

# CLOSURE AND RECLAMATION PLAN ANGILAK PROPERTY KIVALLIQ ENERGY CORPORATION

Effective Date: June 16, 2016

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#### 1. Preamble

This Closure and Reclamation Plan is in effect as of June 1, 2016, and applies specifically to the Angilak Property. A property map, land tenure map and camp layout figure included in Appendix I. Kivalliq Energy Corp. (Kivalliq Energy) is a uranium exploration company with a Nunavut focus. Kivalliq Energy was the first company in Canada to sign a comprehensive agreement with the Inuit of Nunavut to explore for uranium on Inuit Owned Lands. Kivalliq Energy endeavors 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. All plans, licences and permits are posted for review and copies of the plans will be available in the office tent for reference.

#### 2. Introduction

The work proposed for this project consists of diamond drilling, reverse circulation (RC) drilling, prospecting, staking, geological mapping, trenching, rock and soil/till sampling, grid establishment/line cutting, airborne geophysics, ground geophysics, possibility of trenching (non-mechanical), and fuel transport (fixed and rotary-wing, overland). No buildings, equipment or waste will remain once the project is complete.

Kivalliq Energy has been exploring in Nunavut since 2008. The property consists of both Crown and Inuit Owned Lands (IOL) in the Kivalliq Region of Nunavut. Land and water use for the purpose of exploration has been authorized by the Kivalliq Inuit Association (KIA), Indigenous and Northern Affairs Canada (INAC) and the Nunavut Water Board (NWB). In accordance with the terms and conditions of these authorizations, Kivalliq Energy will return the land to as near its original natural state as is practical and possible.

## 3. Project Overview

Kivalliq Energy operates two projects in Nunavut and two projects in Saskatchewan. The projects include the Angilak Property and the Baker Basin Property in Nunavut and the Genesis Property and the Hatchet Lake Property in Saskatchewan. The Angilak Property, consisting of 91 active mineral claims, is located approximately 225 kilometres south-southwest of Baker Lake and 350 kilometres west of Rankin Inlet (Figure 1).

As indicated on Figure 2, all mineral claims are contiguous and extend north, south, east and west between latitudes 62° 27′ and 62° 48′ North and longitudes 98° 21′ and 99° 24′ West in NTS map areas 65 J/06, 65 J/07, 65 J/09, 65 J/10, 65 J/11 and 65 J/15 (UTM coordinates: 6925000N to

6965000N and 479300E to 533000E, NAD83, Zone 14). The camp is located at 527975m E, 6937950m N. See Figure 3 for a layout of the camp.

#### 4. Schedule

The final restoration of the camp site will begin once the program is complete. All work described in this plan will be completed prior to the date of expiry of the land use permits and water licence unless a renewal is applied for and granted. Empty fuel drums will be removed from site regularly. Once a fuel cache is retired, a thorough inspection will be conducted. Any contamination will be cleaned up according to the Spill Contingency Plan and debris will be removed from the site.

#### 5. Infrastructure

#### Camp

The camp currently consists of:

- Insulated tents on wood frames. These tents function as sleep tents, an office, core tent, first aid station, kitchen, dry and storage.
- Toilets.
- A generator building.
- Helicopter landing area.
- Natural gravel airstrip.
- Garbage incineration area.

#### Nutaaq Camp Infrastructure

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15 – 14' x 16' tents for sleeping, an office and first aid station

4 – 14' x 32' tent for kitchen, core tents and dry

1 toilet facilities

A generator building to house a 20 kW diesel generator as well as a back-up

generator

30' x 60' Sprung Tent

Existing:

#### **Vehicles and Equipment**

Existing: 17 Snow machines

1 Polaris Side by Side Quad

1 Kubota small farm tractor

1 Candig Mini Excavator

1 D6 CAT

1 CAT 928 Front End Loader

3 Cargo Sleds

#### **Drilling Equipment**

Existing: 3 Boyles 17 Core Drill Rigs

#### Fuel Caches

The main fuel cache has been established at the camp. All fuel stored on site is contained in Instaberms secondary containment, manufactured by Raymac Industries in British Columbia. Drums of fuel are stored in neat, orderly rows and are inspected daily. A spill kit is located at each fuel cache. Empty drums are removed from site regularly and returned to Aviation Fuel Enterprises in Baker Lake.

Smaller caches are established temporarily to support drilling activities and sampling/survey programs. Spill kits are located at every fuel cache.

Currently Kivallig Energy is permitted to cache 3000 drums of fuel on site at a time.

This will include:

- 1500 205 L drums of diesel
- 1490 205 L drums of Jet fuel
- 10 205 L drums of gasoline
- 50 100 lb cylinders of propane

Most of this fuel will be used by the end of each season. However, enough fuel will be left on site over winter to ensure a supply for a safe re-opening of camp in the spring. Kivalliq Energy is currently investigating the purchase and use of double-walled enviro tanks. Please refer to the Fuel Management Plan for more information.

#### 6. Seasonal Shutdowns

#### **Buildings and Contents**

Wood structures and wood floors will be kept secured. The canvas tents will be removed from site for drying and storage. Weatherhaven sleeping tents will remain in place for the winter. Wooden bed frames will be turned upside down and secured to the wooden floors for over-winter storage. The generator may be removed from site for servicing and storage.

#### Water System

Pumps and hoses will be drained and stored inside to protect them over winter. Pumps may be removed from site for servicing and storage.

#### Fuel Caches and Chemical Storage

An inventory will be conducted prior to leaving at the end of the field season. A thorough inspection of all fuel caches will be completed and empty fuel drums will be removed from site. Every effort will be made to use up any partially full fuel drums. In the event that any partially full fuel drums are left once the season is over, they will be placed on an angle to ensure that snow and water do not enter the drum and no leakage from the drum occurs. Full fuel drums will be stored on their sides with the bungs in the 3 and 9 o-clock position. All chemicals, including cleaning products, will be stored in a sealed building.

#### Waste

Combustible Waste: All combustible waste will be incinerated. Untreated wood and large pieces of cardboard will be burned in a controlled open burn in compliance with the Municipal Solid Wastes Suitable for Open Burning Guidelines. Ash generated from the on-going incineration will be stored in sealed metal 55-gallon drums and removed from site via regularly scheduled backhaul.

*Grey Water Sump*: The grey water sump will be inspected and covered securely for the winter. Stakes will be placed around the sump so that it is easily identifiable when the camp is opened up again each year.

*Black water*: The camp uses incineration and Pacto toilets. Bags containing waste are incinerated.

*Drill Sites*: The drill will be partially dismantled into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. All drill sites will be inspected for soil contamination. Any remaining waste will be taken to camp and either incinerated if appropriate or to be flown out to an approved disposal location.

Grey water and sludge sumps will be filled and leveled as required. As much as possible, drill sites will be restored immediately after the drill has been moved to the next site.

#### Contamination Clean Up

Any soil around camp that has become contaminated and gone unnoticed will be treated as per the Spill Contingency Plan. Before and after photos will be taken to document the contamination and the clean- up. These photos will make up part of the final report to be submitted to the Water Resource Inspector and the Kivalliq Inuit Association following any spill and will also be attached as part of the Annual Report submitted to the NWB and the KIA.

#### 7. Final Closure and Reclamation

#### **Buildings and Contents**

All buildings will be dismantled and removed. All wooden structures including floors will either be burned or removed.

#### **Equipment**

All equipment, including pumps, will be dismantled and removed from the project area.

## Fuel caches and Chemical Storage

All fuel drums will be removed. All areas where there have been fuel caches will be thoroughly inspected. Any contamination will be cleaned up as well as any debris removed. Contaminated soil will be handled as per the Spill Contingency Plan. Final photos will be taken of all fuel caches for inclusion in the final report.

All chemicals will be removed from site. Areas where chemicals have been stored will be inspected to ensure that there has been no contamination.

## Sumps

The Kivalliq Energy exploration program utilizes one central sump located in a naturally occurring depression free from any potential runoff contamination.

#### **Drill Sites**

The drill will be dismantled into its main components as per the drilling contractor procedure, packaged and secured along with its ancillary equipment and rods. The drill will be flown out by the drilling contractor.

All drill sites will be inspected for soil contamination. Any remaining waste will be taken to camp to be burned if possible or to be flown out to an approved disposal location.

An inspection will be conducted to ensure that all drill sites are/have been restored and sumps have been covered and leveled.

#### Trenching

Upon final closure of exploration activities on the Angilak Property, trench extensions and excavations created by Kivalliq Energy will be backfilled and disturbed areas re-contoured to their original state, using best efforts and best practices. In areas where the historic trenches have been cleaned out, these trenches will be returned to conditions existing prior to Kivalliq's work programs. Excavation and reclamation will be carried out using hand tools or a Candig CD21 heli-portable miniexcavator currently authorized and on site.

#### Contamination Clean Up

Any contamination will be treated as per the Spill Contingency Plan. Before and after photos will be taken to document the contamination and the clean-up. These photos will make up part of the final report to be submitted to the Water Resource Inspector and the Kivalliq Inuit Association following any spill and will also be attached as part of the Annual Report submitted to the Nunavut Water Board and the Kivalliq Inuit Association.

## **Inspection and Documentation**

A complete inspection will be conducted of all areas prior to closure. Photos will be taken to document the conditions prior to leaving the site for use in the final plan. All appropriate agencies will be contacted and notified once the final clean-up has been conducted. The photos will make up part of the final closure reports to be submitted to Aboriginal Affairs and Northern Development Canada and the Kivalliq Inuit Association.

# 8. Emergency Contact Information

CONTACT	TELEPHONE NUMBER
INAC Field Operations Manager, Iqaluit	867-975-4295
Kivalliq Inuit Association	867-645-5725
Environment Canada – 24 hour emergency	867-920 8130
Nunavut Government, Robert Eno	867-975-7729
Department of Fisheries and Oceans, Iqaluit	867-979-8000
Unaalik Aviation, Rankin	867-645-2535
Ookpik Aviation, Baker Lake	867-793-4720
Baker Lake RCMP	867-793-0123
Stanton Regional Hospital, Yellowknife	867-669-4111
Discovery Mining Services, Yellowknife	867-920-4600
Kivalliq Energy, Jeff Ward, President	604-646-4527
Kivalliq Energy, 24 hour emergency contact	Andrew Berry 604-765-1892
	Camp Phone: 604-759-4750

# **APPENDIX I**





