

**STORNOWAY DIAMOND CORPORATION**  
Spill Contingency Plan  
Remote Fly Camp, Nunavut

Effective: June 1, 2010

## **Table of Contents**

1.0) Introduction .....	1
2.0) Facilities.....	1
3.0) Petroleum and Chemical Product Storage and Inventory.....	1
3.1) Remote Location Fuel Inventory, Storage and Handling Procedures	
3.2) Petroleum Product Transfer	
4.0) Risk Assessment and Mitigation of Risk.....	2
4.1) Petroleum Products and Other Fuels	
5.0) Responding to Failures and Spill.....	2
5.1) Spill Response Team Contact List	
5.2) Basic Steps – Spill Procedure	
5.3) Basic Steps – Chain of Command	
5.4) Other Contacts for Spill Response/Assistance	
6.0) Taking Action .....	4
6.1) Preventative Measures	
6.2) Mitigative Measures	
6.3) Spill Response Actions	
7.0) Spill Equipment .....	8
8.0) Training and Practice Drills.....	8
8.1) Training	
8.2) Practice Drills	

## **List Of Appendices**

Appendix I – Spill Report Form  
Appendix II – Maps and Figures  
Appendix III – Material Safety Data Sheets

## **1.0 Introduction**

This Spill Contingency Plan will become effective on June 1, 2010. Any proposed changes and/or amendments will be submitted to the Nunavut Water Board as soon as is practicable.

This Spill Contingency Plan has been specifically prepared for the small two to four person fly camp to be established in the Coronation Gulf region of Nunavut by Stornoway Diamond Corporation. This Plan shall be posted at operational remote camp that it applies to.

Stornoway Diamond Corporation endeavours to take every reasonable precaution toward ensuring the protection and conservation of the natural environment and the safety and health of all employees and contractors from any potential harmful effects of stored materials and operations.

## **2.0 Facilities**

Camp Location: To Be Determined (The exact coordinates for the camp location are yet to be determined however a suitable site will be chosen along the 5.7 km stretch of lakeshore that is indicated Figure 2 in Appendix II depicting the land use area).

Stornoway plans to establish a small, temporary, two to four person fly camp in the Coronation Gulf region in order to carry out a short term, extremely low impact exploration program on landholdings in the area. The program will take place at some point between June and late September of 2010 or 2011 and will see a small fly camp established along the shoreline of the unnamed lake to the northeast of Kiglikavik Lake (NTS 86I/15 NE). For a period of no longer than 14 days the small crew will occupy a base camp comprised of pup tents and recreational style camping equipment.

## **3.0 Petroleum and Chemical Product Storage and Inventory**

### **3.1 Remote Location Fuel Inventory, Storage and Handling Procedures**

Due to the small and temporary nature of this land use operation determining the exact type and quantity of each of the fuels and/or chemical products that will be in use and stored at the camp is not practicable at this time. The following contains a listing of all of the petroleum and chemical products that could possibly be utilized during the course of the fly camp in quantities typically required to maintain a land use operation of this type and size for a 14 day period.

- *Gasoline - most likely stored in jerry cans*
- *Propane Tanks - 100 lb tank*
- *Naptha (White Gas) Tanks –*
- *Oil (4 Cycle Engine Oil) – a case of twelve, 1 litre plastic bottles*

Liquid fuel will be stored on flat stable terrain situated well away from water bodies, and at least 31 meters above the high water mark.

### **3.2 Petroleum Product Transfer**

Manual and automatic pumps (and aviation fuel filters for jet fuel) are used for the transfer of all petroleum products. Smoking, sparks, or open flames are **prohibited** in fuel storage and fuelling areas at all times.

## **4.0 Risk Assessment and Mitigation of Risk**

### **4.1 Petroleum Products and Other Fuels**

Following, is a list of sources:

- 1) Drummed product: There will be no drummed products stored at the camp facility. Gasoline will be stored in jerry cans and motor oil in the sealed, one litre bottles that they are sold in.
- 2) Fuel cylinders: Propane, leaks may occur at the valves. All cylinders are secured at all times.
- 3) Vehicles and equipment: Wheeled vehicles and equipment, aircraft (fixed and rotary wing), generators, pumps. Incidents involving leaking or dripping fuels and oils may occur due to malfunctions, impact damage, and lack of regular maintenance, improper storage, or faulty operation.

Regular inspection and maintenance in accordance with recognized and accepted standard practices at all camps and fuel caches, reduces risks associated with the categories listed above.

Absorbent mats will be placed under any area where re-fuelling, transferring and/or handling is done and under fuel storage areas.

## **5.0 Responding to Failures and Spills**

### **5.1 Spill Response Contact List**

24 Hour Spill Line  
(867) 920-8130

DIAND Water Resources Inspector  
Iqaluit, Nunavut  
(867) 975-4298

Environment Canada  
Iqaluit, Nunavut  
24 Hour Duty Officer  
Phone: (867) 766-3737  
Fax: (867) 873-8185

## 5.2 Basic Steps — Spill Procedure

In the case of any spill or other environmental emergency, it is necessary to react in the most immediate, safe, and environmentally responsible manner. No spill or incident is so minor that it can be ignored.

The basic steps of the response plan are as follows:

1. Ensure the safety of all persons at all times.
2. Identify and find the spill substance and its source, and, if possible, stop the process or shut off the source.
3. Inform the on-site coordinator or his/her designate at once, so that he/she may take the appropriate actions. Appropriate action includes the notification of the spill to the 24 hour Spill Line and DIAND Water Resource Officer, a copy of the Spill Report form can be found in Appendix I.
4. Contain the spill or environmental hazard, as per its nature, and as per the advice of the Spill Line and the DIAND Water Resource Officer as required.
5. Implement any necessary cleanup and/or remedial action.

## 5.3 Basic Steps — Chain of Command

1. Immediately notify and report to the 24-Hour Spill Line at (867) 920-8130, the DIAND Water Resources Inspector in Nunavut at (867) 975-4298, and Environment Canada personnel at 867-766-3737.
2. ***A Spill Report Form (Appendix I)*** is filled out as completely as possible before or after contacting the 24 Hour Spill Line.
3. Notify Robin Hopkins , Stornoway Diamond Corporation at (604) 983-7750.

## 5.4 Other contacts for spill response/assistance and further reporting

Nunavut Water Board	(867) 360-6338
Fisheries and Oceans Canada Habitat Impact Assessment Biologist	(867) 979-8007
Government of Nunavut Department of Environment	
- General Reception	(867) 975-7700
- Manger of Pollution Control	(867) 975-7748

## **6.0 Taking Action**

### **6.1 Before the Fact: Preventative Measures**

The following actions illustrate a proactive approach to environmental stewardship. In addition, these actions minimize the potential for spills during fuel handling, transfer and storage:

1. Fuel transfer hoses with cam lock mechanisms are used.
2. Carefully monitor fuel content in the receiving vessel during transfer. Always have additional absorbent pads on hand while transferring fuel.
3. Clean up drips and minor spills immediately.
4. Regularly inspect drums, tanks and hoses for leaks or potential to leak and for proper storage.
5. Create fuel caches in natural depressions that are located a **minimum** of 31 metres from the normal high-water mark of any water body.
6. Train personnel, especially those who will be operators, in proper fuel handling and spill response procedures.

### **6.2 After the Fact: Mitigative Measures**

1. First steps to take when a spill occurs:
  - a) Ensure your own safety and that of others around you, beginning with those nearest to the scene.
  - b) Control danger to human life, if necessary.
  - c) Identify the source of the spill.
  - d) Notify your supervisor, request assistance if needed.
  - e) Assess whether or not the spill can be readily stopped.
  - f) Contain or stop the spill at the source.
2. Secondary steps to take:
  - a) Determine status of the spill event.
  - b) If necessary, pump fuel from a damaged and/or leaking tank or drum into a refuge container.
  - c) Notify the 24-hour Spill Report Line, and receive further instructions from the appropriate contact agencies listed in *Section 5.3*. (disposal of contaminated soil or ice/snow in sealed containers for removal from site, etc.).
  - d) Complete and Fax a copy of the Spill Report Form (*Appendix I*).
  - e) Notify permitting authorities.
  - f) If possible, resume cleanup and containment.

### 6.3 SPILL RESPONSE ACTIONS

#### DIESEL FUEL, HYDRAULIC OIL, AND LUBRICATING OIL

Take action only if safety permits – stop the source flow if safe to do so and eliminate all ignition sources. **Never smoke** when dealing with these types of spills.

##### **On Land**

Build a containment berm using soil material or snow and place a plastic tarp at the foot of the berm for easy capture of the spill after all vapours have dissipated.  
Remove the spill by using absorbent pads or excavating the soil, gravel or snow.  
Remove spill splashed on vegetation using particulate absorbent material.  
Contact regulatory agencies for approval before commencing with the removal of any soil, gravel, or vegetation.

##### **On Muskeg**

Do not deploy personnel and equipment on marsh or vegetation.  
Remove pooled oil with sorbent pads and/or skimmer.  
Flush with low pressure water to herd oil to collection point.  
Burn only in localized areas, e.g., trenches, piles or windrows.  
Do not burn if root systems can be damaged (low water table).  
Minimize damage caused by equipment and excavation.

##### **On Water**

Contain spill as close to release point as possible.  
Use containment boom to capture spill for recovery after vapours have dissipated.  
Use absorbent pads to capture small spills.  
Use skimmer for larger spills.

##### **On Ice and Snow**

Build a containment berm around spill using snow.  
Remove spill using absorbent pads or particulate sorbent material.  
The contaminated ice and snow must be scraped and shovelled into plastic buckets with lids, 205 litre drums, and/or polypropylene bags.

##### **Storage and Transfer**

All contaminated water, ice, snow, soil, and clean up supplies will be stored in closed, labelled containers. All containers will be stored in a well ventilated area away from incompatible materials.

##### **Disposal**

Contaminated water, ice, soil and clean up supplies will be disposed of at a facility approved by Federal and/or Territorial regulatory agencies.



### 6.3 SPILL RESPONSE ACTIONS GASOLINE AND JET B AVIATION FUEL

Take action only if safety permits – stop the source flow if safe to do so and eliminate all ignition sources. **Never** **smoke** when dealing with these types of spills.

#### **On Land**

Build a containment berm using soil material or snow and place a plastic tarp at the foot of the berm for easy capture of the spill after all vapours have dissipated.  
Remove the spill by using absorbent pads or excavating the soil, gravel or snow.  
Remove spill splashed on vegetation using particulate absorbent material.  
Contact regulatory agencies for approval before commencing with the removal of any soil, gravel, or vegetation.

#### **On Muskeg**

Do not deploy personnel and equipment on marsh or vegetation.  
Remove pooled gasoline or Jet B with sorbent pads and/or skimmer.  
Flush with low pressure water to herd oil to collection point.  
On advice from regulatory agencies, burn only in localized areas, e.g., trenches, piles or windrows.  
Do not burn if root systems can be damaged (low water table).  
Minimize damage caused by equipment and excavation.

#### **On Water**

Contain spill as close to release point as possible.  
Use containment boom to capture spill for recovery after vapours have dissipated.  
Use absorbent pads to capture small spills.  
Use skimmer for larger spills.

#### **On Ice and Snow**

Build a containment berm around spill using snow.  
Remove spill using absorbent pads or particulate sorbent material.  
The contaminated ice and snow must be scraped and shovelled into plastic buckets with lids, 205 litre drums, and/or polypropylene bags.

#### **Storage and Transfer**

All contaminated water, ice, snow, soil, and clean up supplies will be stored in closed, labelled containers. All containers will be stored in a well ventilated area away from incompatible materials.

#### **Disposal**

Contaminated water, ice, soil and clean up supplies will be disposed of at a facility approved by Federal and/or Territorial regulatory agencies.



### 6.3 SPILL RESPONSE ACTIONS PROPANE

Take action only if safety permits. Gases stored in cylinders can explode when ignited. Keep vehicles away from area. **Never smoke** when dealing with these types of spills.

#### **On Land**

Do not attempt to contain the propane release.

#### **On Water**

Do not attempt to contain the propane release.

#### **On Ice and Snow**

Do not attempt to contain the propane release.

#### **General**

It is not possible to contain vapours when released.

Water spray can be used to knock down vapours if there is no chance of ignition.

Small fires can be extinguished with dry chemical or CO<sub>2</sub>.

Personnel should withdraw immediately from area unless a small leak is stopped immediately after it has been detected.

If tanks are damaged, gas should be allowed to disperse and no recovery attempt should be made.

Personnel should avoid touching release point on containers since frost forms very rapidly.

Keep away from tank ends.

#### **Storage and Transfer**

It is not possible to contain vapours when released.

#### **Disposal**

Contaminated water, ice, soil and clean up supplies will be disposed of at a facility approved by Federal and/or Territorial regulatory agencies.

## **7.0 Spill Equipment**

The following items will be on hand to aid personnel

- One extra storage container (jerry can) for gasoline will be kept at the site in the rare event that the primary storage container should develop a leak.
- A supply of absorbent mats will kept at the site and will be placed under any area where re-fuelling, transferring and/or handling is done and under fuel storage areas.
- One garden shovel
- A supply of disposal bags

## **8.0 Training and Practice Drills**

### **8.1 Training**

At the beginning of the land use operation all employees and contractors will be made familiar with the Spill Contingency Plan for this project, the protocols to be followed regarding the handling, storage and transfer methods of all fuel on site, and the proper procedures to follow should a fuel spill occur.

# APPENDIX I

## **Spill Report Form**



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

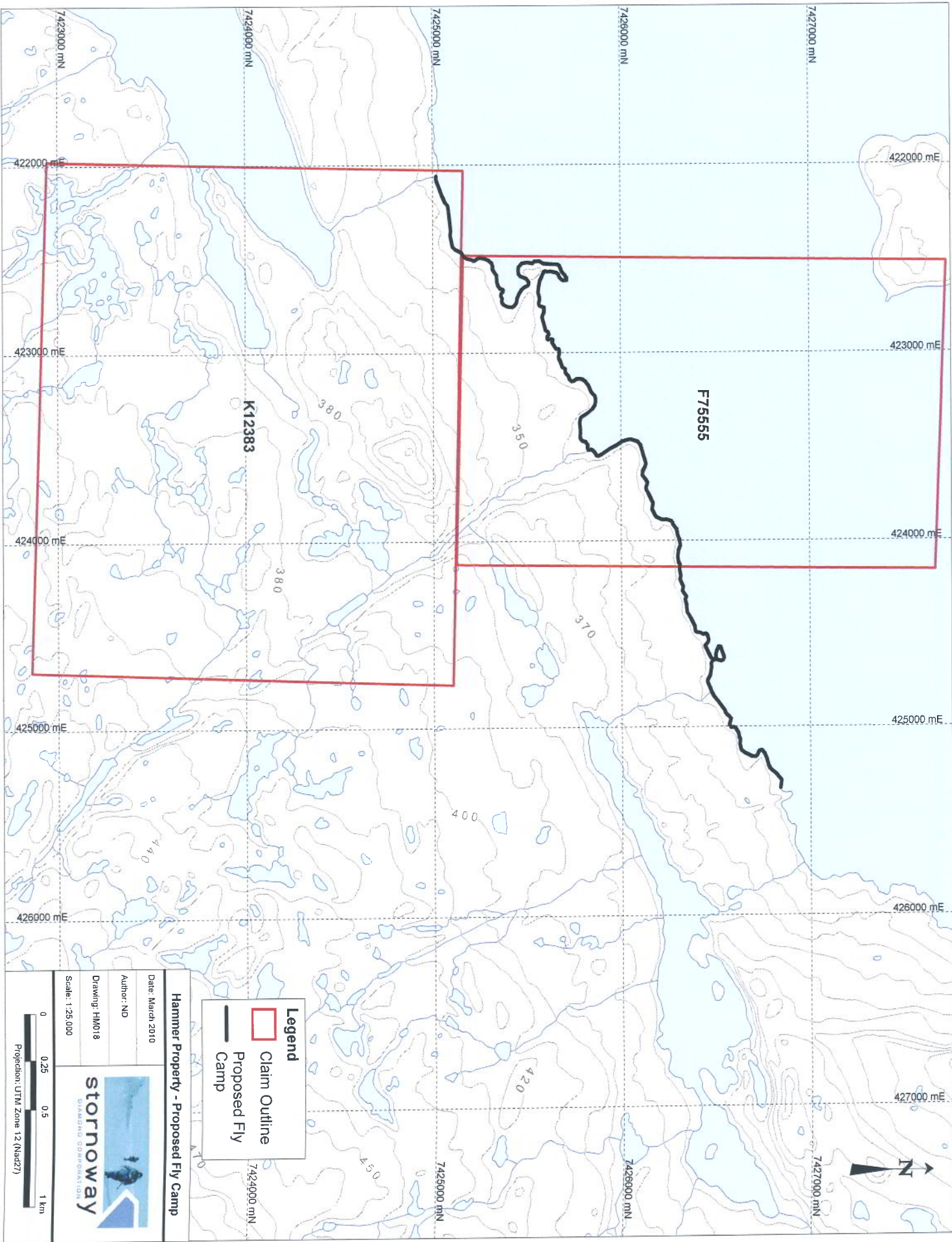
REPORT LINE USE ONLY

A	REPORT DATE: MONTH - DAY - YEAR		REPORT TIME		<input type="checkbox"/> ORIGINAL SPILL REPORT, OR <input type="checkbox"/> UPDATE # _____ TO THE ORIGINAL SPILL REPORT	REPORT NUMBER _____
	OCCURRENCE DATE: MONTH - DAY - YEAR		OCCURRENCE TIME			
C	LAND USE PERMIT NUMBER (IF APPLICABLE)			WATER LICENCE NUMBER (IF APPLICABLE)		
D	GEOGRAPHIC PLACE NAME OR DISTANCE AND DIRECTION FROM NAMED LOCATION				REGION	
					<input type="checkbox"/> NWT <input type="checkbox"/> NUNAVUT <input type="checkbox"/> ADJACENT JURISDICTION OR OCEAN	
E	LATITUDE			LONGITUDE		
	DEGREES	MINUTES	SECONDS	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 EQUIPMENT	
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	
	ANY ALTERNATE CONTACT	POSITION	EMPLOYER	ALTERNATE CONTACT LOCATION	ALTERNATE TELEPHONE	
REPORT LINE USE ONLY						
N	RECEIVED AT SPILL LINE BY	POSITION	EMPLOYER	LOCATION CALLED	REPORT LINE NUMBER	
		STATION OPERATOR		YELLOWKNIFE, NT	(867) 920-8130	
LEAD AGENCY <input type="checkbox"/> EC <input type="checkbox"/> CCG <input type="checkbox"/> GNWT <input type="checkbox"/> GN <input type="checkbox"/> ILA <input type="checkbox"/> INAC <input type="checkbox"/> NEB <input type="checkbox"/> TC				SIGNIFICANCE <input type="checkbox"/> MINOR <input type="checkbox"/> MAJOR <input type="checkbox"/> UNKNOWN		FILE STATUS <input type="checkbox"/> OPEN <input type="checkbox"/> CLOSED
AGENCY		CONTACT NAME		CONTACT TIME	REMARKS	
LEAD AGENCY						
FIRST SUPPORT AGENCY						
SECOND SUPPORT AGENCY						
THIRD SUPPORT AGENCY						

## APPENDIX II

# Maps and Figures





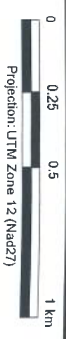
**Legend**

- Claim Outline
- Proposed Fly Camp

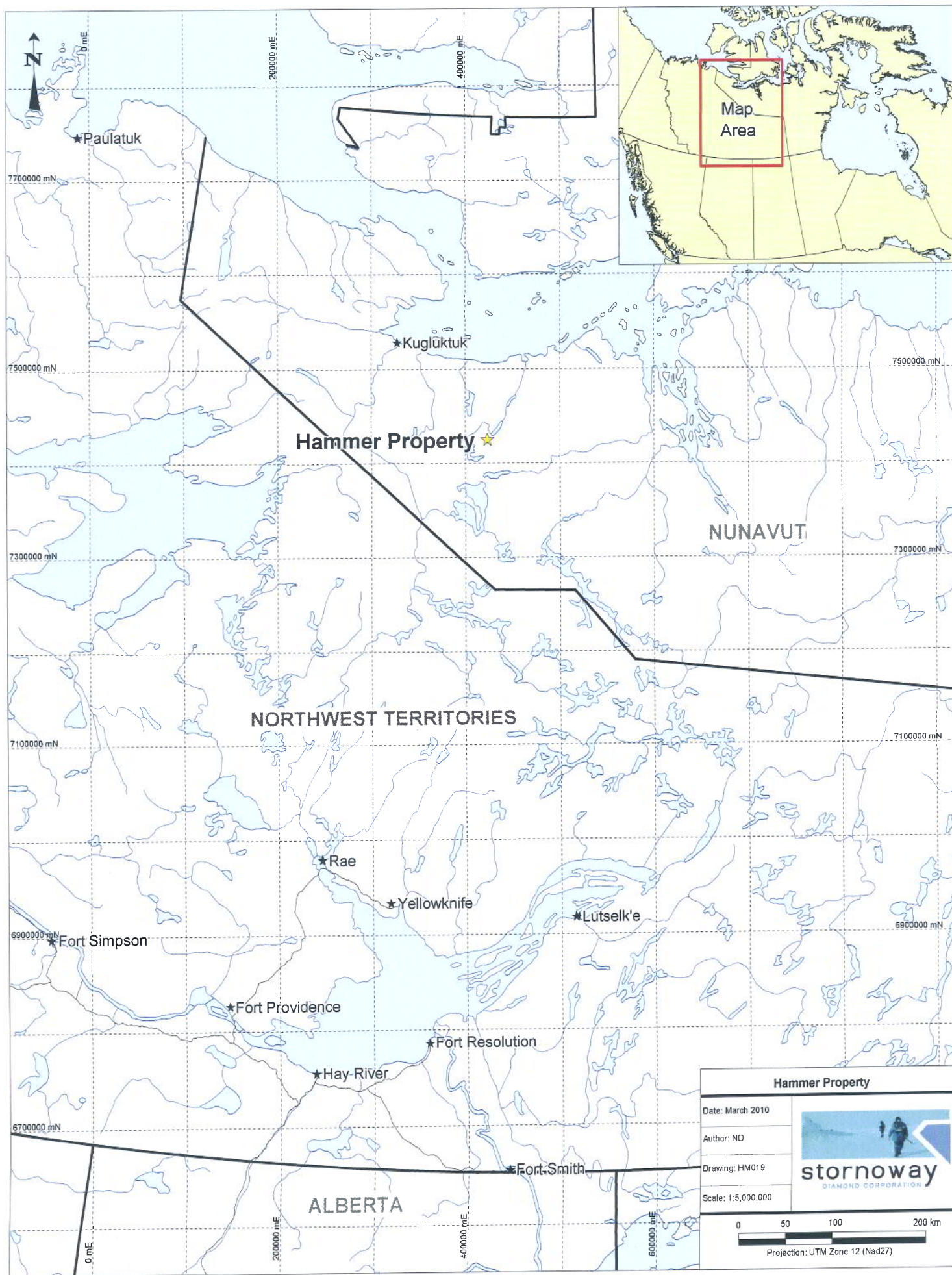
**Hammer Property - Proposed Fly Camp**

Date: March 2010  
Author: ND  
Drawing: HM018  
Scale: 1:25,000

**stornoway**  
DIAMOND CORPORATION







## APPENDIX III

# **Material Safety Data Sheets**