



**AREVA Resources Canada Inc.**

**KIGGAVIK PROJECT, NUNAVUT**

Monthly Wildlife Report

June 15 – June 30, 2013

## **1 INTRODUCTION**

Throughout the 2013 field season, wildlife monitoring is being carried out in accordance with the Wildlife Mitigation and Monitoring Plan (WMMP) developed for the Kiggavik Project. One of the requirements of the plan is monthly reporting. This is the first monthly report of the 2013 field season for the month of June.

## **2 MITIGATION ACTION TAKEN**

As required by the Nunavut Impact Review Board (NIRB) 2007 screening decision and the WMMP, drill activity will be suspended when concentrations of caribou are within 2 km of drill rigs during the months of June and July. At no time did caribou approach within 2 km of drilling activities.

As per the Aboriginal Affairs and Northern Development Canada (AANDC) Land Use Permit and the WMMP, when caribou cows calve outside the designated caribou protection areas operations will be suspended if cows and/or calves are present within 10 km of operations between May 15 and July 15. At no time did cows and/or calves approach within 10 km of drilling activities during the designated calving season.

## **3 LOCAL WILDLIFE MONITORS**

Throughout June, AREVA employed Wildlife Monitors from Baker Lake; Timothy Evviuk and Stacey Kenacosak. Consistent monitoring occurred each day in June. Monitoring consists of five height-of-land (HOL) stations around camp and periodic visits to the drill sites. A daily log is completed by the wildlife monitor. There were no wildlife disturbances recorded by the wildlife monitor during the month of June. The Wildlife Monitors record observations around drill sites, and at five locations around camp. The Height of Land (HOL) locations around camp are shown in Figure 1 below. While on site, the Wildlife Monitors report to the Safety, Health, Environment, and Quality (SHEQ) Supervisor to determine if monitoring is needed at specific locations besides the HOL locations around camp.



Figure 1 Wildlife Monitor Height of Land (HOL) Locations

## 4 WILDLIFE SIGHTINGS

Sightings vary between incidental camp observations, contractor observations, observations by the Wildlife Monitor, and aerial observations from the helicopter. Sightings are recorded at various locations and transcribed into an environmental data spreadsheet as shown in the appended Table. Sighting details vary with the observer and are sometimes minimal. There were a total of 43 sightings which included caribou, muskox, wolverine, arctic fox, arctic hare, wolves, ptarmigan, geese, ducks, sandhill cranes, lemming, and various small birds. As shown in the appended table, a dead ptarmigan was found with its head caught in a chain link fence. A summary of all wildlife sightings in June is provided in Table 1 below. Wildlife recorded by multiple observers may result in an overestimate of the total number observed. For example, the herd of muskox observed on June 20 was recorded by both the drillers and Wildlife Monitor which results in an increase of total number observed when it was likely the same herd for both sightings.

**Table 1 June Kiggavik Wildlife Summary**

<b>Species</b>	<b>Wildlife Sightings</b>	<b>Total Number Observed</b>
Arctic Fox	6	6
Arctic Hare	2	2
Canadian Geese	2	7
Caribou	9	23
Ducks	1	2
Lemming	1	1
Muskox	16	220
Ptarmigan*	1	1
Sandhill Cranes	1	4
Small Birds	1	1
Wolf	2	3
Wolverine	1	1
<b>Total</b>	<b>43</b>	<b>271</b>

\*Ptarmigan are commonly observed throughout the Kiggavik camp

## **4.1. OBSERVATION METHODS**

Apart from the regular observations from local Wildlife Monitors, personnel record wildlife sightings as well. The appended table outlines the sightings in more detail, including the method of observation.

The Kiggavik camp uses two helicopters throughout the season for transport of personnel and to provide drill support. Long range flights are occasionally made between Baker Lake and Kiggavik, while short range flights are commonly made between the Kiggavik camp and drilling rigs. These flights are monitored for altitude restrictions, and pilots will be informed if caribou are approaching the area. Pilots and personnel record aerial wildlife observations from the helicopter during these regular flights.

Wildlife logs are placed in the camp kitchen and camp office for ease of recording wildlife sightings. During site orientation, Kiggavik personnel are informed of the wildlife log locations and are encouraged to report all wildlife sightings.

The Government of Northwest Territories (GNWT) and Government of Nunavut (GN) provide collaring data showing collar movements. The issuance of collar data enables proper implementation of the WMMP as a source of caribou movements.

## **5 RAPTOR NEST MONITORING**

No Raptor nest sites near camp or drilling areas have been identified to date.

## **6 FLIGHT ALTITUDES**

The Kiggavik WMMP requires that long range flights be flown a minimum of 610 m (2000 ft) above ground, and short range flights be flown 300 m (1000 ft) above ground with exceptions for low-level ceiling conditions, slinging activity, or risks to flight safety. The pilots have been compliant with altitudes required for both long range and short range flights.

Through the internet based SkyConnect program, helicopter altitudes are tracked and periodically checked by the SHEQ Supervisor. The SkyConnect program allows the SHEQ Supervisor to cross reference with daily flight reports to ensure pilots have recorded reasons for occasional low level flights such as slinging or low level ceiling/bad weather. The pilots have been diligent in flying at or above the desired altitudes whenever possible. Figure 2 provides a map view of a typical long range flight and the altitude at one particular point of the flight.

Baker Lake residents wishing to view the helicopter altitudes are welcome to stop by the AREVA office any time. Logs of the flights are kept throughout the season.

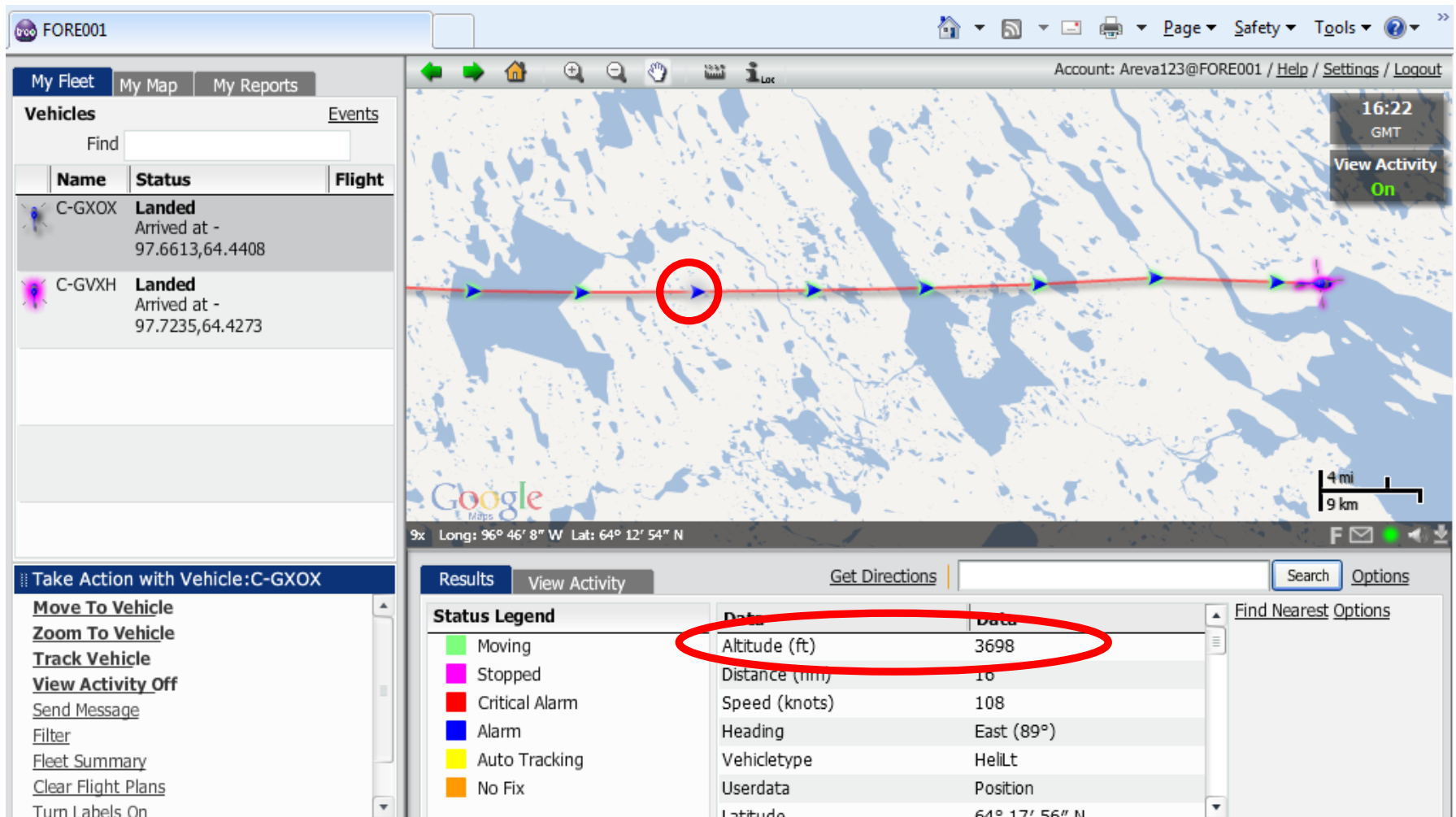


Figure 2 Helicopter Altitude Check June 26, 2013

Date	Time	Observation method	Species	Number	Behaviour	Disturbance	Cause of Disturbance	Behaviour Before Disturbance	Behaviour After Disturbance	Actions Taken to Avoid Disturbance	Physical Location	Comments
6/15/2013		Camp Observation	Wolves	2	Running	No	--	--	--	--	South of camp	
6/16/2013		Camp Observation	Arctic Hare	1	Sitting/Resting	No	--	--	--	--	Camp area	
6/16/2013	11:00	Incidental	Caribou	1	Feeding/Walking	No	--	--	--	--	Fuel Cache	
6/17/2013		Camp Observation	Fox	1	Running	No	--	--	--	--	Geology area	
6/17/2013		Wildlife Monitor	Caribou	2	standing	No	--	--	--	--	West Hill of unnamed lake	
6/17/2013		Camp Observation	Ptarmigan	1	Deceased	yes	Fence	--	--	--	Fenced storage area, head caught in fence	
6/19/2013	13:00	Incidental	Wolverine	1	Feeding	No	--	--	--	--	Drill #3 (KN-01)	
6/19/2013		Aerial	Muskox	3	unknown	No	--	--	--	--	Near old Forum camp	
6/20/2013	17:00	Incidental	Muskox	35	Walking/Feeding	No	--	--	--	--	Drill #3 (KN-01)	
6/20/2013		Wildlife Monitor	Muskox	35 - 40	Walking/Feeding	No	--	--	--	--	HOL 3	
6/20/2013	08:00	Camp Observation	Small bird	1	unknown	No	--	--	--	--	Camp area	
6/21/2013	09:00	Camp Observation	Arctic Hare	1	licking leg	No	--	--	--	--	By cabin 12 (camp)	
6/21/2013	13:30	Incidental	Muskox	3	Walking	No	--	--	--	--	350 m North of Camp	
6/21/2013	07:15	Camp Observation	Arctic Fox	1	Walking	No	--	--	--	--	Near main office	
6/22/2013	07:00	Camp Observation	Muskox	3	eating	No	--	--	--	--	North West of Camp	
6/22/2013	11:30	Camp Observation	Arctic Fox	1	Hunting siksik	No	--	--	--	--	By propane tanks	
6/22/2013	17:00	Camp Observation	Canadian Geese	5	Unsure	No	--	--	--	--	South West of Camp	
6/23/2013	08:00	Incidental	Lemming	1	Walking By	No	--	--	--	--	In camp	
6/24/2013		Aerial	Caribou	1	Unsure	No	--	--	--	--	Between drill #2 and camp	
6/24/2013		Aerial	Caribou	7	Unsure	No	--	--	--	--	7 miles east of camp	
6/24/2013		Aerial	Muskox	20	Unsure	No	--	--	--	--	4 miles west of Tom Lake	
6/24/2013		Aerial	Caribou	5	Unsure	No	--	--	--	--	10 miles west of Baker	
6/25/2013		Aerial	Muskox	3	Unsure	No	--	--	--	--	Sleek Lake North	
6/26/2013		Aerial	Muskox	3	Unsure	No	--	--	--	--	Sleek Lake South	
6/26/2013		Aerial	Caribou	3	Unsure	No	--	--	--	--	1 mile NE of fuel cache	

Date	Time	Observation method	Species	Number	Behaviour	Disturbance	Cause of Disturbance	Behaviour Before Disturbance	Behaviour After Disturbance	Actions Taken to Avoid Disturbance	Physical Location	Comments
6/26/2013	15:30	HOL	Sandhill Crane	4	Pacing around	No	--	--	--	--	SE of camp	
6/27/2013	12:00	Camp Observation	Arctic fox	1	Hunting Lemmings	No	--	--	--	--	In camp	
6/27/2013	15:00	HOL	Muskox	3	Unsure	No	--	--	--	--	1.4 km N of camp	
6/27/2013	16:30	HOL	Muskox	15	Unsure	No	--	--	--	--	2 km NE of camp	
6/27/2013	05:30	Incidental	Ducks	2	Unsure	No	--	--	--	--	15 yards from drill 2 pump	
6/27/2013	05:30	Incidental	Canadian Geese	2	Unsure	No	--	--	--	--	15 yards from drill 2 pump	
6/27/2013		Aerial	Muskox	15	Unsure	No	--	--	--	--	Sleek Lake South	
6/28/2013	10:20	Camp Observation	Arctic Fox	1	Hunting Lemmings	No	--	--	--	--	North East end of camp	
6/28/2013	03:00	Camp Observation	White Wolf	1	Unsure	No	--	--	--	--	South of Camp	
6/28/2013	17:00	HOL	Muskox	21	Unsure	No	--	--	--	--	West of camp	
6/28/2013	15:00	Incidental	Caribou	2	Unsure	No	--	--	--	--	4 km W of camp	
6/28/2013		Aerial	Muskox	2	Unsure	No	--	--	--	--	Sleek Lake West	
6/29/2013	13:15	Camp Observation	Fox	1	Running	No	--	--	--	--	Middle of camp	
6/29/2013	12:00	Camp Observation	Caribou	1	Running	No	--	--	--	--	Ran through camp	
6/29/2013	17:15	Incidental	Muskox	21	Eating	No	--	--	--	--	SE of camp (5 km)	
6/29/2013	12:00	Camp Observation	Caribou	1	Walking	No	--	--	--	--	Core racks	
6/29/2013		Aerial	Muskox	1	Unsure	No	--	--	--	--	Sleek Lake West	
6/30/2013		Aerial	Muskox	33	Unsure	No	--	--	--	--	South of Camp	