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# **TREE RIVER PROJECT SPILL CONTINGENCY PLAN**

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## **Project Introduction**

The following plan applies to the Tree River Project operated by Strongbow Exploration Inc. ("Strongbow"). This project, located in the West Kitikmeot Region of Nunavut, approximately 140 km northwest of Kugluktuk, consists of both Inuit Owned Lands (surface and subsurface rights) and mineral claims on Crown Lands.

The first phase of the proposed exploration program ('Phase I') will be conducted between early July and mid-August 2006 over period of a few days to two weeks. Accommodations for Phase I will be minimal, sufficient to accommodate up to 6 people over a period of few days to two weeks. Pup tents will be used as sleeping quarters and a larger, possibly weatherhaven style tent would be erected to serve as a kitchen and office space. Four fly camp locations are proposed in total (3 on Crown land) although it is unlikely that more than three of these locations will actually be used. The proposed fly camp sites have been selected from a map and have not been visited, therefore, if there are problems with access or unsuitable ground conditions at the listed locations they may have to be modified at the time of mobilization.

If the results from Phase I exploration warrants further work, a second phase of exploration ('Phase II') may be conducted in late summer or fall of 2006 or in 2007. Phase II would involve a diamond drilling program (10 short drill holes <200 m each) and the establishment of a larger, temporary exploration camp, with the projected location being at the co-ordinates listed above for "Fly Camp 4" (67° 06' 40.7" N, 112° 10' 42.3" W) . The camp would likely consist of six or nine 14'x16' Jutland-style tents with wooden floors and frames (1 kitchen, 1 dry, 1 office, 1 logging tent and 2 to 4 sleeping tents) with the ability to support a population of up to 16 people for 4 to 6 weeks time.

## **Spill Response Plan**

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. The general response to be followed in the event of a spill is:

*Identify the product* - check container design, warning labels, markings, etc.

*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

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

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

*Report the spill* - provide basic information such as location of spill, name of polluter, type and amount of material spilled, date and time of the spill and any perceived threat to human health or the environment (complete NWT Spill Report form)

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

*Detailed Report* – A detailed report of the spill (including GPS location) must be submitted to the DIAND Water Resources Inspector less than 30 days after the spill is reported

## **Detailed Response Plan**

### ***Phase I (Fly Camps)***

(a) *On-site person in charge, management or control of contaminants*

Robert Campbell, Strongbow Exploration Inc. – *camp phone to be determined*

(b) *Name and address of employer of personnel described in part (a)*

Strongbow Exploration Inc.  
800-625 Howe St., Vancouver, B.C.  
V6C-2T6  
phone: (604) 668-8355  
fax: (604) 668-8366

(c) *Description of the facility*

Facility – Phase I – 4-6 Person Fly Camp(s)

Locations – Fuel will be stored in the appropriate facility a safe distance from the accommodations and well away (>100m) from water bodies

Size - Fuel stored at above ground facility in sealed 205 litre (45 gal.) steel drums

Storage Capacity – Maximum fuel stored at each of the Phase I fly camps will typically be two (2) drums (410 litres) of Jet-B , two (2) drums (410 litres) of diesel, two (2) 100lb-propane tanks for cooking and heating purposes.

(d) *Description of the type and amount of potential contaminants normally stored at the Phase I Tree River fly camps during occupation:*

JET B fuel for the helicopter – 410 litres (2 drums)  
Diesel - 410 litres ( 2 drums)  
Propane for cooking, heating, etc. – Two (2) 100 lb. tanks  
Gasoline for water pump – 25 litres

## ***Phase II (Temporary Exploration Camp)***

*(a) On-site person in charge, management or control of contaminants*

Robert Campbell, Strongbow Exploration Inc. – *camp phone to be determined*

*(b) Name and address of employer of personnel described in part (a)*

Strongbow Exploration Inc.  
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*(c) Description of the facility*

Facility – Phase II – 16 Person Exploration Camp

Locations – Fuel will be stored in the appropriate facility a safe distance from the accommodations and well away (>100m) from water bodies

Size - Fuel stored at above ground facility in sealed 205 litre (45 gal.) steel drums

Storage Capacity – Maximum fuel stored at Phase II camp will typically be 19 drums (4100 litres) of Jet-B and/or diesel, two (2) 100lb-propane tanks and 25 liters of gasoline for operation of the water pump.

A minor amount of fuel will be stored for no more than four days at each drill site, and removed promptly upon completion of each drill hole. On-site storage will be a safe distance from drilling activities, with fuel stored in sealed steel drums.

*(d) Description of the type and amount of potential contaminants to be normally stored the Tree River camp during occupation:*

JET B fuel for the helicopter – 2050 litres (10 drums)  
Diesel - 1845 litres ( 9 drums)  
Propane for cooking, heating, etc. - Four (4) 100 lb. tanks  
Oil – Several Cases of 4 Cycle Engine Oil  
Gasoline for water pump – 25 litres

*Description of the type and amount of potential contaminants to be normally stored at drill site:*

JET B fuel for the helicopter – 410 litres (2 drums)  
Diesel for the drill - 820 litres (4 drums)  
Propane for heating, etc. - One (1) 100 lb. tank

## Preventative Measures

Fuel drums will be monitored for any signs of leakage:

- (i) Immediately after they arrive on-site,
- (ii) Once they have been transported to the designated storage area, and
- (iii) Periodically after that time (i.e. as the stocks are accessed).

Drums will be stored upright on flat stable terrain during the summer to reduce chances of a leak. If available a natural depression situated well away from water bodies will be utilized for storage. The contents of any drum that leaks, or shows the potential to leak, will be transferred by wobble pump to a different drum. With the exception of the container in use, all fuel container outlets will be kept sealed to prevent leakage. On-site equipment (e.g. helicopter) will be refueled at some distance from the main storage facilities to reduce potential damage should a fire occur.

## Reporting

- (i) Identify the product - check container design, warning labels, markings, etc.
- (ii) 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
- (iii) Stop the flow at the source - reduce or terminate the flow of product without endangering anyone
- (iv) Assess the seriousness of the spill - evaluate potential dangers of the spill to human health and safety, the aquatic environment, wildlife, ground water, vegetation and other land resources
- (v) Report the spill to the 24-Hour Spill Report Line (867) 920-8130 - provide basic information such as location of spill, direction of motion if any, name of contact on-site, type and amount of material spilled, cause of spill, date and time of the spill and any perceived threat to human health or the environment (complete Spill Report form)
- (vi) Report the spill to both Strongbow Exploration Inc's office in Vancouver
- (vii) Depending on severity of the spill, report to the other appropriate authorities (i.e. Nunavut Water Board, Department of Fisheries and Oceans; Regional Inuit Association)

## Containment

Oil spill containment techniques include:

- (i) Earth dams - simple and effective control means for surface and small streams
- (ii) Interceptor trenches - control on land and shallow subsurface seepage
- (iii) Culvert weirs - not applicable
- (iv) Underflow dams - effective in narrow ditch or stream
- (v) Net and absorbent barriers - effective in tundra area and slow moving water
- (vi) Containment booms - commercial product for large bodies of water

- (vii) Space spraying or 'herding' - using a very fine water spray as a means of cleaning vegetation, shorelines, lake surface, etc.
- (viii) Absorbent materials - include fine sand, soil or snow; commercial sorbents include sheets, rolls, pillows and booms that can be rapidly deployed with no preparation

On-site equipment available for employees includes:

Spill Kit (containing 1 20L Poly containment pail, 12 or more 16" x 20" oil absorbent pads, 2-3" by 48" oil absorbent socks, 1 heavy duty disposal bag (6 mil), 1 pair Chemi-pro gloves and 3 lbs of All Purpose absorbent.) An extra supply of (approx. 100) 16" x 20" oil absorbent pads will be kept in the "Dry" tent in case of emergency.

### Clean up

The most likely spill scenario is the partial loss of petroleum products from one of the 205 l (45 gal.) drums. Drums will be checked on arrival in camp, after transfer to the designated storage facility and periodically thereafter. Contents of any leaking drum will be immediately transferred via wobble pump to an empty, leak free drum. It is unlikely that more than one drum will leak at any time. Any spills will be contained, and pumped into empty barrels.

### Disposal

No organic soils are present at the proposed storage site, and if possible, any sands and gravels contaminated by a significant spill of petroleum products will be excavated by hand, incinerated to remove hydrocarbons, and returned to their natural site.

### Training

All employees and contractors will be oriented upon arrival to the site as to the location and nature of possible spill hazards, as well as the location, content, and usage of spill kits, and locally available materials to control a spill. A brief exercise will be conducted after orientation to clearly outline the spill response protocol, and ensure the employee's comfort with the plan.

## **SPILL REPORTING PROCEDURE**

1. Immediately report the spill to the following agencies:
  - 24 Hour Spill Report Line (867) 920-8130
  - Environment Canada 24 Hour Pager (867) 920-5131
  - Environment Canada (867) 975-4644
  - DIAND Water Resources Inspector (867) 975-4298
  - Department of Fisheries and Oceans –  
Nunavut Regional Office (867) 979-8000
2. Report the spill to Strongbow Exploration Inc.'s office in Vancouver\*
  - David Gale – Vice President, Exploration
  - Nicole Westcott – Land Administrator

*\* The on-site person in charge will have a confidential 24 hour contact number for a representative of Strongbow Exploration Inc.'s management team throughout the field season.*

3. Fill out the NWT Spill Report Form (as it appears in Appendix 1 of this plan) which is to be submitted to the DIAND Water Resources Inspector no later than 30 days after the occurrence of the spill.



### **Emergency Contact Information**

24-Hour Spill Report Line Phone Number	(867) 920-8130
24-Hour Spill Report Line Fax Number	(867) 920-8127
DIAND Water Resources Inspector	(867) 975-4298
Environment Canada (Nunavut)	(867) 975-4644
Environment Canada 24 Hour Emergency Pager Number	(867) 920-5131
Department of Fisheries and Oceans-Nunavut Regional Office	(867) 979-8000
Indian and Northern Affairs Canada, Land Administration Minister – Nunavut Regional Office	(867) 975-4280
Kitikmeot Inuit Association	(867) 982-3310
Kitikmeot Hunters' and Trappers' Association	(867) 982-4207
Kugluktuk Hunters' and Trappers' Association	(867) 982-4908
Bay Chino (Umingmaktok) Hunters' and Trappers' Association	(867) 983-2426
RCMP, Kugluktuk Detachment	(867) 982-0123
Kugluktuk Health Center (Nursing Station)	(867) 982-4531
Stanton Yellowknife Hospital	(867) 669-4111

## **Consultations**

Contingency Planning and Spill Reporting in the NWT - A guide to the new regulations, GNWT, 8pp. June, 2002.

Oil Spill Containment and Clean up Techniques - 22 minute instructional video prepared by NWT Renewable Resources Pollution Control Division, 1988.

Report All Spills - Environment Series, GNWT Renewable Resources, Pollution Control Division, 1988.

Spill Containment and Clean-up Course, GNWT Renewable Resources, Pollution Control Division, 1991, 74pp.

Spill Contingency Planning and Reporting Regulations - Environmental Protection Act - Northwest Territories, July 22, 1993, 11pp.

Spills, Our Record in the Northwest Territories - Environment Series, GNWT Renewable Resources, Culture and Communications, 1990

Hazardous Substance Specialist  
Environmental Protection Division  
Renewable Resources  
Government of the NWT  
600, 5102-50th Ave.  
Yellowknife NWT  
X1A 3S8

telephone: (867) 873-7654  
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**Appendix 1**

***Spill Report Form***



# NWT SPILL REPORT

(Oil, Gas, Hazardous Chemicals or other Materials)

24 – Hour Report Line  
Phone: (867) 920-8130  
Fax: (867) 873-6924

<b>A</b> Report Date and Time		<b>B</b> Date and Time of spill (if known)		<b>C</b> <input type="checkbox"/> Original Report <input type="checkbox"/> Update no. _____		Spill Number	
<b>D</b> Location and map coordinates (if known) and direction (if moving)							
<b>E</b> Partly responsible for spill							
<b>F</b> Product(s) spilled and estimated quantities (provide metric volumes/weights if possible)							
<b>G</b> Cause of spill							
<b>H</b> Is spill terminated? <input type="checkbox"/> yes <input type="checkbox"/> no		<b>I</b> If spill is continuing, give estimated rate		<b>J</b> Is further spillage possible? <input type="checkbox"/> yes <input type="checkbox"/> no		<b>K</b> Extent of contaminated area (in square meters if possible)	
<b>L</b> Factors effecting spill or recovery (weather conditions, terrain, snow cover, etc.)				<b>M</b> Containment (natural depression, dikes, etc.)			
<b>N</b> Action, if any, taken or proposed to contain, recover, clean up or dispose of product(s) and contaminated materials							
<b>O</b> Do you require assistance? <input type="checkbox"/> no <input type="checkbox"/> yes, describe:				<b>P</b> Possible hazards to person, property, or environment; eg: fire, drink water, fish or wildlife			
<b>Q</b> Comments or recommendations						<b>FOR SPILL LINE USE ONLY</b>	
						Lead agency	
						Spill significance	
						Lead Agency contact and time ..... ..... .....	
						Is this file now closed? <input type="checkbox"/> yes <input type="checkbox"/> no	
Reported by		Position. Employer, Location				Telephone	
Reported to		Position. Employer, Location				Telephone	

## **Appendix 2**

### ***Figure 1: Phase II Camp Schematic***

***CAMP SCHEMATIC TO BE DETERMINED***