAL SAFETY DATA SHEETS

## FUELS, FUEL ADDITIVES, OIL
## Chidliak and Qilaq[4] Projects – 2010-2011[5] Programmes
## (and activity on IOLs, as applicable)[2]

***(See MSDS on CD provided in June 2010)***
***[Items on updated MSDS List are noted below]***[5]

MSDS-Bombardier BRP XP-S Mineral 2-Stroke Injection Oil-413803000-Unregulated
MSDS-ChainOil-Light-Shell-2008-CURRENT
MSDS-Diesel Fuel Oil Conditioner-Kleen-Flo-2009-CURRENT
MSDS-DIESEL Fuel-PetroCan-2009-CURRENT
MSDS-Duron 10W-30 Heavy Duty EngineOil-PetroCan-2009-CURRENT
MSDS-Duron 15W-40 Heavy Duty EngineOil-PetroCan-2010-CURRENT
MSDS-HYDREX_MV 22_36_60-PetroCan-2009-CURRENT
MSDS-HYDREX_MV_Arctic_15-PetroCan-2008-CURRENT
MSDS-Jet A1-Shell-2008-CURRENT
MSDS-Jet A-A1-PetroCan-2009-CURRENT
MSDS-Jet B-PetroCan-2009-CURRENT
MSDS-Kleen Start-Starting Fluid-Kleen-Flo-2010-CURRENT
MSDS-Mobil Jet Oil 254-Esso-2008-CURRENT
MSDS-Mobil Jet Oil II-Esso-2007-CURRENT
MSDS-Petrol Unleaded-Shell-2010-CURRENT
MSDS-Petrol-Unleaded-PetroCan-2010-CURRENT
MSDS-Polaris 2T VES Synthetic Oil-2007-CURRENT
MSDS-Polaris Prem. Blue Semi-Synthetic Blend Oil-2007-CURRENT
MSDS-Propane-SuperiorPropane-2008-CURRENT
MSDS-Quaker State SAE 30 Motor Oil-2008-CURRENT
MSDS-Rotella T 10W-30-CJ-4-Engine Oil-Shell-2009-CURRENT
MSDS-Rotella T 15W-40-CJ-4-Engine Oil-Shell-2009-CURRENT
MSDS-Snowmobile Motor Oil-PetroCan-2009-CURRENT

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## DRILLING MUDS, GREASES, LUBRICANTS
## Chidliak and Qilaq[4] Projects – 2010-2011[5] Programmes
## (and activity on IOLs, as applicable) [2]

***(See MSDS on CD provided in June 2010)***
***[Items on updated MSDS List are noted below]*** [5]

MSDS-Aeroshell Fluid 41-Aircraft-2009-CURRENT
MSDS-Aeroshell Grease 7-Aircraft-2008-CURRENT
MSDS-Aeroshell Grease 22-Aircraft-2008-CURRENT
MSDS-API ModifThreadCompound-PetroCan-2009-CURRENT
MSDS-DD2000-DrillingMud-2008-CURRENT
MSDS-Drill Rod Grease-PetroCan-2010-CURRENT
MSDS-Enviro Grease- Drill Rod Grease-Poly-Drill-2008-CURRENT
MSDS-Grease OG-0-1-2-PetroCan-2010-CURRENT
MSDS-Lithium Complex Moly 3 or 5-Grease Warehouse-2007-CURRENT
MSDS-LPS 1 Premium Lubricant-2008-CURRENT
MSDS-LPS 2 Aerosol-PetrolDistillate-2009-CURRENT
MSDS-PD1300-Poly-Drill-2008-CURRENT
MSDS-Pure Vis-Mineral Oil Viscosifier-Poly-Drill-2009-CURRENT
MSDS-Traxon-80W-90-85W-140-PetroCan-2009-CURRENT
MSDS-Traxon Synthetic 75W-90-PtroCan-2009-CURRENT
MSDS-WD40-Aerosol-2008-CURRENT
MSDS-WD40-BulkLiquid-2008-CURRENT

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## MISCELLANEOUS CHEMICALS
## Chidliak and Qilaq[4] Projects – 2010-2011[5] Programmes
## (and activity on IOLs, as applicable) [2]

***(See MSDS on CD provided in June 2010)***
***[Items on updated MSDS List are noted below]*** [5]

MSDS-Back Off Bear Deterrent--2010-CURRENT
MSDS-Brake & Elec. Contact Kleen-2009-CURRENT
MSDS-Dow Corning 736 Heat-Resistant Sealant-2010-CURRENT
MSDS-Electro Contact Cleaner-LPS Labs-2008-CURRENT
MSDS-Fire Extinguisher ABC Multipurpose Dry Chemical-2009-CURRENT
MSDS-Gun Blue-Bushnell-Aug2007-CURRENT
MSDS-Kleen-Flo Silicone Gasket Maker-2009-CURRENT
MSDS-Lacquer Thinner 13-554-Recochem-2007-CURRENT
MSDS-LaFarge Portland Cement--2008-CURRENT
MSDS-Lead-Acid-BATTERY-Exide-2008-CURRENT
MSDS-LePage Prestite Contact Cement-2008-Unregulated
MSDS-LePage Speed-Set Epoxy Hardener-2008-CURRENT
MSDS-LePage Speed-Set Epoxy Resin-2008-CURRENT
MSDS-Liqui-Bac-RML Co-2005-Unregulated
MSDS-LPS A-151 Solvent Degreaser-incl. Aerosol-2010-CURRENT
MSDS-Marking SPRAY PAINT-RustOLeum-2008-CURRENT
MSDS-Methyl Ethyl Ketone Solvent-Scienlabs-2008-CURRENT
MSDS-Methyl Hydrate 13-390-Alcohol Solvent-Recochem-2009-CURRENT
MSDS-Motomaster Elec. Contact Cleaner-ShraderCanada-2008-CURRENT
MSDS-Nitrogen-Inert-Undated-CURRENT
MSDS-Oxygen (gas liquid)-Various Uses-Air Liquide-2008-CURRENT
MSDS-Oxygen Medical-Airgas Company-2007-CURRENT
MSDS-PRIST Aviation Glass Cleaner Aerosol-2010-CURRENT
MSDS-Snowmobile Antifreeze 50-50 PreMix PG-Polaris-2007-CURRENT
MSDS-Winter Universal Gas Line Antifreeze-PetroCan-2010-CURRENT
MSDS-Wurth Brake Cleaner 4L-2009-CURRENT

# Spill Response: Annual Exercise

# APPENDIX TO SPILL CONTINGENCY PLAN

Chidliak Camp, Nunavut

19 July 2010

## Emergency Response Team Members

| | Discovery Camp | Sunrise Camp |
|---|---|---|
| Leader | Ron Corey | Aaron Wardwell |
| Alternate Leader | Gerald Olsen | Robert Roy |
| Project Manager: | Operations: | Geology: |
| | Ron Corey | Jenifer Burgess |
| Medical Aid: | | |
| Camp Medic | Tanya Vesley | Terrapin Harvic |
| Alternate | | Susan Wilson |
| Transportation: | | |
| Lead Pilot | David Laporte | Herve Bertho |
| Alternate | Amede Beland | Pascal Vivier |
| Communications: | | |
| | Sandy MacIntyre | Sandy MacIntyre |
| Alternate | Todd Mayer | Todd Mayer |
| Camp Attendants: | (Two Personnel) | (Two Personnel) |
| Iqaluit Coordinator: | | |
| | Jenifer Burry | Jenifer Burry |

| | | |
|---|---|---|
| Alternate | Steve Guzwell | Steve Guzwell |

## Exercise Time Line:



2:04 Camp Attendant sent to the Incinerator at 02:04

2:06 Camp attempted to stop spill to no avail. Radio call was made to Ron Corey Project Manager.

2:06 Code 1 was initiated by Ron to announce spill and to have the large spill kit delivered to the Incinerator.

2:08 Emergency Response Team members Gerald Olsen, Sandy MacIntyre, Jutanee Arnaquq, Tanya Vesley met at Muster Station at the office.

2:09 An Action Plan to control, contain and clean up was formulated. Gerald and Jutanee sent to Fuel Berm to pick up the large spill kit and bring it to the Incinerator.

2:11 Response Team members Gerald and Jutanee donned personnel protective equipment.

Hazardous material boom placed around "spill".

Absorbent pads placed on "spill".

2:14 Cleanup started by shovelling contaminated soil into 22L (5gal) containment pail.




Containment pail placed into large spill plastic bags.

2:17 Spill cleanup completed.

2:20 Project Manager determined that "spill" was < 50L and thus not reportable to 24-Hour Spill Line.

2:25 Project Manager made a simulated telephone call to Brooke Clements, IMT Leader, to notify of Action Plan and resolve.

2:30 Emergency Response Team members present for exercise held critique to discuss the exercise. Review of spill kit was conducted to ensure all understood contents and applications. Key performance timelines for reporting of the "spill" to the Operations Manager, calling of a "Code 1", containment of "spill", initiation of cleanup and reporting of "spill" to the IMT Leader were met.

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**APPENDIX TO SPILL CONTINGENCY PLAN – CHIDLIAK AND QILAQ PROPERTIES AND IOLs AND CUMBERLAND PROJECT**[6]

# "NOTICE OF MODIFICATION" LETTER TO NUNAVUT WATER BOARD REGARDING SINGLE EVENT OF BLASTING WHICH OCCURRED IN JULY 2010

***In compliance with Water Licence #2BE-CHI0813 Amendment #3, Part H, Item 2(a), Peregrine commits to providing 30 days' notice to the Nunavut Water Board, should explosives use be contemplated in 2011. The appropriate mitigations for the specific explosives intended and for their specific use would then be supplied by Peregrine as advised by the explosives specialist supplying the product(s).***

**APPENDIX TO SPILL CONTINGENCY PLAN – CHIDLIAK AND QILAQ PROPERTIES AND IOLs AND CUMBERLAND PROJECT**[6]

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PEREGRINE
DIAMONDS LTD.

*TRANSMITTED ELECTRONICALLY*

05 July 2010

Don Carr
Technical Advisor
Nunavut Water Board
Box 119
Gjoa Haven, NU X0B 1J0

**RE: Notice of Modification to Chidliak Water Licence *#2BE-CHI0813***
**Regarding a Blasting Activity**

Please accept this letter as notification by Peregrine Diamonds Ltd. (Peregrine) of a modification to Type B Water Licence *#2BE-CHI-0813,* as required by *Part G, Item 1* of the licence. The purpose of the modification is to conduct blasting in a small area of a kimberlite outcrop on Crown land; blasting already is authorised under this licence. The blasting would occur within 1.8 km of the originally-intended blasting location approved in *Amendment #1* to Licence *#2BE-CHI-0813.* Peregrine would intend to complete this activity as soon as possible.

Peregrine has determined in the field that it will need to conduct a small blasting activity at the *CH-7* kimberlite outcrop (*photo from August 2009 attached*). The undersigned also has included, for your convenience, a map indicating the location of *CH-7* in relation to the nearest watercourse (the Discovery Camp glacial stream) and the camp itself – a distance of 1.5km. The co-ordinates are: 64° 15' 08" N lat. – 66° 21' 13" W long. As the photo shows, the proposed location is on a hill surrounded by level, bouldery terrain; vegetation and water are not present.

Blasting already is allowed under both Water Licence *#2BE-CHI0813* and Land-Use Permit *#N2008C0005.* Peregrine is approved for collection of a mini-bulk sample at *CH-7*, and this activity is under way, with 35 of a total of 75 bags collected to date with pick and shovel. However, the work is extremely difficult and labour-intensive by hand, given the presence of permafrost, which requires that the crew wait until the hard, exposed permafrost at that spot melts, then continue on with the labour. If blasting does not occur, completion of the approved mini-bulk sample will be seriously compromised.

What is proposed: Fragmentation blasting with pre-made charges, so as to break up the rock to facilitate collection of the sample. (*MSDS for the Blastex explosive charge is attached*). Blasting will be preceded by use of a special hammer drill to drill a pattern of holes across the north end of the outcrop (*see location of backpack in the photo)*, an area 5m x 5m; only this north end will be blasted. Holes will be 5cm in diameter, drilled to 0.6m deep, with 0.9m centres. Blasting will be carried out by a ticketed blaster employed by an Inuit-registered firm, Nunavut Excavating of Iqaluit. It is not anticipated that blasting mats will be required, as there are no watercourses in proximity, but, rather, the shallow holes

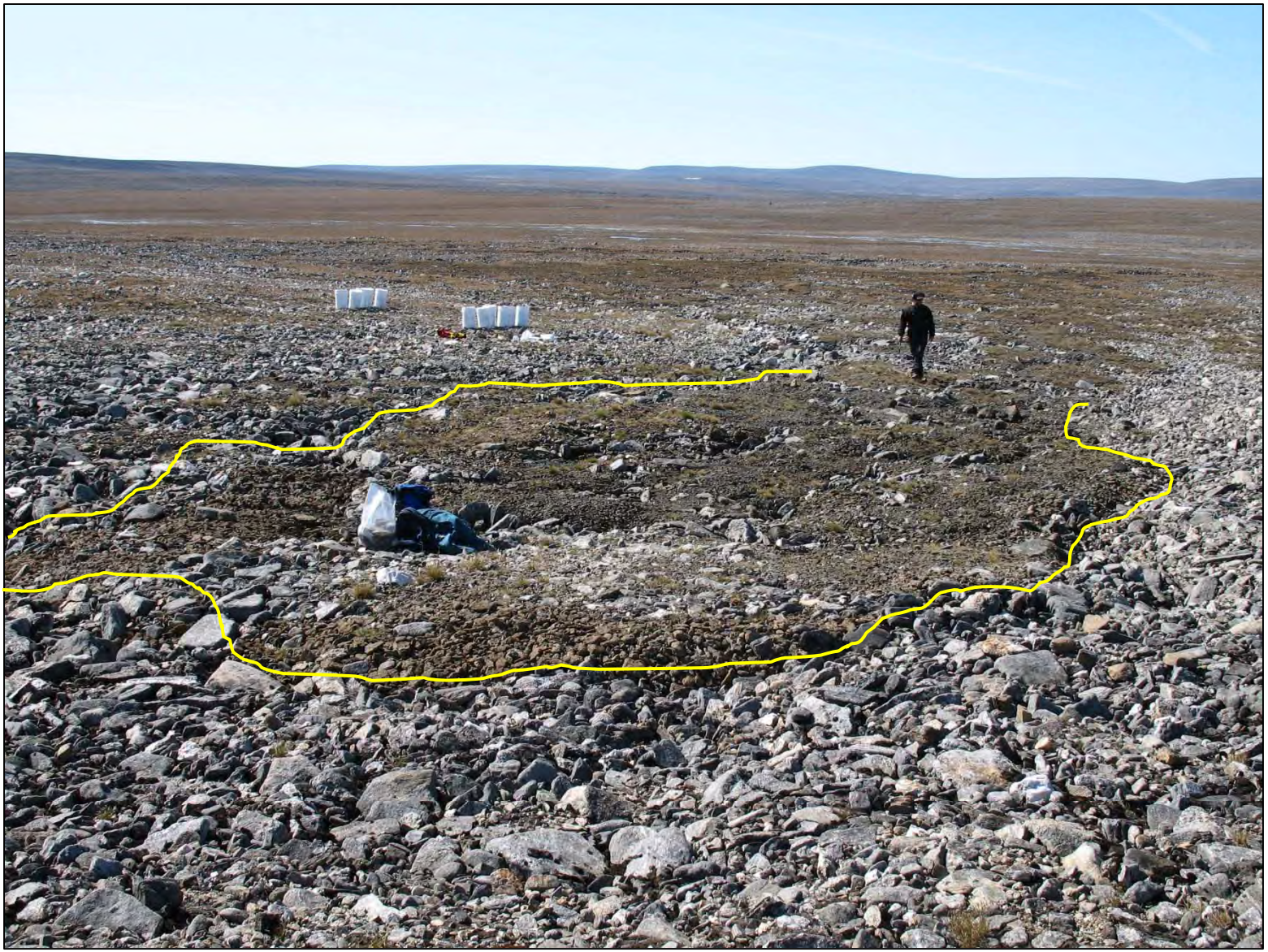
with the charges will be tamped with sand and rocks as mitigation. Any meltwater which might collect after the blasts – unlikely due to short duration of this activity – will be pumped to containment and removed. Equipment: Because Nunavut Excavating does not have the proper drill in its inventory, Peregrine is renting and bringing to site a Special Direct System (SDS) Max Hammer drill, which is similar to a regular hand drill, except that it is somewhat heavier (around 6 or 7kg, depending on the manufacturer and model) and delivers more energy per blow than a conventional hammer drill (*photo and technical descriptive of a typical DeWalt SDS max hammer drill is attached*).

Timeframe: Peregrine is intending to carry out the blasting as soon as the drill arrives and the blaster can travel to site, which could be as soon as Wednesday, **07 July** – hence my urgency in providing this notification.

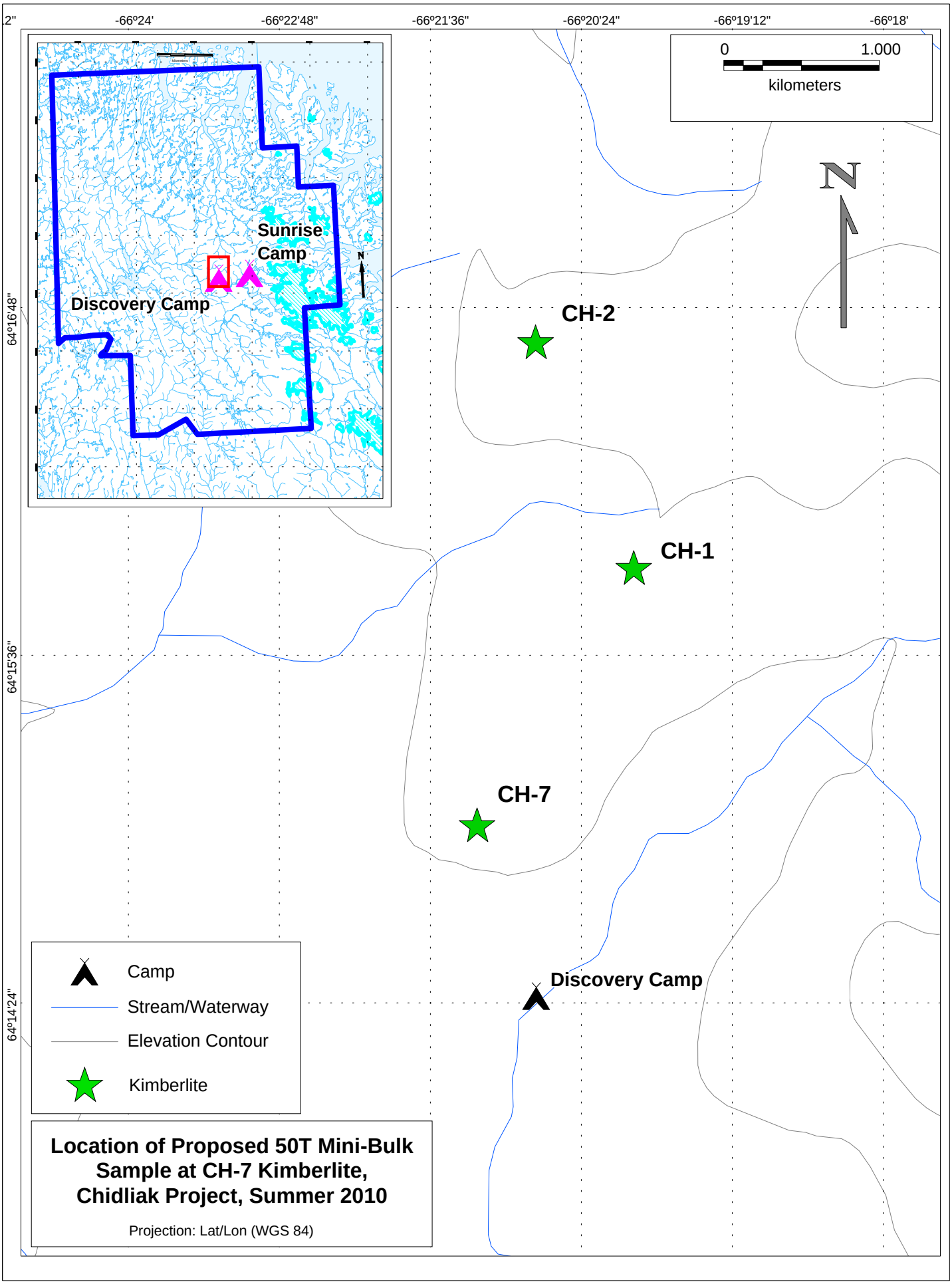
I trust that this modification will be accepted, and I thank you for your timely action.

Shirley Standafer-Pfister
Manager, Regulatory and Environmental Affairs
Peregrine Diamonds Ltd.
#201 - 1250 Homer Street
Vancouver, BC V6B 1C6
(250) 686-1769 (business phone and mobile)
(604) 408-8880 (Vancouver office phone)
(604) 408-8881 (Vancouver office FAX)
shirley@pdiam.com

cc: Kevin Robertson – INAC Land Inspector
David Hohnstein – NWB Technical Manager
Salamonie Shoo – QIA Lands Administrator



Project Manager Hugo Grenon, collecting sample of CH-7 kimberlite for caustic fusion diamonds analysis. (Yellow line indicates approximate outline of CH-7 outcrop)


2"
-66º24'
-66º22'48"
-66º21'36"
-66º20'24"
-66º19'12"
-66º18'
64º16'48"
64º15'36"
64º14'24"
0
1.000
kilometers
N
Sunrise Camp
Discovery Camp
CH-2
CH-1
CH-7
Discovery Camp
Camp
Stream/Waterway
Elevation Contour
Kimberlite
Location of Proposed 50T Mini-Bulk Sample at CH-7 Kimberlite, Chidliak Project, Summer 2010
Projection: Lat/Lon (WGS 84)

# DeWALT  D25840K 7kg SDS- Max Dedicated Demolition Hammer


**Features:**

- Dedicated demolition hammer for medium heavy applications in brick, masonry and concrete
- DEWALT hammer philosophy design: protect mechanism from dust impact, dampen the rebound and develop a low vibration mechanism
- Variable chisel locking at 24 positions to provide the perfect angles for any applications
- Floating rear handle
- Electronic speed and impact energy control
- Lock-on lock-off switch
- Barrel grip for better comfort in horizontal applications
- Brush wear and service indicators

**Standard Equipment:**

- Multi-position side handle
- Grease
- Cloth
- 1 Point Chisel
- Heavy Duty Carry Case

**Specification:**

- Blows Per Minute: 1260-2520
- Tool Holder: SDS-Max
- Weight: 7.2kg
- Length x Height: 528 x 268mm

# Material Safety Data Sheet

**Dyno Nobel Inc.**
2650 Decker Lake Boulevard, Suite 300
Salt Lake City, Utah 84119
Phone: 801-364-4800 Fax: 801-321-6703
E-Mail: dnna.hse@am.dynonobel.com
**FOR 24 HOUR EMERGENCY, CALL CHEMTREC (USA) 800-424-9300**
**CANUTEC (CANADA) 613-996-6666**

**MSDS # 1063**
**Date 07/02/07**

Supercedes
MSDS # 1063 03/27/07

## SECTION I - PRODUCT IDENTIFICATION

**Trade Name(s):**

BLASTEX®
BLASTEX® PLUS
BLASTEX® PLUS HD
BLASTEX® TX
BLASTEX® TX PLUS
BLASTGEL® 1000
BLASTGEL® 1070
SUPER BLASTEX®
SUPER BLASTEX® TX
SUPER BLASTEX® TX
DYNO® 1.5 SB
DYNO® 1.5 SBC
DYNO® 1.5 SB30
DYNO® 900
DYNO® 1300
DYNO® 1500
DYNO® 1520
DYNO® 1540
DYNOTEX
DX-2011
DX-2012

**Product Class:** Emulsion Explosives, Packaged

**Product Appearance & Odor:** White or pink opaque semi-solid, which will appear gray if product contains aluminum. Little or no odor. Packaged in cylindrical cartridges of paper or plastic film.

**DOT Hazard Shipping Description:** Explosive, blasting, type E 1.5D UN0332 II

**NFPA Hazard Classification:** Not Applicable (See Section IV - Special Fire Fighting Procedures)

## SECTION II - HAZARDOUS INGREDIENTS

| | | | Occupational Exposure Limits | |
|---|---|---|---|---|
| **Ingredients:** | **CAS#** | **% (Range)** | **ACGIH TLV-TWA** | **OSHA PEL-TWA** |
| Ammonium Nitrate | 6484-52-2 | 60-85 | None | None |
| Sodium Nitrate | 7631-99-4 | 0-12 | None | None |
| Aluminum | 7429-90-5 | 0-10 | 10 $mg/m^3$ (dust) | 15 $mg/m^3$ (total) |
| Mineral Oil | 64742-35-4 | 0-6 | 5 $mg/m^3$ (mist) | None |
| Kerosene | 8008-20-6 | 0-6 | None | None |

Ingredients, other than those mentioned above, as used in this product are not hazardous as defined under current Department of Labor regulations, or are present in deminimus concentrations (less than 0.1% for carcinogens, less than 1.0% for other hazardous materials).

# Material Safety Data Sheet

## SECTION III - PHYSICAL DATA

**Boiling Point:** Not Applicable
**Vapor Density:** (Air = 1) Not Applicable
**Percent Volatile by Volume:** <20 (water)

**Evaporation Rate (Butyl Acetate = 1):** <1

**Vapor Pressure:** Not Applicable
**Density:** 1.15-1.35 g/cc
**Solubility in Water:** Product partially dissolves very slowly in water.

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

**Flash Point:** >100°C **Flammable Limits:** Not Applicable
**Extinguishing Media:** (See Special Fire Fighting Procedures section.)
**Special Fire Fighting Procedures:** Do not attempt to fight fires involving explosive materials. Evacuate all personnel to a predetermined safe location, no less than 2,500 feet in all directions.
**Unusual Fire and Explosion Hazards:** Can explode or detonate under fire conditions. Burning material may produce toxic vapors.

## SECTION V - HEALTH HAZARD DATA

### Effects of Overexposure

**Eyes:** May cause irritation, redness and tearing.
**Skin:** Prolonged contact may cause irritation.
**Ingestion:** Large amounts may be harmful if swallowed.
**Inhalation:** Not a likely route of exposure.
**Systemic or Other Effects:** None known.

### Emergency and First Aid Procedures

**Eyes:** Irrigate with running water for at least 15 minutes. If irritation persists seek medical attention.
**Skin:** Remove contaminated clothing. Wash with soap and water.
**Ingestion:** Seek medical attention.
**Inhalation:** If irritation occurs, remove to fresh air.
**Special Considerations:** None.

## SECTION VI - REACTIVITY DATA

**Stability:** Stable under normal conditions, may explode when subjected to fire, supersonic shock or high-energy projectile impact, especially when confined or in large quantities.
**Conditions to Avoid:** Keep away from heat, flame, ignition sources and strong shock.
**Materials to Avoid (Incompatibility):** Corrosives (strong acids and strong bases or alkalis).
**Hazardous Decomposition Products:** Nitrogen Oxides ($NO_X$), Carbon Monoxide (CO)
**Hazardous Polymerization:** Will not occur

# Material Safety Data Sheet

## SECTION VII - SPILL OR LEAK PROCEDURES

**Steps to be taken in Case Material is Released or Spilled:** Protect from all ignition sources. In case of fire evacuate area not less than 2,500 feet in all directions. Notify authorities in accordance with emergency response procedures. Only personnel trained in emergency response should respond. If no fire danger is present, and product is undamaged and/or uncontaminated, repackage product in original packaging or other clean DOT approved container. Ensure that a complete account of product has been made and is verified. Follow applicable Federal, State, and local spill reporting requirements.
**Waste Disposal Method:** Disposal must comply with Federal, State and local regulations. If product becomes a waste, it is potentially regulated as a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR, part 261. Review disposal requirements with a person knowledgeable with applicable environmental law (RCRA) before disposing of any explosive material.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

**Ventilation:** Not required for normal handling.
**Respiratory Protection:** None normally required.
**Protective Clothing:** Gloves and work clothing that reduce skin contact are suggested.
**Eye Protection:** Safety glasses are recommended.
**Other Precautions Required:** None.

## SECTION IX - SPECIAL PRECAUTIONS

**Precautions to be taken in handling and storage:** Store in cool, dry, well-ventilated location. Store in compliance with Federal, State and local regulations. Keep away from heat, flame, ignition sources and strong shock.
**Precautions to be taken during use:** Avoid breathing the fumes or gases from detonation of explosives. Use accepted safe industry practices when using explosive materials. Unintended detonation of explosives or explosive devices can cause serious injury or death.
**Other Precautions:** It is recommended that users of explosive materials be familiar with the Institute of Makers of Explosives Safety Library Publications.

## SECTION X - SPECIAL INFORMATION

The reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372 may become applicable if the physical state of this product is changed to an aqueous solution. If an aqueous solution of this product is manufactured, processed, or otherwise used, the nitrate compounds category and ammonia listing of the previously referenced regulation should be reviewed.

### Disclaimer