FINAL REPORT

Cameco Corporation

Turqavik-Aberdeen Uranium Project

2010 Caribou Monitoring Results

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22 November 2010

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1 INTRODUCTION

1.1 Exploration Caribou Monitoring

Cameco Corporation (Cameco) is conducting exploration activities related to the Turqavik-Aberdeen Uranium Exploration Project (the Project) west of Baker Lake. In Cameco's Land Use Permit (25 April 2008), a key request by the Nunavut Impact Review Board (NIRB) was that "The proponent shall employ a fully independent wildlife monitor to determine when Caribou cows and calves are in the area of operation." To meet NIRB requirements, Cameco retained Gebauer & Associates Ltd. to provide independent local wildlife monitors during exploration activities and to manage the Caribou monitoring program. Results of the 2010 exploration Caribou monitoring program are summarized in the report below.

1.2 Additional Caribou Studies

In 2010, Cameco embarked on a number of focused field studies to better understand Caribou distribution, abundance, and movement patterns in proximity to the camp and exploration areas. The focused studies included Height-of-Land surveys at a key exploration target (Sansa Grid) and a primary fuel cache, ground surveys at government-designated Caribou crossing areas along the Thelon River system, composition studies of Caribou herds encountered during field studies, and some preliminary Ecological Land Classification (ELC). The results of these studies are also provided in this report.

2 METHODOLOGY

2.1 Exploration Caribou Monitoring

Caribou monitoring around drill sites and the camp has been conducted annually since 2008. The primary purpose of these monitoring activities is to document Caribou movements, inform Cameco staff when Caribou herds are in close proximity to exploration activities, and minimize human effects on Caribou. Monitors typically survey areas within approximately 2 km of project activities. The form used to record observations is provided in Appendix 1 (Field Form A).

2.2 Height-of-Land Surveys

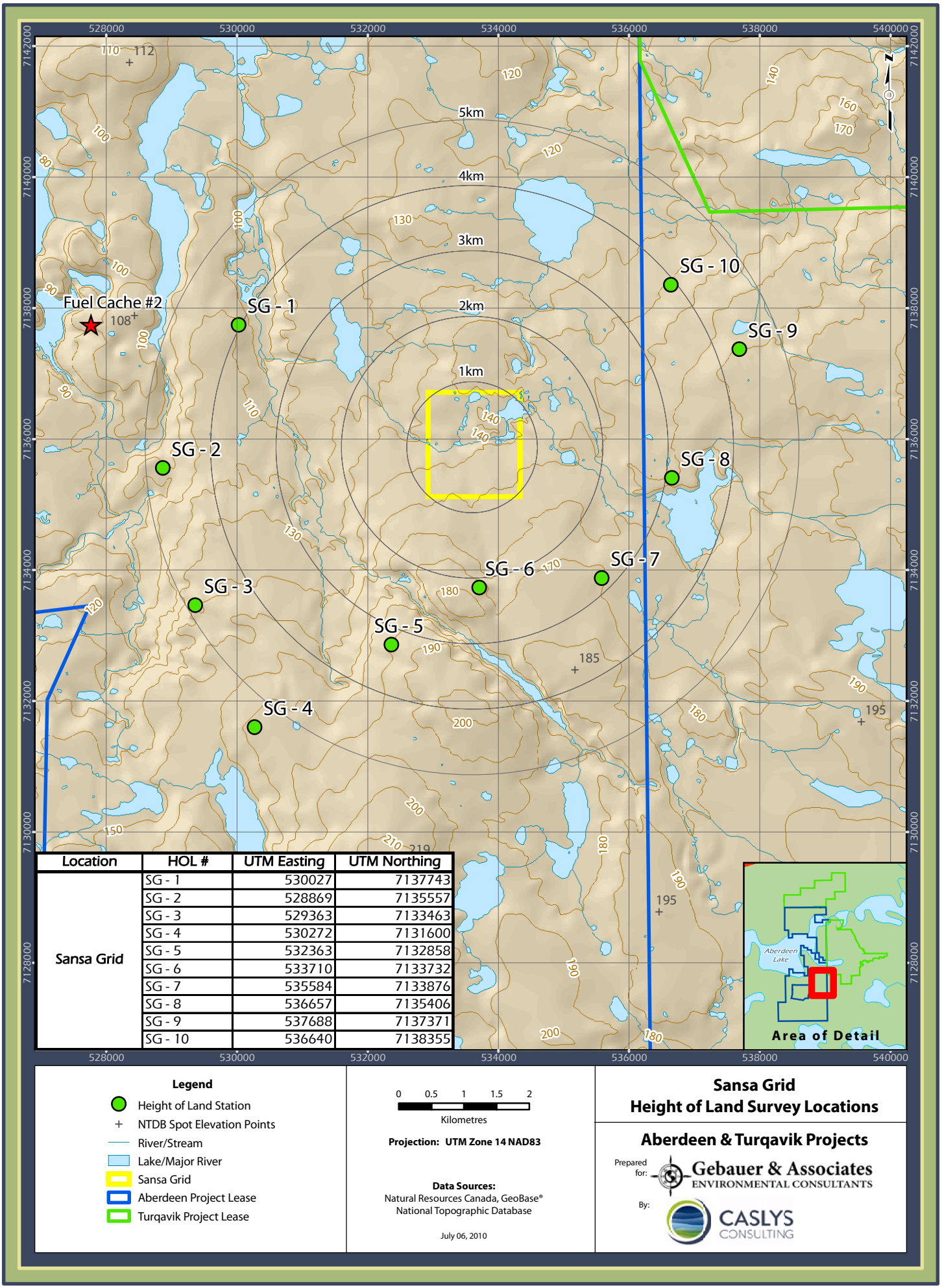
The Sansa Grid and Fuel Cache Height-of-Land surveys each consist of ten observation points spaced 2 to 4 km apart in a circular pattern (see Figures 1 [Sansa Grid] and 2 [Fuel Cache]). A team of two surveyors records observations of wildlife at each point using binoculars or a spotting scope within a 15 minute period. All wildlife is identified and the following information collected: number, sex, distance from observer, direction of travel, habitat type and behavior (see Appendix I - Field Form B). Height-of-Land surveys at the Sansa Grid and Fuel Cache sites each require approximately 10 hours and 20 km of walking to complete.

2.3 Caribou Crossing Location Surveys

Caribou crossing surveys were conducted in areas identified by the Government of Nunavut as historic or current Caribou crossing sites. Four stretches of the Thelon River near the Project area were surveyed in July and August 2010 (see Figures 3 to 7 for survey locations). The general methodology involves two biologists walking along the shoreline and recording the number of animals, sex, age, behavior, location and direction of travel. Signs of Caribou, such as recent tracks, scats, or evidence of Caribou trails are also noted. When Caribou are observed crossing, observers take detailed notes on herd composition while ensuring the animals are not disturbed. The field observation form is provided in Appendix I (Field Form C).

2.4 Caribou Herd Composition Studies

The primary purpose of herd composition studies is to determine the approximate number of bulls, cows and calves within a Caribou herd. Composition studies are conducted opportunistically when groups of Caribou are encountered or if a large herd is within the Project area, a team of observers undertakes dedicated composition studies. Using binoculars or a spotting scope, one observer counts aloud the number age and sex of identifiable Caribou, while the second observer records the information. If possible, the count is conducted over a specified length of time and then repeated as the herd moves through the observation point. This procedure accounts for natural age and sex separation within a herd and allows for a more accurate assessment of the age and sex composition.



Location	HOL #	UTM Easting	UTM Northing
Sansa Grid	SG - 1	530027	7137743
	SG - 2	528869	7135557
	SG - 3	529363	7133463
	SG - 4	530272	7131600
	SG - 5	532363	7132858
	SG - 6	533710	7133732
	SG - 7	535584	7133876
	SG - 8	536657	7135406
	SG - 9	537688	7137371
	SG - 10	536640	7138355

Legend

- Height of Land Station
- NTDB Spot Elevation Points
- River/Stream
- Lake/Major River
- Sansa Grid
- Aberdeen Project Lease
- Turqavik Project Lease

0 0.5 1 1.5 2

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada, GeoBase®
National Topographic Database

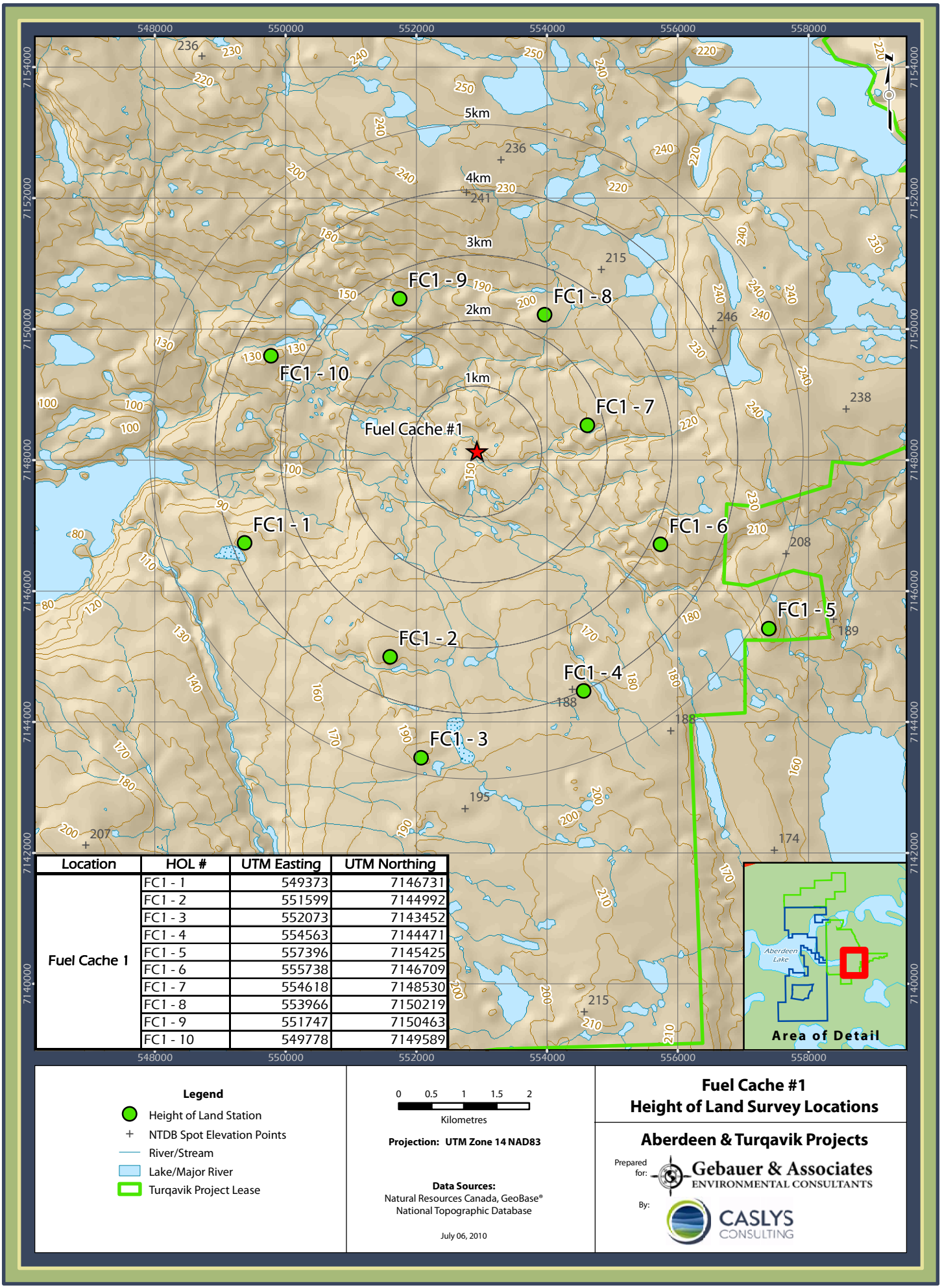
July 06, 2010

Sansa Grid
Height of Land Survey Locations

Aberdeen & Turqavik Projects

Prepared for: Gebauer & Associates ENVIRONMENTAL CONSULTANTS

By: CASLYS CONSULTING



Location	HOL #	UTM Easting	UTM Northing
Fuel Cache 1	FC1 - 1	549373	7146731
	FC1 - 2	551599	7144992
	FC1 - 3	552073	7143452
	FC1 - 4	554563	7144471
	FC1 - 5	557396	7145425
	FC1 - 6	555738	7146709
	FC1 - 7	554618	7148530
	FC1 - 8	553966	7150219
	FC1 - 9	551747	7150463
	FC1 - 10	549778	7149589

Legend

- Height of Land Station
- NTDB Spot Elevation Points
- River/Stream
- Lake/Major River
- Turqavik Project Lease

0 0.5 1 1.5 2

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada, GeoBase®
National Topographic Database

July 06, 2010

Fuel Cache #1
Height of Land Survey Locations

Aberdeen & Turqavik Projects

Prepared for: Gebauer & Associates ENVIRONMENTAL CONSULTANTS

By: CASLYS CONSULTING

Identified Water Crossings of Caribou Along the South Shore of Thelon River/Aberdeen Lake Index Map

Legend

Water Crossing (Gov't Nunavut)

Map A

Map B

Map C

Map D

Qamanaugaq Bay

Aberdeen Lake

Thelon River

Narrows

Illurjualik

Qamanaajuk Lake

Aggatailik Narrows

Schultz Lake

Area of Detail

0 1,000 2,000 3,000

Metres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Cameco Corporation
Gebauer & Associates Ltd.

Cameco Project

Prepared for: Cameco

By: Gebauer & Associates Environmental Consultants; CASLYS Consulting

July 06, 2010

520000 521000 522000 523000 524000 525000 526000

7157000 7156000 7155000 7154000

Aberdeen Lake

Map A

520907
7154434

524890
7153859

60

90

Identified Water Crossings of Caribou Along the South Shore of Thelon River/Aberdeen Lake Map A

Legend

- End Points
- Transects
- Water Crossing (Gov't Nunavut)

Area of Detail

0 250 500 750

Metres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Cameco Corporation
Gebauer & Associates Ltd.

Cameco Project

Prepared for: Cameco

By: Gebauer & Associates Environmental Consultants

CASLYS CONSULTING

July 06, 2010

Identified Water Crossings of Caribou Along the South Shore of Thelon River/Aberdeen Lake Map B

Legend

- End Points
- Transects
- Water Crossing (Gov't Nunavut)

530201
7169911

530734
7161643

Map B

Qamanaugaq Bay

Aberdeen Lake

524000 525000 526000 527000 528000 529000 530000 531000 532000 533000 534000

7170000 7169000 7168000 7167000 7166000 7165000 7164000 7163000 7162000

N

Area of Detail

0 250 500 750
Metres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Cameco Corporation
Gebauer & Associates Ltd.

Cameco Project

Prepared for: Cameco

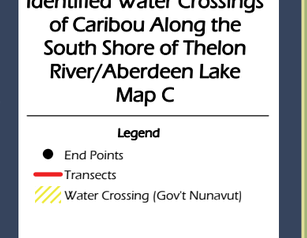
By: Gebauer & Associates Environmental Consultants
CASLYS CONSULTING

July 06, 2010

Identified Water Crossings of Caribou Along the South Shore of Thelon River/Aberdeen Lake Map C

Legend

- End Points
- Transects
- Water Crossing (Gov't Nunavut)



0 250 500 750
Metres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Cameco Corporation
Gebauer & Associates Ltd.

Cameco Project

Prepared for: Cameco

By: Gebauer & Associates ENVIRONMENTAL CONSULTANTS
CASLYS CONSULTING

July 06, 2010

534729
7172119

544354
7174615

Map C

Thelon River

Illurjualik

Narrows

535000 536000 537000 538000 539000 540000 541000 542000 543000 544000 545000

7176000 7175000 7174000 7173000 7172000 7171000 7170000 7169000

Identified Water Crossings of Caribou Along the South Shore of Thelon River/Aberdeen Lake Map D

Legend

- End Points
- Transects
- Water Crossing (Gov't Nunavut)

Area of Detail

0 250 500 750

Metres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Cameco Corporation
Gebauer & Associates Ltd.

Cameco Project

Prepared for: Cameco

By: Gebauer & Associates Environmental Consultants

CASLYS CONSULTING

July 06, 2010

Aggorttalik

Narrows

Map D

550452
7175875

555856
7175904

550000 551000 552000 553000 554000 555000 556000

7179000 7178000 7177000 7176000 7175000

2.5 Ecological Land Classification

Ecological Land Classification (ELC) is a method of classifying ecologically distinct areas and habitats of the earth. Landsat satellite imagery is the first step in the classification process, and the images produced are interpreted as distinct ecological zones. To corroborate the classifications produced through Landsat imagery, some field observations are required. This process, called ground-truthing, is completed as part of project-related baseline data collection, and is conducted in data gap areas specified by the Government of Nunavut.

A 20 x 20 m plot is selected and a biologist identifies plant species and percent cover in the plot area. Additional information that is recorded includes, landform topography, exposure, surficial expression, substrate material, and moisture regime. The Landsat verification forms used in Ecological Land Classification are provided in Appendix I (Field Form D).

2.6 Camp Wildlife Log

A wildlife log is located in the camp kitchen so that all staff and camp visitors can record wildlife observed within the vicinity of camp. During orientation, all staff are informed of the location of the log and encouraged to record their observations during their time in camp. The wildlife log helps collect data on incidental sightings when wildlife biologists are not present. An example of the camp wildlife log is provided in Appendix I (Field Form E).

2.7 Bird Checklists

During all field programs, each team of biologists records the total number and species of birds seen within an approximate 10 x 10 km area for a given day. Visual observations as well as songs and calls are used to identify bird species. Bird checklists provide useful project-related baseline data and contribute to Environment Canada's bird monitoring program, which collects data on the distribution, abundance and breeding status of birds in the Northwest Territories and Nunavut.

3 RESULTS

3.1 Exploration Caribou Monitoring

The following section presents the Caribou exploration monitoring results from the 2010 field season.

3.1.1 June 2010

3.1.1.1 Monitoring Results

Small numbers of adult Caribou were seen in the vicinity of Cameco exploration activities during June 2010. Table 1 summarizes Caribou observations during the June 2010 monitoring period.

Table 1: Results of Cameco`s June 2010 Caribou Monitoring Program.

Date	Observations	Comments
01-11 June	No exploration monitoring	Not applicable
12-14 June	None observed	Not applicable
15 June	3 adults	5-6 km away; walking
16-17 June	None observed	Not applicable
18 June	4 adults	60 m away; walking, standing, foraging and swimming
	1 bull and 2 cows	2 km away; foraging and walking
19 June	6 adults	Seen from air; foraging and standing
	2 adults	4 km away; foraging and walking
	1 adult	1 km away; foraging and resting
	8 adults	3 km away; walking and foraging
20 June	1 bull and 2 cows	2.5 km away; walking briskly
21 June	None observed	Not applicable
22-23 June	No exploration monitoring	Not applicable
24-25 June	None observed	Not applicable
26 June	No exploration monitoring	Not applicable
27 June	3 adults	2 km away; foraging and walking briskly
	3 bulls	400 m away; foraging and walking
	7 adults	2.75 km away; foraging and walking
28 June	1 adult	4.5 km away; foraging and walking
29-30 June	None observed	Not applicable

3.1.1.2 Mitigation Actions Taken

No interactions between exploration activities and Caribou were noted; therefore, no mitigative actions were taken.

3.1.1.3 Summary

Small groups of adult Caribou were seen infrequently during the June monitoring period. Where determination of sex was possible, animals were identified as bulls. No interactions between exploration activities and Caribou were noted.

3.1.2 July 2010

3.1.2.1 Monitoring Results

Individuals or small groups of Caribou were seen in the vicinity of Cameco exploration activities throughout July. Between 27 and 31 July, herds of 50-2000 Caribou were observed. On 31 July, approximately 7000 Caribou were observed during a wildlife survey of a new drilling location prior to relocating the drilling equipment. Table 2 summarizes Caribou observations during the July 2010 observation period.

Table 2: Results of Cameco`s July 2010 Caribou Monitoring Program. Yellow Shading Indicates Potentially Disturbed Animals (Natural, Observer or Project-related).

Date	Observations	Comments
01July	1 adult	500 m away; foraging, walking and alert
02-04 July	None observed	Not applicable
05 July	8 adults	600 m away; foraging
06 July	3 adults	Sighted by drilling crew
07 July	None observed	Dense fog limited observations
08 July	No exploration monitoring	Not applicable
09 July	None observed	Not applicable
10 July	1 adult	2 km away; standing, walking and grazing
11 July	None observed	Not applicable
12 July	2 adults	460 m away; walking, looking and trotting
13 July	No exploration monitoring	Not applicable
14 July	None observed	Not applicable
15 July	No exploration monitoring	Not applicable
16-20 July	None observed	Not applicable
21 July	1 young cow	50 m away; drinking, walking stiffly, cautious and very skinny
	1 bull	>2 km away; grazing and walking

Table 2: Continued.

Date	Observations	Comments
22-24 July	1 bull	2 km away; walking
25 July	No exploration monitoring	Not applicable
26 July	None observed	Not applicable
27 July	3 adults	3.5 km away; foraging and walking
	50 adults	6 km away; walking
28 July	60 adults	2.5 km away; foraging and walking
	100 adults	3.5 km away; foraging and walking
	500 adults	5 km away; foraging and walking
	1,000 adults	6 km away; foraging and walking
	1 cow and 1 calf	900 m away; walking and foraging
	1,500 adults	500 m away; not determined
	1 bull	500m away; foraging and walking
	2,000 adults	4 km away; foraging and walking
29 July	1 cow	350 m away; walking briskly
	1 bull	2 km away; foraging and walking
	1 cow	400 m away; foraging and resting
	1 bull	500 m away; walking
30 July	2,000 adults	10 km away; foraging and walking
	50 adults	4 km away; foraging and walking
	100 adults	5 km away; walking briskly
	1,000 adults	6 km walking
	1 cow and 1 calf	1.5 km away; walking briskly
	2,000 adults	2.5 km away; not determined
31 July (Advance survey of new drill site prior to drill move)	100 adults and 30 calves	1.5 km away; resting
	7,000 adults	400 m away; resting
	5 adults	1.3 km away; walking
	1 cow	2.5 km away; walking briskly
	1 bull	100 m away; foraging

3.1.2.2 Mitigation Actions Taken

No interactions between exploration activities and Caribou were noted; therefore, no mitigative actions were taken. In all cases when groups of 50 or more Caribou were observed, a minimum distance of 2 km from exploration activities was observed.

3.1.2.3 Summary

Individuals or small groups of adult Caribou were observed for the first three weeks of July. Beginning on 27 July, Caribou were seen with increasing abundance and frequency. Large groups of at least 1,000 animals were observed on 28 and 30 July. On 31 July, during an advance wildlife survey of a new drilling location, one herd of 7,000 animals was observed as well as a group of 100 Caribou with 30 calves. No interactions between exploration activities and Caribou were noted; therefore, no mitigative actions were taken in July 2010.

3.1.3 August 2010

3.1.3.1 Monitoring Results

Exploration monitoring continued throughout August and Caribou were observed on all monitoring days. The largest herd observed in August consisted of 500 animals; however, most observations were of small groups of bulls, cows and some calves. Table 3 summarizes Caribou observations during the August 2010 observation period.

Table 3: Results of Cameco`s August 2010 Caribou Monitoring Program. Yellow Shading Indicates Potentially Disturbed Animals (Natural, Observer or Project-related).

Date	Observations	Comments
01 August	1 cow	100 m away; walking
02 August	2 cows and 1 calf	1.5 km away; walking
	4 bulls and 6 cows	1 km away; foraging and walking
	500 adults	2 km away; foraging and walking
	100 adults	1 km away; foraging and walking
	8 bulls, 3 cows, 2 adolescents	400 m away; foraging and walking
	13 adults	1 km away; walking
	1 bull	300 m away; standing
	6 cows and 7 calves	400 m away; foraging and walking
	500 adults	5 km away; foraging and walking
	1 bull, 2 cows and 2 calves	25 m away; trotting
	2 cows and 2 calves	125 m away; trotting
	5 bulls and 1 cow	100 m away; foraging and walking
	1 bull	700 m away; foraging and walking

Table 3: Continued.

Date	Observations	Comments
03 August	1 bull	2 km away; foraging and walking
04 August	2 bulls, 2 cows and 2 calves	3 km away; foraging and walking
05 August	1 cow	1.5 km away; foraging and walking
	2 bulls	2 km away; foraging and walking
	1 bull	800 m away; resting
06 August	8 bulls, 6 females, 4 calves and 9 adolescents	450m away; walking briskly
	2 cows, 1 calf, 1 adolescent	600 m away, walking briskly
	2 cows, 1 adolescent	600 m away; walking briskly
	1 bull	350 m away; walking
	1 bull	2 km away foraging and walking
	1 bull	150 m away; foraging
07 August	1 bull	125 m away; not determined
	2 bull	600 m away; foraging and walking
	1 adolescent	750 m away; resting
	3 adults	3 km away; foraging and walking
	1 bull	75 m away; injured and walking with difficulty
	1 bull	450 m away; standing
	1 bull	2.5 km away; foraging and walking
	500 adults	5 km away; foraging and walking
08 August	1 bull	350 m away; resting
	1 bull	3 km away; foraging and walking
	1 bull	750 m away; foraging and walking
09 August	5 adults	4 km away; foraging and walking
	3 adults	3 km away; foraging and walking
	10 adults	3 km away; foraging and walking
	3 bulls and 2 adolescents	2.5 km away; walking briskly
	1 bull and 2 adolescents	2 km away; foraging
	1 cow	750 m away; resting
	1 cow	500 m away; resting
	30 adults	6 km away; walking
	1 bull and 1 cow	200 m away; foraging and walking
	1 adolescent	400 m away; foraging and walking
	1 cow and 1 calf	300 m away; running
	15 bulls, 10 cows, 8 calves and 10 adolescents	50 m away; running/disturbed by flies
	22 adults	450 m away; walking and resting
	300 adults	3 km away; running, walking and foraging
10 August	No exploration monitoring	Not applicable

Table 3: Continued.

Date	Observations	Comments
11 August	2 adults	4 km away; foraging
	3 cows and 2 calves	2.5 km away; foraging
	2 cows and 1 calf	2.5 km away; walking and foraging
	16 adults and 3 calves	5 km away; walking and foraging
	1 cow and 1 calf	4 km away; walking and foraging
	1 bull	3 km away; walking and foraging
	5 adults and 2 calves	3.5 km away; walking and foraging
	1 cow	1.5 km away; standing
	1 cow	1 km; foraging
	1 cow	800 m away; foraging and resting
	23 adults	900 m away; foraging
	2 adults	2 km away; foraging
	1 adult	1 km away; foraging
	1 adult	1 km away; foraging
	1 bull	650 m away; foraging
	1 cow	600 m away; foraging
	1 cow	700 m away; foraging
	12 adults	1.5 km away; foraging
12 August	1 bull and 4 adolescents	900 m away; foraging
	1 cow	1.3 km away; walking and foraging
	1 cow and 1 calf	900 m away; foraging
	2 bulls	900 m away; foraging
	5 adults	1.2 km away; foraging
	4 cows and 4 calves	900 m away; foraging
	2 cows and 1 calf	900 m away; foraging
	5 bulls, 43 cows, 3 calves	900 m away; foraging
	2 cows and 1 calf	900 m away; foraging
	3 bulls and 1 adolescent	900 m away; foraging
	1 bull	500 m away; foraging
	4 cows and 1 bull	1.2km away; foraging
	18 adults	4 km away; foraging
	1 adolescent	500 m away; resting
	1 cow and 1 bull	100 m away; foraging
13 August	11 adults	3 km away; foraging
	38 adults	2 km away; foraging
	200 adults	3 km away; foraging
	25 adults	3 km away; foraging
	2 adults	1.2 km away; foraging
	1 cow	850 m away; foraging
	1 bull	1.15 km away; resting
	3 bulls	1.25 km away; resting
	1 adult	3 km away; foraging

Table 3: Continued.

Date	Observations	Comments
14 August	1 adult	1 km away; foraging
	2 adults	2 km away; foraging
	1 adult	2 km away; foraging
	1 adult	2 km away; resting and foraging
	2 bulls and 1 adolescent	3 km away; foraging
15 August	2 cows and 1 calf	2 km away; foraging
	1 adult and 1 calf	3 km away; foraging
	3 adults and 1 calf	2.5 km away; foraging
	2 cows	2 km away; foraging
	1 bull	670 m away; foraging
	1 cow and 1 calf	At drill; foraging
16 August	1 bull and 3 cows	3 km away; foraging
	1 cow	2.5 km away; foraging
	2 adults	2.5 km away; foraging
	5 adults	2.5 km away; foraging
	1 adult	1.5 km away; foraging
17 August	10 adults	500 m away; foraging
	4 adults	1.5 km away; foraging
	5 adults and 1 bull	2 km away; foraging
	4 adults and 1 calf	1.5 km away; foraging
	1 cow and 1 calf	1.5 km away; foraging
	5 adults	3 km away; running
	9 adults	3km away; foraging
	1 bull	1.5 km away; foraging
	2 adults	1.2 km away; foraging
	2 adults	500 m away; foraging
	6 adults and 2 calves	1 km away; foraging
	4 adults and 2 bulls	3 km away; foraging
	6 adults	1.5 km away; foraging
	2 adults	500 m away; foraging
18 August	7 adults	1 km away; foraging
	3 bulls	800 m away; foraging
	3 adults and 4 bulls	1.2 km away; foraging
	15 adults	2 km away; foraging
	30 adults	3.5 km away; walking and foraging
	1 cow and 1 calf	1.4 km away; walking and foraging
19 August	No exploration monitoring	Not applicable
20 August	14 cows, 4 bulls, 3 calves and 4 adolescents	1.5 km away; foraging and walking
	1 cow	1 km away; foraging and walking
	3 cows and 2 calves	1.5 km away; foraging and walking
	1 bull, 1 cow and 1 calf	1.7 km away; foraging and walking
	25 adults	2 km away; foraging and walking
	2 bulls	400 m away; foraging and walking
	35 adults	1.5 km away; walking

Table 3: Continued.

Date	Observations	Comments
20 August Continued	3 bulls, 8 cows, 6 calves and 8 adolescents	300 m away, walking briskly
	1 cow and 1 calf	950 m away; foraging and walking
	1 bull	1 km away; foraging and walking
	1 cow and 1 calf	850 m away; foraging and walking
	2 bulls, 2 cows and 2 calves	700 m away; foraging and walking
21 August	1 bull	900 m away; resting
	1 adolescent	30 m away; walking
	1 bull	950 m away; walking
22 August	No exploration monitoring	Not applicable
23 August	1 bull, 1 cow and 2 young	60 m away; running
	2 bulls	900 m away; foraging and walking
	1 cow and 1 adolescent	950 m away; foraging and walking
	1 bull	750 m away; foraging and walking
	1 cow and 1 calf	600 m away ; foraging and walking
24 August	2 bulls	850 m away; foraging and resting
	1 cow and 2 calves	900 m away; foraging and walking
	2 cows and 2 calves	70 m away; foraging and walking
	4 bulls, 3 cows and 2 calves	1.5 km away; foraging and walking
25 August	2 bulls	100 m away; walking
	150 adults	1.5 km away; walking, foraging and resting
	1 bull	40 m away; walking and resting
	45 adults	950 m away; walking
26 August	8 adults	300 m away; walking
	1 cow and 1 calf	400 m away; foraging and resting
	1 cow and 1 calf	700 m away; foraging and walking
	2 bulls	800 m away; not determined
	1 cow and 1 calves	350 m away; walking
27 August	No exploration monitoring	Not applicable
28 August	1 bull, 3 cows, 1 adolescent and 1 calf	900 m away; resting
	2 bulls and 1 adolescent	700 m away; foraging and resting
	30 adults	1 km away; foraging and resting
	2 bulls	600 m away; resting
	14 adults	1.5 km away; foraging and walking
	1 bull, 2 cows and 1 calf	65 m away; foraging and walking
	2 adults	60 m away; walking and resting
	100 adults	1 km away; walking and resting
	100 adults	900 m away; foraging and resting

Table 3: Continued.

Date	Observations	Comments
29 August	1 bull and 2 cows	800 m away; foraging, walking and resting
	1 cow and 1 calf	500 m away; foraging and feeding calf
	50 adults	1.5 to 3 km away; foraging and resting
	15 adults	4 km away; foraging and resting
	1 bull	2.5 km away; walking
	5 bulls	800 m away; foraging and standing
	45 adults	2 km away; foraging and resting
	25 adults	3 km away; walking and resting
	5 bulls and 1 adolescent	50 m away; curious and walking
30 August	14 adults	2.5 km away; foraging and resting
	5 bulls and 3 adolescents	300 m away; foraging and resting
	1 bull	3 km away; running
31 August	2 bulls	800 m away; standing and resting
	1 bull	150 m away; standing and resting
	1 bull	200 m away; walking and resting

3.1.3.2 Mitigation Actions Taken

No interactions between exploration activities and Caribou were noted; therefore, no mitigative actions were taken. In all cases when groups of 50 or more Caribou were observed, a minimum distance of 2 km from exploration activities was observed.

3.1.3.3 Summary

Exploration monitors recorded the highest frequency of Caribou observations in August. Relative to July, the overall abundance of Caribou decreased due to smaller herd sizes. The largest group observed in August consisted of 500 animals whereas a herd of 7000 animals was seen in late July. The majority of observations in August consisted of small groups of bulls and cows, with some calves and adolescents identified. No interactions between exploration activities and Caribou were noted; therefore, no mitigative actions were taken.

3.1.4 2010 Exploration Caribou Monitoring Summary

Exploration monitors recorded the highest frequency of Caribou in August; however, relative to July, the overall abundance of Caribou decreased due to smaller herd sizes. The largest group observed in August consisted of 500 animals whereas a herd of 7,000 animals was seen in late July. The majority of observations in August consisted of small groups of bulls and cows, with some calves and adolescents identified. No interactions between exploration activities and Caribou were noted; therefore, no mitigative actions were taken. Table 1 below briefly summarizes exploration monitoring Caribou observations from June, July and August 2010.

Table 4: Exploration Monitoring Caribou Observations in June, July and August 2010.

Species	June (12th to 30th)	July (1st to 31st)	August (1st to 31st)
Caribou	41 + carcass + wolf kill + trail	16,496 + 32 calves + tracks + carcasses	3,344 + 54 young + 88 calves + fur

3.2 Height-of-Land Survey

3.2.1 Summary

Eleven Height-of-Land surveys were conducted in the 2010 field season; seven (7) were completed in July, three (3) in June and two (2) in August. In June and July, a single Caribou was seen each month; however, in August over 1,300 Caribou and calves were observed. A group of four (4) Muskoxen with two (2) calves was observed in June, while only adult Muskoxen were identified in July and August. One Arctic Wolf was observed in both June and July, and an Arctic Fox den with three pups was located in August. Table 5 summarizes all the observations from Height-of-Land surveys conducted in 2010 by month.

Table 5: Wildlife Observations Recorded during Cameco`s 2010 Height-of-Land Surveys. Numbers Represent Cumulative Numbers by Survey Date.

Species	**June (22nd & 23rd)**	**July (13th, 15th, 17th, 18th, 22nd, 23rd & 29th)**	**August (2nd & 9th)**
Mammals			
Arctic Fox	scat	scat	den + 3 young
Arctic Hare			1
Caribou	1	1 + bones + pellets	1,355 + 38 calves
Muskox	4 cows with 2 calves	7 + pellets	4
Sik Sik		1	
Wolf	1 + scat	1 + scat	
Birds			
American Golden-Plover	2	6 + 10 (5 pairs) + 1 young	
Canada Goose	2		14
Dunlin		2 (1 pair)	
Glaucous Gull	1		
Goose sp.		pellet	
Greater Scaup	4 (2 pairs)		
Greater White-fronted Goose	4		
Herring Gull	3	2	
Least Sandpiper		4 (2 pairs)	
Long-tailed Duck	12 + 14 (7 pairs)		
Long-tailed Jaeger	7 + 4 (2 pairs)	3 + 6 (3 pairs)	1
Northern Pintail	2 (1 pair)		
Parasitic Jaeger	1	3 + 4 (2 pairs)	1
Ptarmigan sp.		carcass + feathers + pellets	
Rock Ptarmigan	43	1	
Rough-legged Hawk		1	
Sandhill Crane	2 + 10 (5 pairs)	2 + 8 (4 pairs)	3 + 2 (1 pair)
Semipalmated Plover		2 (1 pair)	
Semipalmated Sandpiper	1		
Short-eared Owl	2	2	
Snowy Owl		1	
Stilt Sandpiper		2 (1 pair)	
Willow Ptarmigan	26	2 (1 pair)	

3.2.2 Discussion

Height-of-Land surveys are an essential tool for baseline data collection as they provide a systematic, replicable and non-invasive method of wildlife observation. The surveys can be included in long-term monitoring programs in the event a mine is developed and a monitoring program is required. In addition, Height-of-Land surveys document the movement, distribution and abundance of Caribou and other wildlife, particularly large-scale movements, within the Project area. As an example, in August 2010, 1,355 adult Caribou with 38 calves were identified on the Sansa Grid Height-of-Land survey. While large-scale Caribou observations were not recorded in June and July 2010, the data are valuable in establishing baseline conditions against which future results can be compared.

3.3 Caribou Crossing Location Survey

3.3.1 Summary

Surveys at Caribou crossing locations were conducted in July and August 2010. Overall, three (3) surveys were conducted along each of the transects outlined on Mapsheets A, B and D (see Figures 4, 5 and 7), while six (6) surveys were completed on the Mapsheet C transect (see Figure 6). In addition, four (4) stand-watches were completed at the narrowest point on Mapsheet C and one (1) stand-watch was completed near the island on Mapsheet D. Caribou tracks were observed along the shoreline of all Mapsheets indicating recent presence of animals; however, Caribou crossing was only confirmed on Mapsheet C.

On the afternoon of 31July 2010, 57 Caribou were observed crossing from north to south on Mapsheet C at the location of a cabin. Inuit staying in the cabin informed biologists that 300-400 Caribou had crossed from north to south earlier on the morning of 31 July. Following the 31 July crossing event, stand-watches were implemented at the cabin on Mapsheet C and near the island on Mapsheet D.

On 01 August 2010, two (2) adult Caribou were observed crossing at Mapsheet C and the cabin residents informed biologists that approximately 200 Caribou had crossed from north to south in the late evening of 31 July, and approximately 40 Caribou had crossed early on the morning of 01 August. Throughout the day on August 03, biologists observed 340 Caribou with some calves crossing from north to south at the cabin location on Mapsheet C. No Caribou were observed crossing at other locations.

Table 6 summarizes all mammal observations during Caribou crossing surveys in 2010. A complete list of all wildlife species recorded during Caribou crossing surveys is provided in Appendix II.

Table 6: Mammal Observations from Cameco Caribou Crossing Surveys in July and August 2010.

Species	July	August
Mammals		
Caribou	77 + 2 calves + tracks + trails	977 + 8 calves
Muskox	8 + 3 calves + pellets	
Wolf	1 + carcass + tracks	carcass
Wolverine	carcass	

3.3.2 Discussion

Caribou crossing surveys in 2010 confirm that Caribou with calves are crossing the Thelon River from north to south within the Project area. Further research is required to determine: 1) whether these animals are part of the Qamanirjuaq or Beverly Caribou herds; 2) if the crossing location is used on a yearly basis; and 3) and if animals are crossing in more than one direction in a given season. In subsequent years, focused 24-hour stand-watch observations are recommended at high traffic crossings points at critical times of the summer to further document Caribou crossing activity in the Project area.

3.4 Caribou Herd Composition Studies

3.4.1 Summary

Caribou herd composition counts were conducted on 23, 25, 26 and 30 of July 2010, when a post-calving Caribou herd, estimated to contain 10,000 animals, was within the Project area. Overall, 23 independent counts were conducted and 4,367 Caribou were classified as bulls, cows or calves. The herd composition, determined by averaging all classified counts was 21.4% bulls, 58.6% cows and 28.9% calves, with the overall ratio of cows to calves being 0.49. Due to the large herd size, and variability in distribution (scattered/grouped) and movement (bedded-down/running), counts were not standardized to a defined time period. In order to compensate for natural groupings of bulls, cows and calves, counts were conducted at regular intervals during Caribou movement through the observation point. Table 7 summarizes the results of all classified counts.

Table 7: Results of Caribou Herd Composition Studies Conducted in Late July 2010.

Date	Time	# Bulls	# Cows	# Calves	Totals	% Bulls	% Cows	% Calves
24 July	10:30	6	186	115	307	2.0	60.6	37.5
24 July	13:00	61	115	20	196	31.1	58.7	10.2
24 July	16:00	6	76	65	147	4.1	51.7	44.2
25 July	11:30	66	13	2	81	81.5	16.0	2.5
25 July	12:25	102	125	13	240	42.5	52.1	5.4
25 July	13:14	43	138	49	230	18.7	60.0	21.3
25 July	13:50	4	293	219	516	0.8	56.8	42.4
25 July	14:20	1	87	86	174	0.6	50.0	49.4
26 July	08:50	15	94	64	173	8.7	54.3	37.0
26 July	11:04	3	51	36	90	3.3	56.7	40.0
26 July	11:35	6	41	21	68	8.8	60.3	30.9
26 July	12:14	25	156	69	250	10.0	62.4	27.6
26 July	12:31	17	99	39	155	11.0	63.9	25.2
26 July	14:22	32	137	52	221	14.5	62.0	23.5
26 July	14:34	9	18	7	34	26.5	52.9	20.6
26 July	14:48	21	72	30	123	17.1	58.5	24.4
26 July	16:10	70	249	114	433	16.2	57.5	26.3
30 July	08:22	0	19	21	40	N/A	47.5	52.5
30 July	10:33	10	117	77	204	4.9	57.4	37.7
30 July	11:12	8	88	14	110	7.3	80.0	12.7
30 July	11:36	10	79	36	125	8.0	63.2	28.8
30 July	11:47	17	165	78	260	6.5	63.5	30.0
30 July	14:01	15	141	34	190	7.9	74.2	17.9
Totals		**547**	**2,559**	**1,261**	**4,367**			

3.4.2 Discussion

Caribou herd composition studies provide important baseline data on sex, age ratio, overall abundance and distribution of Caribou, as well as a preliminary assessment of a herd's overall health. An overall cow:calf ratio of 0.49 suggests that the herd observed had a successful calving season; however, these results are not conclusive as further standardized classified counts would be required for a statistically significant result. In addition, the studies confirm that a significant post-calving movement of Caribou from the Qamanirjuaq herd moved through the Project area in late July 2010 (see Figure 8 for approximate herd size, distribution and movement).

2010 Caribou Distribution and Movement in the Turqavik-Aberdeen Project Area

Legend

Caribou Movements

Number of Observed Caribou

- 0 - 500
- 501 - 2,000
- 2,001 - 5,000
- 5,001 - 10,000
- 10,001 - 30,000

- Aberdeen Lease
- Turqavik Lease
- Kiggavik Lease
- Sissons Lease

Area of Detail

0 2 4 6 8

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada
GeoBase®
National Topographic Database
Cameco Corporation
Gebauer & Associates Ltd.

Prepared for:

Cameco

By:

Gebauer & Associates
ENVIRONMENTAL CONSULTANTS

CASLYS CONSULTING

November 23, 2010

520000 540000 560000 580000 600000 620000 640000

7180000 7160000 7140000 7120000 7100000

Schultz Lake
Qamanaarjuk Lake
Aberdeen Lake
Thelon River
Whitehills Lake
Judge Sissons Lake
Pitz Lake
Baker Lake

late July - early August
mid - late August
late July - early August
late July
early August
mid July - early August
late July - early August
late July - early August
late July
late July

3.5 Ecological Land Classification

3.5.1 Summary

Twenty ELC plots were completed in the 2010 field season. The most common plant species observed were Dwarf Birch (*Betula glanulosa*), *Sphagnum* moss, Labrador Tea (*Ledum decumbens*), sedges (*Carex* sp.) and Iceland Moss (*Cetraria nivalis*). No unusual or rare plant species were found. A complete list of all documented plants species is provided in Appendix III. The locations of ELC plots conducted in 2010 are provided in Figure 9 below.

3.6 Incidental Wildlife Observations

The following section presents incidental wildlife observations from:

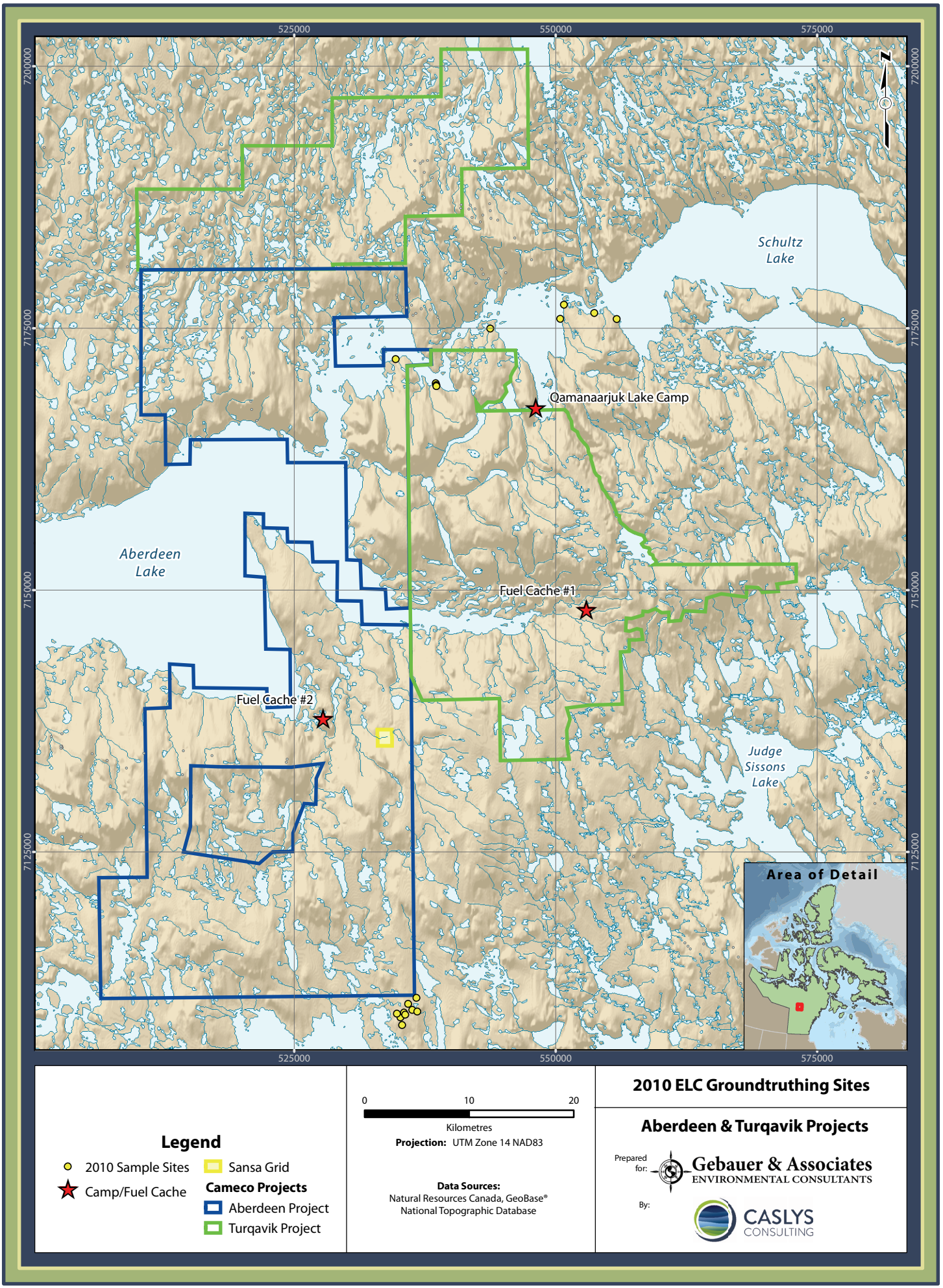
- Exploration Monitoring;
- The Camp Wildlife Log; and
- The Bird Checklist Surveys.

3.6.1 Exploration Monitoring

3.6.1.1 Summary

Exploration monitors observed a variety of mammal and bird species during the 2010 field season. Mammal observations included Muskoxen and calves, Wolverine, Arctic Wolf, Arctic Fox and Arctic Hare. Table 8 summarizes mammal species observed during exploration monitoring from June through August 2010.

Songbirds, waterbirds and raptor species were also observed during exploration monitoring, and the nests of American Golden Plover, Horned Lark, Lapland Longspur, Peregrine Falcon, Sandhill Crane, Semipalmated Sandpiper and Willow Ptarmigan were identified. Successful breeding was confirmed by the presence of young of Canada Goose, Dunlin, Greater White-fronted Goose, Lapland Longspur, Long-tailed Duck, Parasitic Jaeger, Rough-legged Hawk, Sandhill Crane, Semipalmated Plover and Stilt Sandpiper. A complete list of all exploration monitoring incidental observations is provided in Table 8 below.



Legend

- 2010 Sample Sites
- Camp/Fuel Cache
- Sansa Grid

Cameco Projects

- Aberdeen Project
- Turqavik Project

0 10 20

Kilometres

Projection: UTM Zone 14 NAD83

Data Sources:
Natural Resources Canada, GeoBase®
National Topographic Database

2010 ELC Groundtruthing Sites

Aberdeen & Turqavik Projects

Prepared for: Gebauer & Associates Environmental Consultants

By: CASLYS CONSULTING

Table 8: Incidental Wildlife Observations Recorded during Cameco`s 2010 Exploration Caribou Monitoring Program. Numbers Represent Cumulative Numbers by Month.

Species	June (12th to 30th)	July (1st to 31st)	August (1st to 31st)
Mammals			
Arctic Fox	2 + den	tracks, scats	1 + 3 young
Arctic Hare	10	5	6
Brown Lemming		2	
Caribou	41 + carcass + wolf kill + trail	16,496 + 32 calves + tracks + carcasses	3,344 + 54 young + 88 calves + fur
Muskox	31 + 8 cows with 4 calves	7 + 16 (cow/calf) + 9 cows/5 calves + tracks + old skull	3 + 13 cows/6 calves + 10 cows/3 calves + 15 cows/4 calves
Sik Sik		dens/burrows	3
Wolf	7 + scats	3 + scats	scat
Wolverine	1		2
Birds			
American Golden-Plover	3 + nest (4 eggs)	4 + 8 (4 pairs)	4 (2 pairs)
Arctic Tern	2 (1 pair)		
Bald Eagle	1	4 + 1 young	
Canada Goose	62	12	149 + 6 (3 pairs) + 5 young
Common Loon	2 (1 pair)		
Common Raven	1		1
Duck sp.	3 + 2 (1 pair)		
Dunlin		3 + 1 young	1
Glaucous Gull	3	2 + 2 (1 pair)	
Greater White-fronted Goose	3 + 2 (1 pair)	9 + 2 (1 pair) + 3 young	
Gull sp.		1 + carcass	
Gyrfalcon	3		
Herring Gull	9 + 2 (1 pair)	11 + 2 (1 pair)	7
Horned Lark	1 + nest (4 eggs)		
Jaeger sp.			
Lapland Longspur	1 + nest (4 eggs)	2 (1 pair) + nest (1 egg) + 1 young	
Least Sandpiper		4 (2 pairs)	
Long-tailed Duck	25	9 + 12 young	31 + 4 (2 pairs) + 33 young
Long-tailed Jaeger	7 + 2 (1 pair)	11 + 8 (4 pairs)	6 + 2 (1 pair)
Northern Pintail	6 (3 pairs)	3	7
Pacific Loon	1 + 4 (2 pairs)		

Table 8: Continued.

Species	June (12th to 30th)	July (1st to 31st)	August (1st to 31st)
Parasitic Jaeger	1	2 + 4 (2 pairs)	2 + 6 (3 pairs) + 2 young
Pectoral Sandpiper		1	
Peregrine Falcon	2 (1 pair)	2 + 2 (1 pair) + nest (3 eggs)	1 + 2 (1 pair)
Ptarmigan sp.	1 carcass + 1 feather		
Raptor sp.		2	
Red-breasted Merganser		12	1
Red-throated Loon			2 (1 pair)
Rough-legged Hawk	3 + 2 (1 pair)	1 + 2 (1 pair) + 4 young	3
Sandhill Crane	3 + 16 (8 pairs) + nest (2 eggs)	4 + 16 (8 pairs) + 3 young	20 (10 pairs) + 1 young
Sandpiper sp.	1		
Semipalmated Plover		10 (5 pairs) + 3 young	
Semipalmated Sandpiper		6 + 2 (1 pair) + nest (2 eggs)	7 + 2 (1 pair)
Short-eared Owl			1
Snow Goose	15		127
Snowy Owl	2 + scat	1 + pellet	
Stilt Sandpiper		20 + 2 young	
Willow Ptarmigan		5 + 4 (2 pairs) + 27 young + nest (4 broken eggs)	
Yellow-billed Loon		1	

3.6.2 Camp Wildlife Log

3.6.2.1 Summary

The Cameco wildlife log was in use from May through September 2010. Mammal observations included Grizzly Bear, Wolverine, Arctic Wolf, Caribou and Muskox. The greatest diversity of observations was recorded in May while the highest abundance of Caribou was recorded in August. Arctic wolves were seen in all months except August and Grizzly Bear was recorded twice in September. Nine bird species were recorded in the camp wildlife log, of which Bald Eagle, Rough-legged-Hawk and Short-eared Owl were highlights. A complete summary of observations from the 2010 Cameco wildlife log is provided in Table 9. Since all camp staff provided entries to the wildlife log, the accuracy of species identification could not be verified in all cases.

Table 9: Wildlife Observations Recorded in Cameco`s 2010 Wildlife Log. Numbers Represent Cumulative Numbers by Month.

Species	May	June	July	August	September
Mammals					
Arctic Fox	1				
Arctic Hare	12				
Caribou	182	34		235	6
Grizzly Bear					2
Muskox	5	7	1	4	1
Wolf	7	1	1		1
Wolverine	1	2			
Birds					
Bald Eagle				1	
Common Raven	3				4
Goose sp.	50			50	
Herring Gull	1				
Ptarmigan sp.	50				
Rough-legged Hawk	1				
Sandhill Crane	7				
Short-eared Owl					1
Snow Goose	20				

3.6.3 Bird Checklist Surveys

3.6.3.1 Summary

Thirty-six bird checklist surveys were completed between 22 June and 28 August 2010. The five most common bird species seen (and number of observations) were Canada Goose (955), Lapland Longspur (746), Savannah Sparrow (490), Herring Gull (409) and Long-tailed Duck (184). The most common raptor species were Rough-legged Hawk (18), Bald Eagle (17), Peregrine Falcon (7), Short-eared Owl (5) and Snowy Owl (4). Table 10 summarizes all bird species observed on all checklist surveys in 2010. For a record of each species observed by survey date, see Appendix IV.

Table 10: Cumulative Number of Bird Species Observed in the Cameco Project Area on Bird Checklist Surveys between 22 June and 17 August 2010.

Common Name	Scientific Name	Total
American Golden Plover	*Pluvialis dominica*	141
American Pipit	*Anthus rubescens*	36
Arctic Tern	*Sterna paradisaea*	32
Baird's Sandpiper	*Calidris bairdii*	3
Bald Eagle	*Haliaeetus leucocephalus*	17
Brown-headed Cowbird	*Molothrus ater*	1
Canada Goose	*Branta canadensis*	955
Common Loon	*Gavia immer*	10
Common Merganser	*Mergus merganser*	8
Common Raven	*Corvus corax*	8
Common Redpoll	*Carduelis flammea*	93
Dunlin	*Calidris alpina*	24
Glaucous Gull	*Larus hyperboreus*	2
Greater Scaup	*Aythya marila*	9
Greater White-fronted Goose	*Anser albifrons*	29
Gyrfalcon	*Falco rusticolus*	1
Herring Gull	*Larus argentatus*	409
Hoary Redpoll	*Carduelis hornemanni*	10
Horned Lark	*Eremophila alpestris*	59
Lapland Longspur	*Calcarius lapponicus*	746
Least Sandpiper	*Calidris minutilla*	19
Long-tailed Duck	*Clangula hyemalis*	184
Long-tailed Jaeger	*Stercorarius longicaudus*	143
Northern Pintail	*Anas acuta*	13
Parasitic Jaeger	*Stercorarius parasiticus*	45
Pectoral Sandpiper	*Calidris melanotos*	1
Peep sp.	*Calidris* sp.	4
Peregrine Falcon	*Falco peregrinus*	7
Red-breasted Merganser	*Mergus serrator*	29
Red-necked Phalarope	*Phalaropus lobatus*	1
Red-throated Loon	*Gavia stellata*	5
Redpoll sp.	*Carduelis* sp.	25
Rock Ptarmigan	*Lagopus muta*	152
Rough-legged Hawk	*Buteo lagopus*	18
Sandhill Crane	*Grus canadensis*	105
Savannah Sparrow	*Passerculus sandwichensis*	490

Table 10: Continued.

Common Name	Scientific Name	Total
Semipalmated Plover	*Charadrius semipalmatus*	30
Semipalmated Sandpiper	*Calidris pusilla*	72
Short-eared Owl	*Asio flammeus*	5
Snow Bunting	*Plectrophenax nivalis*	48
Snow Goose	*Chen caerulescens*	7
Snowy Owl	*Bubo scandiacus*	4
Stilt Sandpiper	*Calidris himantopus*	35
White-crowned Sparrow	*Zonotrichia leucophrys*	10
Willow Ptarmigan	*Lagopus lagopus*	96
Yellow-billed Loon	*Gavia adamsii*	1

4 RECOMMENDATIONS FOR 2011 STUDIES

With exploration activities continuing on the Cameco property, the NIRB requires ongoing exploration wildlife monitoring. In addition, given the success of Caribou research projects in 2010, continued and expanded programs are recommended for 2011. The following recommendations should be considered for 2011.

1. **Exploration Monitoring:** Ongoing program – June to August. A) One wildlife monitor surveying within 1 km of each active drilling site; or B) One pair of observers surveying drill sites on an alternating basis.

2. **Height-of Land Surveys:** Ongoing program – June to August. Objective of at least 10 complete surveys of each of the Fuel Cache and Sansa Grid.

3. **Caribou Crossing Surveys:** Modified from 2010 – July and August. Focus on stand-watches over 24-hour periods at high traffic crossing locations. A temporary tent shelter set-up at the confirmed crossing location on Mapsheet C and manned by observers during the last week of July and first week of August could be an effective observation method that would increase Caribou crossing observation frequency. Limited surveys at other potential crossing locations (i.e., Mapsheets A, B and D to confirm presence/absence of crossing Caribou).

4. **Caribou Herd Composition:** Continued from 2010 – July and August. Opportunistic surveys as an ongoing priority when herds of Caribou are observed. Due to the importance of project-related impacts to Caribou, when large herds of Caribou are observed other monitoring activities can be suspended to conduct herd composition studies.

5. **Wildlife Log:** Ongoing program – May to September.

6. **Bird Checklist Surveys:** Ongoing program. Completed by field teams on each field day to ensure a continued record of baseline bird species observations.

5 2010 SUMMARY

Cameco's 2010 exploration and Caribou monitoring programs reduced the potential impacts of exploration on Caribou, met regulatory requirements, and collected essential baseline wildlife data, particularly on Caribou abundance, distribution and movements. Height-of-Land surveys, Caribou crossing surveys and herd composition studies furthered the understanding of Caribou movements, distribution and abundance within the vicinity of the Project area.

Caribou monitoring associated with exploration activities was conducted from 12 June to 31 August 2010. Relatively few Caribou were observed in June while increased abundance was observed in July due to the presence of large herds. Adult bulls were the most common sex and age of Caribou observed in all months. Throughout the 2010 monitoring program, interactions between exploration activities and Caribou were not observed; therefore, mitigative actions were not required

Eleven Height-of-Land surveys were conducted between 12 June and 02 August 2010. Approximately 1,300 Caribou were observed along with two Arctic Wolves, 17 Muskoxen with two (2) calves and an Arctic Fox den with three pups. During the Caribou crossing surveys, over 300 Caribou with calves were observed crossing the Thelon River from north to south (and several 100 more were reported by Inuit hunters) and a high traffic crossing location was identified that will be part of future Caribou crossing monitoring surveys. Twenty-three herd composition counts were conducted between 23 and 30 of July when a Caribou herd of 10,000 animals passed through the Project area. A total of 4,367 Caribou was counted and classified as bull, cow or calf, and the overall cow to calf ratio was estimated to be 0.49. The herd appeared to be part of a post-calving movement of the Qamanirjuaq herd, but further studies will provide more confidence in these observations.

Twenty ELC plots were conducted in the Project area and common plant species were identified at each location. Among other observations, the Cameco wildlife log recorded the presence of two Grizzly Bears in September. Thirty-six bird checklists surveys were completed in 2010 adding baseline data on bird species in the Project area as well as providing valuable information on overall bird abundance and distribution to Environment Canada.

With exploration activities expected to continue on the Cameco property, exploration and Caribou monitoring activities should resume in the 2011 field season. In order to compare data across study years, most elements of the 2010 monitoring program should remain unchanged. Only Caribou crossing surveys should be modified with a focus on stand-watch surveys over walking surveys. As more data is collected on the distribution, abundance and movements of wildlife on the Cameco property, further conclusions can be made on the potential effects of future project activities on wildlife.

6 APPENDIX I - FIELD FORMS

6.1 Appendix I: Form A - Exploration Wildlife Monitoring Data Form

Cameco Corporation - Wildlife Monitoring Data Form - 2010

Date (dd/mm/yy) _____ Observer _____ Location_____

Time	Species	Number[1]		Location of Observation (UTM)		Distance (m) and Direction (e.g., N) to Wildlife	Direction of Travel	Habitat Area or Feature[2]	Activity before Disturbance[3]	Activity after Disturbance[3]	Interest and Behaviour[4]	Comments (e.g., Health, Interactions etc.)	
		Adult (M,F)	Young (C,A)	Easting	Northing								

[1] M = Male, F = Female; C = Calf; A = Adolescent

[2] E.g., den, esker, nest, grazing area, calving area, etc.

[3] E.g., resting, standing, grazing, feeding, calving, swimming, walking, running, aggressive etc.

[4] E.g., uninterested, annoyed, scared, etc.

6.2 Appendix I: Form B – Height-of-Land Survey Data Form

CAMECO – HEIGHT-OF-LAND SURVEYS - 2010

Time Started _____ **Time Ended** _____ **Page** _____ **of** _____
Date (dd/mm/yy) _____ **Observer**:_____
Temperature:_____ **Wind Speed**_____ **Wind Direction** _____ **Visibility** _____ **Precipitation** _____

Stn #	Time	Species Name	Number, Sex and Age[1]	Habitat (ELC)[2]	Distance from Observer	Direction from Station	Observation Type[3]	Direction of Travel[4]	Behavior[5]	Comments

[1] Sex **= M (male) or F (female); Age = C (calf), Y (yearling) or A (adult)**
[2] Habitat **= WA (water), SE (sedge), BR (birch/riparian shrub), HT (heath tundra), LI (lichen), LR (lichen-rock), RC (ridge crest/esker), RO (rock/ boulder), and DI (disturbed)**
[3] Observation Types**: visual (animals seen), tracks, pellets, scat, feather, burrow, den, antler, bones, carcass, call, fur etc.**
[4] Direction of Travel **= NA (not applicable), N, NE, E, SE, S, SW, W, NW**
[5] Behaviour **= RE (resting), FO (foraging), WK (walking), RU (running), ST (standing), MI (milling), and CO (courting)**

6.3 Appendix I: Form C – Caribou Crossing Data Form

CAMECO CORP. – CARIBOU IDENTIFIED CROSSING LOCATION SURVEY FORM - 2010

Date (day/month/year) _____**Time Started** _____ **Time Ended** _____ **Location**_____ **Page** ___ **of** ____
StartLocation (UTM) _____ **End Location** _____ **Observer Names**: _____
Temperature: ____ **Wind Speed (km/hr):** _____ **Wind Direction:** ____ **Visibility (circle):** 100m 500m 1km >1km **Precipitation:** _____

Time	Species Name	Observation Type[1]	Number, Sex and Age[2]	Habitat Type (ELC)[3]	Behaviour[4]	Direction of Travel[5]	Direction from Observer	Observer Location (GPS Coordinates)			Comments
								Zone	Easting	Northing	

[1] Observation Types **= visual (animals seen), trails, tracks, pellets, scat, feather, burrow, den, antler, bones, carcass, call, fur etc.**
[2] Sex **= M (male) or F (female); Age = C (calf, chick, cub or pup), Y (yearling), and A (adult)**
[3] Habitat **= WA (water), SE (sedge), BR (birch and riparian shrub), HT (heath tundra), LI (lichen), LR (lichen-rock), RC (ridge crest/esker/avens), RO (rock and boulder), and DI (disturbed)**
[4] Behaviour **= RE (resting), FO (foraging), WK (walking), RU (running), ST (standing), SW (swimming), MI (milling), CO (courting), FL (flying), and NE (nesting)**
[5] Direction of Travel **= NA (Not Applicable), N (North), NE (Northeast), E (East), SE (Southeast), S (South), SW (Southwest), W (West), and NW (Northwest)**

6.4 Appendix I: Form D – Ecological Land Classification Verification

Landsat 5/7 Verification Form A -

Site #:	Subarea:	Color:	Observer A:
Waypoint:		Date:	Observer B:

Trees & Erect Shrubs

Height of Erect Shrubs/trees(cm):	Betula glandulosa	Salix planifolia		
0 -25				
25-50				
50-75				
75-100				
125-150				
150-175				
175-200				

Landform Topography

Upland:	Ridged Moraine	Beach Ridge	Esker Ridge	Kame Complex
	Boulder Field	Bedrock Outcrop	Peat Plateau	Other
	Depression	H-Center Polygons	L-Center Polygons	Frost Boils
Lowland:	Coastal Flat	River Shoreline	Lake Shoreline	Pond/seep shoreline
	Shoreline of Dranige	Shoreline of Thermal-karst	Dried lake bed	Other

Slope

Upper	Middle	Lower	Gentle	Moderate	
			Steep	Flat	

Exposure - Circle one

N S E W NNE NE ENE SSE SE ESE NNW NW WNW SSW SW WSW

Surficial Expression

Level	Undulating	Hummocky	Tussocky	Broke/erode
Hummock Height(cm):	0-25	25-50	50-75	75-100
Tussock Height(cm):	0-10	10-20	20-30	30-40
Width of trough(cm):	0-50	50-100	100-200	200-300

Substrate

Bedrock	Boulders	Cobbles	Gravel	Sand
Clay/Silt	Glacial Till	Gramin Peat	Moss Peat	

Moisture Regime

Xeric	Mesic	Hygric	Hydric	Water

Photos & Observations

Aerial

Whole

Close

Observations: _____

Landsat 5/7 Verification Form B -

Site #:	Subarea:	Waypoint:	

Landcover Detail (%)

Rock		Boulder		Cobble		Gravel		Sand	
Clay/Silt		WetPeat		DryPeat		Water		Disturbed	
Moss		Lichens		Gramin.		Forbs		Trees	

Erect Shrubs (<10cm)		Prostrate Shrubs (<10cm)		Ericaceous Shrubs	

Vegetation Species (%) **(Estimate %cover of ind. abiotic and biotic items/species)(cumulative cover values may exceed 100%)**

Moss spp.		Sphaerophorus globosus		Calamagrostis lappinoca	
Sphagnum Moss		Stereocaulon spp.		Calamagrostis neglecta	
Fungi		Thamnolia subuliformis		Calamagrostis spp.	
Betula glandulosa		Crustose lichens		Deschampsia caespitosa	
Salix planifolia		Rhizocarpen spp.		Erigeron spp.	
Salix lanata		Umbellicaria		Glyceria striata	
Salix spp.		Arctoparmelia spp.		Heirochloe alpina	
Salix arctophila		Carex aquatilis		Kobresia sinpliciuseula	
Salix reticulata		Carex atrofusca		Luzula confusa	
Salix spp.		Carex bigelowii		Luzula wahlenbergii	
Andromeda polifolia		Carex glacialis		Poa alpina	
Arctostaphyalos spp.		Carex gynocrates		Poa arctica	
Cassiope tetragona		Carex membranacea		Poa spp.	
Empetrum nigrum		Carex misandra		Trichophorum caespitosum	
Ledum decumbens		Carex rariflora		Trisetum spicatum	
Loiseleuria procumbens		Carex rotundata		Graminoide spp.	
Rhododendron lapponicum		Carex rupestris		Dryas integrifolia	
Vaccinium uliginosum		Carex saxitilis		Epilobium latifolium	
Vaccinium vitis-idaea		Carex scirpoidea		Epilobium palustre	
Allectoria nigricans		Carex spp.		Lycopodium spp.	
Alectoria ochroleuca		Carex vaginata		Polugonum viviparum	
Bryocaulin divergens		Eriophorum angustifolium		Saxifraga tricuspidata	
Bryoria nitidula		Eriophorum russeolum		Silene acaulis	
Cetraria cucullata		Eriophorum scheuchzeri		Tofielda pusilla	
Cetraria nivalis		Eriophorum spp.			
Cetraria spp.		Eriophorum vaginatum			
Cetrariella delisei		Juncus albescens			
Cladina mitis		Juncus arcticus			
Cladina rangiferina		Juncus spp.			
Cladina stellaris		Scirpus caespitosus			
Cladina spp.		Agrostis spp.			
Cladonia spp.		Alopecurus alpinus			
Dactylina arctica		Arctagrostis latifolia			
Lichen spp.		Arctogrostis spp.			
Nephroma arcticum		Arctophila fulva			
Peltigera scabrosa		Calamagrostis deschamp.			
Peltigera spp.		Calamagrostis inexpansa			

6.5 Appendix I: Form E - Wildlife Log

TURQAVIK-ABERDEEN WILDLIFE LOG - 2010

Month _____ Page ___ of ____

Date	Time	Species	Number, Sex	Location	Behaviour & Comments	Observer
03 Jun	*0900*	*Caribou*	*1*	*100m N. of Camp*	*Foraging*	*Gebauer*

7 APPENDIX II: INCIDENTAL OBSERVATIONS DURING CROSSING SURVEYS

Wildlife Observations Recorded during Cameco`s 2010 Caribou Crossing Surveys. Numbers Represent Cumulative Numbers by Survey Date.

Species	July	August
Mammals		
Caribou	77 + 2 calves + tracks + trails	977 + 8 calves
Muskox	8 + 3 calves + pellets	
Wolf	1 + carcass + tracks	carcass
Wolverine	carcass	
Birds		
American Golden-Plover	4	
American Pipit	4	
Arctic Tern	12 + 8 (4 pairs)	
Bald Eagle	8	
Canada Goose	648 + 22 (11 pairs) + 32 young	17 + 2 (1 pair)
Common Loon	3	
Common Merganser	5	
Common Raven	5	
Herring Gull	95	
Long-tailed Duck	4 + 3 young	6 + 16 young
Long-tailed Jaeger	41 + 2 (1 pair)	
Parasitic Jaeger	5 + 2 (1 pair)	
Red-breasted Merganser	2	
Red-throated Loon	1	
Rock Ptarmigan	25 + 16 young	
Rough-legged Hawk	1	
Sandhill Crane	4 (2 pairs)	
Semipalmated Plover	2	
Semipalmated Sandpiper	17	
Snow Bunting	5	
Snow Goose	2 (1 pair) + 1 young	
Snowy Owl		1

8 APPENDIX III: PLANT SPECIES LIST FROM ELC GROUND-TRUTHING

Plant Species Observed on Ecological Land Classification Ground-truthing Plots within the Cameco Project Area in 2010.

Common Name	Scientific Name
SHRUBS	
Arctic Bell-Heather	*Cassiope tetragona*
Bog Bilberry	*Vaccinium uliginosum*
Bog Cranberry	*Vaccinium vitis-idaea*
Bog-Rosemary	*Andromeda polifolia*
Cloudberry	*Rubus chamaemorus*
Crowberry	*Empetrum nigrum*
Diamondleaf willow	*Salix planifolia*
Dwarf Birch	*Betula glandulosa*
Labrador Tea	*Ledum decumbens*
Lapland Rhododendron	*Rhododendron lapponicum*
Northern Willow	*Salix arctophila*
Woolly willow	*Salix lanata*
HERBS	
Alpine Bistort	*Polugonum viviparum*
Arctic Bluegrass	*Poa arctica*
Arctic Lousewort	*Pedicularis langsdorffii*
Chickweed	*Cerastium* sp.
Dwarf Fireweed	*Epilobium latifolium*
Lapland Lousewort	*Pedicularis lapponica*
Milkvetch	*Astragalus* sp.
Northern Woodrush	*Luzula confusa*
Reed Grass	*Calamagrostis* sp.
Scotch False Asphodel	*Tofielda pusilla*
Three-toothed saxifrage	*Saxifraga tricuspidata*
White Mountain Avens	*Dryas integrifolia*

Appendix III: Continued.

Common Name	***Scientific Name***
SEDGES	
Fragile Sedge	*Carex membranacea*
Reindeer Lichen	*Cladina mitis*
Tussock Cottongrass	*Eriophorum vaginatum*
LICHENS AND MOSSES	
Crust Lichens	*Crustose lichens*
Cup Lichens	*Cladonia* sp.
Felt Lichen	*Peltigera* sp.
Finger Lichen	*Dactylina arctica*
Furled Lichen	*Cetraria cucullata*
Iceland Moss	*Cetraria nivalis*
Lichen sp.	*Umbellicaria* sp.
Moss Campion	*Silene acaulis*
Sphagnum sp.	*Sphagnum* sp.
Whiteworm Lichen	*Thamnolia subuliformis*
OTHER	
Fungi sp.	*Fungi* sp.

9 APPENDIX IV: BIRD CHECKLIST OBSERVATIONS

Appendix IVa: Bird Species Observed on Bird Checklist Surveys in the Cameco Project Area between 22 June and 27 July 2010.

Common Name	Scientific Name	22/06/10	23/06/10	09/07/10	10/07/10	11/07/10	12/07/10	13/07/10	14/07/10	15/07/10	16/07/10	17/07/10	18/07/10	19/07/10	20/07/10	21/07/10	22/07/10	23/07/10	24/07/10	25/07/10	27/07/10
American Golden-Plover	*Pluvialis dominica*	4	9						1	12		23	1	12	1			14	4		10
American Pipit	*Anthus rubescens*	1			2									5	2		2	2			3
Arctic Tern	*Sterna paradisaea*						1							2	6						2
Baird's Sandpiper	*Calidris bairdii*			1	1																
Bald Eagle	*Haliaeetus leucocephalus*				1	1								1	1	2		1	1		1
Canada Goose	*Branta canadensis*	5	4	1										25	22	220					137
Common Loon	*Gavia immer*													1	1	4		1			2
Common Merganser	*Mergus merganser*													3							
Common Raven	*Corvus corax*												1		5						1
Common Redpoll	*Carduelis flammea*				14			10		5	2	8	5	6		4		5	7	4	9
Dunlin	*Calidris alpina*	1		1			4	1				1	3	2		2		3			
Glaucous Gull	*Larus hyperboreus*																			2	
Greater Scaup	*Aythya marila*	2	2		5																
Greater White-fronted Goose	*Anser albifrons*	4		2	2	2	2				2			7		8					
Gyrfalcon	*Falco rusticolus*	1																			
Herring Gull	*Larus argentatus*	3		2	3	1				1		2	2	5	6	10		3		1	24
Hoary Redpoll	*Carduelis hornemanni*		1											4			1		4		
Horned Lark	*Eremophila alpestris*		10	4	13	1		9				2	2			1					
Lapland Longspur	*Calcarius lapponicus*	24	36	19	13	7	14	49	5	23	10	41	15	66	32	28	7	25	18	26	51

Appendix IVa: Continued.

Common Name	Scientific Name	22/06/10	23/06/10	09/07/10	10/07/10	11/07/10	12/07/10	13/07/10	14/07/10	15/07/10	16/07/10	17/07/10	18/07/10	19/07/10	20/07/10	21/07/10	22/07/10	23/07/10	24/07/10	25/07/10	27/07/10
Least Sandpiper	*Calidris minutilla*			1						2				9			1				3
Long-tailed Duck	*Clangula hyemalis*	10	17	4	19						2	1		4		2		2		4	2
Long-tailed Jaeger	*Stercorarius longicaudus*	9	9			2	6	4	1	7	5	1	4	5	6			2			3
Northern Pintail	*Anas acuta*	2																4			
Parasitic Jaeger	*Stercorarius parasiticus*	4		1			2	2					2	2	4	1		2		1	4
Pectoral Sandpiper	*Calidris melanotos*											1									
Peep sp.	*Calidris* sp.	1																			
Peregrine Falcon	*Falco peregrinus*				2									1			1				1
Red-breasted Merganser	*Mergus serrator*	1		1	2							3	2	6		8					
Red-necked Phalarope	*Phalaropus lobatus*				1																
Red-throated Loon	*Gavia stellata*														1						
Redpoll sp.	*Carduelis* sp.	2	1						4		7	2	6		3						
Rock Ptarmigan	*Lagopus muta*	17	33	1			1	1		3	2	1	3	6	3		1	2			7
Rough-legged Hawk	*Buteo lagopus*	3																		1	
Sandhill Crane	*Grus canadensis*	16	6	6	1	1	2		1	3		7	4		1	4		5	2		2
Savannah Sparrow	*Passerculus sandwichensis*	7	7	13	25	9	17	28	5	21	10	35	17	29	4	20	11	29		18	41
Semipalmated Plover	*Charadrius semipalmatus*						1			1		3	3	13							1
Semipalmated Sandpiper	*Calidris pusilla*	1		5										16	4	6		2			5

Appendix IVa: Continued.

Common Name	Scientific Name	22/06/10	23/06/10	09/07/10	10/07/10	11/07/10	12/07/10	13/07/10	14/07/10	15/07/10	16/07/10	17/07/10	18/07/10	19/07/10	20/07/10	21/07/10	22/07/10	23/07/10	24/07/10	25/07/10	27/07/10
Short-eared Owl	*Asio flammeus*	1	1									1	1								
Snow Bunting	*Plectrophenax nivalis*													10	6		1			2	6
Snow Goose	*Chen caerulescens*		1																		
Snowy Owl	*Bubo scandiacus*									1											
Stilt Sandpiper	*Calidris himantopus*			1			12	2		10		1				3		4			
White-crowned Sparrow	*Zonotrichia leucophrys*				1									5			1				3
Willow Ptarmigan	*Lagopus lagopus*	21	13	3	1			1				3	13	7	1	11		13			
Yellow-billed Loon	*Gavia adamsii*													1							

Appendix IVb: Bird Species Observed during Monitoring Surveys of the Cameco Project Area between 28 July and 17 August 2010.

Common Name	Scientific Name	28/07/10	29/07/10	30/07/10	31/07/10	01/08/10	02/08/10	03/08/10	05/08/10	10/08/10	11/08/10	12/08/10	13/08/10	14/08/10	15/08/10	16/08/10	17/08/10
American Golden-Plover	*Pluvialis dominica*	10	18		8	3	10						1				
American Pipit	*Anthus rubescens*	2	8	2	4	3											
Arctic Tern	*Sterna paradisaea*	10			8			1		2							
Baird's Sandpiper	*Calidris bairdii*								1								
Bald Eagle	*Haliaeetus leucocephalus*	3			1	3		1									
Brown-headed Cowbird	*Molothrus ater*		1														
Canada Goose	*Branta canadensis*	292			79	4			84	32	23		8			17	2
Common Loon	*Gavia immer*					1											
Common Merganser	*Mergus merganser*				5												
Common Raven	*Corvus corax*					1											
Common Redpoll	*Carduelis flammea*		6			2					2	3	1				
Dunlin	*Calidris alpina*	4					1		1								
Herring Gull	*Larus argentatus*	93			33	201	2	5	1	3	1	1	1		2		3
Horned Lark	*Eremophila alpestris*		2	5		2	3					2			3		
Lapland Longspur	*Calcarius lapponicus*	57	21	5	30	20	13	10	11	17	6	7	1	8	16	12	3
Least Sandpiper	*Calidris minutilla*							2				1					
Long-tailed Duck	*Clangula hyemalis*	7			34	20			36				20				
Long-tailed Jaeger	*Stercorarius longicaudus*	31	5		17	5	5	5	4	2	2	1			1		1
Northern Pintail	*Anas acuta*												7				
Parasitic Jaeger	*Stercorarius parasiticus*	4	2			2			2	2	5			2		1	
Peep sp.	*Calidris* sp.																3
Peregrine Falcon	*Falco peregrinus*												2				

Appendix IVb: Continued.

Common Name	Scientific Name	28/07/10	29/07/10	30/07/10	31/07/10	01/08/10	02/08/10	03/08/10	05/08/10	10/08/10	11/08/10	12/08/10	13/08/10	14/08/10	15/08/10	16/08/10	17/08/10
Red-breasted Merganser	*Mergus serrator*	3				2							1				
Red-throated Loon	*Gavia stellata*	1			1	2											
Rock Ptarmigan	*Lagopus muta*	15	3		8		2		43								
Rough-legged Hawk	*Buteo lagopus*		1	6	4							1			1		1
Sandhill Crane	*Grus canadensis*		8		5	5	8	2			4	2		4	3		3
Savannah Sparrow	*Passerculus sandwichensis*	33	16	6	27	8	25	5	1	2		9	3	3		6	
Semipalmated Plover	*Charadrius semipalmatus*				3		1		3				1				
Semipalmated Sandpiper	*Calidris pusilla*	7	2		1	1	3	4	6						7	2	
Short-eared Owl	*Asio flammeus*					1											
Snow Bunting	*Plectrophenax nivalis*	8			7					8							
Snow Goose	*Chen caerulescens*										6						
Snowy Owl	*Bubo scandiacus*		1		1				1								
Stilt Sandpiper	*Calidris himantopus*								2								
Willow Ptarmigan	*Lagopus lagopus*					2			7								