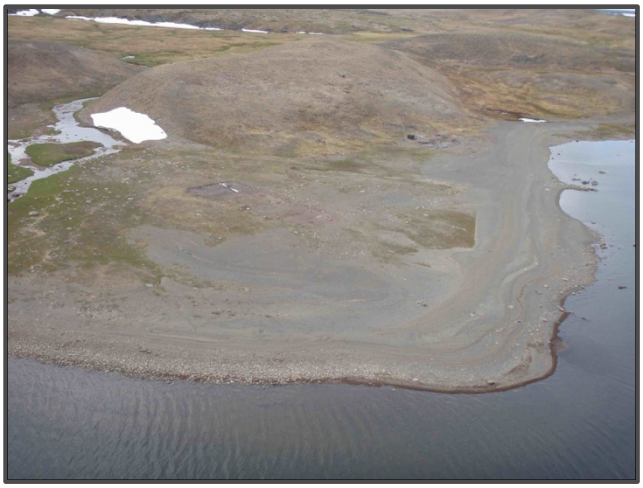
REHABILITATION OF ABANDONED MINERAL EXPLORATION SITES IN NUNAVIK

2017-2018
ACTIVITY REPORT



Kativik Regional Government

Renewable Resources, Environment, Lands and Parks Department

April 2018

KATIVIK

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The Kativik Regional Government (KRG) would like to formally acknowledge the community of Kangiqsujuaq for their participation during the cleanup efforts at SW-27 and WB-9.

The community of Kuujjuaq contributed to the project again this year during the cleanup at site PD-1 and the preparation of material for transportation from their village.

The community of Salluit participated once again this year during the cleanup at site SW-24 and the preparation of material for transportation at Kikkialik and in their village.

Finally, the community of Kuujjuaraapik contributed to the project this year during the cleanup of site GW-8 and the preparation of material for transportation from their village.

Mining companies currently active in Nunavik, especially Canadian Royalties and Glencore Canada Corporation, should furthermore be recognized for their continued cleanup initiatives on numerous sites located on or near their claims.

The KRG would like to thank Nunavik Rotors and their pilots for the continued professionalism and expertise throughout the transportation of material and employees during fieldwork and inspections.

Finally, the KRG would like to underline the continued financial and technical support it receives from the Makivik Corporation, the Ministère de l'Énergie et des Ressources naturelles (Energy and Natural Resources, MERN) and the Fonds Restor-Action Nunavik.

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1 INTRODUCTION

In 2001 and 2002, a verification of 193 possible abandoned mineral exploration sites was performed in the region of Nunavik. 90 of these sites were confirmed as such: 18 were classified as requiring major cleanup work, 27 needing intermediate cleanup work and 45 would require minor cleanup work.

In order to assist in the rehabilitation of abandoned mineral exploration sites in Nunavik, dating as far back as several decades, the mining industry recognized the need for action and in 2007, created the Fonds Restor-Action Nunavik (FRAN). In October 2007, the KRG, Makivik Corporation, the MERN and the FRAN signed a formal contribution agreement that made it possible to move forward with the cleanup of the eighteen sites requiring major cleanup, using the expertise developed during previous pilot projects undertaken by the KRG in 2005 and 2006. In 2012, this agreement was extended to allow for the rehabilitation work to continue and to include the group of sites requiring intermediate cleanup. In March 2017, a second addendum to the original agreement was signed by the four partners allowing for work to continue further, until March 2019.

In January 2012, a report was published that provides, in greater detail, the history of this project and summarizes the rehabilitation work undertaken on a number of abandoned mineral exploration sites in Nunavik over a seven-year period, from 2005-2011 (KRG, 2012a). This report is available for download at http://osiskogr.com/en/fonds-restor-action-nunavik-2/reports.

In 2017-2018, cleanup work continued in the Nunavik region and the following report describes the rehabilitation activities carried out on the five sites known as: PD-1, SW-27, SW-24, WB-9, GW-8, within the community of Salluit and inspections of sites requiring minor cleanup. Appendix 1 includes five maps that indicate these and all the 90 confirmed abandoned mineral exploration sites in relation to nearby communities in Nunavik.

Currently all the 18 sites requiring major cleanup and 27 sites requiring intermediate cleanup, originally identified in the 2001-2002 inventory have been rehabilitated.

2 CONTRIBUTION AGREEMENT

In March 2017, a second amendment to the agreement concerning the cleanup of abandoned mineral exploration sites in Nunavik was signed allowing for rehabilitation activities to be extended until March 31, 2019. The funding provided for in this agreement has been and continues to be used to carry out the rehabilitation of sites requiring major and intermediate cleanup. The project's Steering Committee will decide which sites requiring minor cleanup will be rehabilitated on a case by case

basis. The cost of the cleanup work in 2017-2018 was estimated at four hundred and twenty-two thousand, two hundred and seventy-five dollars ($422,275).

As per the agreement, the KRG is responsible for the management and logistics of the cleanup work carried out on all sites covered under the contribution agreement. The KRG is also responsible for drafting a timetable and anticipated budget for each year of work and for ensuring that the concerned Inuit communities are adequately informed of the cleanup being performed.

The Makivik Corporation contributes to the project by way of in-kind contribution in the form of marine and air transportation services for materials and labour to a maximum of two hundred thousand dollars ($200,000).

In the first agreement (2007-2012), the FRAN participated through a financial and in-kind contribution of seven hundred and fifty thousand dollars ($750,000). In the renewed agreement (2012-2017), the FRAN again contributed through a maximum financial and in-kind contribution of seven hundred and fifty thousand dollars ($750,000). Although it has reached its maximum financial contribution, FRAN continues to provide technical support and is an important contributor to the extension of the project.

The MERN provides an important financial contribution, covering the entire lifespan of the project, of which the maximum is four million, one hundred thousand dollars ($4.1 M).

3 SUMMARY OF PREVIOUS WORK

As of September 2017, all 18 sites requiring major cleanup have been successfully rehabilitated. This work, spanning twelve years, was undertaken in collaboration with various Inuit communities in Nunavik, the Naskapi Nation of Kawawachikamach, the Innu Nation of Matimekush Lac-John, various active mining companies in the region and other northern organizations. Table 1 provides a summary of the quantities of the waste removed from these sites from 2005-2018.

In 2011, the KRG Project Coordinator undertook inspections on a second group of sites classified as requiring intermediate cleanup. These 27 sites contain similar items found on the sites requiring major cleanup, only to a lesser extent. From 2006 to 2017 the KRG, various active mining companies and Cruise North Expeditions have initiated and successfully completed the rehabilitation of all 27 of these sites. Table 2 provides a summary of the quantities of the waste removed from these sites from 2006-2018.

In 2017, the KRG Project Coordinator undertook inspections on a third group of sites classified as requiring minor cleanup. These 46 sites contain very little material and

are considered as insignificant when compared with the previous two groups. In 2016 and 2017, KRG completed the rehabilitation of 4 of these sites (PD-1, PD-2, KUUJ-2 and SW-14) and confirmed that 16 others had been rehabilitated by another party. Table 3 provides a summary of the quantities of the waste removed from these sites. Quantities for sites that KRG did not clean were based on the original inventory from 2001-2002. Additionally, Table 4 summarizes the total quantity of material, by type, removed from all sites to date.

Table 1 Quantities of Waste Removed from 18 Abandoned Mineral Exploration Sites Classified as Requiring Major Cleanup Work, 2005-2017

Sector/ Site	Buildings burned or demolished (no.)	Equipment (no.)	Propane tanks (no.)	Reservoirs (no.)	Barrels (no.)	Diesel or other fuel (L)	Motor oil (L)	Grease	Other hazardous material	Transformers (T) or batteries (B) (no.)	Pipes, core trays, wood (m^3)	Debris (m^3)
Kawawachikamach												
KAW-35	19	1 muskeg + various	0	5	1000	4000	0	0	Acid, solvents, paint, oil filters, extinguishers	15 B	500+	200+
KAW-45	5	0	0	0	12	30	0	0	Naptha	0	15+	5+
Tasiujaq												
PJ-1	3 + 5 platforms	30	80	10	403	5100	54	5 kg	Paint, antifreeze, extinguishers	2 T 20 B	150+	200+
TQ-1	0	1 snowmobile	6	0	30	500	0	0	0	1 B	20+	40+
TQ-4	2	1 drill	8	0	156	200	0	0	0	0	10+	10+
Aupaluk												
PJ-10	1 platform	0	15	1	74	1400	280	40 L	0	1 B	50+	25+
PJ-17	11	11	40	0	285	500	2000	1 pail	0	1 T; 6 B	75+	100+
Kangirsuk												
TW	2 platforms	1 pipe threader	11	0	83	1230	0	110 L 2 kg	0	0	30+	20+
Kangiqsujuaq												
K-28	1 tent	1 motor	15	2	70	2000	0	0	$CaCl_2$	0	30+	25+
K-61	12	11	18	1	3600	5000	2	900 L	Acid, paint	5 B	150+	75+
WB-3	0	0	1	0	85	675	0	0	0	0	20+	5+
Salluit												
KV-1	0	0	0	0	50	0	0	0	0	0	30+	30+
SAL-1	6	0	15	0	336	1000	27	0	0	4 B	50+	10+
SW-27	0	1 small tractor + various	0	0	115	1000	15	11 pails	0	0	100 +	50+
SW-34	1 platform	0	42	0	1500	1000	0	0	Acid, powder, oil filters	20 B	50+	70+
SW-42	1	0	0	0	45	1000	12	0	0	0	10+	10+
WB-9	11	0	10	3	82	1300	10	0	fire extinguishers, cleaners, tar	1 B	100+	100+
Umiujaq												
WHA-1	9	0	0	0	28	280	0	0	Cleaners	0	50+	5+
TOTAL	**-**	**-**	**261**	**22**	**7 954**	**26 215**	**2 400**	**>1 275 L**	**-**	**3 T; 73 B**	**1 440+**	**980+**

Table 2 Quantities of Waste Removed from 27 Abandoned Mineral Exploration Sites Classified as Requiring Intermediate Cleanup Work, 2006-2017

Sector/ Site	Equipment (no.)	Propane tanks (no.)	Barrels (no.)	Diesel or other fuel (L)	Other hazardous material	Batteries (no.)	Debris
Kawawachikamach							
KAW-36			40	400			Wooden platform, plastic core trays, drilling pipes, old dumpsite, wood and metal debris
KAW-119			11				2 wooden platforms
KAW-59			3	100			4 wooden platforms 1 stove, 1 tarp, 1 canoe wood and metal debris
Kuujjuaq							
Gerido Lake		4	300	8 600			1 plastic reservoir 1 boat
P-24F		30 (small)	60	200			Wood and metal debris 2 stoves and pipes small dump site aluminium core trays
Tasiujaq							
TA-1		2	9				Wood debris Small dumpsite
TA-2			18				Aluminium core trays
TQ-6		2	10				3 stoves and pipes drilling pipes wood and metal debris small dumpsite cables and wires
TQ-10			1				3 large bladder 2 motors, tools metal debris
TQ-14		5	11			3	Drill rods, hoses
VP-11			20				Wooden debris from 3 collapsed buildings
Aupaluk							
G-24O4-3		4	50				Bed frames, tent poles, dumpsite
PJ-17 A		5	64			3	
PJ-19			63				
Kangirsuk							
QC-3		0	22				Small debris, 20 drill rods
Kangiqsujuaq							
I-32		1	30	820			1 dumpsite
K-27			20				Wood, wiring, piping
K-37	1 water heater		14				
K-49	1 plane	14	45				1 stove, piping, wood, wood and metal debris
KAN-1	1 helicopter		12	820		1	Helicopter debris (metal)
KAN-2	2 tripods, 1 drill, 1 motor, 1 winch				$CaCl_2$		50 pipes
KAN-4			75				
KAN-6	INUIT CAMP						
KAN-7	muskeg	18	75				2 oxygen tanks, metal, wood
KAN-10		1	25				Metal and wood, core trays
Salluit							
Parent Lake			4	400			
SW-24		19	52	900	Pail of grease		Boat pieces
Umiujaq/Kuujjuarapik							
GW-8			35				Old snowmobile 2 Quatrex bags of debris
TOTAL	**-**	**105**	**1 022**	**11 340**	**-**	**7**	

Table 3 Quantities of Waste Removed from Abandoned Mineral Exploration Sites Classified as Requiring Minor Cleanup Work in 2016 and 2017

Sector/Site	Equipment (no.)	Propane tanks (no.)	Barrels (no.)	Diesel or other fuel (L)	Other hazardous material	Batteries (no.)	Debris
Kawawachikamach							
KAW-28			2				Stove, water heater, small dump
Kuujjuaq							
***PD-1**			8				
***PD-2**			24				5 bed frames, 50 core boxes, stoves & pipes
***KUJ-2**				5,000			3 Quatrex bags, 2 water reservoirs
KAW-112			5				2 Quatrex bags, 1 water reservoir
Aupaluk							
PJ-19			13				
Kangiqsujuaq							
I-12			20				
K-36			11				
K-41			13				
KAN-3	Muskeg						
KAN-5		2	61				
KAN-8			60				
KAN-11	Muskeg						
KAN-12			8				
Salluit							
P-35G08-1002A	Fuel tank						Camp debris: stove, sink, pipes, debris
P-35G08-1003			1				Metal debris
SAL-2			4		2 pails grease		
***SW-14**		4	24		Machine oil, 2 batteries, fire extinguishers		Water heater, stove, pipes, hoses, camp debris, wood debris
SW-13			8				
TOTAL	**-**	**6**	**262**	**5,000**	**-**	**-**	

*Cleaned by KRG

Table 4 Total Quantity of Material Removed From All Sites To Date

Material	Quantity	Notes
Buildings burned or demolished	79	
Equipment: **Muskeg/Tractor/Vehicle** **Snowmobile** **Drill** **Engine/Generator** **Heavy Equipment** **Aircraft** **Boat**	 9 3 2 20 20 2 3	
Propane tanks	372	
Reservoirs	25	
Barrels	9 238	
Fuel (litres)	37 555	
Motor Oil (litres)	2 450	
Grease (litres)	1 400	
Batteries	82	
Other hazardous materials		Fire extinguishers, paint, oil filters, solvents, tar, cleaners, acid, antifreeze
Transformers	3	
Debris (m^3)	5 000	

Table 5 provides the list of all sites considered under the project and their rehabilitated status at the end of the 2017 cleanup season.

Table 5 Status of All Abandoned Mineral Exploration Sites Requiring Major, Intermediate and Minor Cleanup Work

Site Name	Latitude	Longitude	Status
SITES REQUIRING MAJOR CLEANUP			
KAW-45	55° 33.68' N	67° 21.20' W	Cleaned
KAW-35	55° 13.94' N	66° 07.27' W	Cleaned
PJ-1	58° 57.71' N	69° 35.85' W	Cleaned
TQ-1	57º 57.68' N	69 º 40.16' W	Cleaned
TQ-4	58º 15.23' N	70º 07.20' W	Cleaned
PJ-17	59° 20.29' N	69° 45.93' W	Cleaned
PJ-10	59° 15.07' N	70° 06.52' W	Cleaned
TW	60° 05.45' N	69° 55.48' W	Cleaned
K-28	61 º 34.65' N	73 º 14.75' W	Cleaned
K-61	61 º 33.25' N	73 º 27.25' W	Cleaned
WB-3	61 º 29.41' N	72 º 18.09' W	Cleaned
KV-1	61 º 25.64' N	76 º 45.46' W	Cleaned
SAL-1	61 º 31.14' N	74 º 53.01' W	Cleaned
SW-34	61 º 34.90' N	74 º 28.12' W	Cleaned
SW-27	61 º 28.76' N	76 º 22.93' W	Cleaned
SW-42	61 º 23.92' N	74 º 34.40' W	Cleaned

WB-9	61 º 27.35' N	74 º 33.22' W	Cleaned
WHA-1	56º 24.06' N	75º 59.40' W	Cleaned
SITES REQURING INTERMEDIATE CLEANUP			
KAW-36	55° 15.02'	66° 09.46'	Cleaned
KAW-59	56° 17.80'	67° 49.00'	Cleaned
KAW-119	57° 37.48'	66° 45.77'	Cleaned
P-24F	57° 01.54'	68° 53.20'	Cleaned
TA-1	58° 16.80'	69° 50.19'	Cleaned
TA-2	58° 17.48'	69° 56.34'	Cleaned
TQ-6	58° 17.92'	69° 57.37'	Cleaned
TQ-10	58° 06.36'	70° 09.10'	Cleaned
TQ-14	58° 19.36'	70° 14.30'	Cleaned
VP-11	57° 48.59'	69° 31.75'	Cleaned
G-24N04-3	59° 11.57'	69° 49.86'	Cleaned
PJ-17A	59° 20.54'	69° 43.81'	Cleaned
PJ-19	59° 18.91'	69° 46.06'	Cleaned
QC-3	60° 21.55'	70° 09.33'	Cleaned
I-32	61° 43.12'	72° 54.94'	Cleaned
K-27	61° 36.24'	73° 19.89'	Cleaned
K-37	61° 31.07'	73° 37.44'	Cleaned
K-49	61° 28.70'	73° 49.70'	Cleaned
KAN-1	61° 32.19'	72° 57.90'	Cleaned
KAN-2	61° 32.51'	73° 31.11'	Cleaned
KAN-4	61° 30.92'	73° 40.18'	Cleaned
KAN-6	61° 28.94'	73° 49.50'	Cleaned
KAN-7	61° 28.48'	73° 49.93'	Cleaned
KAN-10	61° 31.58'	72° 49.30'	Cleaned
Parent Lake	61° 33.43'	75 10.36'	Cleaned
SW-24	61° 18.75'	75° 44.00'	Cleaned
GW-8	55° 05.09'	78° 15.51'	Cleaned
SITES REQUIRING MINOR CLEANUP			
KAW-28	57° 28.27'	68° 11.97'	Cleaned
KAW-42A	56° 04.54'	67° 54.89'	insignificant
KAW-43	56° 04.43'	67° 15.96'	insignificant
KAW-54	55° 05.67'	67° 25.79'	insignificant
KAW-58	56° 16.45'	67° 47.21'	insignificant
KAW-60	56° 16.07'	67° 47.53'	insignificant
KAW-63	55° 54.17'	67° 06.03'	insignificant
KAW-67A	55° 10.89'	67° 31.49'	insignificant
KAW-69	55° 11.75'	67° 21.51'	insignificant
KAW-72	55° 08.10'	67° 13.65'	insignificant
KAW-5	56° 55.67'	68° 52.92'	insignificant
KAW-10	57° 27.76'	69° 15.49'	insignificant
KAW-26	56° 33.84'	68° 50.32'	insignificant
KAW-112	57° 40.68'	69° 34.16'	Cleaned
PD-1	57° 33.79'	69° 05.10'	Cleaned
PD-2	57° 05.67'	69° 04.56'	Cleaned
KUJ-2	61°34.64.4'	72°45.22.9'	Cleaned
PJ-9	59° 18.91'	69° 59.94'	Cleaned
KG-19	60° 26.79'	70° 10.85'	insignificant
KG-21	60° 18.63'	70° 57.45'	insignificant
QC-2	60° 24.82'	70° 09.67'	insignificant
I-12	61° 35.32'	73 35.85'	Cleaned
K-36	61° 31.39'	73 16.63'	Cleaned
K-41	61° 30.79'	73 44.74'	Cleaned
KAN-3	61° 31.63'	73° 37.28'	Cleaned
KAN-5	61° 30.19'	73° 45.28'	Cleaned
KAN-8	61° 30.55'	73° 45.45'	Cleaned
KAN-9	61° 36.73'	72° 44.56'	insignificant
KAN-11	61° 32.62'	73° 37.27'	Cleaned
KAN-12	61° 30.77'	73° 44.28'	Cleaned
G-35G08-1	61° 29.08'	74 26.55'	insignificant
P-35G08-1002	61° 29.22'	74° 28.35'	Cleaned

P-35G08-1002A	61° 29.18’	74° 27.55’	Cleaned
P-35G08-1003	61° 27.28’	74° 14.48’	Cleaned
SAL-2	61° 27.19’	74° 41.97’	Cleaned
SW-13	61° 34.00’	74° 38.14’	Cleaned
SW-14	61° 49.64’	75° 38.63’	Cleaned
SW-32	61° 34.73’	75° 26.75’	Insignificant
GW-5	55° 57.49’	76° 47.97’	Insignificant
PH-11	55° 58.97’	76° 41.79’	Insignificant
UD-1	56° 08.80’	76° 35.40’	Insignificant
UD-6	56° 06.41’	76° 30.23’	Insignificant
UM-1	55° 59.99’	76° 45.59’	Insignificant
UM-2	55° 56.67’	76° 42.50’	Insignificant
UM-3	55° 57.68’	76° 47.59’	Insignificant
GW-2	55° 44.48’	77° 01.95’	insignificant

4 GENERAL RESPONSE PLAN, 2017-2019

The *Agreement Concerning the Cleanup in Nunavik of Abandoned Mineral Exploration Sites Classified as “Major”,* originally signed in 2007 was amended in April 2012 to allow for funding to be continued for rehabilitation activities being carried out on abandoned mineral exploration sites in Nunavik. This funding was earmarked to complete cleanup work on the remaining sites requiring major cleanup as well as the cleanup of sites classified as requiring intermediate work. In 2017, a second addendum was signed and the 2017-2019 General Response Plan was prepared and contains the following sections: a description of the cleanup work to be carried out before March 2019; the proposed work schedule; the proposed budget for the work; a description of human resources; and a few details concerning the communication of results. A summary of the GRP is provided below. It is important to note that at the end of each year, the GRP is adjusted to better reflect the reality of the cleanup situation.

4.1 WORK TO BE COMPLETED UNDER THE GRP

In drafting the GRP, the work to be completed was broken down into the following categories: 1) field logistics, 2) the transportation and disposal of hazardous material, 3) the management of combustible non-toxic material, and 4) the management of non-combustible non-toxic material. Below is a brief summary of those categories.

4.1.1 Field Logistics

Summer is the busiest and most productive cleanup season. It allows workers easier access to the material on the sites and a greater number of daylight hours to operate. Summer fieldwork involves the cutting up and crushing of barrels, the transfer of residues to undamaged barrels, the gathering of hazardous material and waste, gathering of general debris, gathering and burning of combustible material, and facilitating, if necessary, the transportation of these materials during the winter.

Access by land, via all-terrain vehicle or boat, may be possible after taking into account the distance between each site and the nearest villages as well as topographical conditions. However, generally speaking, most sites are accessed by helicopter or float plane. Winter work involves the transportation of materials if the sites are within proximity to a village and accessible by snowmobile.

4.1.2 Transportation and Disposal of Hazardous Waste

All recoverable hazardous materials are sent to an appropriate recovery facility south of the province via marine transportation. The transfer of residues to undamaged marine containers, labeling and preparing of the material for transportation is carried out during summer fieldwork.

4.1.3 Management of Combustible Non-Toxic Material

Combustible non-toxic material is burned or left to decompose at each site. This material includes wood as well as buildings constructed from wood, aluminum and mineral wool insulation. Pursuant to Section 22 of the *Regulation Respecting the Quality of the Atmosphere*, a certificate of authorization is required to burn wood, shacks and buildings. Prior to burning any building, all hazardous materials are removed including emergency lights (lead and Ni-Cd battery cells), smoke detectors, fluorescent ballasts and fire system accumulators (Ni-Cd battery cells). Non-combustible material is removed including asphalt shingles, heating stoves, refrigerators, stove-ovens, bed frames, etc. Material remaining after burning (tin, glass wool, iron and wire) is managed with the non-combustible, non-toxic waste at the site. It is also possible that petroleum hydrocarbons at the sites will be used to ignite combustible material. In such cases, a certificate of authorization will be required pursuant to Section 23 of the *Regulation Respecting the Quality of the Atmosphere* for the open-air burning of petroleum hydrocarbons, which the KRG obtained in 2008.

4.1.4 Management of Non-Combustible Non-Toxic Material

At most of the sites, non-combustible non-toxic material represents the greatest quantity of debris (empty barrels, equipment parts, domestic appliances, core trays, wire meshing, etc.) and is the least likely to be harmful to the environment or to jeopardize the health of animals and humans. Notwithstanding, such material adversely affects the appearance of the landscape. For this reason, wherever possible all waste is removed from the sites. Batteries, oil, antifreeze and tires will be removed from equipment, transported from the sites and treated as hazardous material.

4.2 WORK SCHEDULE

Table 6 outlines the proposed work schedule for rehabilitation activities as set out in the 2012-2017 and 2017-2019 GRPs, between April 1, 2012 and March 31, 2019. In order to facilitate the work, cleanup activities are carried out, when possible, on sites located in the same sector.

Table 6 Tentative Work Schedule for 2012-2019 Cleanup Activities

Year / Site	Summer 2012	Summer 2013	Summer 2014	Summer 2015	Summer 2016	Summer 2017	Summer 2018	Winter 2018-2019
MAJOR SITES								
SW-34								
SW-27								
WB-9								
KV-1								
KAW-35								
PJ-1								
INTERMEDIATE SITES								
KAW-36								Summary Report 2012-2019
KAW-59								
KAW-119								
P-24F								
TA-1								
TA-2								
TQ-6								
TQ-10								
TQ-14								
VP-11								
G-24N04-3								
PJ-19								
QC-3								
KAN-10	CR							
KAN-2	CR							
KAN-7	CR							
Parent Lake								
SW-24								
GW-8								
MINOR SITES								
Inspection								
Cleanup (if necessary)								

CR = Cleaned by Canadian Royalties

4.3 BUDGET PROVISIONS, 2017-2019

Table 7 indicates the projected yearly budget, as set out on the 2017-2019 GRP, for carrying out rehabilitation work on the remaining abandoned mineral exploration sites requiring major and intermediate work, as identified in the 2001-2002 inventory. It should be noted that adjustments to the budget are made at the end of each cleanup season to better reflect the work remaining on sites and in communities.

Table 7 Projected Yearly Budget for 2017-2019 Rehabilitation Activities

YEAR	2017-2018	2018-2019	TOTAL
EXPENSES			
Coordinator salary (General Contract)	$50,000	$40,000	$80,000
Technician salary and benefits	$30,000	$20,000	$50,000
Worker salaries	$45,000	$20,000	$65,000
Professional/Technical salaries (General Contract)	$0,000	$0	$0
Transportation of waste (via south)	$35,000	$15,000	$50,000
Transportation of material/employees	$80,000	$50,000	$110,000
Disposal of waste (General Contract)	$10,000	$0	$0
Travel Airfare	$38,000	$25,000	$58,000
Travel Expenses	$15,000	$5,000	$18,000
Material/Equipment	$20,000	$5,000	$25,000
Communication and translation	$2,500	$3,000	$5,000
KRG training costs (Human Resources)	$7,000	$6,000	$12,000
Sub-total	**$332,500**	**$189,000**	**$483,000**
Administration (12%)	$39,900	$22,680	$57,960
Weather Condition Provision (15%)	$49,875	$28,350	$72,450
TOTAL	**$422,275**	**$240,030**	**$662,305**

4.4 HUMAN RESOURCES

Human resources for the project fall into two categories: 1) KRG employees, which is to say the project coordinator and environmental or field technicians, and 2) local workers.

The project coordinator works full-time on the project while the environmental technician or field supervisor works part-time during the summer season and winter season if necessary. Experience acquired in the previous work terms suggests that it is absolutely necessary to have one and in some case two technicians on site to complete the cleanup according to the schedule and to allow for more consistent logistical planning by the coordinator.

Local workers are hired to work on the project from the communities located closest to each site. This not only creates jobs, but it also contributes to increasing local know-how regarding contaminated site restoration and environmental project management. The Northern Villages are central to providing local workers for the rehabilitation work, including the payment of the workers' wages. The amounts paid to these workers are subsequently invoiced to the KRG who reimburses all related costs. This cooperation is extremely effective and permits the hiring of individuals

who are recognized in their communities. This kind of experience is also highly sought-after by mineral exploration companies during the cleanup of their sites and could therefore lead to future work.

Worker safety is also an important issue for those involved in rehabilitating the abandoned mineral exploration sites in Nunavik. Most of the sites are in isolated locations that cannot easily be reached from nearby villages. In summer, workers are usually transported by helicopter or floatplane. In some cases, the transporter does not remain at the site, therefore emergency planning is important. It is essential that each work team have an emergency plan and adequate communication systems to contact help, if necessary.

4.5 COMMUNICATIONS

At the beginning of each year, a letter is sent to each of the Northern Villages asking for their participation in the project and providing information regarding the work to take place on the sites near their community. At the end of each year, an activity report is sent to each of the partners involved in the cleanup work including those providing financial or in-kind contributions.

5 DESCRIPTION OF 2017-2018 REHABILITATION WORK

This section provides an updated description of the sites where cleanup work was carried out during the 2017-2018 season. In 2011, an inspection of these site was undertaken and data collected to better understand the type of work, manpower and equipment required and to estimate a timeframe for rehabilitation.

This year, the rehabilitation of sites SW-27, WB-9, PD-1, SW-24, and GW-8 was completed. Work was also undertaken in the communities of Salluit and Kuujjuaq to prepare material for transportation by ship. Additionally, inspections of the 46 sites requiring minor cleanup was undertaken throughout the region, in tandem with field work in each sector. The rehabilitation activities on each site is described in Section 5.1 with supporting photographs available in Appendix 2.

It should be noted that in 2017 a field technician was not available and therefore the Project Coordinator supervised the work on site and in communities when necessary. Nancy Dea remained as project coordinator in 2017-2018.

5.1 DESCRIPTION OF WORK

Kuujjuaq Sector

PD-1

The abandoned mineral exploration site known as PD-1 (57° 33.79' N, 69° 05.10' W) is located approximately 85 km southwest of Kuujjuaq. The debris at this site is located in one general area and is considered as a site requiring minor cleanup (Map 4).

In June 2016, the project coordinator and 3 workers from Kuujjuaq undertook rehabilitation activities on the site. It was a one-day campaign in which they removed 8 empty drums and 1 heavy-duty bag of small debris. This material was transported to Kuujjuaq by helicopter and stored in a marine container, already holding material removed from two other sites the previous year. This container of material will be shipped in 2018. The site is now complete and photos of this work can be found in Appendix 2.

Salluit Sector

SW-27

The abandoned mineral exploration site SW-27 (61°28.76' N, 76°22.93' W) is located roughly 90 km south-southwest of Salluit (Map 6). The 2001-2002 inventory ranks this site 12th in importance for major rehabilitation work. The site covers 0.2 km^2 and although originally thought to comprise four sectors, five sectors were actually found on site. Before rehabilitation activities, SW-27 contained a significant quantity of residual material and hydrocarbons residue.

In 2017, during the third year of cleanup if this site, the Project coordinator and 4 workers from Kangiqsujuaq removed the remaining material from the site. A helicopter transported 3 loads of metal rods, 3 full drums, an old stove and metal debris to Salluit. A small tractor was not removed from the site due its weight which proved too heavy for the helicopter to lift. The material from SW-27 was stored in a marine container in Salluit which was already holding material previously removed from another site. The container, with 4 tonnes of material, was shipped to a recycling facility in Montréal. The site is now complete and pictures of this work can be found in Appendix 2.

SW-24

Site SW-24 falls under the category of sites requiring intermediate cleanup (Map 4), however it is not specifically one single site. Several hundred drums and propane tanks have been spotted along the *Petite rivière de Puvirnituq* during previous inspections and by various Inuit informants in the past. Most barrels are located in

the downstream portion of the river on the south shore, near the site requiring major cleanup known as WB-9.

In August 2017, the Project Coordinator and 4 workers from Salluit undertook and completed the rehabilitation of site SW-24. During a two-day campaign, they collected 52 empty drums, 18 barrels with liquid, 17 propane tanks and a small volume of metal debris. The material was transported by helicopter to the Kikkialik mine, on Glencore Canada Corporation property. There the material was stored in a marine container and will be shipped by the mining company to a proper facility as part of their in-kind contribution to the project. This site is now complete and pictures of this work can be found in Appendix 2.

WB-9

Site WB-9, an abandoned mineral exploration site requiring major cleanup, is located next to Kenty Lake, roughly 100 km south-southeast of Salluit (Map 6). After having burned all combustible material at the site in 2015, a final sweep was conducted in August 2017 with the purpose of removing any smaller debris that may have been difficult to see while buildings burned or smoldered. During a one-day campaign, a magnet was used to collect the smaller debris such as nails and screws. In total 3 loads of material, weighing approximately 3,500 pounds, was removed from the site by helicopter and transported to the Kikkialik mine, on the property of Glencore Canada Corporation. There the material was stored in a marine container and will be shipped by the mining company to a proper facility as part of their in-kind contribution to the project. This site is now complete and pictures of this work can be found in Appendix 2.

Kuujjuaraapik Sector

GW-8

The site GW-8 is located south-west of the community of Kuujjuaraapik (55° 05.09' N, 78° 15.51' W) and falls under the category of requiring intermediate cleanup (Map 4).

In September 2017, the project coordinator and 3 workers from the community of Kuujjuaraapik conducted a one-day cleanup campaign at the site. A small secondary site was discovered to the east of GW-8 and was also rehabilitated. In total, 35 drums, a small engine part, an old snowmobile and 2 heavy-duty bags of small debris was removed from the site and transported by helicopter to Kuujjuaraapik. The material was stored in a marine container and was shipped to an appropriate recycling facility in November 2017. 10 tonnes of material were removed from the site, which is now complete. Pictures of this work can be found in Appendix 2.

5.2 2017-2018 EXPENDITURES

Table 8 indicates the calculated expenditures during the fieldwork undertaken in the 2017-2018 season. Some expenses were under or over-estimated from previous cost assessments due to weather conditions and less days spent on some sites.

Table 8 2017-2018 Expenditures

INCOME	
KRG surplus	$0
MERN income	$221 252
FRAN income	$0
Other	$0
TOTAL	**$221 252**

IN-KIND CONTRIBUTION	
Glencore Canada Corporation	$4 725
Canadian Royalties	$3 640
TOTAL	**$8 365**

EXPENDITURES*	**2017**
Travel & Accommodations	$19 302
General Contracts	$187 717
Salaries & Fringe Benefits	$0
Purchase of Materials	$547
Administrative Charges	$13 686
TOTAL:	**$221 252**

*Source: 2017 KRG Financial Statement

6 DESCRIPTION OF 2018-2019 REHABILITATION WORK

Currently, all of the 18 sites categorized as requiring major cleanup and all of the 27 sites categorized as requiring intermediate cleanup are complete. Concerning the sites requiring minor cleanup, 20 of the 46 sites are complete with the remaining sites containing very little material and are considered as insignificant. A map of all these sites, indicating their location relative to Nunavik communities and their status can be found in Appendix 1.

During the 2017 cleanup campaign, the project coordinator was made aware of 22 previously unknown sites located throughout Nunavik. These sites were either discovered during fieldwork or inspections on the territory, or by people frequenting the area such as pilots and hunters. Site coordinates and descriptions were noted and sent to the MERN who verified each site as either being located on an active claim, an

expired claim or having no historical claim associated with the material. Table 9 provides a summary of this information while photographs of these sites can be found in Appendix 3. A map of these newly found sites, indicating their location relative to Nunavik communities, can be found in Appendix 1.

Table 9 List of Recently Located Abandoned Mineral Exploration Sites in Nunavik, 2017

Site Name	Latitude	Longitude	Description	Claim Status (Notes)	Expiration
KAW-01	56° 26'36.7"	68° 08'05.1"	Looks recent: 9 buildings, airstrip, lots of haz mat, dumpsite, 60 drums	Active	2019/09/04
Gerido-1	58° 14'063"	69° 55'457"	7 drums, scattered debris, generator	Active	2019/11/06
Gerido-2	58° 14'525"	69° 55' 366"	9 drums and debris	Active	2019/11/06
Gerido-2A	58° 14'586"	69° 55' 705"	16 drums and debris	Active	2019/11/06
Gerido-3	58° 13'466"	69° 56' 368"	80 drums, dumpsite, collapsed building, platform, debris	Active	2019/11/06
Gerido-4	58° 15'1"	69° 55' 3"	8 drums, wood debris	Active	2019/11/06
Gerido-5	58° 15'1"	69° 54' 7"	Approximately 70 drums (along shore and in bushes), core trays, drill rods	Active	2019/11/06
Gerido-6	58° 15'5"	69° 54' 6"	2 drums	Active	2019/11/06
Jordon Lake-1	58° 08'485"	70° 10' 641"	Many core trays, 35 drums, 7 propane tanks, muskeg, modern stove, generator, building, debris	Expired	2012/09/29
Jordon Lake-2	58° 07'3"	70° 12' 9"	Compete drill rig inside shelter, many drill rods, small tractor, generator, few drums and debris	Expired	2012/09/29
Jordon Lake-3	58° 07'2"	70° 12' 2"	2 sectors with 15 drums, 2 water heaters, drill rods, hoses, wood, small debris	Expired	2012/09/29
Jordon Lake-4	58° 06'8"	70° 12' 6"	26 drums in a group, small boat in bushes	Expired	2012/09/29
GR-1*	59° 46'651"	65° 26'111"	25 drums	NO HISTORICAL CLAIM	

GR-2	59°21	64°38	50 drums, 3 wooden structures, propane tanks	Expired	2012/10/20
GR-3	59°20	64°37	drill	Expired	2008/06/18
KG-1*	59° 46'5"	69° 59'6"	Pile of about 120 drums, core trays, old campsite with scattered debris and dumpsite	Expired (Located outside, just north of mining property)	2015/08/24
Ammaluttuq Lake*	60° 16'6"	70° 57'9"	1st pile: 37 drums & 14 propane tanks. 2nd pile: 32 drums. Scattered debris and drums (about 10), dump site, 2 batteries	NO HISTORICAL CLAIM	
Vincenza Lake	61° 25'06"	72° 51'41"	30 drums (scattered along shore), 2 batteries, 5 propane tanks, dump site, scattered debris	Expired	2013/01/15
Watts Lake-1	61° 49'09"	74° 10'11"	20-30 drums	Expired (Claims close to location)	2006/07/28
Watts Lake-2	61° 50'55"	74° 13'53"	20-30 drums	Expired	2006/07/28
Lac Gundeau	61° 58'68"	73° 62'58"	75 drums	Expired	2012/12/10
SW-27 C*	61° 30'37"	76° 02'34"	15 drums, 4 propane tanks, wooden debris	Active (Inside "Projected protected area – Kovik River". Located north of mining property)	2018/11/28
SW-27 D	61° 28'97"	76° 05'64"	15 drums, 12 propane tanks, wooden debris, boxes	Active	2018/11/28

* Sites not located on active or historical claims

During their December 7th, 2017 meeting, the project's steering committee, with representatives from each of the 4 partners who signed the funding agreement, discussed the potential 2018-2019 activities. It was decided that due to the size and amount of material found on the 4 newly discovered sites that are not located on either active or expired claims, these would be made a priority for rehabilitation. Below is a description of these sites, their designated category, and the work that will be carried out in 2018-2019.

Kangiqsualujjuaq Sector

GR-1

The abandoned mineral exploration site GR-1 (59°46'651"N, 65°26'111"W) is located northeast, along the coast from the community of Kangiqsualujjuaq. Approximately 25 drums are located on site and is considered as requiring intermediate cleanup.

The KRG will need to coordinate one or two days of fieldwork with the Northern Village of Kangiqsualujjuaq. A container will be needed in the community and the material will be transported there by helicopter from the site. There are currently no photographs of this site.

Kangirsuk Sector

KG-1

The abandoned mineral exploration site KG-1 (59°46'5"N, 65°59'6"W) is located 28 km southwest from the community of Kangirsuk. The site could be considered as requiring major cleanup due to the volume of material found there: 120 drums, scattered debris, core trays and a dumpsite.

The KRG will need to coordinate with the Northern Village of Kangirsuk in order to undertake the rehabilitation of this site. It would be advisable to transport the mobile drum crusher, currently located in Kuujjuaq, to this site in the summer. At least five days will be needed to crush the barrels and transport them, and other debris, to the community where they can be stored in a marine container and shipped to an appropriate recycling facility.

KG-2 (Amaluttuq Lake)

The abandoned mineral exploration site KG-2 (60°16'6"N, 70°57'9"W) is located on Amaluttuq Lake, approximately 60 km from the community of Kangirsuk. This site is considered as requiring intermediate cleanup and consists of 2 sectors, each with a pile of approximately 35 barrels. Other debris includes 14 propane tanks, 10 scattered barrels, a dumps site and 2 batteries.

It is advised that this site be cleaned in conjunction with KG-1. Teams of workers and a supervisor can be based on both sites during the same field session to maximize helicopter use. Again, the drum crusher can be transported to this site and an estimated three days would be needed to crush the barrels and have them, and the other debris, brought to Kangirsuk by helicopter. The material will then be stored in a marine container and shipped to an appropriate recycling facility.

Salluit Sector

SW-27C

The abandoned mineral exploration site SW-27C (61°30'37"N, 76°02'34"W) is located approximately 90 km south southwest from the community of Salluit. It was given this name due to its proximity to the site requiring major cleanup known as SW-27, which was competed in 2017.

Site SW-27C has approximately 15 drums, 4 propane tanks and scattered wood and metal debris and is considered as requiring intermediate cleanup work. KRG will need to coordinate the cleanup campaign with the community of Salluit. It might be possible to undertake the work at this site while returning to SW-27 with a mobile welding machine that can be used to cut the small tractor remaining there into manageable pieces. Material from these two sites can be transported to Kikkialik by helicopter. This will depend on collaboration with Glencore Canada Corporation.

It should also be noted that this site is located near active claims (one of which contains another new site known as SW-27D) that are currently owned by Orford Mining. The KRG could inform the company of the material found on these sites and ask for their assistance in the rehabilitation process.

6.1 PROJECTED BUDGET FOR 2018-2019

Table 10 indicates the projected budget for carrying out rehabilitation work on the 4 newly found sites (GR-1, KG-1, KG-2 and SW-27C) during the 2018-2019 cleanup season.

Table 10 Projected 2018-2019 Budget

INCOME	
KRG surplus 2017	$0
MERN income	$255,300
FRAN income	$0
Other	$
TOTAL	**$255,300**

IN-KIND CONTRIBUTION					
Site	**GR-1**	**KG-1**	**KG-2**	**SW-27C**	**Total**
Glencore Canada Corporation				$10,000	$10,000
Orford Mining				$5,000	$5,000
TOTAL	**$**	**$**	**$0**	**$15,000**	**$15,000**

EXPENSES					
Site	**GR-1**	**KG-1**	**KG-2**	**SW-27C**	**TOTAL**
Coordinator salary (General Contract)	$10,000	$10,000	$10,000	$10,000	**$40,000**
Technician salary and benefits	$5,000	$5,000	$5,000	$5,000	**$20,000**
Worker salaries	$5,000	$5,000	$5,000	$5,000	**$20,000**
Professional/Technical salaries (General Contract)	$0	$0	$0	$0	**$0**
Transportation of waste (via south)	$5,000	$5,000	$5,000	$5,000	**$20,000**
Transportation of material/workers	$15,000	$15,000	$15,000	$15,000	**$60,000**
Disposal of waste (General Contract)	$5,000	$5,000	$5,000	$5,000	**$20,000**
Travel Airfare	$5,000	$5,000	$5,000	$5,000	**$20,000**
Travel Expenses	$2,000	$2,000	$2,000	$2,000	**$8,000**
Material/Equipment	$2,000	$2,000	$2,000	$2,000	**$8,000**
Communication and translation	$500	$500	$500	$500	**$2,000**
KRG training costs (Human Resources)	$1,000	$1,000	$1,000	$1,000	**$4,000**
Sub-total	**$55,500**	**$55,500**	**$55,500**	**$55,500**	**$222,000**
Weather condition provision (15%)	$8,325	$8,325	$8,325	$8,325	$33,300
TOTAL	**$68,825**	**$68,825**	**$68,825**	**$68,825**	**$255,300**

7 REFERENCES

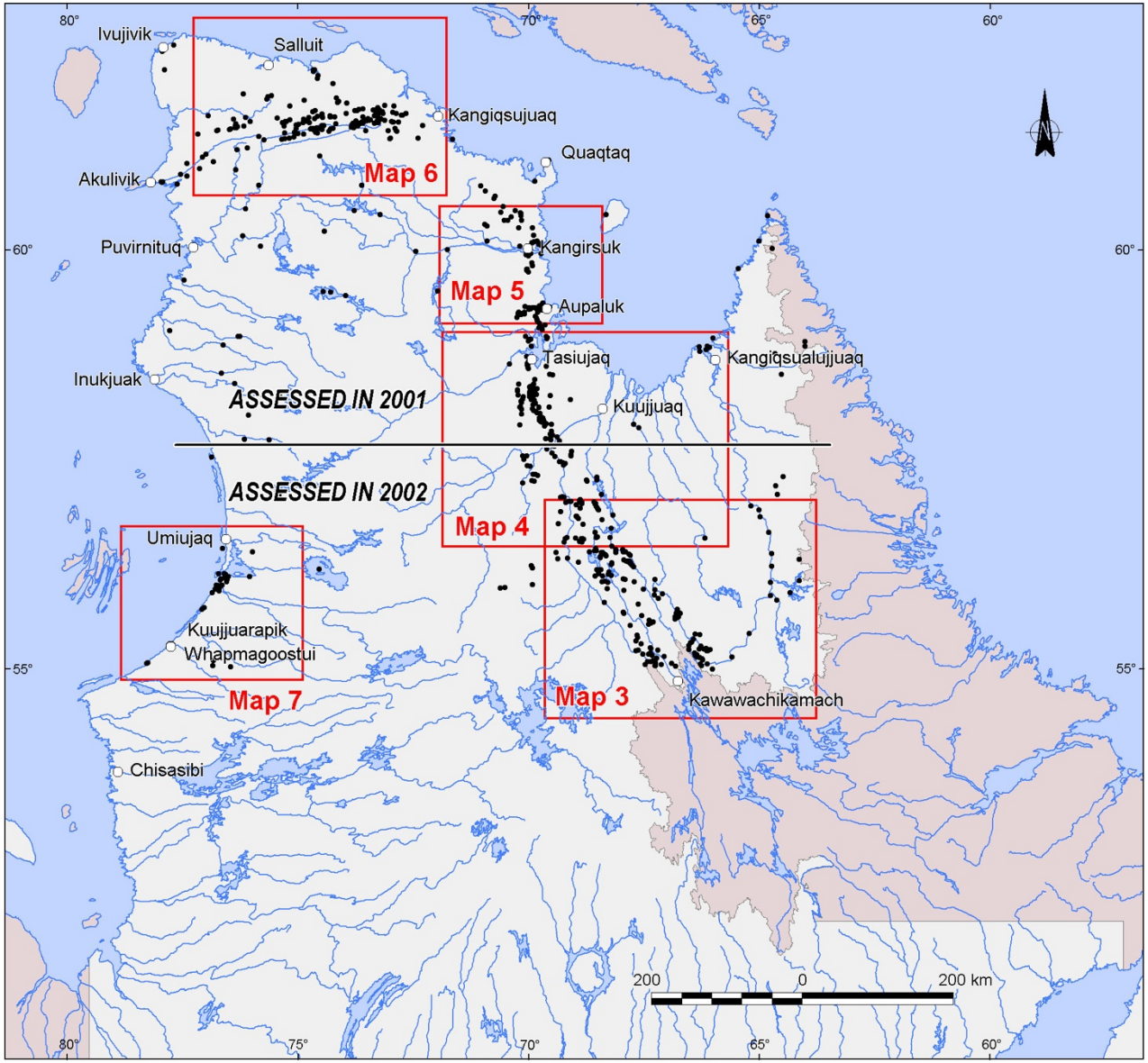
Kativik Regional Government. 2012a. *Abandoned Mineral Exploration Sites in Nunavik Rehabilitation Project. 2005-2012*
Summary Report and Update of the General Response Plan. Renewable Resources, Environment, Lands and Parks Department of the Kativik Regional Government, Kuujjuaq. 322 p. and appendices.

Kativik Regional Government. 2012b. *General Response Plan, 2012-2017: For the Rehabilitation of Abandoned Mineral*
Exploration Sites in Nunavik. Renewable Resources, Environment, Lands and Parks Department of the Kativik Regional Government, Kuujjuaq. 12 p.

APPENDIX 1

Maps Showing the Locations and Status of Abandoned Mineral Exploration Sites in Nunavik

LIST OF MAPS


Ivujivik
Salluit
Kangiqsujuaq
Quaqtaq
Akulivik
Map 6
Puvirnituq
Kangirsuk
Map 5
Aupaluk
Tasiujaq
Kangiqsualujjuaq
Inukjuak
ASSESSED IN 2001
Kuujjuaq
ASSESSED IN 2002
Map 4
Umiujaq
Kuujjuarapik
Whapmagoostui
Map 7
Map 3
Kawawachikamach
Chisasibi
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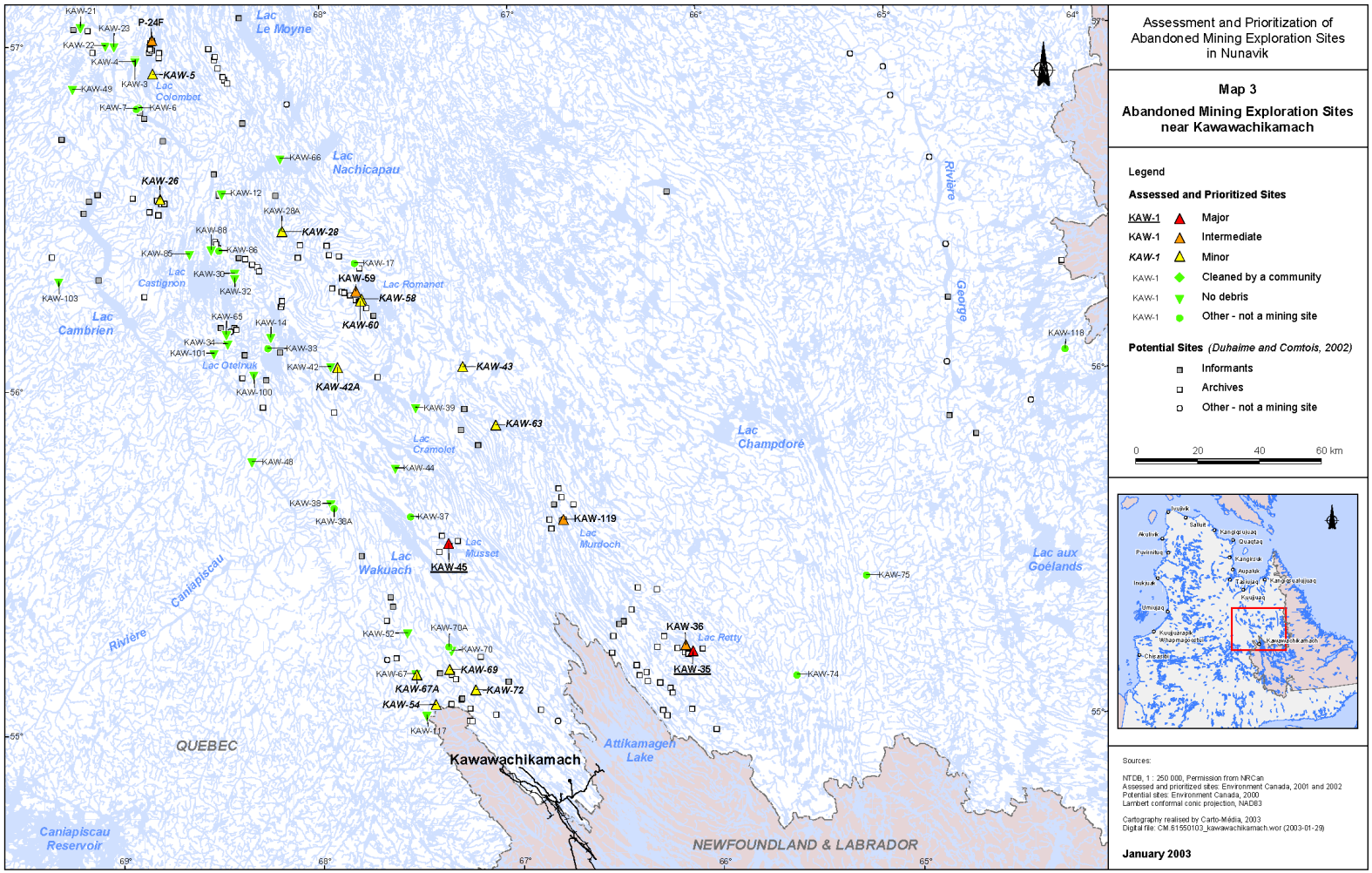
80°
75°
70°
65°
60°
55°


Assessment and Prioritization of Abandoned Mining Exploration Sites in Nunavik
Map 3
Abandoned Mining Exploration Sites near Kawawachikamach
Legend
Assessed and Prioritized Sites
KAW-1 Major
KAW-1 Intermediate
KAW-1 Minor
KAW-1 Cleaned by a community
KAW-1 No debris
KAW-1 Other - not a mining site
Potential Sites (Duhaime and Comtois, 2002)
Informants
Archives
Other - not a mining site
0 20 40 60 km
Sources:
NTDB, 1 : 250 000, Permission from NRCan
Assessed and prioritized sites: Environment Canada, 2001 and 2002
Potential sites: Environment Canada, 2000
Lambert conformal conic projection, NAD83
Cartography realised by Carto-Média, 2003
Digital file: CM.61550103_kawawachikamach.wor (2003-01-29)
January 2003
Lac Le Moyne
Lac Nachicapau
Lac Castignon
Lac Cambrien
Lac Otelnuk
Lac Romanet
Lac Cramolet
Lac Champdoré
Lac Wakuach
Lac Musset
Lac Murdoch
Lac Retty
Lac aux Goélands
Rivière Caniapiscau
Rivière George
Attikamagen Lake
Caniapiscau Reservoir
QUÉBEC
NEWFOUNDLAND & LABRADOR
Kawawachikamach
P-24F
KAW-5
KAW-26
KAW-28
KAW-59
KAW-58
KAW-60
KAW-42A
KAW-43
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KAW-119
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KAW-36
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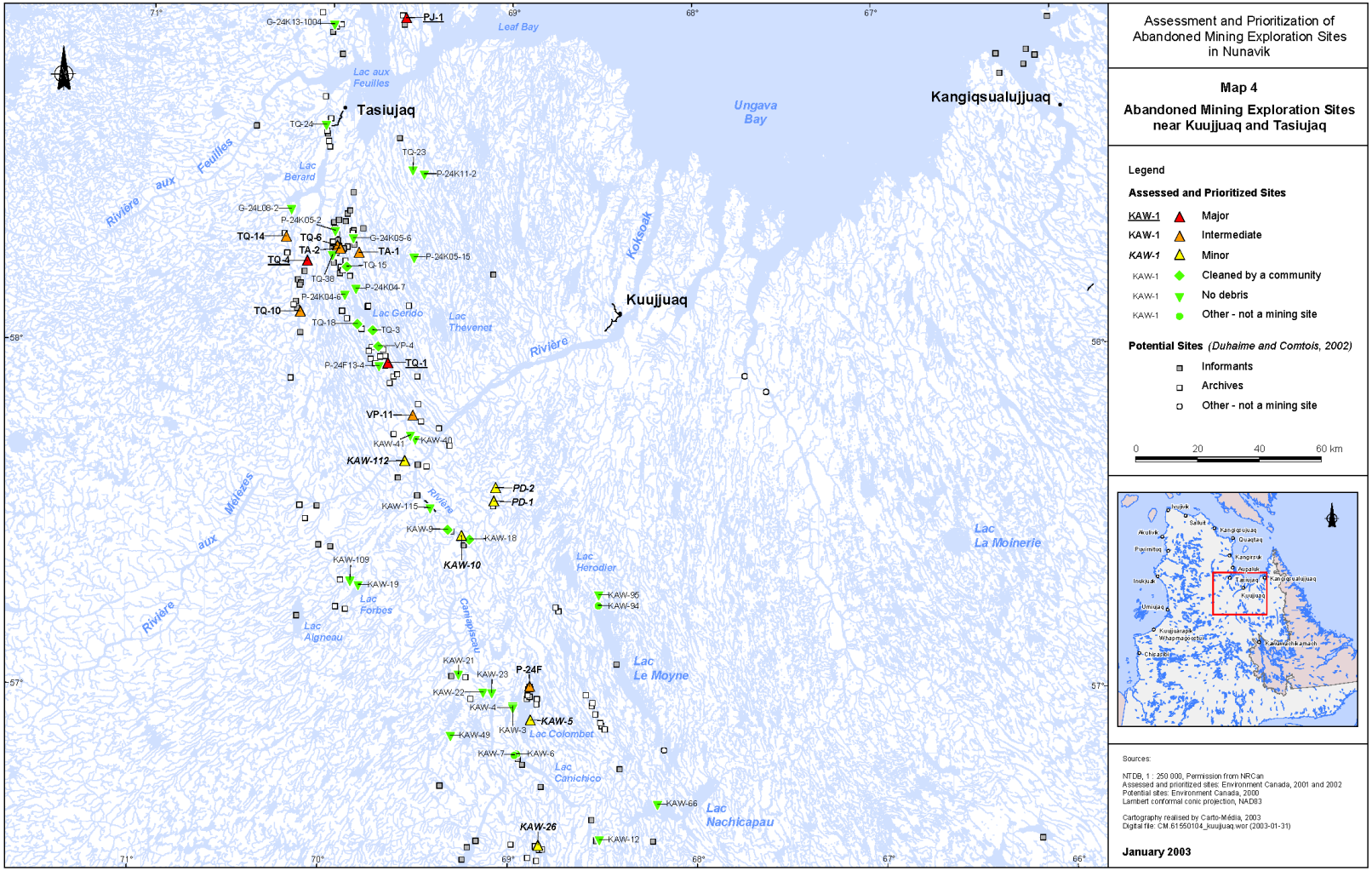
KAW-69
KAW-67A
KAW-72
KAW-54


Assessment and Prioritization of Abandoned Mining Exploration Sites in Nunavik
Map 4
Abandoned Mining Exploration Sites near Kuujjuaq and Tasiujaq
Legend
Assessed and Prioritized Sites
KAW-1 Major
KAW-1 Intermediate
KAW-1 Minor
KAW-1 Cleaned by a community
KAW-1 No debris
KAW-1 Other - not a mining site
Potential Sites (Duhaime and Comtois, 2002)
Informants
Archives
Other - not a mining site
0 20 40 60 km
Sources:
NTDB, 1 : 250 000, Permission from NRCan
Assessed and prioritized sites: Environment Canada, 2001 and 2002
Potential sites: Environment Canada, 2000
Lambert conformal conic projection, NAD83
Cartography realised by Carto-Média, 2003
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January 2003
Tasiujaq
Kangiqsualujjuaq
Kuujjuaq
Leaf Bay
Ungava Bay
Lac aux Feuilles
Rivière aux Feuilles
Lac Berard
Lac Gerido
Lac Thevenet
Rivière Koksoak
Lac La Moinerie
Lac Herodier
Lac Forbes
Lac Algneau
Rivière aux Mélèzes
Rivière Caniapiscau
Lac Le Moyne
Lac Colombet
Lac Canichico
Lac Nachicapau
PJ-1
TQ-24
TQ-23
P-24K11-2
TQ-14
TQ-6
TA-2
TA-1
TQ-4
TQ-15
TQ-36
TQ-10
TQ-18
TQ-3
VP-4
TQ-1
VP-11
KAW-41
KAW-40
KAW-112
PD-2
PD-1
KAW-115
KAW-9
KAW-18
KAW-10
KAW-109
KAW-19
KAW-95
KAW-94
KAW-21
KAW-23
P-24F
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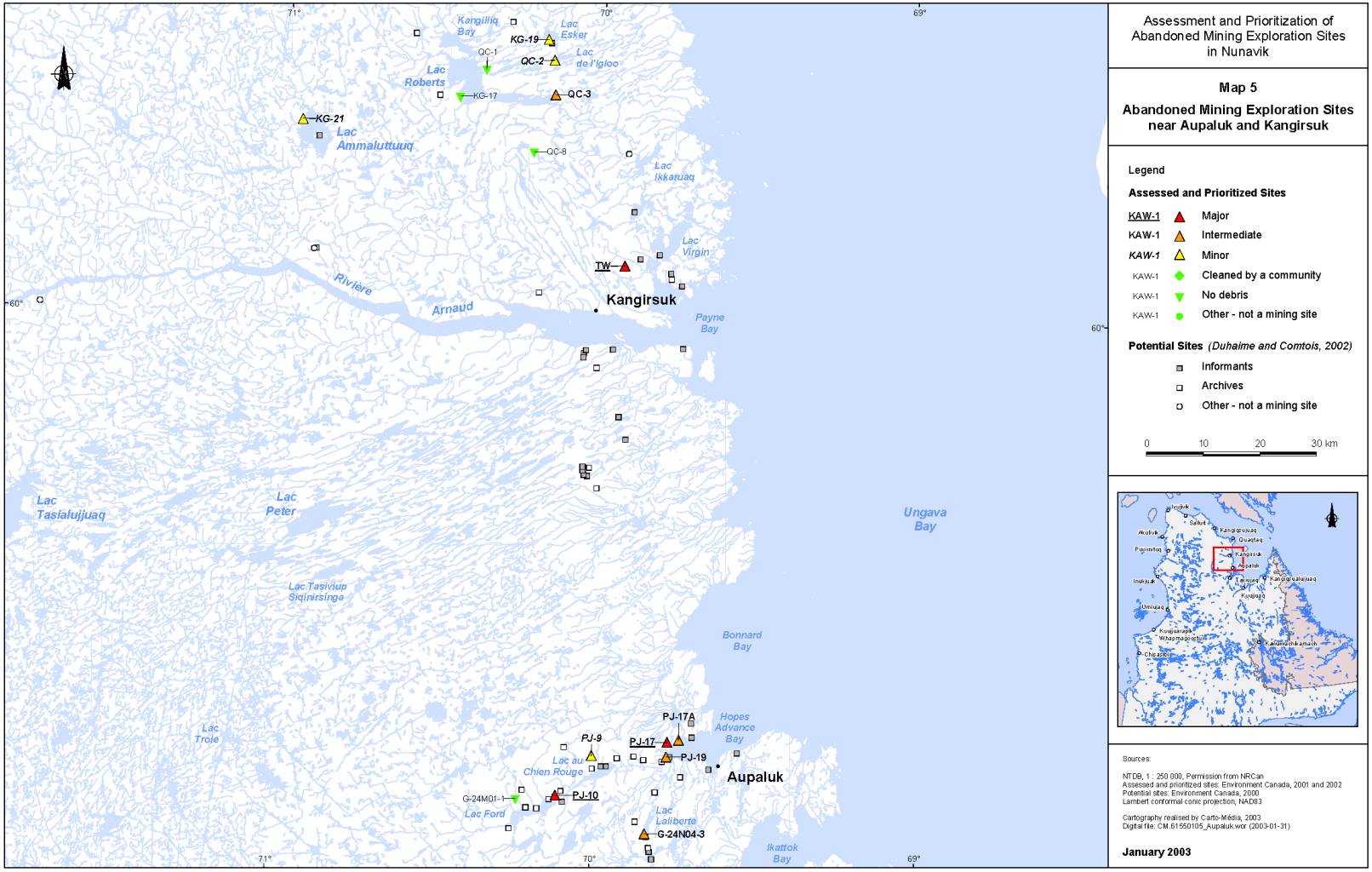
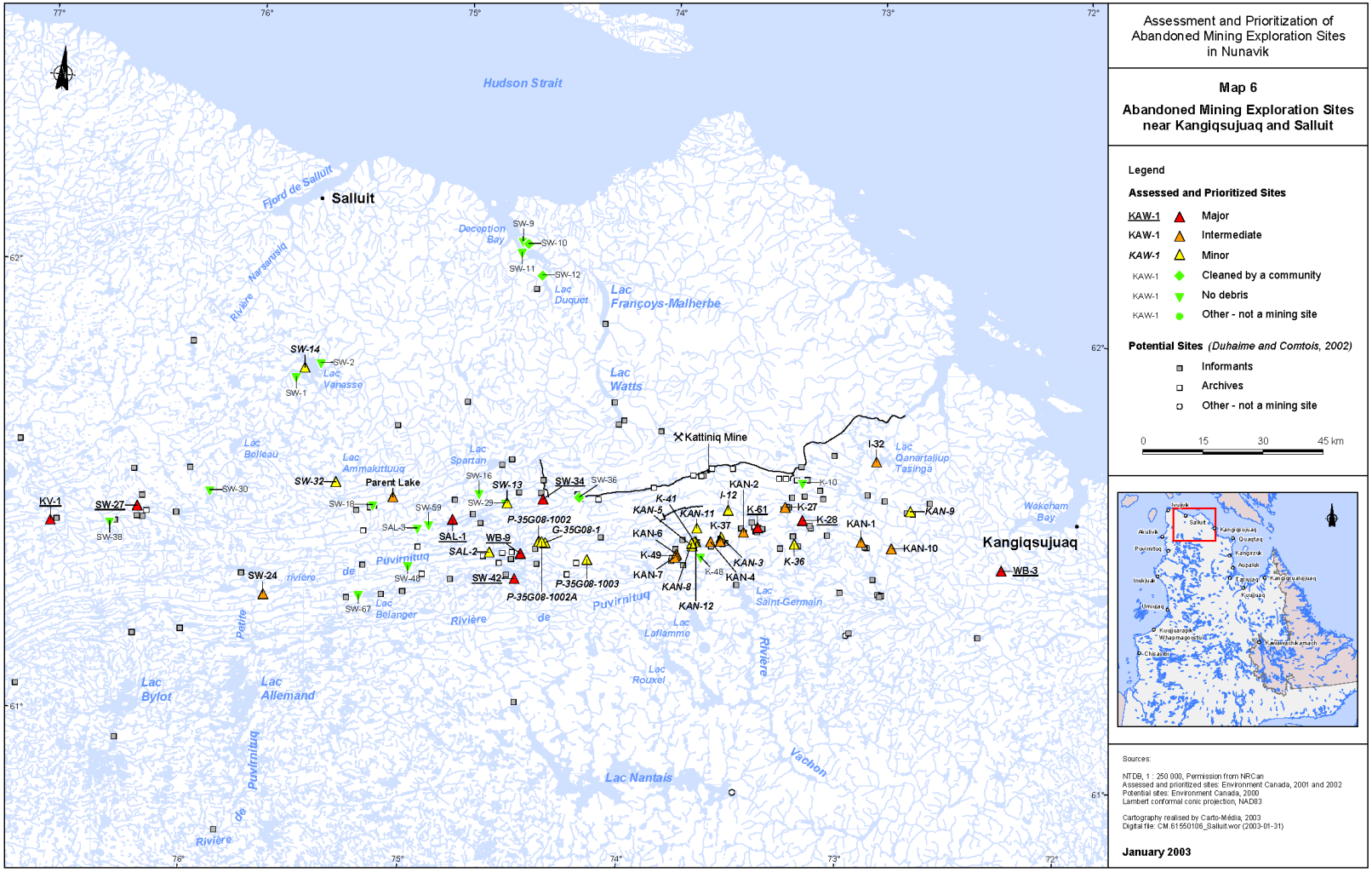
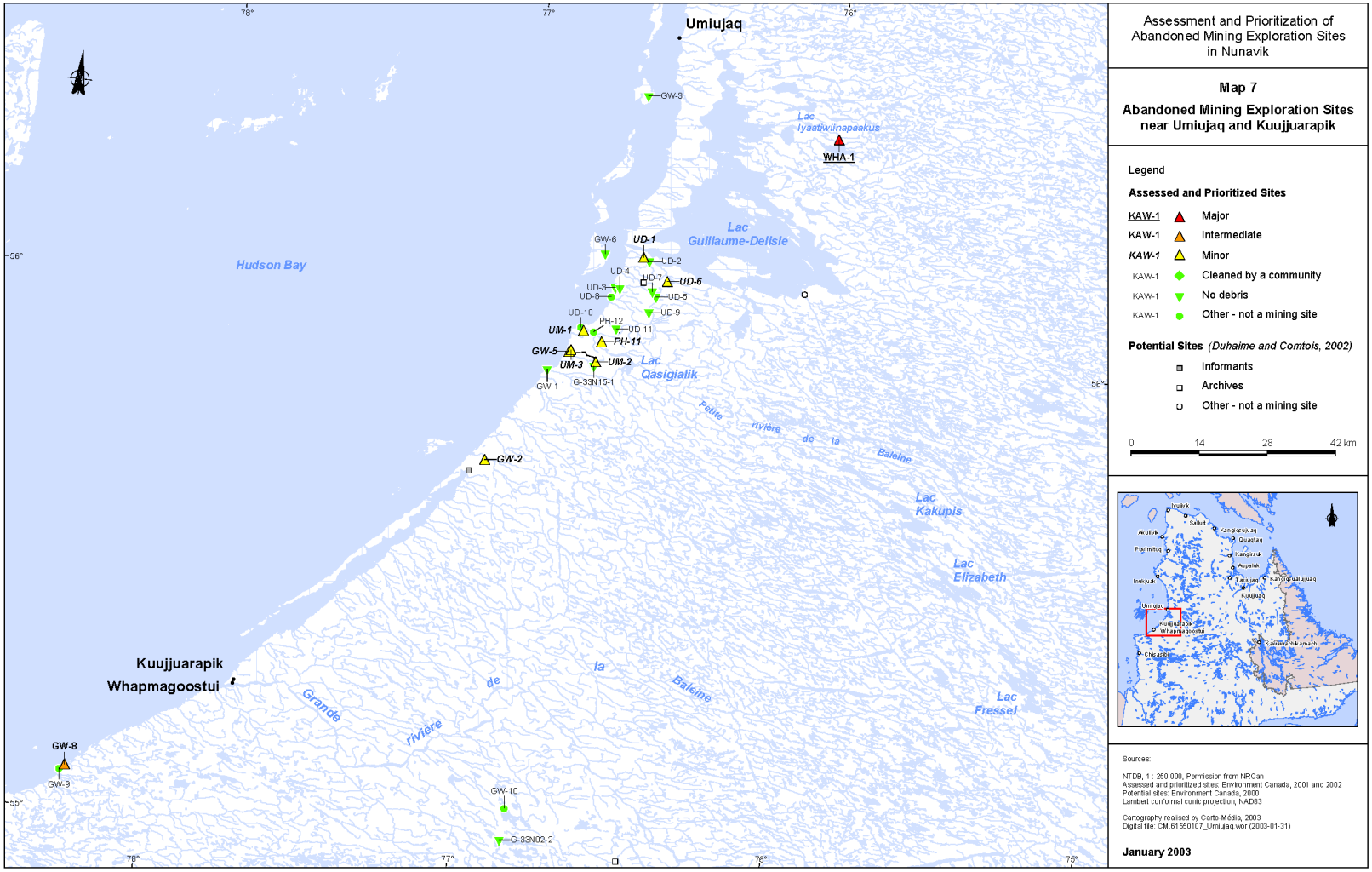
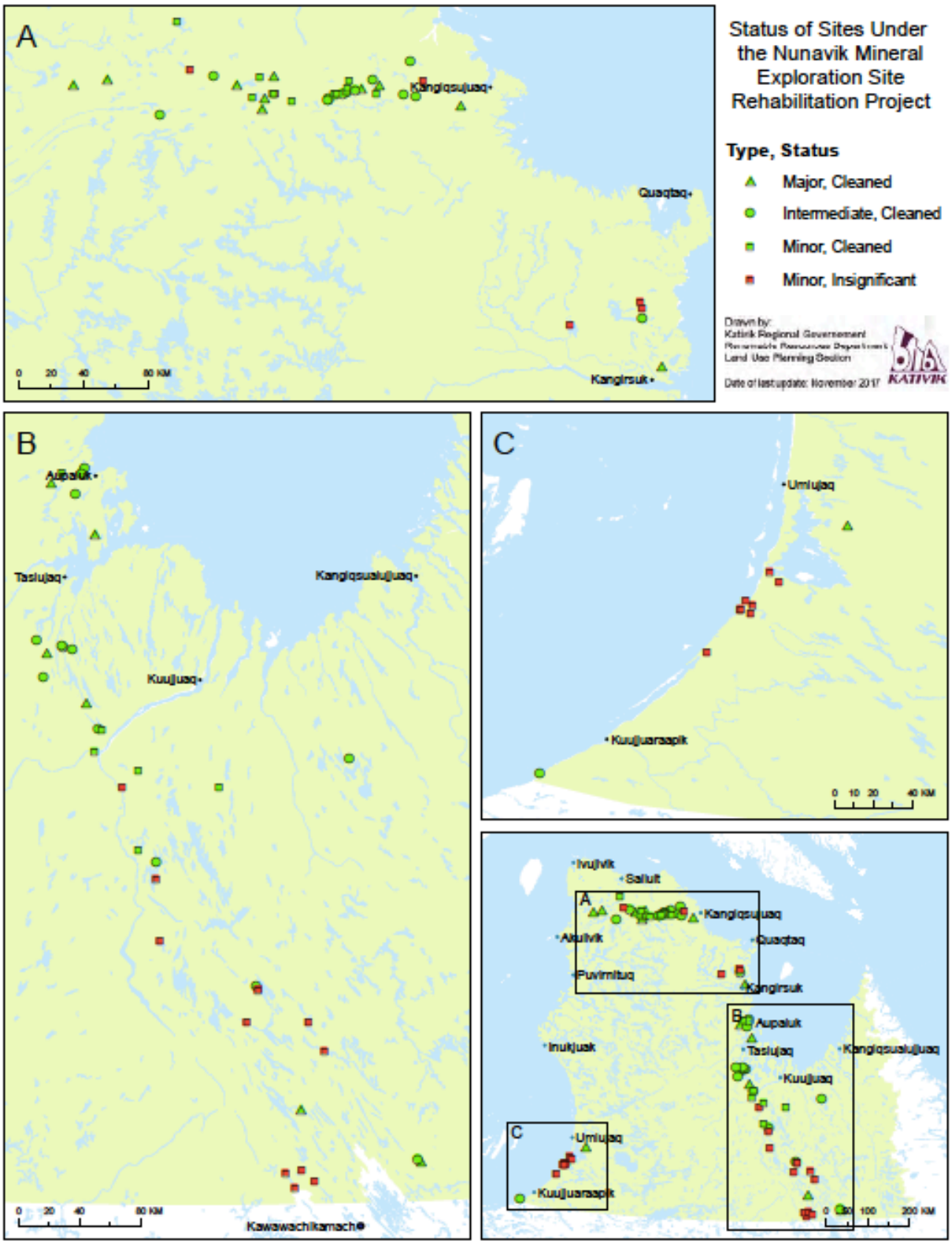
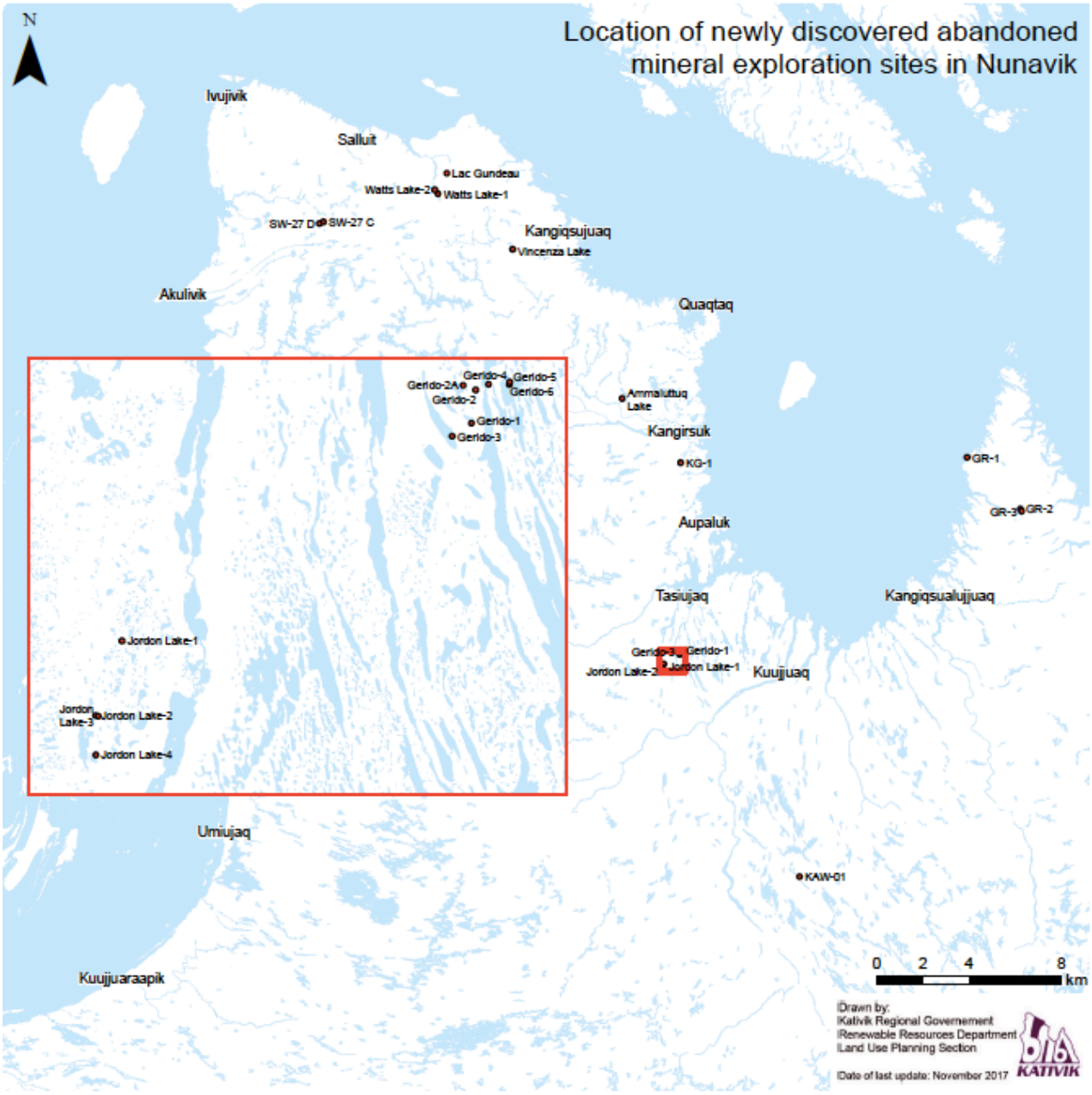
KAW-66
KAW-26
KAW-12


Assessment and Prioritization of Abandoned Mining Exploration Sites in Nunavik
Map 5
Abandoned Mining Exploration Sites near Aupaluk and Kangirsuk
Legend
Assessed and Prioritized Sites
KAW-1 Major
KAW-1 Intermediate
KAW-1 Minor
KAW-1 Cleaned by a community
KAW-1 No debris
KAW-1 Other - not a mining site
Potential Sites (Duhaime and Comtois, 2002)
Informants
Archives
Other - not a mining site
0 10 20 30 km
Sources:
NTDB, 1 : 250 000, Permission from NRCan
Assessed and prioritized sites: Environment Canada, 2001 and 2002
Potential sites: Environment Canada, 2000
Lambert conformal conic projection, NAD83
Cartography realised by Carto-Média, 2003
Digital file: CM.61550105_Aupaluk.wor (2003-01-31)
January 2003
Kangiliiq Bay
Lac Esker
KG-19
QC-1
QC-2
Lac de l'Igloo
Lac Roberts
KG-17
QC-3
KG-21
Lac Ammaluttuuq
QC-8
Lac Ikkaruaq
Lac Virgin
TW
Rivière Arnaud
Kangirsuk
Payne Bay
Lac Tasialujjuaq
Lac Peter
Lac Tasiviup Siqinirsinga
Ungava Bay
Bonnard Bay
Lac Troie
Hopes Advance Bay
PJ-17A
PJ-9
PJ-17
PJ-19
Lac au Chien Rouge
Aupaluk
G-24M01-1
PJ-10
Lac Ford
Lac Laliberte
G-24N04-3
Ikattok Bay
71°
70°
69°
60°


Assessment and Prioritization of Abandoned Mining Exploration Sites in Nunavik
Map 6
Abandoned Mining Exploration Sites near Kangiqsujuaq and Salluit
Legend
Assessed and Prioritized Sites
KAW-1 Major
KAW-1 Intermediate
KAW-1 Minor
KAW-1 Cleaned by a community
KAW-1 No debris
KAW-1 Other - not a mining site
Potential Sites (Duhaime and Comtois, 2002)
Informants
Archives
Other - not a mining site
0 15 30 45 km
Hudson Strait
Salluit
Fjord de Salluit
Deception Bay
Rivière Narsarsiq
Lac Duquet
Lac François-Malherbe
Lac Watts
Lac Vanasse
Lac Belleau
Lac Ammakittuuq
Lac Spartan
Lac Qanartaliup Tasinga
Kattiniq Mine
Parent Lake
Wakeham Bay
Kangiqsujuaq
Puvirnituq
Rivière de Puvirnituq
Lac Saint-Germain
Lac Laflamme
Lac Rouxel
Lac Nantais
Lac Bylot
Lac Allemand
Lac Belanger
Rivière Petite
Rivière Vachon
SW-1
SW-2
SW-9
SW-10
SW-11
SW-12
SW-13
SW-14
SW-16
SW-18
SW-19
SW-24
SW-27
SW-29
SW-30
SW-32
SW-34
SW-36
SW-38
SW-42
SW-46
SW-48
SW-59
SW-67
KV-1
SAL-1
SAL-2
SAL-3
WB-3
WB-9
P-35G08-1002
G-35G08-1
P-35G08-1003
P-35G08-1002A
K-10
K-27
K-28
K-36
K-37
K-41
K-48
K-49
K-61
I-12
I-32
KAN-1
KAN-2
KAN-3
KAN-4
KAN-5
KAN-6
KAN-7
KAN-8
KAN-9
KAN-10
KAN-11
KAN-12
Sources:
NTDB, 1 : 250 000, Permission from NRCan
Assessed and prioritized sites: Environment Canada, 2001 and 2002
Potential sites: Environment Canada, 2000
Lambert conformal conic projection, NAD83
Cartography realised by Carto-Média, 2003
Digital file: CM.61550106_Salluit.wor (2003-01-31)
January 2003


Assessment and Prioritization of Abandoned Mining Exploration Sites in Nunavik
Map 7
Abandoned Mining Exploration Sites near Umiujaq and Kuujjuarapik
Legend
Assessed and Prioritized Sites
KAW-1 Major
KAW-1 Intermediate
KAW-1 Minor
KAW-1 Cleaned by a community
KAW-1 No debris
KAW-1 Other - not a mining site
Potential Sites (Duhaime and Comtois, 2002)
Informants
Archives
Other - not a mining site
0 14 28 42 km
Umiujaq
Kuujjuarapik
Whapmagoostui
Hudson Bay
Lac Guillaume-Delisle
Lac Qasigialik
Lac Kakupis
Lac Elizabeth
Lac Fressel
Petite rivière de la Baleine
Grande rivière de la Baleine
Lac Iyaatiwiinapaakus
WHA-1
GW-1
GW-2
GW-3
GW-5
GW-6
GW-8
GW-9
GW-10
UD-1
UD-2
UD-3
UD-4
UD-5
UD-6
UD-7
UD-8
UD-9
UD-10
UD-11
PH-11
PH-12
UM-1
UM-2
UM-3
G-33N15-1
G-33N02-2
Sources:
NTDB, 1 : 250 000, Permission from NRCan
Assessed and prioritized sites: Environment Canada, 2001 and 2002
Potential sites: Environment Canada, 2000
Lambert conformal conic projection, NAD83
Cartography realised by Carto-Média, 2003
Digital file: CM.61550107_Umiujaq.wor (2003-01-31)
January 2003


A
Kangiqsujuaq
Quaqtaq
Kangirsuk
0 20 40 80 KM
Status of Sites Under the Nunavik Mineral Exploration Site Rehabilitation Project
Type, Status
Major, Cleaned
Intermediate, Cleaned
Minor, Cleaned
Minor, Insignificant
Drawn by:
Kativik Regional Government
Renewable Resources Department
Land Use Planning Section
Date of last update: November 2017
KATIVIK
B
Aupaluk
Tasiujaq
Kangiqsualujjuaq
Kuujjuaq
Kawawachikamach
C
Umiujaq
Kuujjuaraapik
0 10 20 40 KM
Ivujivik
Salluit
Kangiqsujuaq
Akulivik
Puvirnituq
Inukjuak
0 50 100 200 KM


Location of newly discovered abandoned mineral exploration sites in Nunavik
N
Ivujivik
Salluit
Lac Gundeau
Watts Lake-2
Watts Lake-1
SW-27 D
SW-27 C
Kangiqsujuaq
Vincenza Lake
Akulivik
Quaqtaq
Gerido-4
Gerido-5
Gerido-2A
Gerido-6
Gerido-2
Ammaluttuq Lake
Gerido-1
Gerido-3
Kangirsuk
KG-1
GR-1
GR-3
GR-2
Aupaluk
Tasiujaq
Kangiqsualujjuaq
Jordon Lake-1
Gerido-3
Gerido-1
Jordon Lake-2
Jordon Lake-1
Kuujjuaq
Jordon Lake-3
Jordon Lake-2
Jordon Lake-4
Umiujaq
KAW-01
Kuujjuaraapik
0 2 4 8 km
Drawn by:
Kativik Regional Government
Renewable Resources Department
Land Use Planning Section
Date of last update: November 2017
KATIVIK

APPENDIX 2

Photographs of Sites on Which Rehabilitation Work was Undertaken in 2017-2018

Figure 1: Site PD-1, before rehabilitation, June 2017

Figure 2: Material at marina in Kuujjuaq, June 2017

Figure 3: Material being loaded into container at marina in Kuujjuaq, June 2017

Figure 4: Material inside container, Kuujjuaq, June 2017

Figure 5: Material on site WB-9 before cleanup, July 2017

Figure 6: Material on site WB-9 ready for transportation by helicopter, July 2017

Figure 7: Core remaining on site WB-9, July 2017

Figure 8: Site WB-9 after rehabilitation, July 2017

Figure 9: Material collected at site SW-27, July 2017

Figure 10: Workers at site SW-27, July 2017

Figure 11: Small tractor remaining at site SW-27, July 2017

Figure 12: Material inside container at Kikkialik mine, July 2017

Figure 13: Workers at site SW-24, August 2017

Figure 14: Tent ring found at site SW-24 during rehabilitation activities, August 2017

Figure 15: Material transported to Kikkialik by helicopter from site SW-24, August 2017

Figure 16: Material transported to Kikkialik by helicopter from site SW-24, August 2017

Figure 17: Material transported from Salluit, August 2017

Figure 18: Preparing material for transportation by cargo ship from Salluit, August 2017

Figure 19: Site GW-8 before rehabilitation, September 2017

Figure 20: Secondary site found east of GW-8, September 2017

Figure 21: Material at site GW-8, September 2017

Figure 22: Material from site GW-8 ready for marine transportation in Kuujjuaraapik, September 2017

APPENDIX 3

Photographs of Sites on Which Rehabilitation Work Will Take Place in 2018-2019

Note: There are currently no photographs of site GR-1.

Figure 23: Material seen at site KG-1, August 2017

Figure 24: Material seen at site KG-1, August 2017

Figure 25: Material seen at site KG-2 (Amaluttuq Lake), August 2017

Figure 26: Material seen at site KG-2 (Amaluttuq Lake), August 2017

Figure 27: Material seen at site SW-27C, August 2017

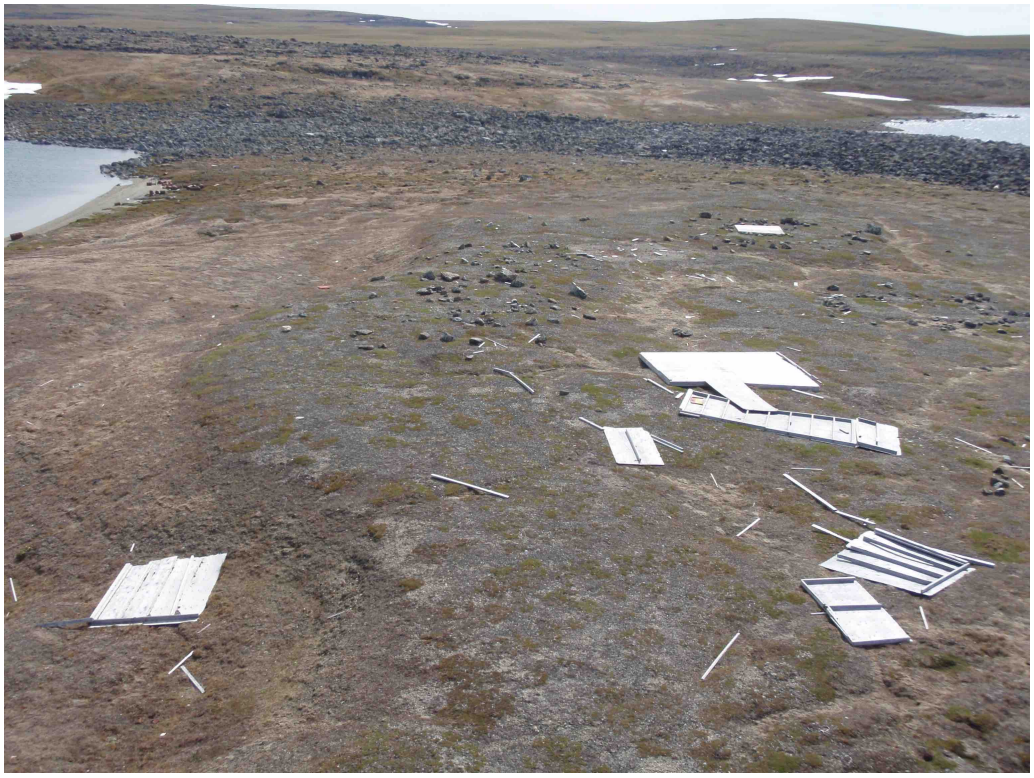


Figure 28: Material seen at site SW-27C, August 2017