Appendix E

Winter Wildlife Survey

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2012 Aerial Winter Wildlife Surveys

Kami Iron Ore Mine and Rail Infrastructure Project

Prepared for

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Final Report

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EXECUTIVE SUMMARY

Stassinu Stantec Limited Partnership (Stassinu Stantec) was retained by Alderon Iron Ore Corp (Alderon) to conduct winter wildlife surveys for an area encompassing the Kamistiatusset (Kami) Iron Ore Mine and Rail Infrastructure (the Project). The purpose of the survey is to provide information on wildlife present during winter to be used in the environmental assessment of the Project, as well as ongoing Project planning and design work. The purpose of the winter wildlife surveys was to gather and present information on wildlife species in the vicinity of the Project that are either more easily detected or may only be present during the winter. This information can be used to provide insight on the presence (including relative abundance of some species) and distribution of wildlife in the study area.

Winter wildlife surveys were conducted in and around the Kami Iron Ore Property in western Labrador on 27 January and 27 March 2012 by Stassinu Stantec field teams and consisted of aerial strip transect surveys throughout the Project area. A list of species and species signs observed was generated for each survey. Locations were recorded with a global positioning system (GPS) and photographs were taken if possible.

Ten terrestrial wildlife species or evidence of their presence were detected in the Project area during the two strip transect surveys. Snowshoe hare (*Lepus americanus*) were the most frequently detected species. Several avifauna species, including songbirds and passerines, were also recorded during the surveys. No unusual or unexpected species were encountered and no caribou (*Rangifer* sp.) or other species of conservation concern were observed or detected.

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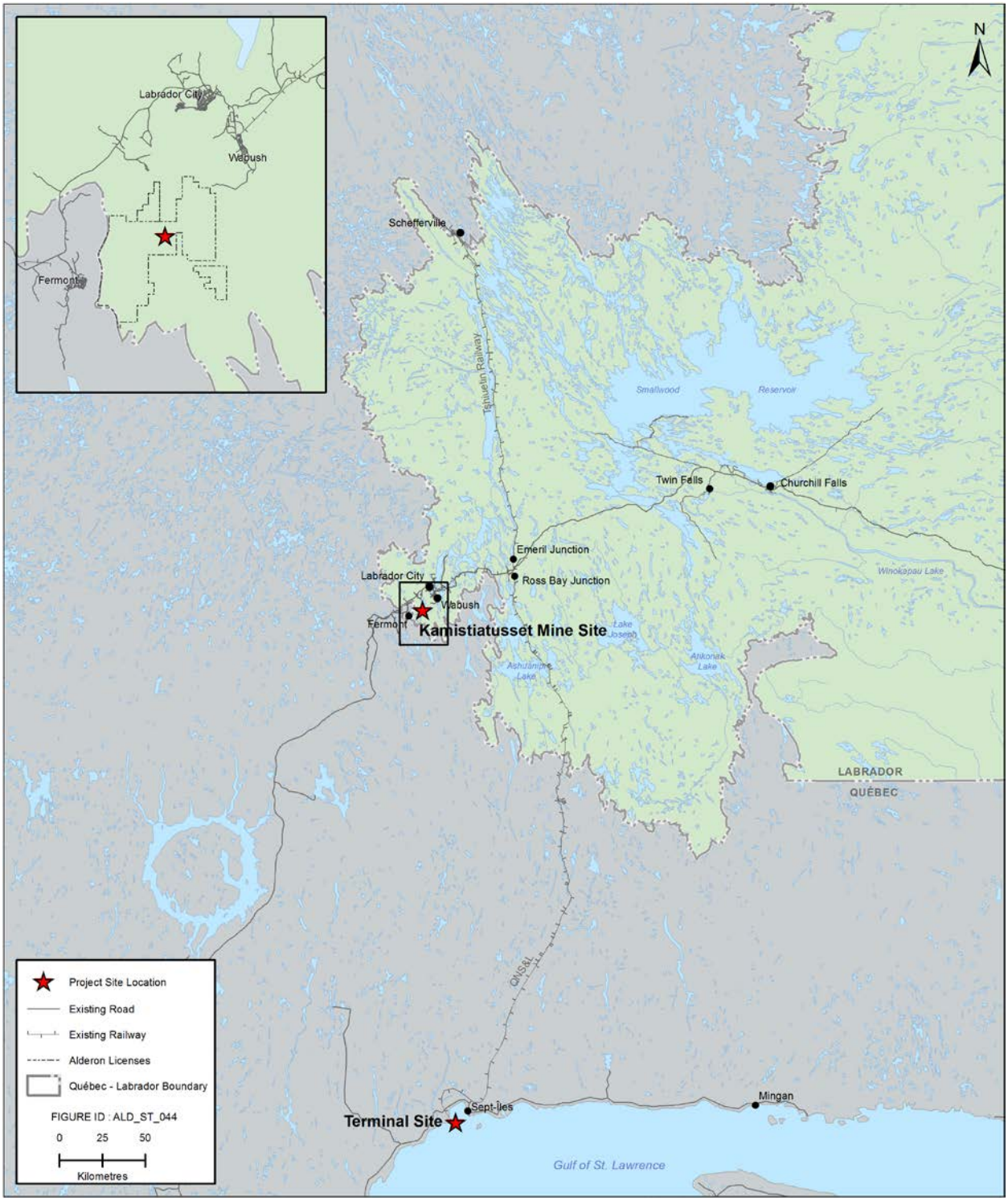
1.0 INTRODUCTION

Alderon Iron Ore Corp. (Alderon) is proposing to develop an iron ore mine in western Labrador, and build associated infrastructure at the Pointe-Noire Terminal in the Port of Sept-Îles, Québec. The mine property is located south of the towns of Wabush and Labrador City in Newfoundland and Labrador and east of Fermont, Québec (Figure 1.1). The Kami Iron Ore Mine and Rail Infrastructure (the "Project") is located entirely within Labrador, and includes construction, operation, and rehabilitation and closure of an open pit, waste rock disposal areas, processing infrastructure, a tailings management facility (TMF), ancillary infrastructure to support the mine and process plant, and a rail transportation component. The mine will have a nominal capacity of 16 million metric tonnes of iron ore concentrate per year. Concentrate will be transported by existing rail to the Pointe-Noire Terminal at the Port of Sept-Îles, where Project-related components will be located on land within the jurisdiction of the Port Authority of Sept-Îles.

The Labrador Project components will require approvals from the Government of Newfoundland and Labrador and are subject to environmental assessment (EA) under the *Environmental Protection Act* (NLEPA) and associated *Environmental Assessment Regulations*. Federal approvals will also be required, which trigger the requirement for a federal EA under the *Canadian Environment Assessment Act* (CEAA), at the comprehensive study level. The Project was registered in accordance with the NLEPA and CEAA in October 2011. This environmental study was conducted in support of the EA process for the Kami Iron Ore Mine and Rail Infrastructure.

Figure 1-1 Project Location for the Kami Iron Ore Mine and Rail Infrastructure Project



1.1 Overview of Kami Iron Ore Project

The Kami Iron Ore Project in Labrador includes construction, operation, and closure / decommissioning of the following primary components.

- Open pit (Rose Pit);
- Waste rock disposal areas (Rose North and Rose South);
- Processing infrastructure includes crushing, grinding, spiral concentration, magnetic separation, and tailings thickening areas;
- Tailings management facility (TMF);
- Effluent treatment facility;
- Ancillary infrastructure to support the mine and process plant (gate and guardhouse, reclaim water pumphouse, truck wash bay and shop, electrical substation, explosives magazine storage, administration / office buildings, maintenance offices, warehouse area and employee facilities, conveyors, load-out silo, stockpiles, sewage and water treatment units, mobile equipment, access road and transmission lines);
- A rail transportation component to connect the mine site to the Québec North Shore & Labrador (QNS&L) Railway; and
- Electrical transmission line to be located by Nalcor Energy.

1.2 Winter Wildlife Surveys

The presence of wildlife species such as marten (*Martes americana*), red fox (*Vulpes vulpes*), river otter (*Lontra canadensis*), and snowshoe hare (*Lepus americana*) are often better detected through track identification on fresh snow cover. Although most seasonal wildlife tend to arrive in spring and depart in the fall, other species such as Snowy Owl (*Bubo scandiacus*), Willow Ptarmigan (*Lagopus lagopus*), wolf (*Canis lupus*) and possibly caribou (*Rangifer tarandus*) may only be present in the area during winter. The winter wildlife surveys are supplement to a series of aerial and ground based surveys completed in the Local Wildlife Study Area (LWSA) in late summer and fall of 2011.

1.3 Study Team

The Winter Wildlife Survey was conducted by Stassinu Stantec. The Study Team included a study manager, a study lead, field observers, and a data analyst (Table 1.1). All team members have in-depth knowledge and experience in their fields of expertise and a broad general knowledge of the work conducted by other experts in related fields. Brief biographical statements, highlighting project roles and responsibilities and relevant education and employment experience, are provided below.

Table 1.1 Study Team – Winter Wildlife Survey

Role	Personnel
Study Manager and Lead	Perry Trimper
Field Observers (Study Team)	Perry Trimper, Tina Newbury, Julie Henderson, Randy Best
Data Analysis and Report Preparation	Perry Trimper, Julie Henderson
GIS	Amber Frickleton, Heather Ward

Perry Trimper, B.Sc.F, served as the Project Manager for the Winter Wildlife Study and participated as observer during the 2012 surveys. He is a Principal with Stassinu Stantec based in the Goose Bay office in Labrador. His 28 years of experience is primarily in northern environments of both Canada and Russia, and his areas of specialization include boreal and Arctic wildlife research, northern indigenous peoples, environmental assessment, and sustainable resource development.

Tina Newbury, M.Sc., is a terrestrial ecologist with Stantec in Corner Brook, NL. Her responsibilities include wildlife surveys, data analysis, and report-writing for various projects. Ms. Newbury has 18 years of experience, including her involvement on various wildlife projects associated with mining, hydroelectric development and other activities. Her work in Labrador includes investigations of various wildlife species in the region, as well as habitat characterization studies. Ms. Newbury served as a field observer for the aerial surveys.

Julie Henderson, M.Sc.F, is an environmental scientist based in Happy Valley - Goose Bay, NL. Her field experience is in wildlife surveys and habitat assessment, forest inventory and vegetation sampling. She has strong analytical and report writing skills and is able to effectively work with large amounts of data and generate associated reports.

Randy Best (formerly of Minaskuat) was employed as an Innu Technician in Labrador with experience on several projects in the region including baseline studies associated with other large scale environmental assessments (e.g., Lower Churchill Project). He has traditional knowledge of several mammal species including caribou, and of the history of hunting and trapping in Labrador. Mr. Best is proficient at identifying mammalian and avifauna evidence (tracks and other sign) during winter.

Amber L. Frickleton, B.A., Ad. Dip GIS, is GIS Coordinator with Stantec in St. John's, NL. She manages and maintains geographic and related attribute data for the creation of maps and datasets for internal staff and clients to support the implementation of environmental assessments. Her role on this Project included map design and production, data manipulation and analysis, and the maintenance of databases in accordance with standard formats and procedures.

Heather Ward, **M.Sc.,** is a GIS Analyst with the Information Management team in Stantec's St. John's office. Mrs. Ward started working with Stantec in January 2012. She has recently completed her MSc degree with a focus in Remote Sensing/GIS at Memorial University. Her experience comes from a combination of private sector work in Remote Sensing and GIS and

work related to her Master of Science program. Mrs. Ward has considerable experience with Remote Sensing, geo-statistical and spatial analysis as well as cartography.

2.0 OBJECTIVES AND RATIONALE

The purpose of the winter wildlife surveys was to gather and present information on wildlife species in the vicinity of the Project that are either more easily detected or may only be present during the winter. The primary objectives of the winter wildlife surveys were:

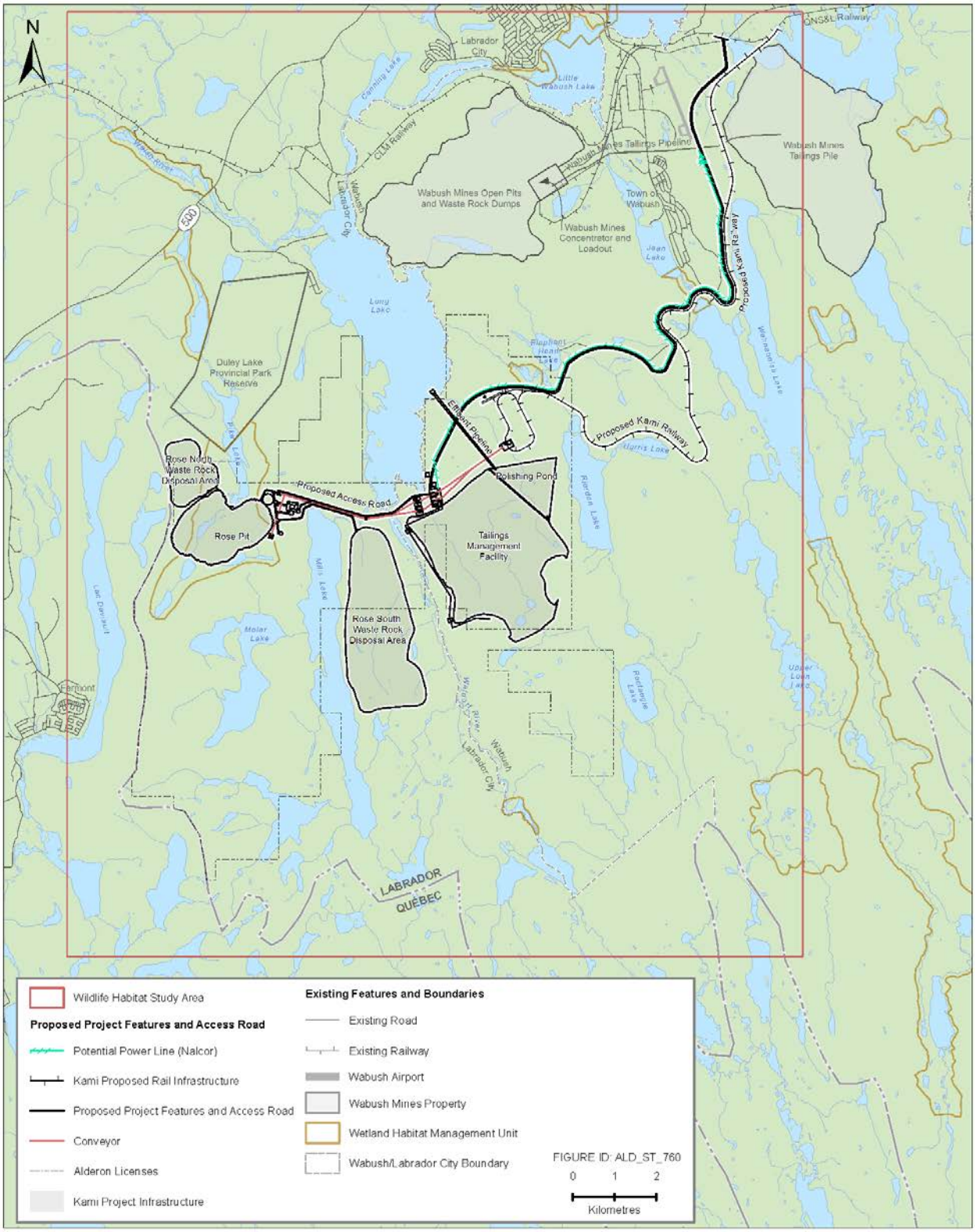
- To complete aerial and record all sightings and/or evidence of species present in the Project Area during winter.
- Use the information collected to provide insight on the presence and distribution of identified species within the LWSA. An indication of relative abundance could also be obtained using this technique.

Results of the wildlife surveys were incorporated into the EIS and used to support and inform the EA for the Project.

3.0 STUDY AREA

The Kami Iron Ore Mine is located in western Labrador near the Québec border, proximate to the communities of Wabush and Labrador City, Newfoundland and Labrador, and Fermont, Québec. The Project Area falls within the Mid Subarctic Forest (Michikamau) Ecoregion. This ecoregion is characterized by open coniferous forests, with spruce as predominant tree species, bare rock outcroppings, and many lakes (Meades 1990). Average winter temperature in western Labrador is -16.8ºC with an average monthly snow fall amount of 65.1 cm (Environment Canada 2012). The greatest snowfall amounts occur in November and the lowest temperatures occur in January (Environment Canada 2012). The study area is shown on Figure 3.1.

Figure 3-1 Study Area for the Kami Iron Ore Project Winter Wildlife Surveys



4.0 METHODS

4.1 Pre-Survey Planning

An application for a scientific research was sent for approval to the provincial Wildlife Division prior to commencing field work. Before finalizing arrangements, local area weather forecasts were monitored for Happy Valley-Goose Bay and Wabush Lake to ensure safe flying conditions that were suitable for conducting wildlife surveys. Although reservations for the field team in western Labrador were secured in advance, availability of accommodations restricted the timing of the survey.

4.2 Field / Sampling Methods

A scientific research permit was received from the provincial Wildlife Division before surveys commenced. Air traffic control personnel at the Wabush airport were contacted to coordinate our movements in the vicinity of the airport prior to each survey. Aerial strip-transect surveys were completed January 27 and March 27, 2012. A Bell Long Ranger 206L equipped with enhanced visibility 'bubble windows' was used. Using the aircraft GPS and front navigator/recorder following the 1:50,000 (National Topographic Series (NTS) map sheets, the pilot was directed along a north-south oriented grid over the approximately 19 x 21 km area that encompassed the Study Area (Figure 4.1). The helicopter followed flight lines spaced at 2,000 m intervals (with additional lines completed at 1,000 m as time permitted).

An altitude of 200 to 300 feet (61 to 91 m) above ground level (agl) and a constant speed of approximately 130 km/h (70 knots) were maintained throughout the surveys. A handheld GPS was used to record locations of observed wildlife and wildlife sign during the surveys. Corresponding waypoints were recorded on data sheets and on specially prepared map sheets (Appendix A).

Animal tracks were identified to species by the field team using known characteristics such as track pattern, size, and spacing.

4.3 Data Analysis

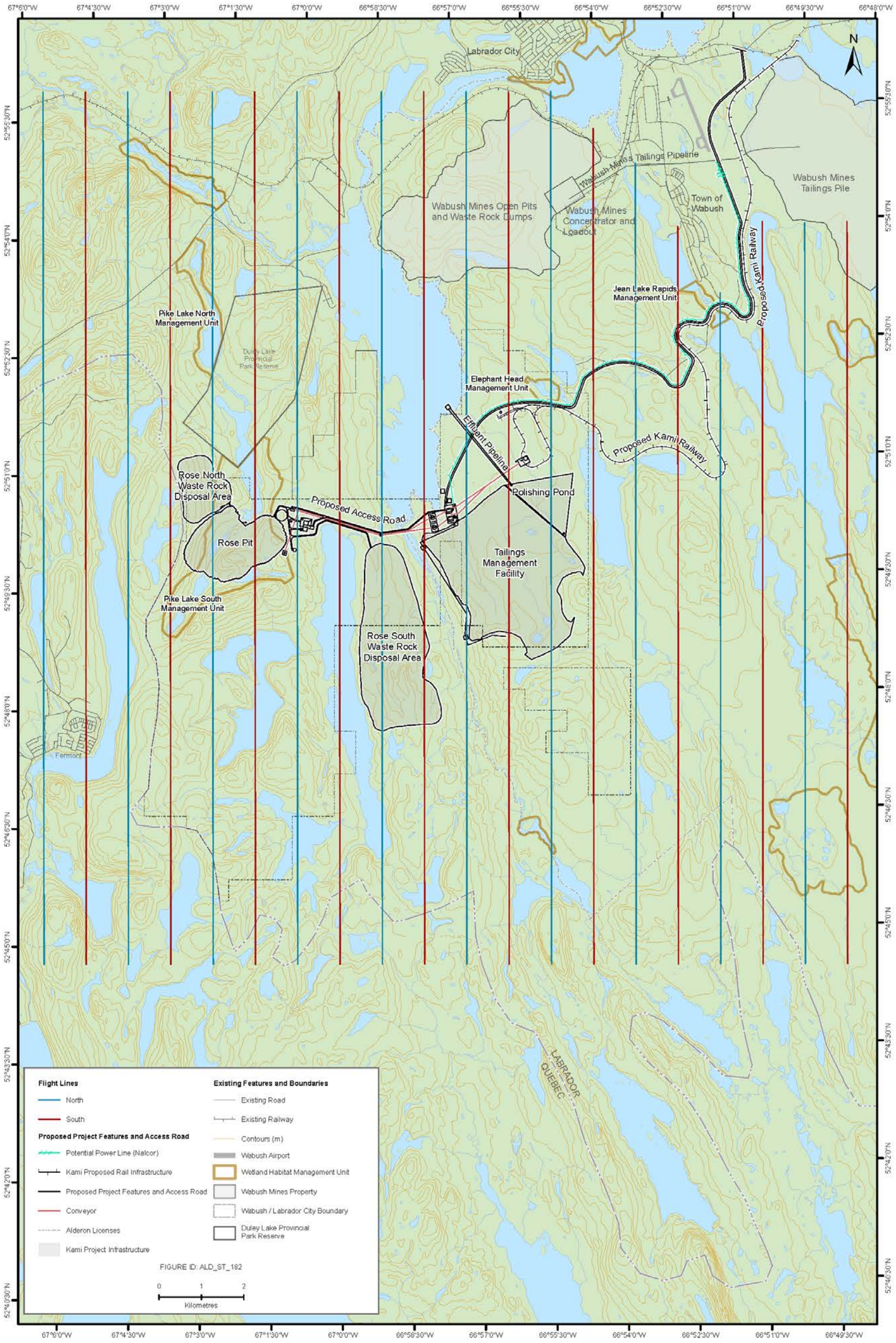
Field data from the survey sites were entered into a database (i.e., Microsoft Excel) for summary and analysis. Although the survey area was snow covered at the time of the aerial surveys, observations were paired with the corresponding ecotypes to determine any habitat associations or trends that may exist.

4.4 Quality Assurance / Quality Control Procedures

To ensure consistent delivery of high quality products and services, Stassinu Stantec has developed and implemented a Quality Management System (QMS) within its operations. Observations in particular were checked against field data to ensure accuracy. The QMS is

registered to International Organization for Standardization 9001:2000 (QMS - Requirements) by QMI Management Systems Registration (CERT-0011312:026332).

Figure 4-1 Survey Transects for Aerial Wildlife Surveys, January and March 2012



5.0 RESULTS

Ten terrestrial wildlife species or their sign (e.g., tracks, snow roosts) were identified during two aerial strip transect surveys. Avifauna species such as Common Raven (*Corvus corax*), Spruce Grouse (*Falcipennis Canadensis*), Willow Ptarmigan and some unidentified songbirds and passerines were also observed.

5.1 Weather Conditions

Survey conditions on January 27, 2012 were excellent for the detection of wildlife tracks. Snow fall of approximately 5 to 10 cm had occurred two days prior to the survey, making fresh tracks highly visible. The temperature was -26^{0}C, with little to no cloud cover under calm conditions. Survey conditions on March 27, 2012 were suitable for the detection of wildlife tracks. Snow fall of approximately 1 to 2 cm had occurred two days prior to the survey, although a hard crust had developed throughout much of the study area making fresh tracks less visible in some locations. Temperatures ranged from -34^{0}C to -25^{0}C, with little to no cloud cover under calm conditions.

5.2 Wildlife Observations

5.2.1 Ungulates

Five moose were observed during the January 27 survey (Figure 5.1), including one female with a calf and one moose was observed during the March 27 survey (Figure 5.2). Observations of moose were made in softwood dominant habitats (i.e., Black Spruce-Labrador Tea-Feathermoss, Black Spruce-Lichen, Tamarack/Black Spruce Treed Fen and Black Spruce/Tamarack-Sphagnum Woodland). Moose tracks were detected in 12 locations during the first survey and in two locations during the second survey (Figures 5.1 and 5.2). Caribou or caribou tracks were not observed in the Study Area during the winter surveys.

5.2.2 Furbearers

Red fox tracks were abundant throughout the study area during both surveys. Most observations occurred in softwood dominant ecotypes although tracks were also observed in mixed-wood and hardwood dominant areas. Red fox tracks were the second most frequently observed track during both surveys. Possible coyote tracks were recorded at one location during the first survey, although the field team noted that the tracks may have been domestic dog tracks given the proximity to a recreation trail. One wolf was observed near the southern end of Long Lake (also known as Duley Lake) during the January 27 survey and tracks were recorded at nine locations in the survey area.

Snowshoe hare tracks were the most frequently observed during the two surveys; more than 65 tracks were detected throughout the survey area in various habitat types. During the first survey the field team stopped recording snowshoe hare tracks and ptarmigan because they were present throughout the Study Area in high abundance.

One pair of river otter were observed at the southern end of Mills Lake during the January 27 survey, tracks or slides were recorded during both surveys near rivers, lakes, and streams in the survey area (Figure 5.1, Figure 5.2).

Other furbearer tracks detected less frequently during the surveys included; Canada lynx (*Lynx canadensis*; n=9), marten (n=9), red squirrel (*Tamiasciurus hudsonicus*; n=12), ermine (*Mustela ermine*; n=4), and porcupine (*Erethizon dorsatum*; n=3) (Figure 5.1, Figure 5.2).

5.2.3 Avifauna

Avifauna species detected included Spruce Grouse, Common Raven, Purple Finch (*Haemorhous purpureus*), and unidentified passerines.

Figure 5-1 Winter Wildlife Surveys – Observations and Sightings January 27, 2012

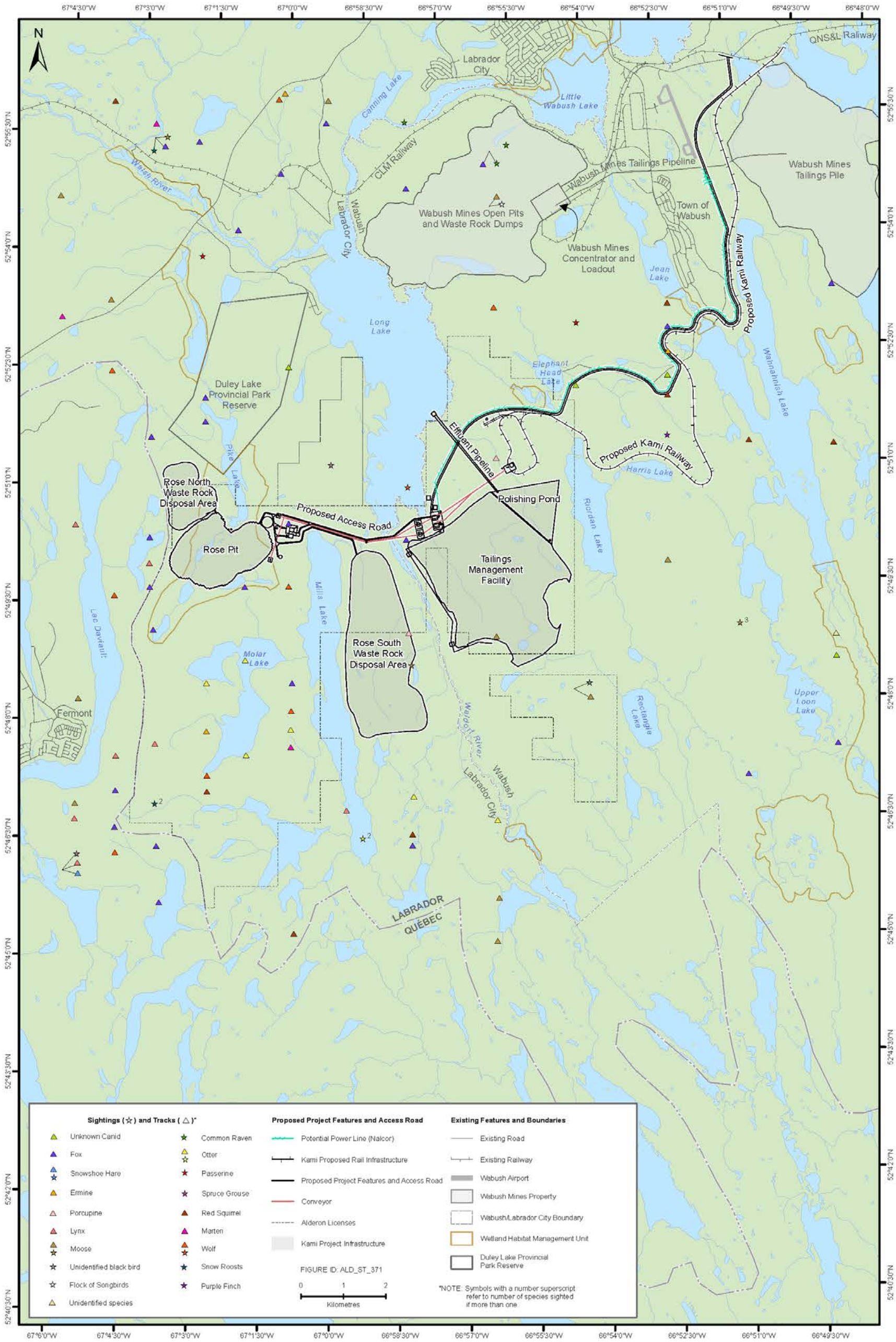
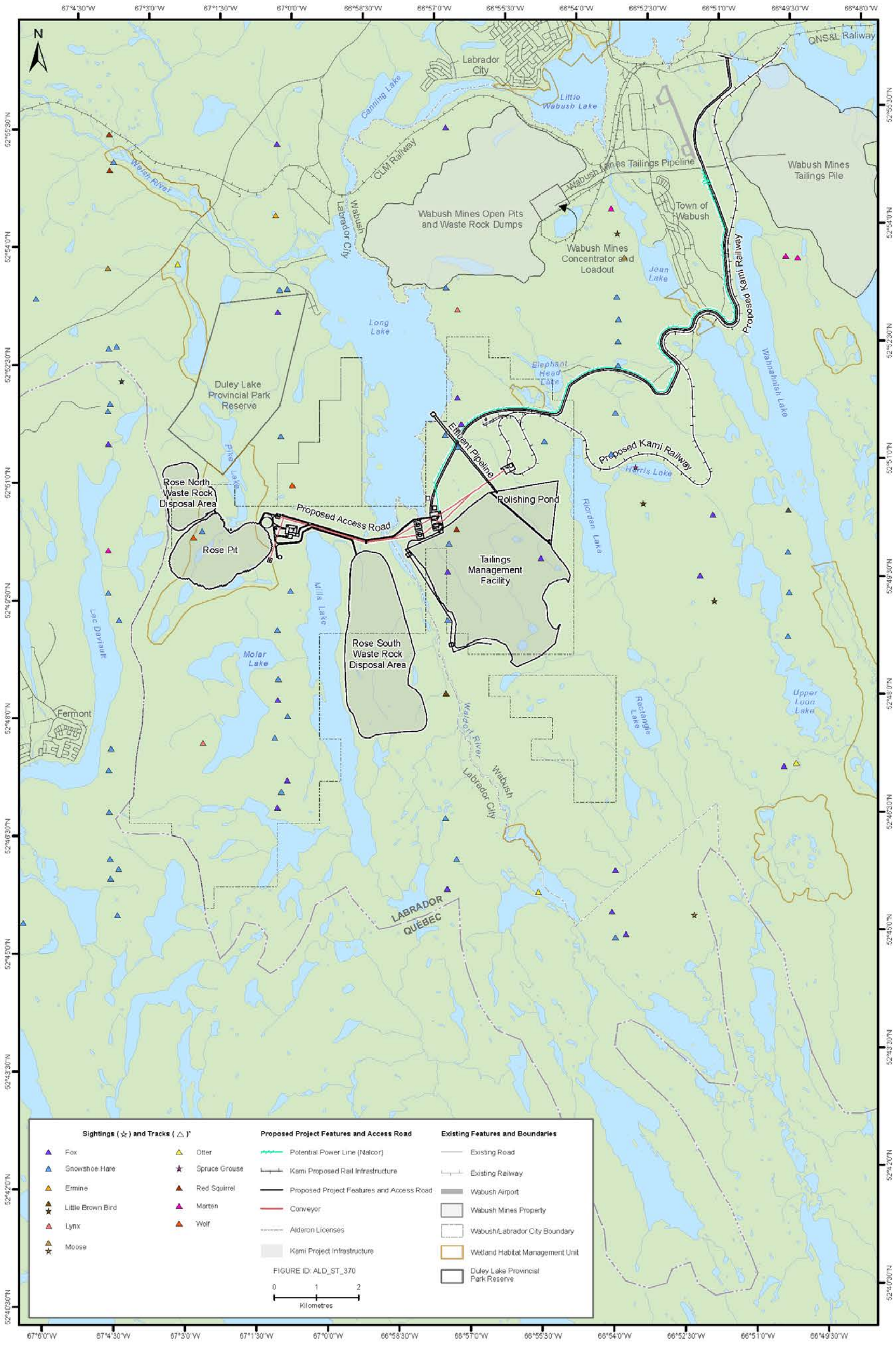


Figure 5-2 Winter Wildlife Surveys – Observations and Sightings March 27, 2012



5.3 Discussion

5.3.1 Ungulates

Moose are relatively new to Labrador and occur in relatively low densities compared to elsewhere in its range (Trimper et al. 1996, Jones 2008). Although density was not calculated in this survey, the observation of six moose during the two aerial surveys in the Study Area is comparable to numbers ranging from 0.016 to 0.03 moose/km^2 observed in central Labrador (Jung et al. 2009).

Caribou, or evidence of their presence, were not observed during surveys. This was expected, given the seasonal ranges of recognized herds closest to the Project. Sedentary forest-dwelling caribou herds (*Rangifer tarandus caribou*) tend to aggregate in winter and disperse across central Ungava in the spring and summer, but are typically found south of 55^{0}N (Bergerud et al. 2008). The reported range of the sedentary Lac Joseph caribou herd is within the area south of the smallwood reservoir to 51^0 N and between 66^0 and 62^0 W (Bergerud et al 2008), south and southeast of the Study Area. Extensive aerial surveys in 2009, covering 7,022 km^2 and including the study area, did not locate any caribou in the vicinity of the Project, and observations of caribou were concentrated between 53^{0}N and 51'30^{0}N and between 66'30^0 and 63^{0}W (Schmelzer 2011). A group of caribou in the vicinity of the McPhadyen River, northwest of the study area, has been documented in the past (most recent surveys in 1986), however this "herd" has been shown to lack philopatry to calving grounds (Bergerud et al. 2008) and is not one of the three sedentary populations currently recognized in Labrador (Schmelzer 2011). Ranges of the other two recognized sedentary caribou herds in Labrador are located in central (Red Wine Mountain) and eastern (Mealy Mountain) Labrador.

Migratory forest tundra caribou (*Rangifer tarandus*) follow a different life history and tend to move as a group from wintering ranges below the tree line to spring and summer (calving grounds) north of the tree line (Bergerud et al. 2008). While the known range of the migratory George River Caribou Herd has extended (and contracted) over the years since initial surveys in 1958, animals from this herd have typically remained north and northeast of the study area (Bergerud et al. 2008). The recently documented distribution of this herd, including calving and wintering areas and migratory routes between these, lies in an area northeast of the project area (NLDEC 2010).

5.3.2 Furbearers

Snowshoe hare were the most widely distributed and abundant species detected during the surveys. Snowshoe hare are widely distributed in various forest habitat types throughout its range in Labrador (Krebs et al. 1986; Boutin 1995). Wildlife detected during the winter surveys, including red fox, wolf, river otter, lynx, squirrel, ermine, and porcupine, were expected observations based on the knowledge of these species in similar habitat types elsewhere in Labrador. Coyote have been confirmed in central and southern Labrador (NLWD 2012), so though it may be possible that coyote are in the study area, it is unlikely, especially given the proximity of the tracks in question to a recreation trail and the presence of wolves. Other

species that likely occur in the study area, though not detected during surveys, include American black bear (*Ursus americanus*) and North American beaver (*Castor canadensis*).

6.0 SUMMARY

The winter wildlife surveys conducted in the Project Area provide additional information about existing conditions in the region. As a supplement to nine aerial waterfowl surveys and ground-based field work completed in summer and fall 2011, the 2012 winter wildlife surveys account for temporal boundaries of species that may be present in the Project Area throughout the year.

The most frequently detected species in the Project Area during the winter wildlife surveys were snowshoe hare, red fox and Willow Ptarmigan. Carnivores and other larger mammals, including wolf, lynx and moose, were observed less frequently as expected. There were no caribou or other species of conservation concern detected in the Study Area during the two aerial winter wildlife surveys.

7.0 REFERENCES

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APPENDIX A

Winter Survey Observation Data

Table A1 Winter Survey Observation Data

Date	Latitude and Longitude.	Line #	Species	Observation	Comments
1/27/2012	N52 53.246 W66 48.816	20	fox	track	
1/27/2012	N52 52.810 W66 48.821	20	snowshoe hare	track	all thru this area
1/27/2012	N52 51.227 W66 48.874	20	red squirrel	track	
1/27/2012	N52 50.223 W66 48.901	20	snowshoe hare	track	all thru this area
1/27/2012	N52 48.792 W66 48.941	20	unidentified	track	old
1/27/2012	N52 48.510 W66 48.948	20	fox or coyote	track	old canid track
1/27/2012	N52 47.679 W66 48.956	20	ptarmigan	track	lots
1/27/2012	N52 47.513 W66 48.965	20	snowshoe hare	track	
1/27/2012	N52 47.397 W66 48.965	20	fox or coyote	track	
1/27/2012	N52 46.951 W66 48.982	20	ptarmigan	track	
1/27/2012	N52 46.146 W66 48.999	20	snowshoe hare	track	all thru this area
1/27/2012	N52 44.548 W66 50.947	18	snowshoe hare	track	
1/27/2012	N52 45.950 W66 50.918	18	ptarmigan	track	
1/27/2012	N52 46.886 W66 50.871	18	snowshoe hare	track	
1/27/2012	N52 47.034 W66 50.858	18	fox	track	
1/27/2012	N52 48.007 W66 50.798	18	snowshoe hare	track	
1/27/2012	N52 48.259 W66 50.771	18	ptarmigan	track	
1/27/2012	N52 48.481 W66 50.757	18	snowshoe hare	track	
1/27/2012	N52 48.624 W66 50.756	18	snowshoe hare	track	all thru this area
1/27/2012	N52 48.958 W66 50.950	18	3 moose	sighting	cow,calf and male
1/27/2012	N52 48.958 W66 50.950	18	snowshoe hare	track	
1/27/2012	N52 49.963 W66 50.700	18	snowshoe hare	track	
1/27/2012	N52 50.381 W66 50.685	18	snowshoe hare	track	
1/27/2012	N52 51.285 W66 50.652	18	red squirrel	track	
1/27/2012	N52 51.285 W66 50.652	18	ptarmigan	track	
1/27/2012	N52 52.585 W66 50.602	18	snowshoe hare	track	
1/27/2012	N52 52.585 W66 50.602	18	ptarmigan	track	
1/27/2012	N52 53.539 W66 50.799	18	ptarmigan	track	
1/27/2012	N52 53.539 W66 50.799	18	snowshoe hare	track	
1/27/2012	N52 53.060 W66 52.281	16	snowshoe hare	track	
1/27/2012	N52 53.060 W66 52.281	16	red squirrel	track	
1/27/2012	N52 52.760 W66 52.288	16	fox	track	
1/27/2012	N52 52.444 W66 52.299	16	ermine	track	
1/27/2012	N52 52.444 W66 52.299	16	snowshoe hare	track	
1/27/2012	N52 52.142 W66 52.318	16	fox or coyote	track	
1/27/2012	N52 51.885 W66 52.331	16	red squirrel	track	

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Date	Latitude and Longitude.	Line #	Species	Observation	Comments
1/27/2012	N52 51.378 W66 52.366	16	purple finch	sighting	unidentified small, red bird
1/27/2012	N52 49.786 W66 52.428	16	marten	track	
1/27/2012	N52 49.786 W66 52.428	16	moose	track	old
1/27/2012	N52 48.081 W66 52.463	16	ptarmigan	track	
1/27/2012	N52 45.548 W66 54.515	14	snowshoe hare	track	
1/27/2012	N52 45.548 W66 54.515	14	ptarmigan	track	
1/27/2012	N52 46.899 W66 54.492	14	ptarmigan	track	
1/27/2012	N52 47.667 W66 54.461	14	ptarmigan	track	
1/27/2012	N52 48.183 W66 54.457	14	ptarmigan	track	
1/27/2012	N52 48.183 W66 54.457	14	moose	track	old
1/27/2012	N52 48.183 W66 54.457	14	unidentified black bird	sighting	
1/27/2012	N52 50.055 W66 54.366	14	ptarmigan	track	
1/27/2012	N52 50.490 W66 54.356	14	ptarmigan	track	
1/27/2012	N52 50.490 W66 54.356	14	snowshoe hare	track	
1/27/2012	N52 51.749 W66 54.299	14	ptarmigan	track	
1/27/2012	N52 52.040 W66 54.255	14	fox or coyote	track	
1/27/2012	N52 52.838 W66 54.214	14	unidentified passerine	sighting	possible robin
1/27/2012	N52 52.838 W66 54.214	14	ptarmigan	track	
1/27/2012	N52 55.130 W66 55.580	14	Common raven	sighting	
1/27/2012	N52 55.034 W66 55.924	12	fox	track	
1/27/2012	N52 55.034 W66 55.924	12	Common raven	sighting	
1/27/2012	N52 54.357 W66 55.922	12	moose	track	old
1/27/2012	N52 54.357 W66 55.922	12	ptarmigan	track	
1/27/2012	N52 54.357 W66 55.922	12	snowshoe hare	track	
1/27/2012	N52 54.357 W66 55.922	12	flock of songbirds	track	flushed
1/27/2012	N52 53.060 W66 55.937	12	wolf	track	
1/27/2012	N52 51.142 W66 55.969	12	porcupine	track	
1/27/2012	N52 48.872 W66 56.073	12	marten	track	
1/27/2012	N52 48.872 W66 56.073	12	moose	track	old
1/27/2012	N52 47.341 W66 56.145	12	ptarmigan	track	
1/27/2012	N52 46.535 W66 56.155	12	otter	track	
1/27/2012	N52 45.539 W66 56.164	12	moose	track	old
1/27/2012	N52 44.993 W66 56.231	12	moose	track	old
1/27/2012	N52 55.451 W66 57.709	10	Common raven	sighting	
1/27/2012	N52 54.607 W66 57.710	10	fox	track	
1/27/2012	N52 50.801 W66 57.849	10	wolf	sighting	middle of Duley (Long) lake
1/27/2012	N52 50.131 W66 57.908	10	fox	track	

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1/27/2012	N52 48.943 W66 57.913	10	porcupine?	track	or otter?
1/27/2012	N52 48.567 W66 57.916	10	moose	sighting	adult male
1/27/2012	N52 46.861 W66 57.904	10	otter	track	
1/27/2012	N52 46.381 W66 57.948	10	red squirrel	track	
1/27/2012	N52 46.239 W66 57.958	10	fox	track	
1/27/2012	N52 46.347 W66 58.999	8	2 otters	sighting	crossing south end of Mills Lake
1/27/2012	N52 46.704 W66 59.320	8	lynx	track	older tracks; open water at brook at north end of Mills Lake
1/27/2012	N52 51.112 W66 59.452	8	spruce grouse	sighting	in flight
1/27/2012	N52 55.028 W66 59.419	8	open water	ashqui	
1/27/2012	N52 55.467 W66 59.345	8	otter	track	
1/27/2012	N52 55.467 W66 59.345	8	fox	track	
1/27/2012	N52 55.754 W66 59.293	8	moose	track	
1/27/2012	N52 55.861 W67 00.194	N/A	ermine	track	between flight lines
1/27/2012	N52 54.138 W67 01.261	6	fox	track	
1/27/2012	N52 49.589 W67 01.326	6	fox	track	
1/27/2012	N52 48.656 W67 01.360	6	otter	track	along shore
1/27/2012	N52 47.449 W67 01.403	6	otter	track	along shore
1/27/2012	N52 44.650 W67 02.566	6	snowshoe hare	track	across lake
1/27/2012	N52 45.604 W67 03.320	4	fox	track	
1/27/2012	N52 45.604 W67 03.320	4	snowshoe hare	track	
1/27/2012	N52 45.604 W67 03.320	4	ptarmigan	track	
1/27/2012	N52 46.321 W67 03.342	4	fox	track	
1/27/2012	N52 46.861 W67 03.351	4	2 snow roosts	track	spruce grouse?
1/27/2012	N52 47.627 W67 03.305	4	red squirrel	track	
1/27/2012	N52 47.627 W67 03.305	4	lynx	track	
1/27/2012	N52 49.077 W67 03.282	4	fox	track	
1/27/2012	N52 49.621 W67 03.322	4	fox	track	
1/27/2012	N52 49.927 W67 03.319	4	lynx	track	
1/27/2012	N52 50.259 W67 03.302	4	fox	track	
1/27/2012	N52 51.537 W67 03.208	4	fox	track	
1/27/2012	N52 53.042 W67 03.090	4	ptarmigan	track	near three drill sites
1/27/2012	N52 55.353 W67 02.940	4	fox	track	2 sets
1/27/2012	N52 55.353 W67 02.940	4	moose	sighting	
1/27/2012	N52 55.353 W67 02.940	4	snow roost	track	spruce grouse?
1/27/2012	N52 55.523 W67 02.920	4	marten	track	
1/27/2012	N52 54.642 W67 04.967	2	moose	track	fresh and old
1/27/2012	N52 53.099 W67 05.005	2	marten	track	

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1/27/2012	N52 50.446 W67 04.844	2	fox	track	
1/27/2012	N52 50.446 W67 04.844	2	lynx	track	old
1/27/2012	N52 48.229 W67 04.886	2	moose	track	old
1/27/2012	N52 46.897 W67 05.023	2	moose	track	
1/27/2012	N52 46.705 W67 05.040	2	fox	track	
1/27/2012	N52 46.705 W67 05.040	2	lynx	track	
1/27/2012	N52 46.114 W67 05.184	2	snowshoe hare	track	LOTS of tracks and hare in this area; south facing hillside
1/27/2012	N52 46.114 W67 05.184	2	spruce grouse	sighting	
1/27/2012	N52 46.114 W67 05.184	2	lynx	track	
1/27/2012	N52 46.257 W67 04.207	3	wolf	track	
1/27/2012	N52 46.584 W67 04.206	3	fox	track	
1/27/2012	N52 47.046 W67 04.170	3	fox	track	snowshoe hare tracks everywhere here too
1/27/2012	N52 47.485 W67 04.139	3	lynx	track	
1/27/2012	N52 49.529 W67 04.077	3	wolf	track	deep with excavation- semi large wolf?
1/27/2012	N52 52.394 W67 03.991	3	wolf	track	along ridge
1/27/2012	N52 53.297 W67 03.966	3	moose	track	old
1/27/2012	N52 55.828 W67 03.765	3	porcupine	track	
1/27/2012	N52 55.828 W67 03.765	3	red squirrel	track	
1/27/2012	N52 55.278 W67 02.022	5	moose	track	old
1/27/2012	N52 55.278 W67 02.022	5	fox	track	
1/27/2012	N52 53.819 W67 02.026	5	flock of passerines	sighting	flushed
1/27/2012	N52 52.017 W67 02.041	5	fox	track	
1/27/2012	N52 51.712 W67 02.061	5	fox	track	
1/27/2012	N52 48.378 W67 02.191	5	otter	track	edge of lake
1/27/2012	N52 47.765 W67 02.217	5	ermine	track	
1/27/2012	N52 47.202 W67 02.236	5	wolf	track	
1/27/2012	N52 46.997 W67 02.240	5	red squirrel	track	
1/27/2012	N52 45.158 W67 00.502	7	red squirrel	track	
1/27/2012	N52 45.689 W67 00.490	7	snowshoe hare	track	across lake
1/27/2012	N52 47.533 W67 00.454	7	marten	track	
1/27/2012	N52 47.754 W67 00.450	7	otter	track	
1/27/2012	N52 47.995 W67 00.427	7	wolf	track	
1/27/2012	N52 48.348 W67 00.392	7	fox	track	
1/27/2012	N52 49.578 W67 00.405	7	wolf	track	
1/27/2012	N52 50.384 W67 00.370	7	fox	track	

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1/27/2012	N52 52.369 W67 00.278	7	coyote?	track	or possible dog? Track along skidoo trail
1/27/2012	N52 54.839 W67 00.331	7	fox	track	
1/27/2012	N52 55.786 W67 00.323	7	fox	track	
1/27/2012	N52 55.786 W67 00.323	7	wolf	track	
3/27/2012	N52 53.335 W67 05.549	1	hare	track	
3/27/2012	N52 45.395 W67 06.164	1	hare	track	
3/27/2012	N52 49.216 W67 03.983	3	hare	track	
3/27/2012	N52 45.455 W67 04.187	3	hare	track	
3/27/2012	N52 45.924 W67 04.306	3	hare	track	
3/27/2012	N52 46.175 W67 04.303	3	hare	track	
3/27/2012	N52 46.776 W67 04.298	3	hare	track	
3/27/2012	N52 47.582 W67 01.226	3	hare	track	
3/27/2012	N52 49.545 W67 01.190	3	hare	track	
3/27/2012	N52 51.879 W67 04.094	3	hare	track	
3/27/2012	N52 51.972 W67 04.046	3	hare	track	
3/27/2012	N52 50.105 W67 01.166	3	marten	track	
3/27/2012	N52 51.462 W67 04.106	3	fox	track	
3/27/2012	N52 52.676 W67 04.044	3	hare	track	
3/27/2012	N52 52.701 W67 03.880	3	hare	track	
3/27/2012	N52 52.260 W67 03.796	3	ptarmigan	sighting	
3/27/2012	N52 47.310 W67 04.282	3	hare	track	
3/27/2012	N52 46.051 W67 04.131	3	hare	track	
3/27/2012	N52 53.703 W67 04.013	3	moose	track	
3/27/2012	N52 54.952 W67 03.921	3	squirrell	track	
3/27/2012	N52 55.054 W67 03.837	3	hare	track	
3/27/2012	N52 55.405 W67 03.914	3	squirrell	track	
3/27/2012	N52 53.727 W67 02.538	5	otter	track	
3/27/2012	N52 50.322 W67 02.181	5	hare	track	
3/27/2012	N52 50.240 W67 02.369	5	wolf	track	
3/27/2012	N52 47.622 W67 02.292	5	lynx	track	
3/27/2012	N52 46.772 W67 00.758	7	fox	track	
3/27/2012	N52 46.971 W67 00.671	7	hare	track	
3/27/2012	N52 47.116 W67 00.538	7	fox	track	
3/27/2012	N52 47.662 W67 00.775	7	hare	track	
3/27/2012	N52 47.934 W67 00.491	7	hare	track	
3/27/2012	N52 48.143 W67 00.685	7	fox	track	
3/27/2012	N52 48.414 W67 00.663	7	hare	track	

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3/27/2012	N52 49.038 W67 00.654	7	hare	track	
3/27/2012	N52 49.527 W67 00.360	7	hare	track	
3/27/2012	N52 50.874 W67 00.259	7	wolf	track	
3/27/2012	N52 51.502 W67 00.473	7	hare	track	
3/27/2012	N52 53.085 W67 00.459	7	fox	track	
3/27/2012	N52 53.367 W67 00.417	7	hare	track	
3/27/2012	N52 53.376 W67 00.251	7	hare	track	
3/27/2012	N52 54.316 W67 00.452	7	ermine	track	
3/27/2012	N52 55.227 W67 00.380	7	fox	track	
3/27/2012	N52 45.680 W66 57.240	11	fox	track	
3/27/2012	N52 46.053 W66 57.029	11	hare	track	
3/27/2012	N52 46.576 W66 57.239	11	hare	track	
3/27/2012	N52 48.168 W66 57.156	11	little brown bird	track	
3/27/2012	N52 49.099 W66 57.071	11	hare	track	
3/27/2012	N52 49.715 W66 57.042	11	fox	track	
3/27/2012	N52 50.074 W66 57.002	11	hare	track	
3/27/2012	N52 50.256 W66 56.831	11	squirrell	track	
3/27/2012	N52 51.303 W66 56.756	11	hare	track	
3/27/2012	N52 51.461 W66 57.018	11	hare	track	
3/27/2012	N52 51.592 W66 56.667	11	fox	track	
3/27/2012	N52 51.929 W66 56.735	11	fox	track	
3/27/2012	N52 53.054 W66 56.682	11	lynx	track	
3/27/2012	N52 53.333 W66 59.913	11	hare	track	
3/27/2012	N52 55.379 W66 56.825	11	fox	track	
3/27/2012	N52 51.343 W66 54.929	13	hare	track	
3/27/2012	N52 49.859 W66 55.076	13	fox	track	
3/27/2012	N52 45.605 W66 55.329	13	otter	track	
3/27/2012	N52 44.997 W66 53.738	15	hare	track	
3/27/2012	N52 45.039 W66 53.518	15	fox	track	
3/27/2012	N52 45.329 W66 53.798	15	fox	track	
3/27/2012	N52 45.852 W66 53.705	15	fox	track	
3/27/2012	N52 50.512 W66 52.891	15	little brown bird	sighting	
3/27/2012	N52 50.978 W66 53.029	15	spruce grouse	sighting	
3/27/2012	N52 51.155 W66 53.533	15	hare	track	
3/27/2012	N52 51.678 W66 53.424	15	hare	track	
3/27/2012	N52 52.282 W66 53.335	15	hare	track	
3/27/2012	N52 52.588 W66 53.321	15	hare	track	
3/27/2012	N52 52.867 W66 53.299	15	hare	track	

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3/27/2012	N52 53.156 W66 53.318	15	hare	track	
3/27/2012	N52 53.654 W66 53.134	15	moose	track	
3/27/2012	N52 53.962 W66 53.271	15	little brown bird	sighting	
3/27/2012	N52 54.284 W66 53.381	15	marten	track	
3/27/2012	N52 50.344 W66 51.428	17	fox	track	
3/27/2012	N52 49.244 W66 51.457	17	little brown bird	sighting	
3/27/2012	N52 45.253 W66 52.073	17	moose	sighting	
3/27/2012	N52 47.116 W66 50.100	19	fox	track	
3/27/2012	N52 47.152 W66 49.838	19	otter	track	
3/27/2012	N52 49.847 W66 49.880	19	hare	track	
3/27/2012	N52 49.328 W66 49.881	19	hare	track	
3/27/2012	N52 48.773 W66 49.934	19	hare	track	
3/27/2012	N52 50.376 W66 49.845	19	ptarmigan	track	
3/27/2012	N52 53.613 W66 49.734	19	marten	track	
3/27/2012	N52 53.588 W66 49.483	19	marten	track	