

## NIRB Application for Screening #125023

### Kahuna Diamond Project

**Application Type:** New  
**Project Type:** Exploration  
**Application Date:** 11/10/2016 1:56:24 PM  
**Period of Operation:** From 2017-03-01 to 2019-03-01  
**Proposed Authorization:** From 2017-03-01 to 2019-03-01  
**Project proponent:** Chris Taylor  
 Dunnedin Ventures Inc.  
 1110, 1111 West Georgia St.  
 Vancouver BC V6E 4M3  
 Canada  
 Tel: 778 327 5799, fax: 778 327 6675

## DETAILS

### Non-technical project proposal description

**English:** The goal of the proposed exploration program is to expand the companies knowledge of the known diamond bearing kimberlite bodies located on the property by previous operators and to discover additional diamond bearing kimberlite in the pursuit of of an economic diamond deposit. To achieve this, the 2017 field program will include rock, till and soil sampling, prospecting, geological mapping, test pit sampling, detailed ground geophysical surveys, bulk sampling / reverse circulation drilling. The 2017 field program will be initiated in March 2017 with mobilization of bulk sampling equipment and fuel from Rankin Inlet to the site by Challenger and sleigh, a distance of approximately 50 km.

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### Personnel

Personnel on site: 25  
 Days on site: 104  
 Total Person days: 2600  
 Period of operation: from 2017-03-01 to 2019-03-01  
 Proposed term of operation: from 2017-03-01 to 2019-03-01

## ACTIVITIES

### Project Activities

Location	Activity Type	Land Status	Site History	Site Archaeological or Palentological Value	Proximity to the nearest communities and any protected areas
KH 1	Mineral Exploration	Inuit Owned Surface Lands	previously explored by Shear Minerals.	preliminary archaeological assessment conducted September 2016	The center of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 2	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	The center of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 3	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities by Shear Minerals	preliminary archaeological assessment conducted September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km southwest of Chesterfield Inlet.
KH 4	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals.	preliminary archaeological assessment conducted in September 2016	The centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 5	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 6	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016.	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 7	Mineral Exploration	Crown	previous exploration activities conducted by Shear Minerals.	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 8	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 9	Mineral	Crown	previous	preliminary	the centre of the

	Exploration		exploration activities conducted by Shear Minerals.	archaeological assessment conducted in September 2016	property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 10	Mineral Exploration	Crown	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 13	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 28	Mineral Exploration	Crown	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 11	Mineral Exploration	Crown	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 27	Mineral Exploration	Crown	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment was conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 29	Mineral Exploration	Crown	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 22	Mineral Exploration	Crown	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 19	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 12	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of

					Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 14	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 15	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chessterfield Inlet
KH 16	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 17	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 18	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 21	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 20	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet.
KH 23	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 24	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet

KH 25	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
KH 26	Mineral Exploration	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
Kahuna_FC	Fuel and chemical storage	Inuit Owned Surface Lands	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
Notch_FC	Fuel and chemical storage	Crown	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet
PST_FC	Fuel and chemical storage	Crown	previous exploration activities conducted by Shear Minerals	preliminary archaeological assessment conducted in September 2016	the centre of the property is located approximately 54 km to the northeast of Rankin Inlet and 37 km to the southwest of Chesterfield Inlet

### Community Involvement and Regional Benefits

Community	Name	Organization	Date Contacted
Chesterfield Inlet		Hamlet, KIA, HTO	2016-04-12
Chesterfield Inlet	Barney Aggark	Hamlet	2016-09-21
Chesterfield Inlet	Barney Aggard	Agigiq HTO	2016-11-08
Chesterfield Inlet	Peter Kattegatsiak	KIA Community Land and Resources Committee	2016-05-31

## AUTHORIZATIONS

### Project Locations

Kivalliq

### Project Authorization

Authorizing Agency	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Kivalliq Inuit Association	KVL115B02	Active	2015-05-31	2018-07-16
Kivalliq Inuit Association	KVL315B01	Applied, Decision Pending		
Aboriginal Affairs and Northern Development Canada	N20115C0019	Active	2015-07-17	2017-07-16
Nunavut Water Board	2BE-KDP-	Applied, Decision Pending		

Aboriginal Affairs and Northern Development Canada	amendment to including drilling and bulk sampling	Applied, Decision Pending		
Kivalliq Inuit Association	KVRW16F01	Applied, Decision Pending		

**Please indicate the mineral of interest that is being extracted. Include a brief description.**

Mineral Type	Description
Diamonds	diamond bearing kimberlite dykes have been located

## MATERIAL USE

### Equipment to be used (including drills, pumps, aircraft, vehicles etc.)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Helicopter	1	Long Ranger or A Star	drill moves, ground and crew support and transport
Heli portable Core Drill	1	Boyles 17A or equivalent	drill testing
Caterpillar Challenger	1	Caterpillar Challenger	overland winter hauling
Bombardier Snow Cat	1	Snow Cat	overland winter hauling and back hauling
snowmobiles	4	snowmobiles	crew transport and surveying
air track drill	1	air track drill	blast holes and bulk sampling
excavator	1	small excavator	bulk sample removal
water pumps	2	small water pumps	water supply for drill
generator	1	small generator	to power water pumps

### Detail Fuel and Hazardous Material Use

Fuel / Material	Type	Number of Containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	120	45	5400	Gallons	drills
Aviation fuel	fuel	75	45	3375	Gallons	helicopter
Diesel	hazardous	120	45	5400	Gallons	power drills
aviation fuel	hazardous	75	450	33750	Gallons	helicopter fuel

### Project Water Consumption

Daily Amount (m3)	Proposed Water Retrieval Methods	Proposed Water Retrieval Location
50	hose with water pump	small lakes adjacent to drills

## WASTE

### Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Mineral Exploration	Combustible wastes	minimal	return to Rankin Inlet for disposal	none required
Mineral Exploration	Greywater	none	néa	none
Mineral Exploration	Hazardous	none	none	none
Mineral Exploration	Hazardous waste	minimal	backhaul to approved facility	none
Mineral Exploration	Non-Combustible wastes	minimal	backhaul to Rankin for disposal	none
Mineral Exploration	Overburden (organic soil, waste material, tailings)	moderate	return to as close to natural as soon as possible	none
Mineral Exploration	Sewage (human waste)	minimal	return to Rankin Inlet for disposal	none

### Environmental Impacts

Minimal environmental impacts are expected as a result of grassroots exploration activities. Drilling and bulk sampling will have more moderate environmental impacts that will be remediated immediately after operations by filling in bulk sample locations and flagging off any areas that could be deemed to be of a safety risk.

## **DETAILS PART 2**

### **Project General Information**

Dunnedin Ventures Inc is applying for an amendment to the Class 3 Land Use License with the Kivalliq Inuit Association (KIA) and an amendment to the company's Class A Land Use Permit with Aboriginal Affairs and Northern Development Canada (AANDC) and an application to the Nunavut Water Board (NWB) for the purpose of conducting diamond an exploration drill program. Dunnedin's mineral claims are located in the Kivalliq Region of Nunavut which covers both Crown and Inuit Owned Lands, Surface Parcel CI-15. The center of the property is located approximately 54 kilometers to the northeast of Rankin Inlet and 37 kilometers to the southwest of Chesterfield Inlet. The Kahuna claim group covers 33,810.8 hectares of land on NTS map sheet 55O/02, 03. The purpose of our Dunnedin's activities is to evaluate the potential for economic concentrations of diamonds on Inuit owned surface land and on crown land. The company's plan is to conduct exploration drilling on the Kahuna Property in order to assess historical kimberlite occurrences and to discover new diamond bearing kimberlites. Dunnedin Ventures Inc is submitting has submitted permit applications to complete prospecting, rock, till and soil sampling, geological mapping, diamond/and or reverse circulation drilling, test pit trenching, ground geophysical surveys and a bulk sampling program. A permit from the KIA for an overland winter trail from Rankin Inlet to the bulk sample sites is required to transport heavy equipment and to establish fuel cache sites to support the program. No camp is required at this time and all activities will be conducted from Rankin Inlet. Access to the property is by helicopter. All of these activities have a low impact on the environment and all impacts are temporary and easily reclaimed.

### **DFO Operational Statement of Conformity**

#### **Transportation**

helicopter for drill moves and field crew transport snowmachine for field crew transport

#### **Camp Site**

no camp

#### **Equipment**

helicopter, air track drill, reverse circulation drill, generator, water pumps, core drill, snow machines, Challenger

#### **Water**

water use for drilling only,

#### **Waste Water (Grey water, Sewage, Other)**

none

#### **Fuel**

diesel for drills, jet fuel for helicopter. See attached for details

#### **Chemical and Hazardous Material**

See spill plan for details

#### **Workforce and Human Resources / Socio-Economic Impacts**

Local employees will be hired whenever possible. Local wildlife monitors will be hired from the Aqigiq HTO annually. Representatives from the Hamlet, HTO and KIA CLARC will be taken to exploration areas annually prior to activities for the purpose of obtaining avoidance and other important advice.

#### **Public Involvement / Traditional Knowledge**

Continuing meetings with the community, Hamlet, KIA CLARC and HTO for the purpose of advice and information exchange.

### **SECTION B: Mineral Exploration: Project Information**

see attachment A and NIRB PSIR



**SECTION B: Mineral Exploration: Exploration Activity**

see attachment A and NIRB PSIR

**SECTION B: Mineral Exploration: Geosciences**

soil, til and rock campling, ground geophysical surveys

**SECTION B: Mineral Exploration: Drilling**

reverse circulation drilling and diamond core drilling

**SECTION B: Mineral Exploration: Stripping / Trenching / Pit Excavation**

test pit sampling

**SECTION B: Mineral Exploration: Underground Activities**

n/a

**SECTION B: Mineral Exploration: Waste Rock Storage and Tailings Disposal**

n/a

**SECTION B: Mineral Exploration: Stockpiles**

n/a

**SECTION B: Mineral Exploration: Mine Development Activities**

n/a

**SECTION B: Mineral Exploration: Geology and Mineralogy****SECTION B: Mineral Exploration: Mine****SECTION B: Mineral Exploration: Mill****Description of Existing Environment: Physical Environment**

see attachement A and NIRB PSIR

**Description of Existing Environment: Biological Environment**

see attachment A and NIRB PSIR

**Description of Existing Environment: Socioeconomic Environment**

see attachment A and NIRB PSIR

**Identification of Impacts and Proposed Mitigation Measures**

see attachment A and NIRB PSIR

**Cumulative Effects**

See attachment A and NIRB PSIR



IMPACTS

TABLE 1 - IDENTIFICATION OF ENVIRONMENTAL IMPACTS

CONSTRUCTION																								
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-
OPERATION																								
Mineral Exploration		-	-	-	-	M	-	-	M	M	-	-	M		M	M	M	-	-		P	-	-	-
DECOMMISSIONING																								
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)