

Minto Mine

2014 Wildlife Protection Plan

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Minto Mine
April 2014

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Group, June 2013)

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1 Introduction

The Wildlife Protection Plan (WPP) is a requirement of Quartz Mining Licence QML-0001 (QML), which requires "a plan that describes the mitigation measures or practices pertaining to wildlife attractants, vehicle use, habitat management, wildlife harassment and wildlife health." This WPP is an update to the previous WPP, submitted in September 2011 and approved in October 2011. The content of this WPP is derived from the *Plan Requirement Guidance for Quartz Mining Projects* (Yukon Government, 2013). Changes from the previous WPP are outlined in Table 1-1.

The purpose of the WPP is to establish guidelines for minimizing wildlife disturbance at the Minto Mine site and along the development corridor and to develop a monitoring program that will yield information about wildlife use in the area. Monitoring program results will be used in closure planning activities and will help refine closure objectives related to ensuring unobstructed passage through the area by wildlife. The WPP describes the methods to be used at Minto Mine to ensure protection of wildlife, minimize disturbance to animals and minimize adverse impacts on wildlife habitat to the extent possible during the active life of the mine.

Table 1-1: Summary of Changes to WPP from Previous Version

2011 Wildlife Protection Plan	2014 Wildlife Protection Plan		
1.0 Introduction	Addition of Project Description and First		
	Nations Consultation subsection.		
	Inclusion of Baseline Report.		
1.1 Wildlife Protection Plan Objectives	Subsections deleted and content added to		
1.2 Site History Introduction			
2.0 Wildlife Monitoring and Protection Measures	Training procedures added.		
	More detailed protection procedures added.		
	• Separate section added for Wildlife		
	Monitoring, with details of site monitoring		
	programs provided.		
3.0 Conclusions	No change		

1.1 Project Description

Minto Mine (administered by Minto Explorations Ltd. (Minto)) is a high-grade copper and gold mine that is located 240 km north of Whitehorse, Yukon. Operations are ongoing at this time and began in October 2007. The mineral deposits mined at the site were identified during exploration programs occurring in the area in the 1970's. Exploration activities occurred sporadically since that time until construction of the mine and related facilities began in earnest in 2006. From the perspective of wildlife monitoring, the site is a greenfield operation, meaning that current mining activity represents the most significant industrial activity occurring in this area to date.

Minto Mine is located in the boreal forest at an elevation of about 760 m ASL. The access road starts at the western side of the Yukon River crossing site, continues north adjacent to the Yukon River and then heads southwest up the Minto Creek valley and continues approximately 12 km up to the Minto mine site (Figure 1-1). The ecosystems surrounding the mine site consist of varying ecosystem types that range in structure and age from shrub land to forest. Much of the area has been affected by fire. Riparian zones, estimated to be up to 20 m wide, consist of fairly dense stands of shrubs and trees. Forests, some of which burned during the fires in 1980, 1995 and 2010, are in various stages of regeneration. Despite this rugged terrain, baseline studies indicate that many fauna are observed in the area including approximately 46 species of mammal (insectivores, bats, lagomorphs, rodents, carnivores and ungulates), 60 species of birds and one species of amphibian (wood frog).

Wildfire has been a significant factor affecting the local ecosystems. Many forests are kept in younger successional stages due primarily to the frequency and/or intensity of the burn. The forests within the Yukon Plateau-Central Ecoregion in particular are often less than 100 years old due to the combination of frequent, large fires associated with thunderstorms and normally dry summer conditions. Vegetation succession following fire will differ depending on a number of different factors. This also affects the ability of the area to support wildlife species. The area surrounding the Minto Mine site has experienced three major fires in the past 30 years. A fire burned approximately 7,236 ha in 1980. A second and more extensive fire occurred in 1995 and burned approximately 55,521 ha, while the most recent wildfire, in June 2010, burned 5,100 ha a few kilometers from the active mine area, close enough to trigger a temporary evacuation of the mine

1.2 First Nations Consultation

Minto Mine is located within Selkirk First Nation's (SFN) traditional territory, and within SFN Category A Settlement Land Parcel R-6A. Minto and SFN are parties to a Cooperation Agreement originally dated September 16, 1997 and amended November 4, 2009. In addition to establishing cooperation with respect to permitting and environmental monitoring, this confidential document deals with other economic and social measures and communication between SFN and Minto.

The Minto Mine is currently in Phase IV of operations, with a project proposal submitted to YESAB for approval of Phase V/VI. As such, consultation with the Selkirk First Nations has been ongoing since 2011. While consultation has not been specific to wildlife, wildlife effects concerns are often brought up by SFN community members at these meetings. Over 80 meetings, presentations and site tours have included the SFN community members since 2011. SFN members were not consulted on the content of this document, specifically, but the comments and concerns raised at consultation opportunities have been incorporated into the monitoring currently conducted at Minto Mine, as summarized below.

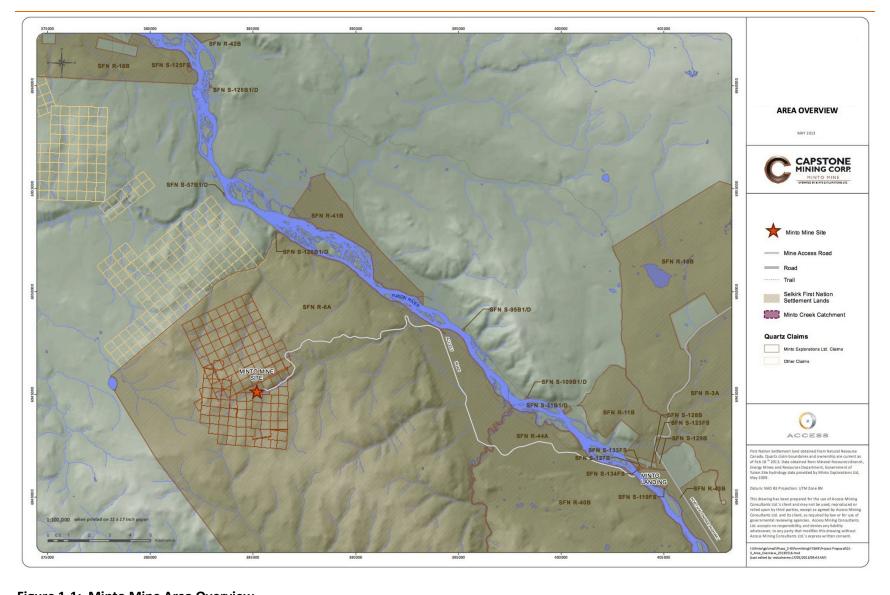


Figure 1-1: Minto Mine Area Overview

1.3 Summary of Key Commitments

The Phase IV environmental assessment evaluation report was issued February 18, 2011, and outlined key commitments by Minto to mitigate significant adverse effects of the project. It is assumed that by following these mitigations through Phase V/VI and, the Minto Mine will avoid unnecessary effects to wildlife and wildlife habitat. The key mitigation commitments and the section in which they are addressed in this report are summarized in Table 1-2.

Table 1-2: Summary of Key Mitigation Commitments from Phase IV YESAB Evaluation Report

Key Mitigation Commitments for Wildlife and Wildlife Habitat	Report Section
The disturbance footprint and related vegetation clearing is to be limited to the extent necessary to minimize habitat loss.	3.2
The project footprint as a whole is relatively small, and an updated site reclamation plan has been prepared for ongoing and final site restoration.	Contained within current Decommissioning and Reclamation Plan
Waste handling adheres to wildlife protection measures of Commercial Dump Permit No: 81-005.	3.2
Camp is kept clean and combustible waste is incinerated completely on a daily basis to eliminate odors that may attract wildlife.	3.2
If wildlife becomes a nuisance or problem, a portable electric fence will be installed around the perimeter of the camp. All nuisances / problems with wildlife will be reported to the local conservation officer immediately for assistance in identifying further effective means of reducing wildlife mortality.	2
No hunting policy for project employees is adhered to and firearms are banned from the mine site.	3.2
Vehicle-animal encounters are prevented by employees following posted speed limits.	3.2
Employees are required to fill out the Company's posted wildlife log.	4
Road reclamation and access limitations as part of the decommissioning plan.	Contained within current Decommissioning and Reclamation Plan

2 Wildlife Resources

Numerous wildlife surveys have been completed in the area surrounding the site since 1994 by the Government of Yukon, Department of Environment; Hallam Knight Piesold Ltd. (HKP); and Access Consulting Group (ACG) (Table 2-1), one survey predates the 1995 fire and the other five occurred subsequently. The completed assessments mainly focused on moose (*Alces alces*), Dall's sheep (*Ovis dalli*), woodland caribou (*Rangifer tarandus caribou*), and raptors. Other wildlife observations and sign

(tracks, scat, browse, etc.) were also recorded during these surveys. These studies, along with observation logs during operational time, form the foundation of the WPP. A baseline report summarizing the results of the surveys, including comments on the distribution of species in the area and identified species at risk has been prepared and is provided in Appendix A, and results are summarized below.

Key wildlife areas (from the surveys summarized in Table 2-1) for peregrine falcons, bald eagles, golden eagles, alpine raptor, thinhorn sheep and woodland caribou are shown in Figure 2-1. Fur and big game harvest statistics indicate that the following species occur in the Minto project area: grizzly bear, black bear, coyote, gray wolf, red fox, wolverine, marten, least weasel, river otter, beaver, and lynx. Cougars may also have the potential to occur in the area as they are known to follow mule deer (Smith et al. 2004); however, the probability of an occurrence is considered to be low. Of the species listed above, the following species or sign of the species have been observed, on site: grizzly bear, black bear, gray wolf, lynx, river otter, beaver, marten, red fox, and mule deer.

Small mammals common to the area include red squirrel, varying hare, fox, mink, weasel, vole, and shrew. The Minto Mine site is situated at the apex of five drainages that are part of the Yukon River watershed, so wildlife uses the area to access the valleys offering conduits from lowlands to highlands for seasonal foraging and hunting (ACG 2010).

A total of 13 raptor species have the potential to occur within the study area. Raptors may breed throughout the study area, with select areas attracting higher breeding densities (e.g., riparian zones) than other areas (e.g. pine stands). Species that have been observed and documented in the Project area include the red-tailed hawk, peregrine falcon, and golden eagle. Only one aerial-based raptor survey was conducted as part of the Minto Mine baseline studies.

High quality riparian cliff habitat for raptors exists along the Yukon River downstream of the Minto Mine access road. A WKA (wildlife key area) for golden eagle summer nesting habitat has been identified approximately 3 km to the east of the project area. This WKA is primarily associated with the steep bluffs along the Yukon River and includes a buffer area. No cliff-nesting raptor habitat has been identified within the Project area itself. The access road to the Minto Mine, however, runs adjacent to potential nesting areas for cliff-nesting raptors, such as the golden eagle and peregrine falcon.

Game birds that have been observed or that have the potential to occur in the study area include grouse (spruce, ruffed, sharp-tailed) and ptarmigan (willow, white-tailed, and rock). Of the species of grouse that live in Yukon, the sharp-tailed grouse is currently the only species of management concern. Sharp-tailed grouse have a limited distribution in Yukon due to the lack of suitable habitat. Gravel outwashes with fairly stable aspen parkland habitat and wet sedge-hummock meadows after fire are considered suitable habitat for this species. Sharp-tailed grouse have been observed in the Project area.

Table 2-1: Wildlife Surveys undertaken in the general Project Area

Dates	Type of Survey	Conducted By
January–March 2012	Late Winter Ungulate Studies	EDI, Environment Yukon
Fall 2012	Klaza Caribou Herd Study	Environment Yukon
March 2011	Late Winter Ungulate Study	EDI, Environment Yukon on behalf of Casino Mining Corporation
July 2010	Baseline Ecosystems and Vegetation Report*	Access Consulting Group
March 2010	Minto Mine Environmental Baseline Ecosystems and Vegetation Report	EBA Engineering Consultants Ltd.
February 2010	Late Winter Moose (Aerial)	Access Consulting Group
December 2010	Post-rut Moose Survey (Aerial)	Access Consulting Group
June 2009	Dall Sheep Survey (Aerial)	Environment Yukon
2007	Moose Survey	Environment Yukon
2003	Klaza Caribou Herd Survey	Environment Yukon
June & July 1994	Spring Wildlife Survey Spring Dall Sheep Survey	Hallam Knight Piesold Ltd.
	Summer Raptor Survey	
	Summer Wildlife Ground Pellet Survey	

^{*}The 2010 Baseline Ecosystems and Vegetation Study (ACG 2010a) was not focused primarily on wildlife; however, general wildlife observations were made during the vegetation survey and were recorded on plot data sheets. This ground-based survey provided information regarding the presence of smaller animals as well as larger mammals that can be more easily seen by aerial surveys.

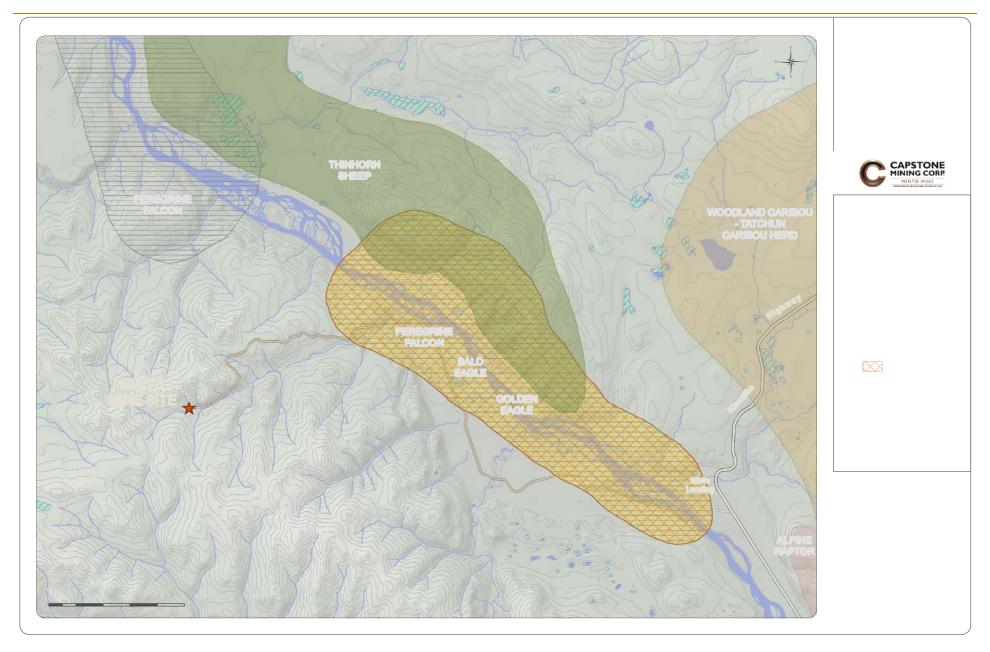


Figure 2-1: Wildlife Key Areas

3 Wildlife Protection Procedures

Wildlife protection at the Minto Mine is an important component of successful mine operation. Some of the key guiding principles for wildlife protection at the Minto Mine include:

- Every effort shall be made to avoid disturbing wildlife.
- All incidents involving wildlife shall be reported to the District Conservation Officer (C.O.) Dean Mclean, Department of Environment, Carmacks, (867) 863-2411. Any other communication regarding wildlife shall also be through the C.O.

In this context, an "incident" means an interaction between human and wildlife which results in harm to one or both.

- The provisions of the Quartz Mining Land Use Regulations Schedule 1 Operating Conditions (MLUA Class 3 LQ00186) will be adhered to. Including (from Yukon Government, 2003):
 - Cut brush must not be piled so that it blocks movement of wildlife.
 - All reasonable effort must be made when drilling to minimize impact on wildlife.
 - Off road and trail routes must be re-contoured and must be used in a way that minimizes ground disturbances, including damage to permafrost and sensitive wildlife habitat.
 - Explosives must be set off in a manner to minimize impact on wildlife.
 - Access to underground opening must be blocked to prevent access by wildlife.

3.1 Training

Basic wildlife training forms part of the orientation for all new employees and visitors to the Minto Mine. Basic training includes such topics as:

- Absolutely no feeding of wildlife;
- Eliminating wildlife attractants;
- Wildlife avoidance;
- Bear awareness; and
- Any topics pertinent to the time of year and current site conditions.

Safety department employees are trained in lethal and non-lethal bear hazing, by Bear Scare Ltd. (program reviewed by the C.O.) in addition, some members of the Environmental department are trained (core and PAL certified) as alternates. Site employees and contractors also receive Bear Safety Awareness and non-lethal hazing training on site, based on Bear Scare Ltd. resources. All members of the Environmental Department staff have also been trained in non-lethal hazing techniques by the Safety Department.

Continued wildlife safety is offered by the Safety Department by a *Staying in Bear Country* video, which is shown on regular intervals, mostly during the times of greater bear activity. Notices are also posted around the Minto Mine camp to alert employees and contractors of nuisance wildlife, or important wildlife protocols. Examples of notices are provided Appendix B.

3.2 Wildlife Protection Procedures

Table 3-1 summarizes the protective measures in use at the Minto Mine that aim to minimize interactions with wildlife, and provides guidance for employees should interactions occur.

Table 3-1: Wildlife Protection Activities

Area of Concern	Protection Activities
Site Access Management	Speed limits are enforced for mine traffic along the access and site roads (maximum 60 km/hr). Traffic between the Yukon River and the mine site is radio controlled for safety and speed control.
	Existing disturbed areas will be used where possible in an effort to minimize the mine footprint and associated impacts to wildlife habitat.
	All personnel coming to site are accounted for and must be on a daily manifest to gain access across the barge/ice bridge.
Attractants	Waste is kept in bear proof containers, and combustible waste is incinerated completely on a daily basis to avoid attraction of nuisance animals.
	Waste is collected as needed to minimize accumulation.
	 Vehicles are to be kept free of food and waste, and should be cleaned out at the end of every day.
	• Segregated waste bins (e.g. Waste metal, wood etc.) are inspected regularly, as are the landfill and burn pit, to ensure food scraps and other attractants are not getting into non-attractant waste streams.
Harassment	As required in sections 92 and 93 of the <i>Wildlife Act</i> , the proponent shall
	 not harass wildlife or encourage wildlife to become a nuisance. Mine personnel are not allowed to have pets in camp.
Hazing Program	Minto's Safety department have been trained by Bear Scare Ltd. in lethal and non-lethal hazing (training by Dan LeGrandeur). This program has been reviewed and supported by Dean McLean (C.O., Carmacks)
	Site employees and contractors received Bear Safety Awareness and non-lethal hazing training on site by Bear Scare Ltd.
	Continued wildlife safety is offered by the Safety Department by way of Staying in Bear Country video.

Area of Concern	Protection Activities	
	Environmental Department staff are also trained in non-lethal hazing techniques	
	In order to minimize wildlife stress and disturbance, potentially dangerous animals are only hazed if they are encountered in areas of high extravehicular human traffic, such as close to camp or workshops. If seen in other areas of the mine, they are monitored only.	
Deterrents & Hazing	Wildlife deterrent and hazing equipment includes:	
Equipment	Standard compressed air bottle blast horns	
	 Noise-making materials (lengths of metal pipe) are kept at bunkhouse doorways in the summer months Standard 225g canisters of Bear Spray 	
	 Two RG 59 Pistol Launcher, 9mm 5 shot hazing revolvers (only fires blank caps), one with the Safety Dept., the other with the Environmental Dept. 	
	One Remington 12 gauge pump action shotgun with bean bag capabilities for non-lethal hazing and lethal rounds for emergency situations	
Ecologically Sensitive Areas	Every precaution is taken to avoid disturbance of wildlife sensitive areas, including but not limited to calving, denning or nesting sites.	
	Vegetative buffer zones are maintained around stream riparian areas and facilities to minimize wildlife disturbance and protect wildlife corridors.	
Animal Egress	Measures are implemented and incorporated into day-to-day work to reduce any impediment of wildlife movements. For example, when earthworks are planned (berm or road construction, etc.), designs accommodate wildlife by ensuring any animals entering the construction area have a means of egress and building slopes no steeper than the surrounding natural terrain to avoid hazards to wildlife.	
	Windrows are created so that wildlife movements are not restricted, and fire hazards are minimized with the exception of roll over protective berms on haul roads.	
	Should the underground development be left unattended for long periods of time (temporary closure) Minto will ensure that the adits are blocked in order to prevent wildlife entrapment. All refuse will be removed and incinerated.	
	The Decommissioning and Reclamation Plan (Minto Explorations Ltd., 2011) includes wildlife protection objectives for closure and post closure.	
Hunting and Fishing	Mine personnel will not be permitted to have firearms on the project site,	

Area of Concern	Protection Activities	
	unless authorized as a safety precaution.	
	 Employees are not permitted to hunt or fish while on the mine site or in the vicinity of the project area, including during travel to and from the site. Infringement of this policy will be reported and may result in disciplinary actions. 	
Bears	Minto addresses bear safety with employees on a regular basis as part of toolbox meetings in seasons wherein the likelihood of bear encounters increases (spring, summer) and posts warnings in high traffic areas around camp when bears have been spotted to encourage increased awareness.	
	The camp is equipped with bear deterrent devices and the devices are maintained in good working order.	
	 The incinerator and burn pit currently in use at the site are equipped with electric fences. Garbage and debris destined for disposal is collected at least daily and prior to incineration stored in wildlife proof containers so that it does not attract wildlife to the mine site. Nuisance bears are reported to the Carmacks Region Conservation Officer. During periods of high bear activity, Environmental staff conduct late 	
	evening and dawn patrols of key areas to minimise risk from bear-human encounters.	
Habitat Protection - Riparian Areas	To avoid major erosion and sedimentation problems the following general practices will be implemented:	
	The area of clearing and disturbed soil will be minimized – existing trails and disturbed areas will be used where possible to minimize the addition of new linear corridors and there will be no unnecessary disturbance to the organic mat and soils;	
	Erosion protection measures (riprap, earth breaks or cross ditches) will be implemented as required;	
	Early construction of diversion ditches and sediment control ponds to manage runoff and provide for settling of suspended solids will be implemented with inspection to ensure effectiveness;	
	Construction activities will be completed efficiently to minimize the length of time disturbed soils are exposed;	
	Site clearing will be timed to minimize soil compaction. To the maximum extent possible, disturbances will be restricted to times when soils are dry or frozen and avoid or delay construction during wet site conditions;	
	Riparian areas will not be unnecessarily disturbed – a minimum buffer of	

Area of Concern	Protection Activities
	30 m will be maintained from surface watercourses to protect riparian areas.
Trapping and Traditional Use	 Trap line trails and trapping areas will not be disturbed; Continued access to traditional harvest areas will be provided.

4 Wildlife Monitoring and Reporting

Table 4-1 summarizes the wildlife monitoring activities conducted at the Minto Mine, including the area monitored and the frequency of monitoring. Wildlife monitoring logs are kept in the Environmental Department office, and stored in an Excel spreadsheet. An example Wildlife Sighting Log form is provided in Appendix C. Interactions with dangerous wildlife are tracked through completion of a Nuisance or Potentially Dangerous Animal Observation Form provided in Appendix D. Wildlife Sighting Logs are posted at all main offices and around camp, and all staff are directed to record all wildlife observations. These are collected regularly and entered into an Excel spreadsheet.

The data collected are compiled and reported in the annual report for the Water Use Licence and Quartz Mining Licence. A review of the data is conducted annually in order to build a picture of how wildlife is using the area, to inform Minto's wildlife protection activities and too evaluate any effects that the mining operation may be having on wildlife values identified in base line studies listed in Table 1-2

Table 4-1: Wildlife Monitoring Activities

Area Monitored	Monitoring Activities	Frequency
Wildlife Monitoring	Wildlife monitoring consists of maintaining a wildlife observation log onsite; and reporting wildlife encounters. Environmental personnel on site will monitor project activities and modify operations to address wildlife concerns.	Ongoing
Migratory Birds	 Monitoring to determine if waterfowl and shorebirds if settle on impacted water bodies, such as the Main or Area 2 Pits. Environmental personnel on site will monitor project activities and modify operations to address wildlife concerns. 	Seasonal during migratory periods
Species at Risk/of Concern,	 Any caribou observations will be reported to the Conservation Officer in Carmacks. Bank swallows have been observed to nest in residuum piles in the summer months, in which case these piles are cordoned off and left undisturbed until after the late summer migration. 	As necessary

5 Adaptive Management

The most likely potential negative effects on wildlife are addressed by the current wildlife protection activities. These effects include;

- Inadequate control of animal attractants and the habituation of wildlife;
- Associated increase of the numbers of bears observed close to camp;
- Wildlife/vehicle collisions.

Should problems in these areas become more pronounced, existing control measures will be reinforced through more energetic enforcement and awareness-raising activities, and through ongoing advice and direction for the local Conservation Officer.

An additional challenge that could conceivably arise is that individuals of a rare species, or species of special concern not previously observed in the project area could become resident. Potential examples include the observing of nests of certain bird species listed by Yukon Environment as threatened, such as Canada Warbler, Common Nighthawk, Rusty Blackbird, Olive-sided Flycatcher, or Short-eared Owl.

Similarly, if woodland caribou were to establish a rearing area in the vicinity of mining activity, new plans would need to be defined to minimize negative impacts on the wildlife concerned. In such cases, in the first instance, advice would be sought from the Conservation Officer and Yukon Environment.

6 References

Minto Explorations Ltd. . (2011). *Decommissioning and Reclamation Plan.* Minto Mine.

Yukon Government. (2013, August). *Plan Requirement Guidance for Quartz Mining Projects*. From http://www.yukonwaterboard.ca/forms/quartz/Plan%20Requirement%20Guideline%20for%20Quartz% 20Mining%20Projects%20-%20August%202013-kh.pdf

Yukon Government. (2003, March 25). Quartz Mining Land Use Regulations O.I.C. 2003/64. Whitehorse, Yukon.

Appendix A

Summary of Baseline Wildlife Surveys Conducted 1994 to 2012 (Access Consulting Group, June 2013)



SUMMARY OF BASELINE WILDLIFE SURVEYS CONDUCTED

1994 TO 2012

June 2013

Prepared for:

MINTO EXPLORATIONS LTD.



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1 Introduction

Minto Mine is an operating high-grade copper and gold mine that is located 240 km north of Whitehorse, Yukon. Mining and milling operations started in 2007; from 2007 to 2012 the ore supply was drawn from one main pit. As the main pit ore supply has been exhausted, other sources north and southeast of the main pit are now being opened for ore extraction. In preparation for this expansion (Phase V/VI), environmental reports are being inventoried to see if there is adequate and up-to-date information. This report will summarize the results of wildlife surveys conducted in the area to date, identify species of concern, and list ongoing and/or near-future surveys to be completed.

The last update on the number and types of wildlife studies that have been conducted in the Minto Mine area was in a comprehensive 2010 report produced by EBA Engineering Consultants Ltd (EBA), titled *Minto Mine, Environment Baseline Report–Wildlife* (EBA 2010b).



2 PROJECT SITE AND ENVIRONMENTAL SETTING

The Minto Mine is located within the Boreal Cordillera ecozone and in the western part of Yukon Plateau Central ecoregion (Smith et al. 2004). The Minto Mine is situated in the far western part of the Yukon Plateau-Central ecoregion near the Dawson Range and adjacent to the Klondike Plateau ecoregion in the west. The area was part of the eastern extent of Beringia, which remained ice-free approximately twenty to fifteen thousand years ago during the last maximum glacial period (Smith et al 2004).

The Minto Mine is in the eastern part of the Dawson Range where the local elevation ranges from 700 m to 950 m; the general landscape is composed of rounded mountains intersected by broad valleys and drainages that flow into the Yukon River. The access road starts on the western side of the Yukon River, at the barge landing site, continues north along the Yukon River and then turns southwest up the Minto Creek valley for 12 km to reach the Minto Mine site.

Forest fires are frequent in this region as less than 300 mm of precipitation falls per year due to the rain shadow formed by the St. Elias-Coast Mountains in the west. As a result, the study area around Minto Mine has experienced numerous fires over the last thirty years, rendering it a complex mosaic of plant communities at various stages of succession. The oldest pertinent fire burned approximately 7,236 ha in 1980, the second and more extensive fire occurred in 1995 and burned approximately 55,521 ha (GYWFM 2012). The 1995 burn occurred along the access road by the Yukon River barge landing and just west of the airstrip as shown in Figure 1. The most recent fires occurred in 2010 and 2011. These small fires only consumed 17 hectares within the Minto claims, southeast of the airstrip.

The fire-disturbed areas are now regenerating and young forest or shrub ecosystems dominate the Minto area (Oswald and Brown 1990). Willows (*Salix sp.*) and trembling aspen (*Populus tremuloides*) are the most represented species in crown cover at present. Lodgepole pine (*Pinus contorta latifolia*) is a later successional species and will gradually dominate well-drained mid and upper slopes. Shade-tolerant white spruce is the regenerating climax tree species currently found in the understory as seedlings. White spruce will eventually overgrow the pine and trembling aspen communities. Black spruce (*Picea mariana*) is also a climax species that is adapted to wetter, cooler sites, and is often the persistent species in white/black spruce-mixed areas along slope toes, valley bottoms, and northern aspects. Small grasslands are scattered along dry crests and steep south-facing slopes, these locations do not retain enough moisture to sustain tree growth.

The diversity of vegetative communities and successional stages around the Minto Mine provides a variety of habitat niches that support approximately 46 species of mammal (insectivores, bats, lagomorphs, rodents, carnivores, and ungulates), 60 species of birds, and one species of amphibian, the wood frog (*Rana sylvatica*). The list of mammals and bird species known to exist in the Minto area and/or the Yukon Plateau-Central ecoregion is included in EBA's 2010 baseline report (EBA 2010b).



3 WILDLIFE BASELINE ASSESSMENTS

Table 3-1 lists the wildlife surveys and studies that have been conducted since 1994 in the Minto mine area.

Table 3-1: Wildlife Surveys and Studies Undertaken in the Minto Project Area.

Dates	Type of Survey	Conducted By
Jan-March 2012	Late Winter Ungulate Studies	Environmental Dynamics Inc (EDI), Environment
		Yukon
Fall 2012	Klaza Caribou Herd Study	Environment Yukon
March 2011	Late Winter Ungulate Study	Environment Yukon and EDI (on behalf of Casino
		Mining Corporation)
July 2010	Baseline Ecosystems and Vegetation Report	Access Consulting Group
February 2010	Late Winter Moose Survey (Aerial)	Access Consulting Group
December 2009	Post-rut Moose Survey (Aerial)	Access Consulting Group
June 2009	Dall Sheep Survey (Aerial)	Environment Yukon
2007	Moose Survey	Environment Yukon
2003	Klaza Caribou Herd Survey	Environment Yukon
1994	Spring Wildlife Survey	Hallam Knight Piesold Ltd.
	Spring Dall Sheep Survey	
	Summer Raptor Survey	
	Summer Wildlife Ground Pellet Survey	

The three most recent wildlife baseline studies were led by Yukon Government (YG) and were not designed specifically for the Minto mine properties. These studies encompassed the large Carmacks West Moose Management Unit and the Klaza caribou herd range, for a total area of 6,430 km² which overlapped the Minto site. The results from the YG survey, when released, will provide more statistically sound estimates of population levels, gender ratios and recruitment success for the overall region. These values can then be used as means of gauging how Minto resident ungulate populations are faring. Also, the locations of sightings when mapped, show distribution and help detect high value habitat that may require protection as mine and road development increases.

The 2010 Baseline Ecosystems and Vegetation Study (Access Consulting Group (ACG) 2010) was not primarily focused on wildlife; however, general wildlife observations were made during the vegetation survey, recorded on plot data sheets and wildlife mitigation recommendations were included in the report.



4 WILDLIFE SPECIES OF CONSERVATION CONCERN IN YUKON

The Minto Mine and surrounding environment provide habitat for several species considered at risk by both the federal and territorial governments. Table 4-1 lists species that have been assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and/or Yukon Government as needing special attention and protective legislation, so that remaining populations are not unduly stressed. The year in which the animal species was deemed a certain status by COSEWIC or YG is indicated in the right column. The list below only includes species whose range overlaps the Minto mine area.

Table 4-1: Wildlife Species of Conservation Concern in Yukon.

Species	Status*	Source
Little Brown Bat (Myotis lucifugus)	Endangered	COSEWIC (2012)
Common Nighthawk	Threatened	COSEWIC (2007)
(Chordeiles minor)		
Olive-sided Fly Catcher	Threatened	COSEWIC (2007)
(Contopus cooperi)		
Barn Swallow (Hirundo rustica)	Threatened	COSEWIC (2011)
Canada Warbler (Wilsonia canadensis)	Threatened	COSEWIC (2008)
Peregrine Falcon	Special concern	COSEWIC (2007), Yukon
(Falco peregrinus anatum - tundrius)		Wildlife Act (2002)
Short Eared Owl	Special concern	COSEWIC (2008)
(Asio flammeus)		
Wolverine (Gulo gulo)	Special concern	COSEWIC (2004)
Grizzly Bear (Ursus arctos)	Special concern	COSEWIC (2009)
Woodland Caribou (Rangifer tarandus	Special concern	COSEWIC (2002)
caribou)	Special concern	COSEWIC (2002)
Collared Pika (Ochotona collaris)	Special concern	COSEWIC (2011)
Rusty Blackbird	Special concern	COSEWIC (2006)
(Euphagus carolinus)		
Gyrfalcon (Falco rusticolus)	Specially protected	Yukon Wildlife Act (2002)
Trumpeter Swan (Cygnus buccinator)	Specially protected	Yukon Wildlife Act (2002)
Mule Deer (Odocoileus hemionus)	Specially protected	Yukon Wildlife Act (2002)
Cougar (Puma concolor)	Specially protected	Yukon Wildlife Act (2002)
Bank Swallow (<i>Riparia riparia</i>)	Conservation concern	Yukon Environment (2011)
Northern Shrike (Lanius excubitor)	Conservation concern	Yukon Environment (2011)
Mountain Goat (Oreamnos	Concernation concern	Vukan Environment (2011)
americanus)	Conservation concern	Yukon Environment (2011)
*		

^{*} Status designations by COSEWIC are defined as:

Extinct - A wildlife species that no longer exists.

Extirpated - A wildlife species that no longer exists in the wild in Canada, but exists elsewhere.

Endangered - A wildlife species facing imminent extirpation or extinction.

Threatened - A wildlife species that may become endangered if factors leading to its extirpation or extinction are not reversed.

Special Concern - A wildlife species that may become threatened or endangered because of its biological characteristics combined with environmental impacts.

Yukon Wildlife Act provides more legal protection for those wildlife species recognized as Specially Protected. Yukon Environment wildlife species of Conservation Concern are populations that are decreasing and require more monitoring.



There are currently 11 wildlife species in Yukon, rated in 2012 as threatened or of special concern by COSEWIC. Ten of those species have ranges that could possibly encroach upon the area around Minto Mine: grizzly bear (Ursus arctos), woodland caribou (Rangifer tarandus caribou), wolverine (Gulo gulo), collared pika (Ochotona collaris), bank swallow (Riparia riparia), barn swallow (Hirundo rustica), rusty blackbird (Euphagus carolinus), olive-sided fly catcher (Contopus cooperi), common nighthawk (Chordeiles minor), short-eared owl (Asio flammeus), and peregrine falcon (Falco peregrines anatum).

One species, the little brown bat (*Myotis lucifugus*), has been classified by COSEWIC as an endangered species, which means they are in immediate danger of extirpation or extinction. Populations of these mammals have been seriously affected by a fungal infection known as White Nose Syndrome. The Minto Mine is within the northern extent of the summer range of the Little Brown Bat, although their existence within the area has not been verified.

Wildlife Species Summaries

The following paragraphs give a brief description of the most recent wildlife surveys that were conducted locally for Minto and surveys conducted by Yukon Government that were larger in scale and included the Minto mine area.

4.1 Moose

Current information regarding moose in the area came from two recent aerial surveys conducted by Environment Yukon that covered a large area that included the Minto Mine site. Yukon Government analyses and report write-ups for both years of surveying are still pending. A synopsis of the results is included below:

4.1.1 Aerial Moose Survey – Late Winter 2011/2012

This late winter aerial survey covered 6,400 km² west and northwest of Carmacks. The 2011 map shows a cluster of moose observation points around the Minto Mine and in the southeast highlands, indicating that this area has a high density of moose in the late winter as compared to most of the Regional Survey Area (G. Pelchat, pers. comm.). Minto Mine vicinity has been subjected to numerous fires in the last thirty years and the vegetation cover is dominated by tall shrubs, attractive habitat for moose with plenty of browse and cover.

In addition, the Yukon River is approximately 10 km to the east. This large river corridor has ample shoreline and islands for moose calving and post-calving habitat. The Ingersoll Islands, located in the Yukon River downstream of the project site, are known to be used for calving during the spring and as rearing habitat during the summer (Magrum 1994). The old burn areas in the Minto Creek Valley, the banks of the Yukon River, and the swamp lands below Minto Creek are often used by moose during the spring and summer (EBA 2010a).



4.1.2 Aerial Moose Survey – Winter 2009/2010

Aerial moose surveys were completed on December 15, 2009 (post-rut) and February 23, 2010 (late winter) by ACG (2009 and 2010). The total area surveyed was 112 km², specifically concentrating on the area around the Minto Mine and nearby drainages,. Moose density for the post-rut survey was estimated to be 125 moose per 1,000 km² (ACG, 2010). The average population density for calf-to-cow ratio estimated from this data was 25 calves and no sub-adults for every 100 adult cows, and the estimated adult sex ratio was 50 mature bulls for 100 cows, which is considered fair, compared to territorial averages (YG,

4.1.3 2007 Early Winter Moose Survey

The early winter 2007 moose survey for the Carmacks West Moose Management Unit (MMU) was conducted by Yukon Department of Environment. The densities are comparable, as there are similar habitat types in the MMU and its boundaries overlap the Minto Mine. The calculated moose density was 124 moose per 1,000 km² for the survey area.

This survey covered a much larger study area than the surveys conducted by ACG during the winter of 2009/2010, which were specifically focused on the area surrounding the Minto Mine site. However, during this survey in 2007, a total of 208 moose were observed during the survey, with a total population estimate of 520 moose for the study area. Survival rates for calves and yearlings were relatively low. The sex ratio of 75 bulls per 100 cows is considered to be a healthy sex ratio. The average sex ratio for other areas surveyed within Yukon is 68 bulls per 100 cows (O'Donoghue et al. 2008).

4.2 CARIBOU

The closest Woodland caribou herds are the Klaza and the Tatchun. The Klaza herd appears to be the more stable of the two, and is the larger herd. A recent (2012) survey was conducted on the Tatchun herd, by Yukon Government, but the results will not be released until 2013. Below is a brief summary of their relationship with the Minto Mine area.

In 2005, the Klaza herd population was estimated at 650 and predicted to increase (Yukon Environment 2005b). There are concerns for this caribou herd, as an increase in exploration projects and road development may cause negative impacts to the health of the Klaza caribou. The Klaza caribou range is west of the Minto Mine. As the area around the Minto Mine has experienced numerous fires recently, the habitat is of minimal value for caribou (Hegel, pers. comm.). Caribou prefer mature open forests where arboreal and ground lichen are plentiful. A Wildlife Key Area (WKA) for woodland caribou winter range was identified approximately 9 km to the east-northeast of the project area (Yukon Environment 2010b). A recent fall (rut) count of Klaza caribou herd was conducted by Environment Yukon, EDI and Little Salmon/Carmacks members in 2012. The results of this study have yet to be released.

The Tachun Caribou herd range is to the east of the Yukon River and does not overlap with the Minto Mine. In 2005, the population estimate for the Tachun herd was 500 animals. A rutting season composition survey that focused on the Tachun herd range was conducted in 2007, and indicated that the count was much lower than previous years; but this may have been a result of caribou congregating in areas where they were not



detected, such as in the trees (Yukon Environment 2007). A count was conducted in the fall of 2012; results are still under analysis and the report release is pending.

4.3 THIN HORN SHEEP

The Minto Bluffs along the Yukon River have been identified as an important Dall sheep area (O'Donoghue 2009). Although the access road to the Minto Mine passes near sheep habitat, sheep habitat within the project area itself is limited and sheep are not expected to inhabit the project area for any extended length of time.

Between 2000 and 2008, sheep surveys of the Minto-Pelly Bluffs resulted in observations of between 31 and 91 sheep annually; with the majority of observations being ewes, yearlings and lambs. During the 2009 survey, 97 sheep were observed, of which 34 were observed on the Minto Bluffs (which is located about 8 km downstream and across the river from the Minto Mine site). This is the highest recorded population for this area. Most sheep observed during these surveys have been located on the Minto Bluffs, Split Mountain, and Mount Hansen (O'Donoghue 2009).

4.4 CARNIVORES, FUR BEARERS AND SMALL MAMMALS

Fur trapping and big game harvest statistics indicated the following species are expected to occur in the Minto Mine area: grizzly bear, black bear, coyote, gray wolf, red fox, wolverine, marten, least weasel, beaver, and lynx. Cougars may also have the potential to be found in the area as they are known to follow mule deer (Smith et al. 2004). Of the species listed above, the following species (or their sign) have been observed, on site: grizzly bear, black bear, gray wolf, lynx, river otter (HKP 1994, Capstone 2007, 2008). Grizzly bears are known to use the Minto mine area. Sightings and tracks were documented in the 2010 Baseline Ecosystems and Vegetation Report; plus sightings have been reported by mine personnel in the last two years.

The territorial estimates for bear populations in Yukon are 6,000 to 7,000 grizzly bear and 10,000 black bear (Yukon Environment 2010a). Yukon Government has indicated that key habitat for black bears include seasonally concentrated feeding areas, such as south aspect slopes containing sagewort, bearberry, and grassland habitat. Summer and fall feeding habitats typically consist of those areas where berries grow. Black bears have been observed in the project area on many occasions (EBA, 2010b).

Key habitat for grizzly bears includes areas where they concentrate seasonally, such as feeding areas, floodplains, and movement corridors. Important feeding habitat includes areas with profuse berries and areas where salmon spawn (YTG 2010b). Although key habitat for grizzly bears has not been identified on site, they have been seen in the project area regularly since the commencement of mine operations. Observations include a sow with two cubs (ACG, 2010).

Wolverines have large territories where they hunt, scavenge and mate. While there is a moderate probability that they inhabit the area, because of their aversion to human activity and low population, they are not likely to be observed.

Small mammals common to the area include the red squirrel, varying hare, fox, mink, weasel, vole, and shrew. The Minto Mine is situated at the apex of five drainages that are part of the Yukon River watershed, so wildlife will access those valleys that offer conduits from lowlands to highlands for seasonal foraging and hunting (ACG 2010).



4.5 BIRDS

Five species of birds are considered to be of conservation concern: the peregrine falcon, short-eared owl, common nighthawk, olive-sided flycatcher, and rusty blackbird. Three of these species, the peregrine falcon, common nighthawk, and olive-sided flycatcher, have a moderate probability of occurrence at the Minto site. Suitable nesting habitat for the peregrine falcon is located in close proximity to the project site as seen in Figure 2, on the bluffs along the Yukon River (O'Donoghue, pers. comm.), and a historical record of nesting for this species was documented at the Pelly–Yukon River confluence (Mossop, pers. comm. as cited in HKP 1994). Common nighthawks are often found near open lodgepole pine forests, old burn areas and open mixed forests, and near wetlands or rivers (Sinclair et al. 2003) and many of these habitat types occur in the project area. The olive-sided flycatcher often occurs in black and white spruce, lodgepole pine, and mixed forests, from lowland areas to tree-line. The short-eared owl and rusty blackbird are considered to have a low probability of occurrence in the project area. The short-eared owl is often associated with open wetland and meadow, alpine, and alpine tundra habitat, which is limited within the project area. The rusty blackbird is also associated with wetland habitat (Sinclair et al. 2003), which is not abundant within the project area itself, but may occur along the margins of the Yukon River.

The rusty blackbird often nests at the edge of ponds/wetland complexes in boreal forests. They prefer lower elevations, but could feed and nest within the study area. Short-eared owls may travel through the area, but their typical habitat is in and near large meadows and agricultural fields and they may not be seen often because they are nocturnal. Peregrine falcons do not use the habitats in the Minto area; they nest and hunt near steep canyon walls along the Yukon River, approximately 20 km east.

Raptors

Although numerous raptor species have the potential to inhabit the project area, species that have been observed and documented in the Minto Mine area include the red-tailed hawk (HKP 1994), peregrine falcon (Mossop, pers. comm. as cited in HKP 1994), and golden eagle (O'Donoghue, pers. comm.). It should be noted that only one aerial-based raptor survey was conducted as part of the Minto Mine baseline studies (HKP 1994).

High-quality riparian cliff habitat for raptors exists along the Yukon River near the Minto Mine, as seen in the Wildlife Key Area (WKA) map, Figure 2. WKA for golden eagle summer nesting habitat has been identified approximately 3 km to the east of the project area (Yukon Environment 2010b). This WKA is primarily associated with the steep bluffs along the Yukon River and includes a buffer area. No cliff-nesting raptor habitat has been identified within the project area itself. The access road to the Minto Mine, however, runs adjacent to potential nesting areas for cliff-nesting raptors, such as the golden eagle and peregrine falcon.

Waterfowl

Key habitat for waterfowl includes wetlands that are used as staging areas in the spring and fall, and for breeding and molting in the summer. As suitably-sized wetlands are not found near the Minto Mine, waterfowl are not known to be present in large numbers or for extended periods. A key habitat area, Lhatsaw wetlands, lies approximately 30 km east of the project site and is used for nesting and molting in the summer (YG, 2012). Waterfowl that have been seen using the Minto Creek drainage include Canada goose, mallard, northern pintail, green-winged teal, and American widgeon (Capstone, 2010).



Game Species

Other game birds that have been observed or that have the potential to occur in the study area include grouse (spruce, ruffed, and sharp-tailed) and ptarmigan (willow, white-tailed, and rock). Of the species of grouse that live in Yukon, the sharp-tailed grouse is currently the only species of concern that requires management. Sharp-tailed grouse have a limited distribution in the Yukon due to the lack of suitable habitat. Gravel outwashes with fairly stable aspen parkland habitat and wet sedge-hummock meadows after fire are considered suitable habitat for this species. Sharp-tailed grouse have been observed in the project area.

4.6 AMPHIBIANS

Of the five amphibian species known to occur in Yukon and northern British Columbia, only one species is known to occur in the project area: the wood frog (*Rana sylvatica*). This species is restricted to wetland areas and has not been surveyed for in the Minto site. No reptiles are known to occur in Yukon.



5 PROPOSED FUTURE WILDLIFE STUDIES

Collection of Local Wildlife Knowledge

Interviews are expected to be conducted in 2013 by Mark O'Donoghue, North Tutchone Regional Biologist, in the Carmacks and Pelly communities. Through workshops and/or individual conversations with knowledgeable local residents, information will be gathered to identify seasonally important wildlife habitats in the Dawson range. This local knowledge will entered into the Environment Yukon GIS database. The data can then be used to update and refine WKAs for maps. WKAs are used by wildlife for critical seasonal life functions at periods in the year when animal species are most sensitive to disruption. Knowledge of WKAs and other important sites will provide the basis for recommendations for avoiding impacts or mitigating mining activities in the region.

Wildlife Key Area Inventory Surveys

In addition to inputs from local residents regarding high value habitat, wildlife surveys will be conducted by Environment Yukon to further identify WKAs and document species movement and behavior through the seasons. The information will be entered into Environment Yukon GIS database to help update WKA maps. The maps are used to support environmental assessment reviews and by managers and planners who need current accurate information about wildlife location and important habitats.

In 2012, WKA surveys were focused in areas that are receiving considerable development pressure. These include surveys for sheep and raptors in the Dawson Range.



6 SUMMARY

The frequent and often large fires that have occurred around the Minto Mine have created prime habitat for moose. The numerous moose sightings and sign found in the area indicate that it is attractive and well-used by resident moose. Local aerial surveys completed in early and late winter in 2009 and 2010 respectively, indicates that the population is below territorial average and recruitment may be low. However, the population has increased since the initial local survey was done in 1994. Then, the population was estimated at 40 moose per 1,000 km² during a government-supported count, which is considered below average. Winter surveys in 2007 indicated a population of 125 per 1,000 km² (YG, 2007).

The Klaza woodland caribou herd range is located approximately 10 km west of the Minto Mine, where there is better winter habitat and mature open forests with ample growth of arboreal and ground lichens. The Minto Mine area does not provide good habitat for caribou, but they may travel through occasionally.

Dall sheep habitat is found along the steeper hillsides within the Yukon River corridor; the Minto Mine area does not contain the steep escape topography nor grasslands needed by these animals. The nearest population of Dall sheep is found at the Minto Bluffs approximately 10 km further down the Yukon River. The nearest disturbance is the access road, which is still approximately 10 km from sheep habitat.

Raptor inventories have been concentrated along the Yukon River corridor where steep slopes and cliffs provide nesting and perches for peregrine and golden eagles. Bald eagles commonly use large trees for nesting and are closely associated with riparian systems. Forest-dependent raptors such as northern goshawk and red-tailed hawks are likely nesting around the Minto Mine in mature forest areas.

Black and grizzly bears are known to use the area and may be attracted to food smells emanating from the camp and garbage disposal area. A waste management plan is in place to reduce attracting bears to camp and operation areas.

Large mammals such as moose, mule deer, timber wolves, grizzly bears, and black bears were found to be using riparian corridors, secondary access roads, and exploration transects as migration routes throughout the Minto mine study area (ACG 2010).

Current wildlife population estimates for caribou and moose conducted by Environment Yukon biologists are done over large regional study areas. Average population statistics, especially for moose, may not accurately reflect local habitat usage or seasonal variations, but can serve as a background comparison.

There is a dearth of information on other animals existing in the vicinity of Minto such as wolves, lynx, mule deer and bears. More locally-focused aerial and ground surveys would aid in determining key wildlife areas within the Minto site.



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Personal Communications

Bellmore, Joe. Fish & Wildlife Technician.

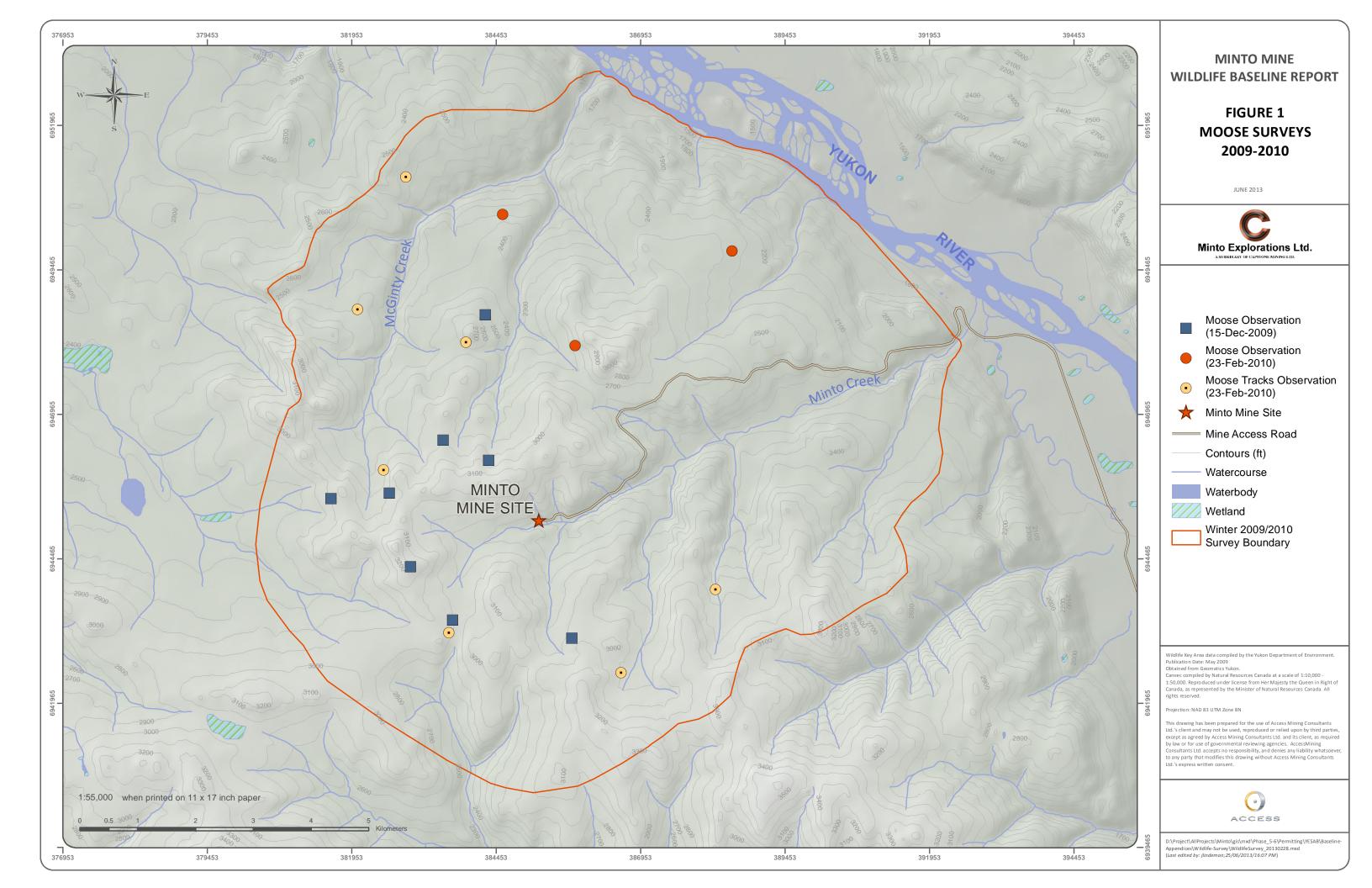
Hegel, Troy. Wildlife Specialist: Caribou.

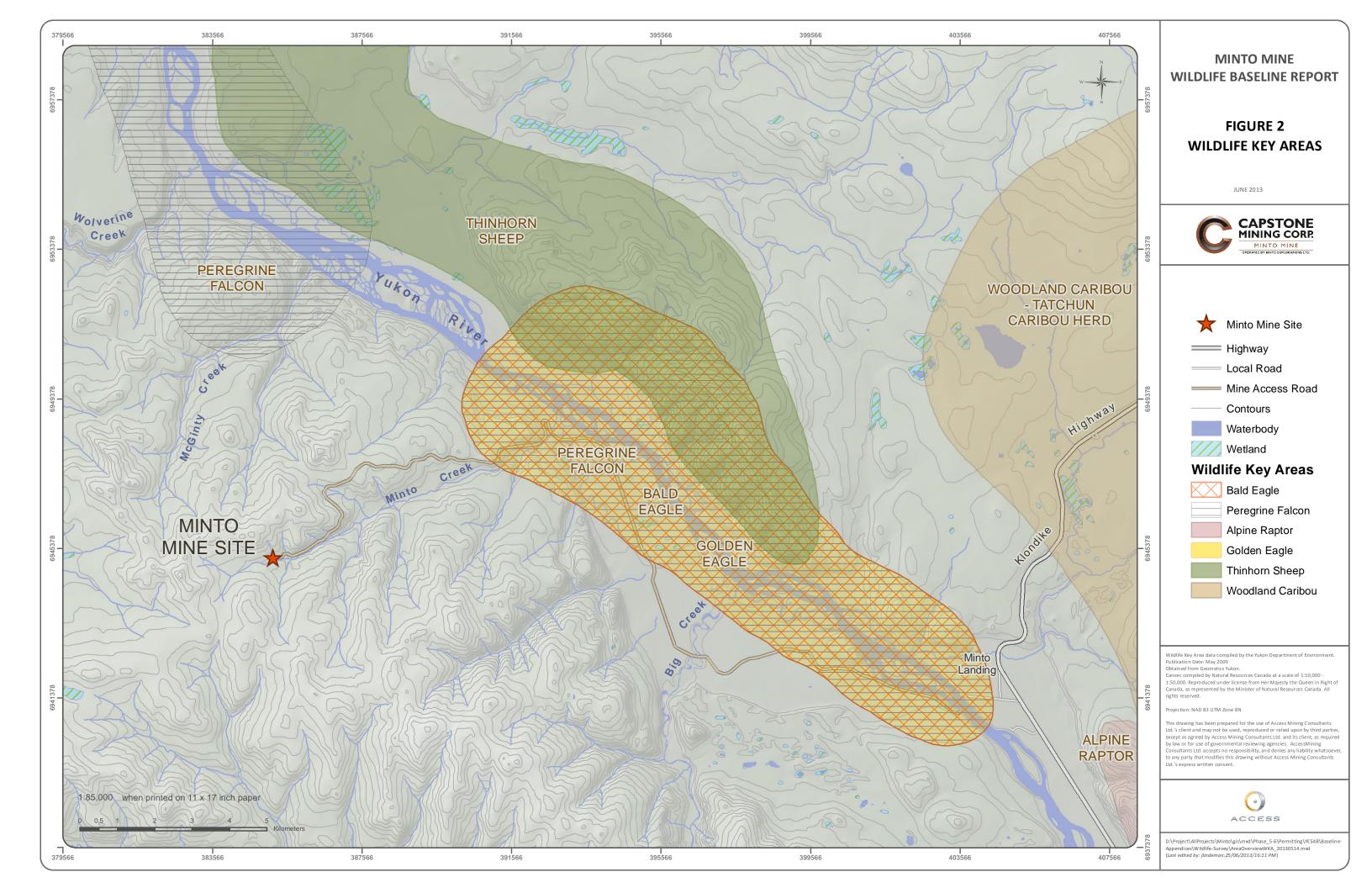
Keesey, Scott. Access Consulting Group Ltd.

O'Donoghue, Mark. N. Tutchone Regional Biologist.

Pelchat, Graeme. Environmental Dynamics Incorporated.

FIGURES





Appendix B

Wildlife Notices



Environment Department Flash

September 15th, 2013

Feeding Wildlife





Recently, fox activity has increased around both the camp and the active mining area. Their behaviour, such as approaching vehicles and following people closely, indicates that they are being fed, either deliberately or by leaving food and food waste where they can get at it.

It is a **federal offense** to feed wildlife. Anyone caught feeding wildlife or improperly disposing of food or food waste can expect disciplinary consequences.

Foxes that get easy access to human food around the mine site generally end up dead: either under the wheels of a vehicle, or of starvation when human food they receive fails to provide appropriate nutrition. They may also have to be destroyed for safety reasons.

- Don't feed wildlife. Report anyone who does.
- Dispose of uneaten food and scraps where wildlife can't get at it.
- Report habituated wildlife to the Environment Department.

For more information, contact the Environment Department



Safety Flash

How to report dangerous wildlife



Dangerous wildlife that are an IMMEDIATE threat to humans:

Example: a bear in camp

IMMEDIATELY report to Safety on **Channel 1**

Dangerous wildlife that are NOT an immediate threat to humans:

Example: a bear on the Access Road at KM 5

Report to Environment/Wildlife Officer on Channel 14 or Ext. 463

*Wildlife that are not dangerous can be reported to Environment at Ext. 463 or on the Wildlife Sighting Forms (found around Site).



Safety Flash

Wildlife have returned!



Help prevent wildlife habituation:

- Do not feed wildlife
- Ensure food waste is disposed of in appropriate bins
 - Do not leave unattended food outside
- The box of a pickup should not contain food waste
- Keep doors and windows closed when unattended

Please consider the following:

- Wildlife do not require feeding by humans
- Wildlife that are fed may become aggressive to humans
- Habituated wildlife could destroyed for safety purposes

FEEDING WILDLIFE IS GROUNDS FOR DISMISSAL

Please report habituated wildlife to Environment at Ext. 463 or Channel 14

Appendix C

Wildlife Monitoring Log Form

EXAMPLES	ortable Incident Yes
4/1/2013 4:30 PM Black bear 1 W37 200 lbs 4/3/2013 7:10 AM Fox 2 Laydown on airport road. 1 black and 1 orange fox kits, small. 4/5/2013 5:40 PM Moose 2 Portal Moose and calf, healthy.	
4/3/20137:10 AMFox2Laydown on airport road.1 black and 1 orange fox kits, small.4/5/20135:40 PMMoose2PortalMoose and calf, healthy.	
4/5/2013 5:40 PM Moose 2 Portal Moose and calf, healthy.	
4/5/2013 5:40 PM Moose 2 Portal Moose and calf, healthy. 4/10/2013 3:00 PM Wolf 1 At km 5. Lone wolf, skinny, eating plants.	
4/10/2013 3:00 PM Wolf 1 At km 5. Lone wolf, skinny, eating plants.	
	-

Appendix D

Nuisance or Potentially Dangerous Animal Observation Form

Nuisance or Potentially Dangerous Animal Observation Form



Date:	Time (24hr):		Observer:		
Species (tick box):					
Grizzly Bear	Black Bear	Moose	Wolf	Wolverine	Other:
Number seen:					
Location:					
Description: Size		Colour:		Sex: M	F Unknown (circle one)
Distinctive marking	S (please give as much de	tail as possible, espe	cially in the case	e of bears)	
What was the anim	al doing?				
Describe the anima	l's behaviour (e.g. Agg	ressive, scared, shy,	relaxed, etc):		
Describe any deterr	ent activities undert	aken & animal's	response (e.g	g. Shouting, sounding	horn):
Completed by:		Observe	r/Safety/Env	ironment/Superv	visor (circle one)

- Submit completed form to Safety Department Completed forms to be filed in Nuisance/Dangerous wildlife reporting binder