



<u>MEMORANDUM</u>

From:

Michael H. Gunning, President

Date: Sept. 3, 2009

To:

Staff

CC.

Subject:

Final Camp Clean-Up, Kirwan Lake, Hornby Basin Project, Nunavut.

Nunavut Water Board

Public Registry

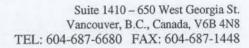
SEP 2 9 2009

Final clean-up and reclamation of the Kirwan Lake exploration camp was done between August 9 and 18, 2009. The camp facilitated work for the Hornby Bay Joint Venture Project during 2006, 2007 and 2008 surface exploration programs. The camp utilized a location between Kirwan and Teewal lakes that was established in the early 1970's during the initial exploration of the Hornby Bay Basin by companies such as Aquitane.

The 2009 clean-up program was initially planned for late June, but was delayed because of late ice break-up on the lakes in the region. The clean-up program was overseen for Triex by Anne Bordeleau. Discovery Mining Services, owners of the camp, provided the clean-up crew, namely Terry Retieffe, Joe Dietrich and Les Paradis who worked with Anne to complete the job over a ten day period. The crew mobilized from Yellowknife via fixed wing charger, an Otter equipped with floats and capable of landing near to the camp site. A summary field report is attached, including photographs documenting work done.

Work included a full clean-up of the camp site, and inspection and clean-up of drill sites and two caches on the surrounding Dismal Lake, Kendall River and Mountain Lake properties. A helicopter was utilized for four days during the middle portion of the job, in order to sling heavy materials such as fuel drums and drill steel to the nearby Hope Lake strip, where it was picked up by cargo aircraft and transported back to Yellowknife for use and/or disposal. Three Buffalo flights (DHC-5) were used.

Overall, the three year Kirwan Lake camp, and surrounding drill sites, are completely cleaned up. All wood from tent frames was incinerated on site, with non-combustibles such as nails and screws recovered and shipped out. The kitchen grey water sump was filled in. All lose garbage was cleaned up, put into empty fuel drums with tops cut off,





and shipped out. The dilapidated wooden shack from the 1970's, and the broken down metal core racks, were also taken down and removed from site. In total, over 60,000lbs of materials were removed and returned to Yellowknife for use and/or proper disposal, including empty fuel drums, empty propane tanks, scrap metal, appliances, stoves, drill steel, hardware, drill consumables and batteries. Similarly, a 2007 drill cache at Dismal Lake and a 2008 drill cache at Kendall River were completely cleaned up.

The following page contains field manifests for materials removed from site and returned to Yellowknife. A small amount of useable diesel in sealed drums was taken to Kugluktuk, the local Inuit community, and donated to a contractor for use in the community.

Recent drill core, properly labelled, was left on site in sturdy core racks, and neatly stacked in boxes in log cabin style on the ground, covered.

Finally, all 2008 drill sites were also inspected during the program, and any miscellaneous garbage, lumber or steel cleaned up. Inspections found most drill sites to be clean, and further, because of the relatively small drill rigs used, and short duration of drilling at any one site, drill sites more than one year old are generally naturally reclaimed to the extent that they are difficult to spot from the air.

MHG

Kirwan Lake Camp Clean Up, August, 2009 Triex Minerals Corporation

Field Manifests with Approximate Loads of Materials Removed
Hope Lake airstrip to Yellowknife, Buffalo (DHC-5) aircraft, Arctic Sunwest Charters Ltd.

1. August 15 th , 2009		
 garbage incinerator 	1	900 lbs
drill rods	100	5,000 lbs
 empty fuel drums 	80	4,000 lbs
 empty fuel drums filled 	12	2,400 lbs
with garbage metal		
misc. garbage steel		3,000 lbs
miss. garbage steel		0,000 100
2. August 16 th , 2009		
 baskets of drill garbage 	2	3,000 lbs
 pallet of drill salt 	2	1,500 lbs
 empty fuel drums with 	2	1,500 lbs
garbage steel	2	1,000 103
 empty 100 lb propane tanks 	12	700 lbs
 empty fuel drums filled 	4	1,200 lbs
with garbage metal	7	1,200 103
 sealed pails of drill 	20	1,000 lbs
consumables	20	1,000 103
 empty fuel drums 	60	2,000 lbs
	00	3,000 lbs
misc. garbage steeldrill rods	100	5,000 lbs
- driii rods	100	5,000 ibs
a to the same		
3. <u>August 19th, 2009</u>		
 empty 100 lb propane tanks 		400 lbs
empty 50 lb propane tanks	4	150 lbs
fuel drums with old fuel	12	5,000 lbs
 empty fuel drums filled 	5	1,500 lbs
with garbage metal		
sealed pails of drill	40	2,000 lbs
consumables		
empty fuel drums	60	2,000 lbs
misc. garbage steel		3,000 lbs
drill rods	100	5,000 lbs

KIRWAN LAKE CAMP CLEAN-UP, MOUNTAIN LAKE PROPERTY August 9th to 18th 2009

SYNOPSIS

Final clean-up and reclamation of the Kirwan Lake exploration camp was done between August 9 and 18, 2009; the work was initially planned for late June, but delayed because of late ice break-up on the lakes in the region. The camp was operated by Triex Minerals between 2006 and 2008. The clean-up program was overseen for Triex by Anne Bordeleau. Discovery Mining Services, owners of the camp, provided the clean-up crew: Terry Retieffe, Joe Dietrich and Les Paradis. Work included camp site clean-up, and inspection and clean-up of surrounding drill sites and two caches on the Dismal Lake, Kendall River and Mountain Lake properties. The coordinates for the cleanup locations are as follows:

Kirwan Lake Camp, Mountain Lake Property:

505153 mE / 7464598 mN (Z11; NAD 83)

Kendall River cache, Drill Hole KR08-003

522581E / 7445692N (Z11; NAD83)

Dismal Lake cache, Drill Hole DL07-008

471150 mE / 7487250 mN (Z11 / NAD 83)

CLEAN-UP TASKS AND LOGISITICS

All wood was incinerated on site and over 60,000lbs of material ranging from fuel drums, propane tanks, scrap metal, appliances, stoves, drill steel, hardware, drill consumables and batteries were removed by helicopter and fixed wing aircrafts.

Two loads of approximately 2800lbs each were shipped back to Yellowknife with the worker's inbound and outbound Twin Otters on floats, directly from Kirwan Camp.

Three loads of approximately 18,000 lbs each were sent to Yellowknife from the Hope Lake Airstrip by Buffalo DHC-5.

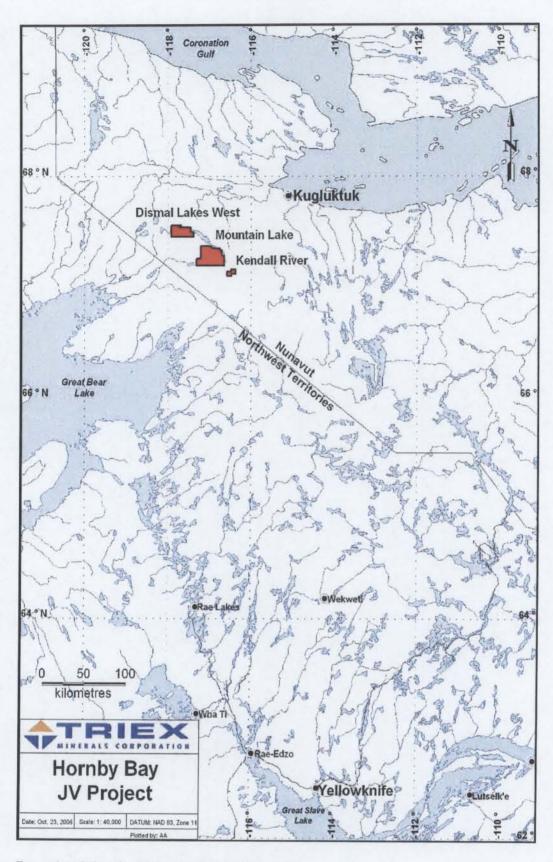
One load of 10 diesel p-50 drums was taken to Kugluktuk by Dornier 228 from the Hope Lake strip, and purchased by a contractor there, while the returning Dornier 228 flight to Yellowknife carried the remaining 3500lbs of scrap metal and drill steel at the strip.

All past drill sites were inspected and any miscellaneous garbage, drill steel or lumber was removed from the sites.

Core boxes containing core were left intact at each of the properties. A 1970's concrete 10X20' footing at Kirwan was left in place. An Environment Canada rain gauge located on shore, approximately 400m east from the original site is also intact.

The following photos illustrate the work done and the items removed during the clean-up.

Respectfully submitted, Anne Bordeleau, Aug. 31, 2009



Location Map for Hornby Basin Properties



Photo 1. Kirwan Camp upon arrival by float plane, August 9th 2009.



Photo 2. Ground view of Kirwan Camp from the Northeast.



Photo 3 First Twin Otter load leaving on August 9th 2009 after dropping off the workers.



Photo 4. View from Northwest side, including cache of fuel drums.



Photo 5. Various drilling consumables scattered throughout the Kirwan Camp site.



Photo 6. Drilling consumables, propane, a pallet of salt and 100 drill rods near the helicopter pad at Kirwan Camp.



Photo 7. A drill basket near the lake at Kirwan Camp.



Photo 8. The generator shack at Kirwan Camp.



Photo 9. The generator shack being dismantled at Kirwan Camp.



Photo 10. An old metal display core rack was found where a concrete footing built in the 1970's remains. The display rack and all trash other than the core and the concrete footing were removed.



Photo 11. 3000lbs of scrap metal made up of old core racks, beds, fuel gerry cans and incinerator refuse near the helicopter pad at Kirwan Camp.



Photo 12. Loads made up of metal to be flown out to the Hope Lake Airstrip 20 miles northeast.



Photo 13. Scrap metal being slung out.



Photo 14. Core shack and frame of core logging tent at Kirwan Camp.



Photo 15. Partial drums of fuel being consolidated for flying. The core logging tent frame is removed and the core shack is undergoing demolition.



Photo 16. Outhouses at Kirwan Camp.



Photo 17. First outhouse being demolished at Kirwan Camp.



Photo 18. Sauna and old canoe near the lake at Kirwan Camp



Photo 19. Drums, consumables and propane being slung out of Kirwan Camp towards the Hope Lake Airstrip.



Photo 20. The Kirwan Camp incinerator which was flown out to the Hope Lake Airstrip for pick-up by the Buffalo DHC-5 once the work was completed.



Photo 21. The last two tents standing at Kirwan were used by the workers and dismantled on the last day of the cleanup, August 18th 2009.



Photo 22. KR08-003 drill site upon arrival on the Kendall Property, Southeast of Mountain Lake.



Photo 23. KR08-003 drill site following clean-up, while the helicopter was removing the last of the drums and 100 drill rods.



Photo 24. A typical drill site on the Mountain Lake Property. Over 400 rods and all the lumber was removed from all of the dill sites on the Mountain Lake, Kendall and Dismal Properties.



Photo 25. A typical site following pick-up on the Mountain Lake Property.



Photo 26. Some of the trash left behind along with 65 drill rods at drill site DL07-008 on the Dismal Lake Property.



Photo 27. DL07-008 following cleanup and removal of steel and trash.



Photo 28. The Hope Lake Airstrip on August 15th 2009, prior to the first of three Buffalo DHC-5 pick-ups, and with one full day of slinging refuse still to come from Kirwan and surrounding areas.



Photo 29. Incoming Buffalo DHC-5 on August 16th 2009, the second of three to pick up Yellowknife-bound 18,000lbs loads.



Photo 30. The last Buffalo DHC-5 full load from the Hope Lake Airstrip on August 19th 2009.



Photo 31. 10 full drums of diesel picked up by Dornier 228 on the Hope Lake Airstrip and flown to a contractor in Kugluktuk, NU.



Photo 32. 70 drill rods, scrap metal and a spill kit for the Dornier 228 backhaul to Yellowknife at the Hope Lake Airstrip.



Photo 33. Core left intact, on site, at Kirwan Camp



Photo 34. Kirwan Camp grounds after the clean-up where stood the kitchen and dry.



Photo 35. Kirwan Camp grounds where stood the core shack, the core logging tent and one sleeper.



Photo 36. The last of the gear at Kirwan Lake prior to the arrival of the return Twin Otter.



Photo 37. Fashioning a bridge for loading the last load. The bridge was cut up and hauled back to Yellowknife on the Twin Otter.



Photo 38. Kirwan Lake Camp site, as seen from the Twin Otter on August 18th 2009, with only core racks remaining.

Date	Wildlife	Number	Spotter	Comments
Aug. 6	caribou	1	Amir	none
Aug. 6	caribou	1	Tanner	none
Aug. 6	grizzly sow and cub	2	Gerry	north of Hope Lake
Aug. 6	grizzly bear- male	1	Gerry	north of Hope Lake
Aug. 6	grizzly bear- male	1	Gerry	north of Hope Lake
Aug. 6	caribou	100	Gerry	south of Dismal Lake
Aug. 11	grizzly bear	1	Andrew	south of camp, near Cominco core
Aug. 11	female caribou	3	Gerry	near generator i32
Aug. 11	2 cow caribou with 3 calves	6	Gerry	near geneator i32
Aug. 12	wolverine	1	Franz	heading west
Aug. 9	caribou bulls, calves, cows	6	Gerry	on claim block
Aug. 9	grizzly	1	Gerry	on claim block
Aug. 11	1 bull & 2 cow caribou	3	Gerry	on claim block
Aug. 12	4 cow and 4 bull caribou	8	Gerry	on claim block
Aug. 12	grey wolf	3	Gerry	14 miles south of Kugluktuk
Aug. 13	grizzly bear	1	Gerry	within claim block
Aug. 13	caribou	6	Gerry	within claim block
Aug. 15	caribou	8	Gerry	within claim block
Aug. 16	caribou	7	Gerry	within claim block
Aug. 16	wolverine	1	Gerry	within claim block
Aug. 17	caribou	9	Gerry	within claim block
Aug. 18	caribou	6	Gerry	within claim block
Aug. 18	grizzly bear- male	1	Gerry	south of river, eating

Date	Wildlife	Number	Spotter	Comments
Aug. 19	male grizzly bear, brown	1	Gerry	w w
Aug. 19	large male grizzly, black	1	Gerry	large 20 year old bear
Aug. 19	caribou	12	Gerry	within claim block area
Aug. 20	caribou	7	Gerry	within claim block area
Aug. 21	caribou	5	Gerry	within claim block area
Aug. 23	caribou	9	Gerry	within claim block area
Aug. 23	male grizzly bear	1	Gerry	Fran Lake near old camp
Aug. 22	caribou	8	Gerry	claim block area, near Fran Lake

Date	Wildlife	Number	Comments
6-May	ravens	2	sited from camp
6-May	caribou	group	sited on south side of Dismal Lake
7-May	geese	flock	heading north, from camp
7-May	ravens	4	sited from camp
8-May	ptarmigan	several	sited in camp
8-May	geese	flock	more geese heading north, from camp
8-May	ptarmigan	1	more ptarmigan sited in camp
10-May	ravens	5	sited from camp
10-May	geese	flock	more geese flying north, from camp
11-May	ravens	4	sited from camp
11-May	geese	flock	more geese flying north, from camp
11-May	ptarmigans	several	more ptarmigans spotted in camp
12-May	ravens	4	sited from camp
12-May	geese	flock	more geese heading north, from camp
12-May	caribou	herd	more caribou sited south of camp
12-May	caribou	herd	more caribou sited east of camp on ice stri
13-May	raven	3	sited from camp
13-May	geese	flock	more geese headed north, from camp
13-May	geese	flock	more geese headed north from drill site
14-May	snow geese	flock of 6	sited north of camp
15-May	seagulls	2	one at camp, one at drill site
15-May	bear	1	sited south of camp
16-May	snow geese	flock	sited at drill site west of camp

8-May snow geese flock sited from camp 8-May geese flock more Canada geese heading north, from comp 8-May bald eagle 1 near drill west of camp 9-May geese flock more Canada geese heading north, from comp 9-May tundra swans 2 near drill west of camp 0-May swans 2 swans flying over camp 0-May ptarmigan group sited around camp 0-May geese flock sited east of camp 1-May caribou herd of 14 neading northwest, west of camp 1-May caribou herd of 12 heading northwest, west of camp 1-May seagulls 10-15 heading northwest, sited at camp 2-May lemming 1 under tent 3-May seagulls flock on lake shore east of camp 4-May seagulls 10 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 2 heading northeast, from camp 6-May seagulls 2 nore geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp	Date	Wildlife	Number	Comments
8-May geese flock more Canada geese heading north, from common seese beading north, from common seese	17-May	seagulls	2	sited from camp
8-May bald eagle 1 near drill west of camp 9-May geese flock more Canada geese heading north, from comp 9-May tundra swans 2 near drill west of camp 0-May swans 2 swans flying over camp 0-May ptarmigan group sited around camp 0-May geese flock sited east of camp 1-May caribou herd of 14 neading northwest, west of camp 1-May caribou herd of 12 heading northwest, west of camp 1-May seagulls 10-15 heading northeast, sited at camp 2-May lemming 1 under tent 3-May seagulls flock on lake shore east of camp 4-May seagulls 10-16 on lake shore east of camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 2 heading northeast, from camp 6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	18-May	snow geese	flock	sited from camp
9-May geese flock more Canada geese heading north, from composed swans 2 near drill west of camp 2 swans flying over camp 2 swans flying over camp 3 sited around camp 3 sited east of camp 4 neading northwest, west of camp 4 neading northwest, west of camp 5 near drill seading northwest, west of camp 6 nerd of 12 heading northwest, west of camp 6 neading northwest, west of camp 7 near near near near near near near near	18-May	geese	flock	more Canada geese heading north, from c
9-May tundra swans 2 near drill west of camp 0-May swans 2 swans flying over camp 0-May ptarmigan group sited around camp 0-May geese flock sited east of camp 1-May caribou herd of 14 neading northwest, west of camp 1-May caribou herd of 12 heading northwest, west of camp 1-May seagulls 10-15 heading northeast, sited at camp 2-May lemming 1 under tent 3-May seagulls flock on lake shore east of camp 4-May seagulls 1 gliding over camp 4-May bald eagle 1 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	18-May	bald eagle	1	near drill west of camp
2 swans flying over camp 2 o-May ptarmigan group sited around camp 3 o-May geese flock sited east of camp 4 o-May caribou herd of 14 neading northwest, west of camp 1 herd of 12 heading northwest, west of camp 2 o-May seagulls 10-15 heading northeast, sited at camp 3 o-May seagulls 10-15 heading northeast, sited at camp 4 on lake shore east of camp 4 on lake shore east of camp 5 on lake shore east of camp 5 heading northeast, from camp 6 o-May seagulls 2 heading northeast, from camp 6 o-May seagulls 4-5 on lake shore east of camp 7 on lake shore east of camp 1 diding over camp 2 heading northeast, from camp 4 on lake shore east of camp 4 heading north, from camp 7 on lake shore east of camp	9-May	geese	flock	more Canada geese heading north, from ca
0-May ptarmigan group sited around camp 0-May geese flock sited east of camp 1-May caribou herd of 14 neading northwest, west of camp 1-May caribou herd of 12 heading northwest, west of camp 2-May seagulls 10-15 heading northeast, sited at camp 2-May lemming 1 under tent 3-May seagulls flock on lake shore east of camp 4-May seagulls 1 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 3 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	9-May	tundra swans	2	near drill west of camp
flock sited east of camp 1-May caribou herd of 14 neading northwest, west of camp 1-May caribou herd of 12 heading northwest, west of camp 2-May seagulls 10-15 heading northeast, sited at camp 2-May lemming 1 under tent 3-May seagulls flock on lake shore east of camp 4-May seagulls flock on lake shore east of camp 4-May bald eagle 1 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May geese 10 more geese heading north, from camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	0-May	swans	2	swans flying over camp
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1-May caribou herd of 12 heading northwest, west of camp 2-May seagulls 10-15 heading northeast, sited at camp 2-May lemming 1 under tent 3-May seagulls flock on lake shore east of camp 4-May seagulls 1 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	0-May	geese	flock	sited east of camp
2-May seagulls 1	1-May	caribou	herd of 14	neading northwest, west of camp
2-May lemming 1 under tent 3-May seagulls 4-May seagulls 4-May bald eagle 1 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	1-May	caribou	herd of 12	heading northwest, west of camp
3-May seagulls flock on lake shore east of camp 4-May seagulls flock on lake shore east of camp 4-May bald eagle 1 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	2-May	seagulls	10-15	heading northeast, sited at camp
4-May seagulls flock on lake shore east of camp 4-May bald eagle 1 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	2-May	lemming	1	under tent
4-May bald eagle 1 gliding over camp 5-May seagulls 2 heading northeast, from camp 6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	3-Мау	seagulls	flock	on lake shore east of camp
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6-May seagulls 4-5 on lake shore east of camp 7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	4-May	bald eagle	1	gliding over camp
7-May geese 2 more geese heading north, from camp 7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	5-May	seagulls	2	heading northeast, from camp
7-May tundra swans 2 heading north, from north of camp 7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	6-May	seagulls	4-5	on lake shore east of camp
7-May geese 10 more geese heading north, from camp 7-May loons 2 two loons on lake at camp	7-May	geese	2	more geese heading north, from camp
7-May loons 2 two loons on lake at camp	7-May	tundra swans	2	heading north, from north of camp
	7-May	geese	10	more geese heading north, from camp
8-May seagulls flock around south shore of lake	7-May	loons	2	two loons on lake at camp
	8-May	seagulls	flock	around south shore of lake

10 TH

Date	Wildlife	Number	Comments
28-May	crows	2	flying around camp
29-May	seagulls	flock	south shore of lake
29-May	crows	flock	sited at camp
29-May	caribou	many	sited "all over" from helicopter
31-May	bear	1	west of camp, towards drill
31-May	fox	2	near drill sites west of camp
2-Jun	caribou	many	more caribou spotted west of camp, "all over
2-Jun	eider ducks	several	sited on lake west of camp
2-Jun	seagulls	several	sited on the lake east of camp
3-Jun	eider ducks	several	more eider ducks on the lake west of camp
3-Jun	seagulls	flock	more seagulls sited from camp
4-Jun	geese	flock	more geese headed north, from camp
4-Jun	seagulls	flock	more seagulls in the lake east of camp
4-Jun	turn	1	arctic turn over lake west of camp
5-Jun	mallard ducks	2	on lake east of camp
5-Jun	eider ducks	2	on lake east of camp
5-Jun	swans	2	heading north, from camp
6-Jun	abundant birds:		sited in camp area
	mallard ducks	2	
	eider ducks	2	
	common loons	2	
	pintail ducks	2 2 2 2 5	
	canada geese		
	arctic turn ptarmigan	1	
6-Jun	bear	1	near camp, to west

, 20 , 30

Date	Wildlife	Number	Comments
7-Jun	abundant waterfowl:		sited in camp area
/-Jun	mallard ducks	4	sited in camp area
	eider ducks	2	
	common loons	2	
	pintail ducks	2	
	seagulls	4	
	tundra swan	1	
7-Jun	lemming	3	under tent
7-Jun	ravens	2	flying northeast over camp
8-Jun	crows	4	flying around camp
8-Jun	seagulls	2	lake east of camp
8-Jun	abundant waterfowl:		sited in camp area
	pintail ducks	2	
	mallard ducks	2	
	eider ducks	2	
9-Jun	ptarmigan	4	sited in camp area
9-Jun	caribou	4	herd spotted south of camp
9-Jun	abundant waterfowl:		sited in camp area
	mallard ducks	2	
	eider ducks	2	
	common loons	2	
	arctic turn	1	
	seagulls	3	
10-Jun	wolves	3	around drill site west of camp
14-Jun	muskox	4	between camp and Hope Lake airstrip
14-Jun	bear sow and 2 cubs	3	between camp and Hope Lake airstrip

Date	Wildlife	Comments
May 2	wolf	wolf tracks seen on airstrip
May 8	geese	first sighting of snow geese flying overhead
May 9	grizzly bear	a grizzly bear spotted about 15kms north of camp
May 9	caribou	scattered caribou about 20kms west of camp
May 10	wolverine, fox	fox, wolverine and rabbit tracks 2kms west of camp
May 12	grizzly bear	two grizzly bears at Fran Lake
May 23	caribou	caribou began migrating east and west of camp
May 24	caribou	caribou continue migrating near camp
May 24	grizzly bear	grizzly is near the water pump at Dismal lake
May 25	caribou	caribou continue migrating near camp
May 26	caribou	caribou continue migrating near camp
May 28	caribou	few caribou sighted in past few days
May 29	wolves	heard wolves in the morning
May 29	caribou	few scattered caribou between camp and Dismal Lake,
May 29	bear	fresh bear tracks near Zargot Lake
May 30	caribou	few scattered caribou between camp and Dismal Lake
May 31	caribou	few scattered caribou between camp and Dismal Lake
May 31	bear	bear near drill at Dismal Lake west
June 3	caribou	few scattered caribou
June 4	caribou	few scattered caribou between camp and Dismal Lake
June 5	caribou	few scattered caribou between camp and Dismal Lake
June 6	wolf	wolf spotted between camp and Dismal Lake,
June 6	hawk	rough legged hawk hung around camp for a few minutes

Date	Wildlife	Comments
June 6	caribou	couple of young caribou near camp
June 9	caribou	6 caribou near camp
June 10	grizzly bear	grizzly bear within 200 metres of camp
June 13	caribou	scattered caribou near camp
June 18-19	grizzly bear	3 bears near camp at various times
June 18-19	caribou	caribou near camp most days
June 18-19	ducks	ducks near camp most days
July 1	mosse	moose on the Teshierpi River, 3km south of camp
July 9	mosse	moose and calf 1km south of camp at south end of Teewal Lake
July 10	moose	moose and calf 1km south of camp at south end of Teewal Lake
July 10	wolf	lone wolf 3 km west of camp
July 11	moose	moose and calf 1km south of camp at south end of Teewal Lake
July 13	muskox	muskox herd near Hope Lake airstrip, estimate = 30 animals
July 16	ptarmigan	6 ptarmigans living near camp
July 16	swans	two swans and three young living on Teewal Lake
July 17	bald eagle	Bald eagle on Teewal Lake
July 20	grizzly bear	bear 16kms west of camp
July 23	caribou	group of 2000 or more caribou, west end of Dismal Lake
July 24	caribou	caribou at west end of Dismal Lake, up to several hundred
July 25	caribou	caribou at west end of Dismal Lake, up to several hundred
July 26	caribou	caribou at west end of Dismal Lake, up to several hundred,
July 26	grizzly bear	bear spotted southwest of Mountain Lake
July 27	caribou	caribou at west end of Dismal Lake, up to several hundred

Date	Wildlife	Comments
July 28	caribou	caribou at west end of Dismal Lake, north of Dismal Lake, around camp and around Kendall River target
July 29	grizzly bear	a bear and two cubs 20km northwest of camp
July 30	caribou	a few caribou near camp, very sparse elsewhere
Aug 14	grizzly bear	grizzly bear sighted 5kms southwest of camp
Aug 19	grizzly bear	bear 1.5kms southwest of camp, on otherside of Teewal Lake
Aug 20	muskox	muskox, more than 30 near the Hope Lake airstrip

4.2.2 Linear Transect Surveys

Linear transect surveys consisted of three, 500 m transects completed by two observers spaced 50 m apart and walking parallel. Transects were placed randomly through the 40 km radius study area to get a representative sample of all vegetation types. Due to random assortment, transects occurred on the dominant vegetation communities which included heath tundra, tussock/hummock, and sedge wetland habitat.

4.2.3 Scoping Surveys

Scoping surveys included observational accounts of all avian and mammalian wildlife in a variety of habitat types. Surveys were completed by teams of two. The frequency of habitat types encountered dictated habitat selection for this survey method.

4.3 RESULTS

4.3.1 Aerial surveys

Aerial surveys were conducted on August 17th and 18th, 2007 using a Hughes 500 helicopter.

Survey observations for August 17th included two grizzly bears, one of which was observed feeding on a caribou calf (Table 4.1). It could not be determined if the calf had been predated or scavenged by the bear. Other carnivore observations included an active wolf den (Table 4.1).

Ungulate observation consisted exclusively of caribou in a variety of group sizes and composition (Table 4.1). Aerial surveys documented one cow and calf group, four lone cows, ten lone bulls, four lone yearlings, one bull with two yearlings, and six lone caribou of undetermined sex (Table 4.1).

Bird observations consisted of two tundra swan pairs, one lone adult tundra swan, and an adult rough-legged hawk (Table 4.1).

During the August 18th aerial survey, a lone wolf and various caribou groups were observed (Table 4.1). Caribou groups consisted of one lone calf, five lone cows, one lone bull, and a single caribou of undetermined sex (Table 4.1).

Bird observations for the August 18th aerial survey included an adult tundra swan with one young, five adult Pacific loons of unknown sex, and six adult redbreasted mergansers of unknown sex (Table 4.1).

Table 4.1 Results of Aerial Survey Observations

Date Description		Sex	Number	
Aug-17	grizzly bear	unknown	2	
Aug-17	wolf den	na	1	
Aug-17	caribou	cow & calf	4	
Aug-17	caribou	cow	4	
Aug-17	caribou	bull	10	
Aug-17	caribou	yearling	4	
Aug-17	caribou	bull, 2 yearling	1	
Aug-17	caribou	unknown	6	
Aug-17	tundra swan	pair	2	
Aug-17	tundra swan	adult	1	
Aug-17	rough-legged hawk	adult	1	
Aug-18	wolf	unknown	1	
Aug-18	caribou	calf	1	
Aug-18	caribou	cow	5	
Aug-18	caribou	bull	1	
Aug-18	caribou	unknown	1	
Aug-18	tundra swan	adult / juv	2	
Aug-18	pacific loon	adults	5	
Aug-18	red-breasted merganser	unknown	6	

Note: Aerial surveys were performed on both August 17th and 18th

4.3.2 Transect surveys

Transect surveys were completed on August 16, 2007 and comprised three surveys through various habitat types. The main habitat types sampled consisted of the following: shrubby heath tundra, tussock/hummock and sedge wetlands. Wildlife observations along the surveyed transects included sign from ungulates, carnivores, bird species and small mammals.

Evidence of caribou was recorded during all three surveys including visual identification, scat, and both tracks and established trails. A group of four bull caribou comprised the only visual ungulate observation. Of note, these four animals were all observed within shrubby heath tundra habitat. The presence of

well-defined caribou trails provides evidence of repeated and established movements through the study area.

Bird species encountered during line transects included several species of songbirds (i.e. passerines) and willow ptarmigan. Passerines observed are typical of tundra habitats and included yellow warbler, white-crowned sparrow and common redpoll.

Signs from Arctic ground squirrels (i.e. sik sik or hik hik) were readily observed during line transect surveys in the form of burrows, trails and scat. Grizzly bear digs were also observed, including the lone observation during the transect surveys, and were often found near ground squirrel dens. Visual observations and sign (i.e. tracks and scat) of arctic hare were also recorded.

4.3.3 Scoping surveys

Scoping surveys occurred on both August 17th and 18th, 2007 and included accounts of wildlife observations and sign in the immediate area (< 5 km radius) surrounding Kirwin Lake camp. Walking surveys encompassed the area east of camp, and regions north and south of Dismal Lake. These lands comprised of tussock/hummock lowlands and ridges, heath tundra, cliff faces, sandy areas, isolated groves of stunted spruce, moss covered habitats, riparian tall shrub and wetland areas.

Ungulate observations included a caribou cow and calf, a lone calf, lone cows, and a single bull. A caribou scapula, determined to be from the current season, was also documented. Walking surveys further yielded evidence of extensive caribou scat in the area. Based on the consistent observations of caribou during all surveys, the area seems to be consistently used by caribou.

Carnivore observations included a grizzly bear dig south of Dismal Lake. An old wolverine skull was discovered close to the Kirwin Lake camp. The western population of wolverine is recognized as a species of Special Concern under COSEWIC (Committee on the Status of Endangered Wildlife in Canada), but does not have status or fall under the federal Species At Risk Act (SARA). Red fox and den sites were also observed during the scoping survey.

Small mammal observations consisted of either vole or lemming observations and trails. Sign from Arctic ground squirrels were very common during the scoping surveys:

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4.3.4 Incidental Observations

Incidental observations include those observations of wildlife that were either recorded off-transect, while en route to the survey transects, during turning points of the aerial surveys and/or that occurred at distances greater than the observer search distance of 600 m for aerial surveys. During the August 17th survey, these records included two cow and calf groups, one lone cow, one lone bull, two lone caribou yearlings, and four animals of unknown sex (Table 4.2). A single muskox of undetermined sex was also observed (Table 4.2). The only carnivore observed during this survey included a single red fox. Lastly, an adult tundra swan with two young were also observed. During the August 18th, a group of four bald eagles of unknown sex comprised the incidental observations (Table 4.2).

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In addition, the fisheries crew observed several species of waterfowl including flocks of pintail, long-tailed duck (oldsquaw) and greater white-fronted goose. Other incidental observations include moose, willow ptarmigan and grizzly bear sign.

Table 4.2 Incidental Observations During Aerial Surveys

Date	Description	Sex	Number
Aug-17	fox	unknown	1
Aug-17	caribou	cow & calf	2
Aug-17	caribou	cow	1
Aug-17	caribou	bull	1
Aug-17	caribou	yearling	2
Aug-17	caribou	unknown	4
Aug-17	musk-ox	unknown	1
Aug-17	tundra swan	adults & 2 juv	1
Aug-18	bald eagle	unknown	4

Note: Aerial surveys were performed on both August 17th and 18th

Date	Wildlife	Comments
26-Apr	caribou	Single caribou tracks 1 km west of camp
26-Apr	wolf	Single wolf tracks 1 km west of camp
27-Apr	caribou	Single caribou tracks 1 km west of camp
27-Apr	wolf	Single wolf tracks 1 km west of camp
28-Apr	caribou	Single caribou tracks 1 km west of camp
28-Apr	wolf	Single wolf tracks 1 km west of camp
3-May	ptarmigan	Ptarmigan started showing up near camp.
8-May	wolf	Two wolves 1 km northwest of camp
8-May	fox	red fox near the drill
12-May	caribou	3 caribou near camp
13-May	geese	Geese started flying over the area
19-May	caribou	Scattered groups of 10-20 caribou east and west of camp
20-May	caribou	Scattered groups of 10-20 caribou east and west of camp
25-May	caribou	group of 14 caribou cross Kirwin Lake at 7 a.m.
26-May	caribou	group of 14 caribou cross Kirwin Lake at 7 a.m.
28-May	caribou	8 caribou on south side of lake this morning;
28-May	bear	bear scat near chopper
3-Jun	caribou	saw 11 caribou
4-Jun	caribou	several caribou near drill hole
5-Jun	caribou	several caribou near drill
14-Jun	grizzly bear	Grizzly bear in camp in the evening
15-Jun	grizzly bear	Grizzly bear in camp in the evening
21-Jun	grizzly bear	2 grizzles seen 3 km northeast of camp

Date	Wildlife	Comments
22-Jun	grizzly bear	2 grizzles seen 3 km northeast of camp
23-Jun	grizzly bear	2 grizzles seen 3 km northeast of camp
24-Jun	grizzly bear	2 grizzles seen 3 km northeast of camp
25-Jun	grizzly bear	2 grizzles seen 3 km northeast of camp
26-Jun	grizzly bear	Grizzly bear at the drill located west of Dismal Lakes, wolf
26-Jun	wolf	wolf on the east side of Teewal Lake
15-Jul	caribou	Caribou herd to north of camp
16-Jul	ptarmigan	Ptarmigans in camp
20-Jul	wolves	2 wolves (possible den) seen on route to Kendall R. drill hole
23-Jul	caribou	Caribou north and South of camp