



ABANDONMENT AND RESTORATION PLAN

Kahuna Property

Dunnedin Ventures Inc.

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Table of Contents

1.	Introduction	1
1.1	Corporate Details	1
1.2	Project Description	1
2.	Schedule.....	2
3.	Infrastructure and Work Sites.....	2
3.1	Temporary Field Camp.....	2
3.2	Fuel Caches	3
3.3	Drill Sites	4
3.4	Bulk Sample Sites	5
4.	Seasonal Shutdown.....	5
4.1	Buildings and Content.....	5
4.2	Fuel Caches and Chemical Storage	6
4.3	Waste	6
4.4	Drill Sites	6
4.5	Bulk Sample Sites	7
4.6	Contamination Cleanup.....	7
4.7	Inspection and Documentation	7
5.	Final Abandonment and Restoration	7
5.1	Buildings and Content.....	7
5.2	Equipment.....	7
5.3	Fuel Caches and Chemical Storage	7
5.4	Waste	8
5.5	Sumps.....	8
5.6	Drill Sites	8
5.7	Bulk Sample Sites	9
5.8	Contamination Cleanup.....	9
5.9	Inspection and Documentation	9
	APPENDIX A: MAPS.....	10

1. Introduction

This Abandonment and Restoration Plan (ARP) was submitted in 2015 and updated as of November 8, 2017 and applies specifically to the Kahuna Property. Dunnedin Ventures Inc. (Dunnedin) Kahuna Property is located between the communities of Rankin Inlet (Kangiqtiniq) and Chesterfield Inlet (Igluigaarjuk) in the Kivalliq Region of Nunavut (Appendix A).

Exploration activities on the Kahuna Property are currently permitted under INAC Land Use Permit N2015C0019, KIA Land Use Licence KVL315B01, KIA Land Use Licence KVR16F01 and NWB Water Licence 2BE-KDP1722. Activities permitted include: rock, till and soil sampling, prospecting and geological mapping, ground geophysical surveying, diamond drilling, reverse circulation drilling and bulk sampling.

This Abandonment and Restoration Plan should be used in conjunction with other property plans and best management practices. Other plans at the Kahuna Property include:

- Fuel Management Plan
- Emergency Response Plan
- Environmental and Wildlife Management Plan
- Field Safety Manual
- Spill Prevention and Response Plan
- Waste Management Plan

1.1 Corporate Details

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1.2 Project Description

The Kahuna Property comprises 145 mineral claims encompassing 166,463 hectares of land located on NTS map sheets 0550/02, 0550/03, 0550/04, 0550/05, 0550/06, 0550/07, 055J/13, 055J/14, 055N/01 and 055N08 (Appendix A). The southern boundary of the property adjoins the north boundary of subsurface Inuit Owned Land (IOL) parcel RI-01, approximately 25 kilometres northeast of Rankin Inlet. The northeast corner of the property is located approximately 10 kilometres southeast of Chesterfield Inlet. The northwest corner of the property is located approximately 75 kilometres west of Chesterfield Inlet. The Property extends north, south, east and west between Latitudes 62°58' and 63°19' North and Longitudes 90°44' and 92°13' West (UTM coordinates: 6,983,000mN to 7,023,000mN and 539,000mE to

614,000mE, NAD83, Zone 15). A total of 82 mineral claims have surface rights covering 87,570 Ha that are within, or partially within, the boundaries of surface Inuit Owned Land parcel CI-15.

The exploration program planned and proposed for 2018 will consist of rock, till and soil sampling, prospecting and geological mapping, ground geophysical surveying, diamond drilling, reverse circulation drilling and bulk sampling.

An amendment application has been submitted to NPC and NIRB to authorize a temporary field camp and fuel cache on Crown Lands under INAC Land Use Permit N2015C0019, and authorize domestic water use for the temporary camp under NWB Water Licence 2BE-KDP1722. The temporary camp will be used to support exploration activities authorized by Dunnedin's permits and licences.

2. Schedule

The program will start in mid to late February with an overland haul of equipment and supply's on Dunnedin's permitted overland winter trail from Rankin Inlet to the property using Caterpillar Challengers and cargo sleds. Equipment and supplies for Dunnedin's new field camp and the 2018 diamond drilling program will be staged on Crown Lands at the site of the proposed new camp location approximately 40 kilometres northeast of Rankin Inlet and 50 kilometres southwest of Chesterfield Inlet. Camp construction will commence in late February upon arrival of the camp supplies. The drill program will operate from mid-March to mid-May. Ground based prospecting and sampling activities will follow in mid-June once the land is free from snow and the property surface is fully accessible. A seasonal shutdown will take place at the completion of exploration activities for the year, at the end of September. Drill sites will be remediated upon removal of the drill rig and restored by the end of each field season.

The final abandonment and restoration of the camp site will begin once the program is complete and no further work is warranted. Subject to periodic renewals, all work described in this plan will be completed prior to the date of expiry of the land use permits and water licences authorizing work. Empty fuel drums will be removed from site regularly and backhauled to an approved facility for proper disposal. Once a fuel cache is retired, a thorough inspection will be conducted. Any contamination will be cleaned up according to the Spill Prevention and Response Plan and debris will be removed from the site.

3. Infrastructure and Work Sites

3.1 Temporary Field Camp

Rankin Inlet was used as a base of operations for the summer 2017 program. To mitigate daily helicopter transits to and from Rankin Inlet, and for safety reasons associated with winter work conditions, Dunnedin is seeking authorization for a temporary field camp located centrally on the

Kahuna Property and proximal to high priority exploration targets. The camp will operate seasonally from March through September.

More than 10 different locations were investigated as potential sites for the new field camp. Members of the Chesterfield Inlet HTO provided assistance and recommendations for the final site selection. The recommended location for Dunnedin's temporary field camp is on Crown Lands approximately 40 kilometres northeast from Rankin Inlet and 50 kilometres southwest from Chesterfield Inlet at 575,975mE and 6,990,875mN in Zone 15, UTM NAD83.

Dunnedin's temporary field camp will accommodate up to 20 people and will be comprised of:

- 1 - Kitchen Tent
- 1 - Office Tent
- 1 - Dry Tent
- 1 - Core Logging Tent
- 1 - Utility Tent
- 1 - Toilet Facility (Pactos)
- 7 - Crew Accommodations (1 tent will house the First Aid Attendant and First Aid Equipment)
- 1 - Generator Shack
- 1 - Portable Fuel-Fired Incinerator
- 2 – 5m x 20m Arctic Grade Containment Berms

Structures will consist of a combination of WeatherPort vinyl tents, canvas prospectors' tents and small plywood structures. All fuel storage and usage areas will be located at least 31 metres from any water body or drainage course.

At the end of the 2018 field season, the WeatherPort vinyl tents and plywood structures will be left standing and ready for use for Dunnedin's 2019 field program. All canvas tent covers will be removed from tent frames during the fall and winter shut down period. The camp will be fully closed and dismantled upon completion of all exploration activities. The site will then be reclaimed and restored to its original state.

3.2 Fuel Caches

Dunnedin's existing permits and licences include authorization for 3 fuel caches that together contain an aggregate of 75 drums (205L each) of jet fuel and 120 drums of diesel fuel. Dunnedin requests an increase in the amount of fuel to be cached on the Kahuna Property to support the field camp, the proposed 2018 winter drill program and the summer 2018 exploration program. The majority of fuel to be cached on the property will be transported via Challenger and cargo sled during winter months on the overland winter. Additional fuel may be delivered to site via helicopter during the summer months.

A main fuel cache will be established on the east side of the new field camp facilities at 576065mE 6990845mN UTM Zone 15, UTM NAD83. Fuel to be cached on the site will include:

- 150 – 205 L drums of diesel
- 150 – 205 L drums of jet fuel
- 10 – 205 L drums of gasoline
- 20 – 100 lb. cylinders of propane

Temporary supply caches of less than nine drums will be located at drill sites and bulk sampling sites to maintain operations of diamond drilling equipment and bulk sampling equipment, respectively.

Fuel Caches will be established and operated in accordance with Dunnedin’s Fuel Management Plan and Spill Prevention and Response Plan.

- All fuel drums will be stored in secondary containment berms.
- All secondary containment berms will be capable of holding 110 percent of the volume of the largest fuel reservoir that is housed within the secondary containment.
- All secondary containment will be of sufficient height and depth to hold any potential spill or failure.
- Secondary containment berms will be made of material (Arctic Grade) that is sufficiently durable to withstand Nunavut’s climate and the natural terrain.
- Secondary containment berms will be equipped with hydrocarbon filtration systems (rain drains) to safely remove water that is collected inside the berms.
- Secondary containment berms will be inspected daily during operations.
- Within the secondary containment berms, fuel drums will be stored in rows on their sides with bungs facing at the 3:00 and 9:00 position.
- Propane cylinders will be stored standing up and away from any potential sources of ignition.
- All drums, tanks and hoses will be regularly inspected for leaks.
- All fuel storage sites will be located a minimum of 31 metres from the normal high-water mark of any water body and will be inspected regularly.
- Spill Kits will be placed and will be easily identifiable with clear signage at each fuel storage site.
- “NO SMOKING” signs will be erected at each fuel storage area.
- Smoking, open flame and any potential sources of ignition are prohibited within 31 metres of any fuel storage site.
- Empty fuel drums will be removed from site regularly.

Dunnedin will endeavor to consume the majority of the cached fuel by the end of each season. Please refer to the “Fuel Management Plan” and “Spill Prevention and Response Plan” for more information.

3.3 Drill Sites

Reclamation of diamond drill or reverse circulation drill sites will be completed immediately following the completion of the drill hole and withdrawal of the drill rig from site. Prior to the mobilization and setup of the drill, site pictures will be taken to document the original state of the site. Site photos will also be taken following the completion of the drill hole. All debris and refuse will be removed

from the drill site prior to leaving the drill target. Casing will either be removed or will be cut off at ground level. A picket will be placed in the abandoned drill hole at completion documenting the hole number, azimuth, dip and end of hole depth.

All drill cuttings, including on-ice drilling, will be disposed at a minimum of 31m from the high water mark.

3.4 Bulk Sample Sites

Equipment and supplies will be transported overland by Caterpillar Challenger hauling sleds to the proposed bulk sample sites during the winter months. Transporting the equipment from site to site during the winter conditions allows for overland travel without disturbing or impacting the underlying ground and vegetation beneath the snow cover. Moving equipment during the summer months will require the support equipment to be dismantled for slinging by helicopter.

Photos will be taken to document the area of the bulk sample site before any ground disturbance has taken place. Site photographs will also be taken upon completion and reclamation.

Water running off of the bulk sample locations will be analyzed for quality to conform to water quality criteria set in the water licence.

Excavated material will be segregated into separate piles of vegetation, humus, topsoil and till comprising boulder, sand and gravel. Once the bulk sample has been extracted, the stockpiled material will be returned in reverse order; i.e. the sand, gravel and boulder till will be placed at the bottom of the trench followed by the stockpiled layers of topsoil, humus and surface vegetation. The trench site will be re-contoured (as best as possible in frozen conditions) to mimic the original landscape. Additional contouring and reclamation will be completed during the summer months, as needed.

4. Seasonal Shutdown

4.1 Buildings and Content

Dunnedin's temporary field camp will be subject to seasonal shutdowns. When work is anticipated for the subsequent year, wood structures and wood floors will be kept secured. The canvas tents will be removed from site for drying and storage. Vinyl Weatherhaven sleeping tents and the incinerator 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, tanks, pipes and hoses will be drained and stored inside to protect them over winter. Gas pumps may be removed from site for servicing and storage. All fuel lines between diesel stoves and their corresponding fuel tanks will be disconnected. Fuel tanks will be removed from their stands, valves turned off, and bungs secured and then placed in secondary containment for storage.

4.2 Fuel Caches and Chemical Storage

At the end of every field season, an inspection and inventory will be completed at each active fuel cache site. Photographs will document the state of the fuel cache upon seasonal shutdown. Empty drums will be removed from the site and returned to Rankin Inlet, any half barrels of fuel will be stored standing at an angle to prevent the accumulation of rain and snow from accessing the fuel. Full fuel drums will be stored on their sides with the bungs in the 3' and 9' o'clock position. Should damaged drums be encountered, fuel will be transferred to a good drum and the damaged drum identified and removed from circulation. Any spills identified will be treated as per the Spill Prevention and Response Plan. All chemicals, including cleaning products, will be stored in a sealed building for the winter.

4.3 Waste

Combustible Waste: All combustible waste will be incinerated in accordance with the Nunavut Environmental Guideline for the Burning and Incinerator of Solid Waste. 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 205L drums and removed from site regularly for disposal at an authorized facility.

Grey Water Sumps: Grey water sumps will be inspected and covered securely for the winter. A grease trap installed on kitchen drains ensures food grease and solids do not enter the sump. Stakes will be placed around the sump so that it is easily identifiable when the camp is opened up again each year. The grey water sump will be located at least 31 metres away from a water body.

Black water: The camp will use Pacto toilet facilities. Bags containing waste will be incinerated. Ash generated from black water incineration will be stored in designated, sealed metal 205L drums and removed from site for proper disposal. During seasonal shutdown, the Pacto toilets will be cleaned and the building secured for the winter.

Non-Combustible, Recyclable and Hazardous Waste: All non-combustible, recyclable and hazardous wastes will be packaged in appropriate containers, labelled and backhauled to Rankin Inlet and shipped south to an authorized disposal facility.

Please refer to the "Waste Management Plan" for additional information on waste management.

4.4 Drill Sites

Drill sites will be remediated upon completion of drilling and all debris will be collected and removed. Photographs will be taken before and after completion of the drilling activities. Once the drill is removed from the site, a picket will be placed at the collar location identifying the hole number, azimuth, dip and end of hole depth.

4.5 Bulk Sample Sites

Bulk sample sites will be remediated upon completion of bulk sampling activities and will be inspected before seasonal shutdowns. Photographs will document the state of the bulk sample site following reclamation.

Dunnedin will make best efforts to reclaim bulk sample locations within the year of sampling.

4.6 Contamination Cleanup

Soil that has become contaminated will be treated following Dunnedin's Spill Prevention and Response Plan and procedures. Before and after photos will be taken to document the contamination and the clean-up procedures implemented. All documentation associated with any spill will be attached as part of the Annual Report submitted to NWB, KIA, INAC and NIRB.

4.7 Inspection and Documentation

A complete inspection will be conducted of all areas prior to seasonal shutdown. Photographs will be taken to document conditions at the various work sites and inventories will be conducted. All appropriate agencies (KIA, INAC, NIRB, NWB, and WSCC) will be contacted and notified that exploration operations have ceased for the year.

5. Final Abandonment and Restoration

5.1 Buildings and Content

All buildings will be dismantled and removed. All wooden structures including floors will either be burned in a controlled open burn in compliance with the Municipal Solid Wastes Suitable for Open Burning Guidelines or removed. The burning of the tent floors and waste lumber will only proceed with the approval from the appropriate regulating authorities. As required, impacted sites may be re-seeded with indigenous species to encourage re-vegetation.

5.2 Equipment

All equipment used on site including diamond and reverse circulation drill and bulk sampling equipment will be dismantled and removed from the project area.

5.3 Fuel Caches and Chemical Storage

All fuel containers will be removed from site and fuel cache locations will be thoroughly inspected. Any signs of contamination will be cleaned up and debris will be removed. Contaminated soil will be handled as per the "Spill Prevention and Response Plan". Final site photographs will be taken and submitted in the final closure 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. Any contamination from chemicals found will be treated as per the “Spill Prevention and Response Plan”.

5.4 Waste

Combustible Waste: All combustible waste will be incinerated according to the “Environmental Guidelines for the Burning and Incineration of Solid Waste” and the “Canada-Wide Standards for Dioxins and Furans” by the Canadian Council of Ministers of the Environment. 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. The drum containing ash generated from the on-going incineration will be removed from site for authorized disposal.

Grey Water Sump: Upon final closure the grey water sump will be inspected and then backfilled and restored to the pre-existing natural contours of the land.

Black water: Upon final closure, Pacto toilets will be cleaned and removed from camp. The plywood structure housing the latrine facilities will be burned in a controlled open burn in compliance with the Municipal Solid Wastes Suitable for Open Burning Guidelines.

Non-Combustible, Recyclable and Hazardous Waste: All non-combustible, recyclable and hazardous wastes will be packaged in the appropriate containers and backhauled to Rankin Inlet for proper disposal.

Please refer to the “Waste Management Plan” for additional information on waste management.

5.5 Sumps

All drill sumps will be inspected and will be back filled and re-contoured as required. Photographs of each drill site sump will be included in the final closure report.

5.6 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 immediately following the completion of the drill hole and removal of the drilling equipment. Photographs will document the state of the drill hole site before and after the drilling activities. During the final year of operations, all of the drill sites will be inspected for contamination, debris and any further ground disturbance. Any contamination will be treated as per the “Spill Prevention and Response Plan”. Photographs will be submitted in the final closure report.

5.7 Bulk Sample Sites

During the final year of operation, all of the bulk sample sites will be re-visited and inspected for contamination, debris and signs of settling and ground disturbance. Any contamination will be treated as per the “Spill Prevention and Response Plan”. All debris will be removed and photographs will document the state of these sites at final closure and submitted along with the final closure report.

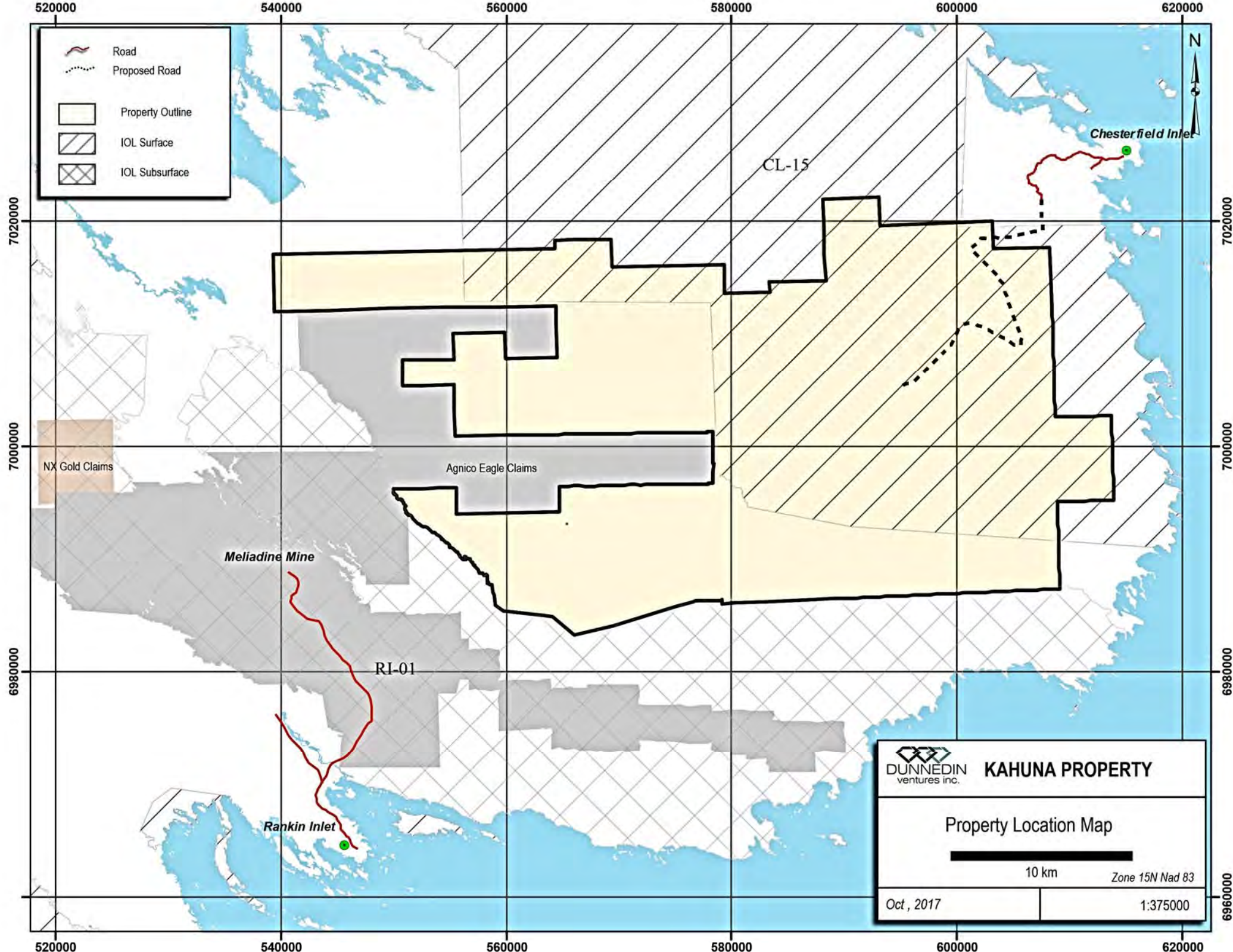
5.8 Contamination Cleanup


Any contamination resulting from Dunnedin’s exploration activities will be treated according to Dunnedin’s Spill Prevention and Response Plan.

5.9 Inspection and Documentation

A complete inspection will be conducted of all the work site areas. Photographs will be submitted in the final closure report documenting the conditions at each work site.


APPENDIX A: MAPS



**DUNNEDIN**
ventures inc.

KAHUNA PROPERTY

Property Location Map



10 km

Zone 15N Nad 83

Oct, 2017

1:375000

