

YEARLY PROGRESS REPORT – 2015

Coppermine Project

Submitted To:

NIRB – File No.: 15EN009

KIA – File No.: KTL315C004

NWB – File No.: 2BE-COP1416

Environment of Canada

Government of Nunavut - DOE

Submitted on Behalf Of:

Tundra Copper Corp.

Suite 654 – 999 Canada Place

Vancouver, BC

Canada V6K3E1

The Proponent, ***Tundra Copper Corp.***, is submitting a comprehensive annual report with copies provided to the Nunavut Impact Review Board, Kugluktuk Hunters and Trappers Organization and the Government of Nunavut Department of Environment. This 2015 annual report covering the time period from Jan 1, 2015 to Dec 31, 2015, contains the following information:

a) A summary of activities undertaken for the year, including:

In late 2014, Tundra Copper completed a helicopter staking program to acquire mineral rights to a large area in the Coppermine District, near Kugluktuk. This area has been the focus of intermittent exploration since the early 1900's due to widespread copper mineralization attracting explorers to the region. Following the staking program, Tundra Copper transported fuel and camp supplies to the camp location during the spring of 2015, in anticipation of the field program during the summer. Consultation with local organizations such as the Kugluktuk Hunters and Trappers Organization and the Kitikmeot Inuit Association as well as the Hamlet of Kugluktuk was ongoing leading up to the summer field season.

The 2015 field program consisted of mapping and prospecting as well as a nine-hole drill program, primarily to test for sediment hosted stratiform copper mineralization in the base of the Rae Group sedimentary rocks. This was the first drill program undertaken by Tundra Copper in the area. A small,

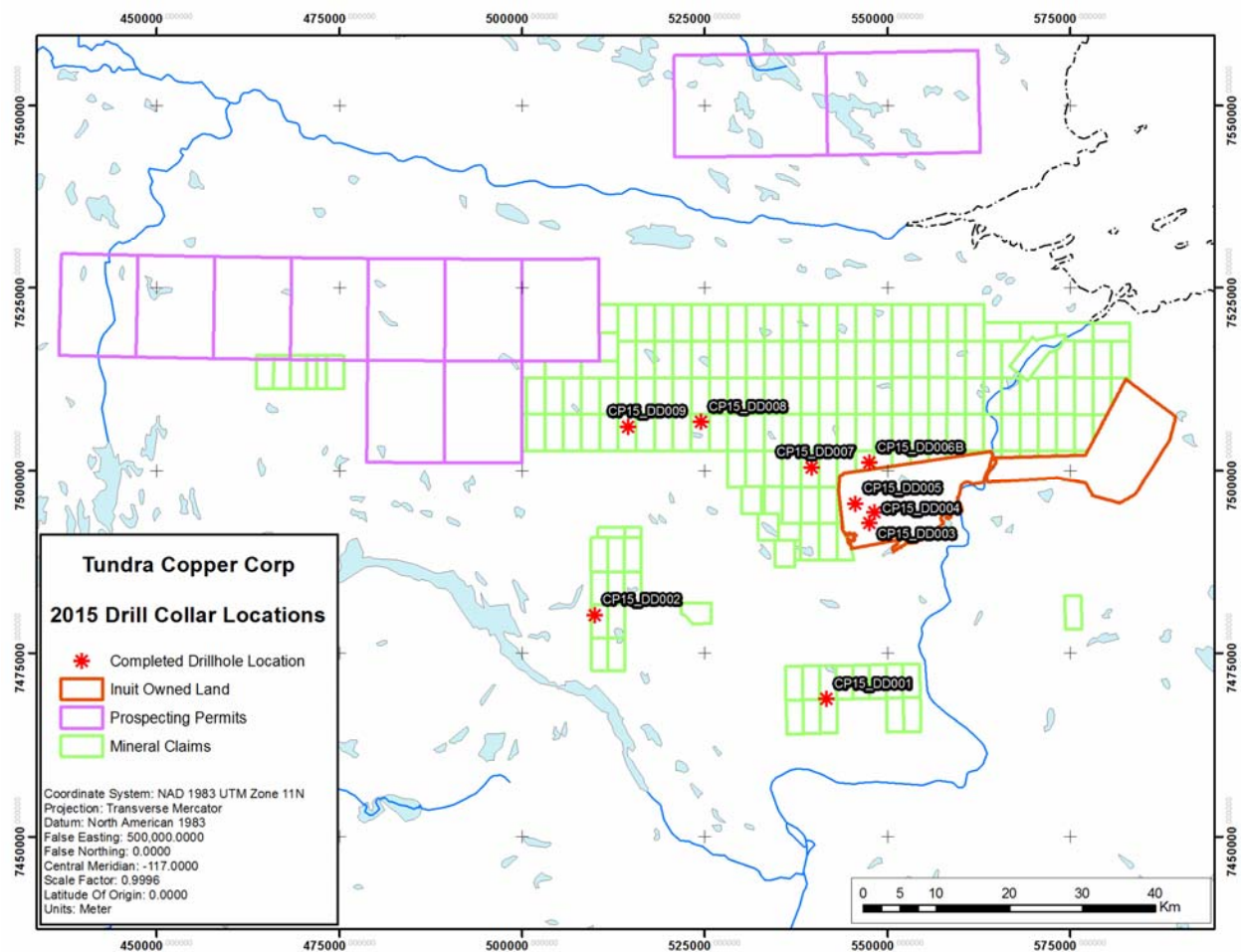
15 person camp was constructed before the program began on July 15th, 2015. The program lasted approximately 7 weeks to September 5th, 2015.

Personnel at the camp included a four person drill crew for one drill, a helicopter pilot and mechanic, one cook, four geologists, two wildlife monitors from Kugluktuk, a core splitter from Kugluktuk, and a camp manager.

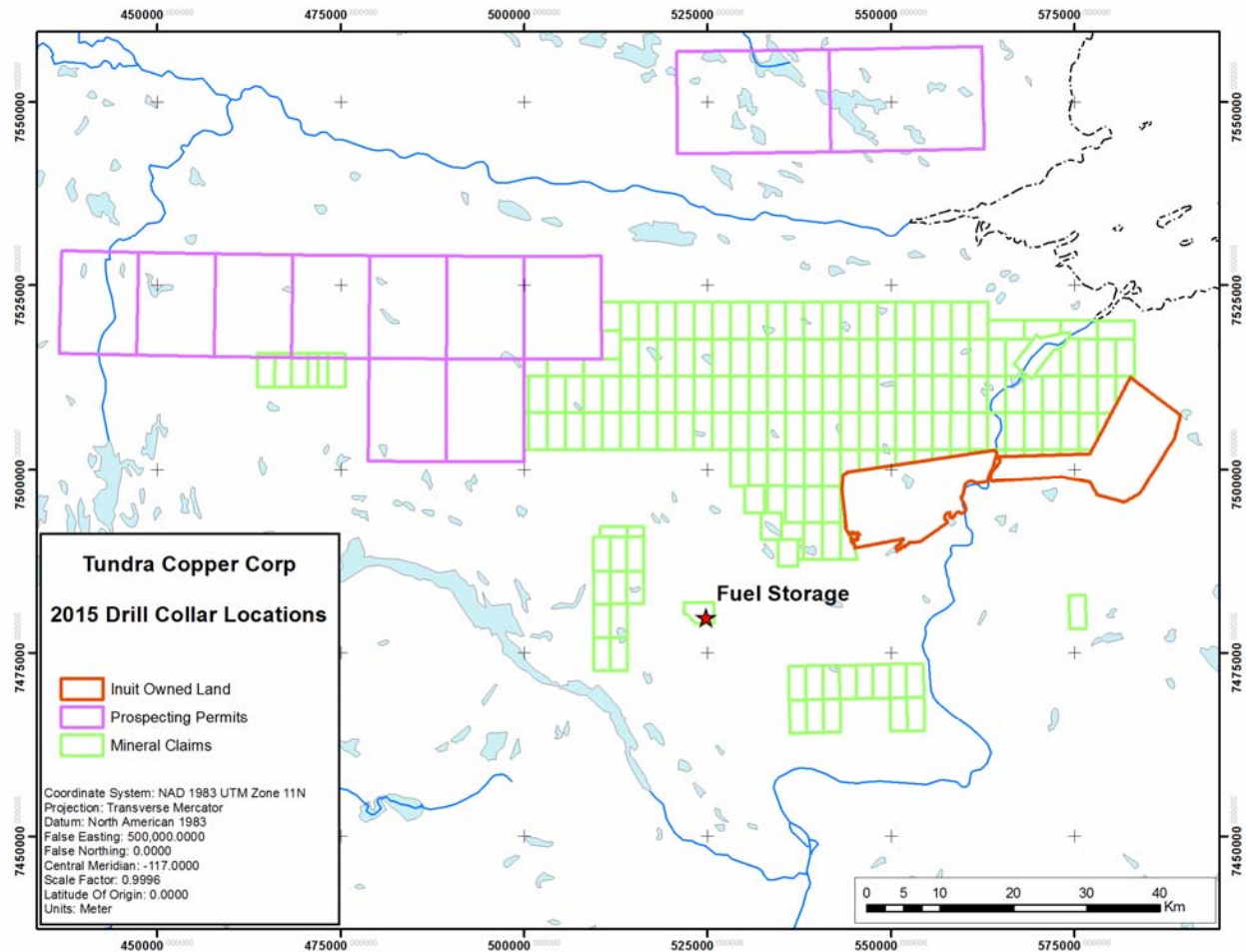
Supplies were flown in from Yellowknife using fixed wing aircraft which landed at the existing Hope Lake airstrip, near the camp. Food, human, and other solid waste was flown out using the same aircraft and was disposed of in Yellowknife.

A Bell 407 helicopter was used during the field program to mobilize geologists and wildlife monitors to and from the field as well as transport drill crews to and from the drill. Throughout the program, the pilots, drill crews, camp personnel, and geologists adhered to the guidelines set out in Tundra Copper's Wildlife Mitigation Plan to ensure that there was as little disturbance to local wildlife as possible.

- a map showing the approximate location of drill sites;



- a map showing the location of the fuel cache;



- a description of local hires, contracting opportunities and initiatives;

Local hires from Kugluktuk included wildlife monitors and core splitters who were contracted through Kikiak Contracting based in Kugluktuk. The wildlife monitors accompanied the geologists in the field as they were mapping and prospecting. Their local knowledge of the area was extremely useful in ensuring a safe environment for the geologists to work in the field as well as in and around the camp. On a few occasions there were encounters with predatory animals such as bears and wolves, all of which were benign in nature. The local knowledge of the wildlife monitors was also used to ensure that any heritage sites were identified and disturbance was avoided.

The other position filled by a local hire was the core-splitter. This job is slightly more technical and involves sampling the drill core for later geochemical assay.

If the Coppermine project advances, these positions will continue to be filled with local hires as well as other more technical positions such as 'geologic technician' which requires a moderate amount of training which can benefit the individual in terms opportunities on other exploration and mining projects in the North.

- **flight altitudes, frequency of flights and anticipated flight routes;**

The typical daily helicopter schedule involved three flights. Two flights were required to shuttle crews out to the field and drill in the morning and during shift change, as well as another flight to deliver fuel to the drill and return drill core to the camp. The flight routes were generally within a 30km radius around camp. On days with moves between drill sites, additional flights were required.

In accordance with Tundra Copper's Wildlife Mitigation Plan, low level (<610m) flying was avoided whenever possible. Due to safety protocol, the aircraft must always fly below the cloud level, therefore if cloud level was below the 610m altitude, then low level flying was unavoidable.

No landings, takeoffs, or fly overs occurred in the vicinity of a herd or bird colony of any sort throughout the field program and guidelines within the Wildlife Mitigation Plan were strictly obeyed throughout the duration of the field program.

- **site photos;**

See Appendix A

- b) A work plan for the following year, including any progressive reclamation work undertaken;**

Tundra Copper Corp. was planning another drill campaign, similar to the size of the program undertaken in 2015. However, all activities on this project have been suspended.

- c) A summary of community consultations undertaken throughout the year, providing copy of materials presented to community members, a description of issues and concerns raised, discussions with community members and advice offered to the company as well as any follow-up actions that were required or taken to resolve any concerns expressed about the project proposal;**

See Appendix B.

- d) Summary of the consultation conducted with Government of Nunavut biologists and any relevant outcomes including revisions or alterations to the timing of project activities;**

The AANDC does not permit any program from May 15th to July 15th in calving or post-calving areas. Tundra Copper Corp changed the start date of its program to July 15th in order to comply with the Land Use Permit.

- e) A log of instances in which community residents occupy or transit through the project area for the purpose of traditional land use or harvesting. This log should include the location and number of people encountered, activity being undertaken (e.g. berry picking, fishing, hunting, camping, etc.), date and time; and any mitigation measures or adaptive management undertaken to prevent disturbance;**

No residents or local harvesters were encountered during the 2015 field program

f) A discussion of issues related to wildlife and environmental monitoring, including the number of cease-work orders required as a result of proximity to caribou;

During the 2015 field program, there were two instances when a small group (approximately 1 dozen animals) of caribou came within the vicinity of camp and four instances of a small group of muskox. On each of these occasions there was no flying in the area. Other encounters with wildlife around the camp and in the field involved solitary caribou, muskox, bear, or wolves. None of these instances required cease-work orders as the helicopter was not operating at the time.

g) An analysis of the effectiveness of mitigation measures for wildlife;

The mitigation measures set out in the Wildlife Mitigation Plan were effective in avoiding wildlife disturbance whenever possible throughout the duration of the field program.

h) A brief summary of Wildlife Monitoring and Mitigation Plan (WMMP) results including the wildlife log and record of observations as well as any mitigation actions that were undertaken;

Accompanying this report is a copy of Tundra Copper's Wildlife Mitigation Plan and a copy of the wildlife log (Appendix C).

i) Summary of any heritage sites encountered during the exploration activities and any follow-up action or reporting required as a result;

Accompanying this report (Appendix D) is a copy of Points West Heritage Consulting memo outlining the archeological assessment completed before the field program began. The complete report has been sent by Points West Heritage Consulting directly to the relevant agencies.

j) A summary of how the Proponent has complied with conditions contained within this Screening Decision, and all conditions as required by other authorizations associated with the project proposal.

Tundra Copper Corp complied with all of the conditions required by NIRB to the best of their ability throughout the 2015 field season. These conditions covered water use, waste disposal, fuel and chemical storage, wildlife, migratory birds and raptors disturbance, aircraft flight restrictions, caribou and muskoxen disturbance, ground disturbance, drilling on land, temporary camps and restoration of disturbed areas, and other conditions which included hiring and consulting with local residents, and ensuring that activities did not interfere with Inuit wildlife harvesting or traditional land use activities.

Waste Management

3. The Proponent shall provide an authorization or letter of conformation of disposal be obtained from the owner/operator of the landfill to be used for disposal of project-related wastes.



Certificate of Disposal

Date: 05-31-2016

Invoice: OE0193

KBL Environmental Ltd hereby certifies that the waste shipped from Kaizen Discovery, on KBL Bill of Lading YK0000000230 and Manifest NT09789-8 which was received at KBL Environmental Ltd. on April 11, 2016 and has been processed, recycled/disposed of in accordance with all applicable Federal and Territorial / Provincial Regulations.

Generator:
Kaizen Discovery
654 - 999 Canada Place
Vancouver, BC V6K 3E1
Canada

Generator #: NUG100059

Issued By:

Operations Manager
KBL Environmental Ltd.
NTR000123

Yellowknife Waste Facility
17 Cameron Road
PO Box 1108
Yellowknife, NT

Respectfully submitted:

Zach Flood, Project Manager

Kaizen Discovery

Suite 654 – 999 Canada Place

Vancouver BC, V6C 3E1

Canada

Date Submitted: **May 31, 2016**

Circulated To:

NIRB: Kelli Gillard

KIA

HTO

NWB

Appendix A. Site Photos:

Following pages.

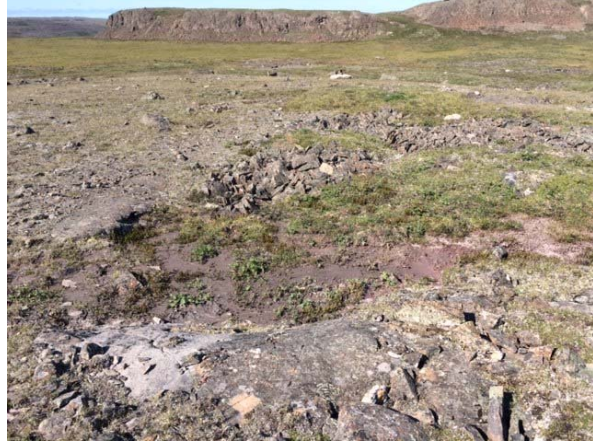


Figure 1. CP15DD_001 After



Figure 2. CP15DD_002 After



Figure 3. CP15DD_003 Drilling



Figure 4. CP15DD_004 Before



Figure 5. CP15DD_005 After



Figure 6. CP15DD_006 After



Figure 7. CP15DD_007 After



Figure 8. CP15DD_008 Before



Figure 9. CP15DD_009 During



Figure 10. Covered fuel berm/storage during demob



Figure 11. Crushed drums and waste drums stored in berms awaiting backhaul to Yellowknife



Figure 12. Wood frame tents at Hope Lake Camp



Figure 13. Photograph of Camp

Appendix B. Community Consultation Concerns and Mitigation:

Concern	Raised by	Proposed Mitigation	Follow-up Actions
Water Quality	Ida Ayalik-Mc Williams, AANDC, Barb Adjun (KAA), Robert Hinanik,	<ul style="list-style-type: none"> Map showing proposed local small lakes for water sources. All wastewater discharge pits and sumps will be appropriately sized and the sump/pit soil cover layer appropriately designed in order to prevent contaminant release or runoff into downstream freshwater bodies. Advice sought from local knowledge holders 	<ul style="list-style-type: none"> All waste water from drill and camp was collected in hand dug sumps. These were inspected by AANDC land use inspectors during the field program and were deemed acceptable.
Terrain	Johnny Nivingalok , Floyd Kakiak, Angus Haviyak, Ida Ayalik-McWilliams,	<ul style="list-style-type: none"> Minimize the footprint of the camp, keep the camp clean, remove all waste, leave no trace of activities. Spill Contingency Plan Abandonment and Restoration Plan Advice sought from local knowledge holders. 	<ul style="list-style-type: none"> The camp was built in a very organized manner, and kept very clean throughout the season. All human waste, food waste, and hazardous waste was collected in empty drums, sealed, and flown back to YK for disposal The fuel spill contingency plan was adhered to throughout the season. There were no significant spills during the program We benefited greatly from the local experience and knowledge from the bear monitors and core splitters throughout the season. These positions were filled by locals from Kugluktuk
Air Quality	Anonymous, AANDC	<ul style="list-style-type: none"> Advice sought from local knowledge holders. 	<ul style="list-style-type: none"> Air quality was not an issue during the field season, due to the small size of the program and camp.
Wildlife and their habitat	Tli Cho, Kugluktuk A. Association, Barb Adjun, Johnny Nivingalok, North Slave Metis Alliance, A. Egotak, Anonymous, Sahtu Secretariat Incorporated, Bobby Hikhiatok, Deline Land Corporation , Floyd Kakiak, Fred Taptuna, GNWT, Jennifer Waterhouse, Nunavut Wildlife Management	<ul style="list-style-type: none"> Dates for camp construction and drill activities has been changed to approx. 15 July to 31 August 2015 Consult with the KAA, GN Department of Environment and community on <i>Draft</i> Wildlife and Environment Mitigation Plan First helicopter flight out to the sample site each day will be used as an initial reconnaissance flight to check for wildlife along the flight corridor and the vicinity; Helicopter pilot shall continuously monitor the flight corridor for wildlife during all flight activities; In the event wildlife are observed by the helicopter pilot along the flight 	<ul style="list-style-type: none"> Tundra Copper Corp designed a Wildlife Mitigation Plan which it adhered to throughout the field season. This plan was accepted by the HTO of Kugluktuk During the archeological inventory which was undertaken before the drilling began, all proposed drill locations were visited or viewed by an archaeologist. No potential issues arose from the archeological survey, i.e. no archeological sites were found near drill locations A wildlife monitor was present during the

	Board, Robert Hinanik, Sahtu Renewable Resource Board, Tuktu Nogat Management Board, Wekeezhi Renewable Resource Board, Angus Haviyok, Ida Ayalik-McWilliams, AANDC, North Slave Metis Alliance, Government of Nunavut, Bobby Anaviolok, Kitikmeot Inuit Association	<p>corridor, the pilot will notify the local employee wildlife monitors and will attempt to choose an alternative flight path until the wildlife have moved on</p> <ul style="list-style-type: none"> • If the wildlife are present and if a safe, alternative flight path is not possible then flying operations shall cease until the caribou have moved on; • Report and record all wildlife sightings • Bear Monitor • Wildlife Monitors • Environmental scan in advance of exploration activities to identify den sites and bird nests to avoid disturbance and to determine appropriate buffers • Request current maps identifying caribou calving grounds • Advice sought from local knowledge holders 	<p>archaeological survey to conduct an environmental scan for wildlife or potential den sites near drill locations (none were present)</p> <ul style="list-style-type: none"> • At least two local wildlife monitors were on site throughout the duration of the field program • All wildlife sightings were recorded during the field program • All potential archeological sites identified during the field program were reported and left undisturbed • Helicopter flights were used as reconnaissance to check for wildlife • Caribou sightings were quite rare, and primarily consisted of solitary animals. On two occasions around 1-2 dozen caribou came through camp undisturbed. No flying or drilling occurred while there were caribou in the vicinity.
Marine mammals and their habitat	Kevin Klengenberg, Barb Adjun (KAA),	<ul style="list-style-type: none"> • Advice sought from local knowledge holders 	<ul style="list-style-type: none"> • Addressed in Wildlife Mitigation Plan
Birds and their habitat	Barb Adjun (KAA), Johnny Nivingalok (KAA), Anonymous, Sahtu Secretariat Incorporated, Deline Land Corporation, F. Kakiak, Fred Taptuna, Jennifer Waterhouse, Sahtu Renewable Resource Board, Angus Haviyok, Ida Ayalik-McWilliams,	<ul style="list-style-type: none"> • Environmental scan of exploration area in advance of activities to identify nesting sites for avoidance purposes and buffer determination • Limit helicopter flights • Advice from local knowledge holders 	<ul style="list-style-type: none"> • Addressed in Wildlife Mitigation Plan
Fish and their habitat	Barb Adjun (KAA), Angus Haviyok,	<ul style="list-style-type: none"> • Ensure that all wastewater discharge sumps/pits are appropriately sized and the sump/pit soil cover layer appropriately designed in order to prevent contaminant release or runoff into downstream freshwater. • Advice from local knowledge holders 	<ul style="list-style-type: none"> • All waste water discharge was collected in appropriate hand dug or natural sumps
Heritage	Johnny	<ul style="list-style-type: none"> • Archaeologist contracted to 	<ul style="list-style-type: none"> • Tundra Copper Corp hired

resources in area	Nivingalok (KAA) , F. Katiak, Ida Ayalik-McWilliams, Government of Nunavut	perform assessment of proposed areas for identification and possible mitigation <ul style="list-style-type: none"> Advice sought from local knowledge holders 	Points West Heritage to perform an archeological assessment of proposed areas before the program began
Traditional uses of land	Kevin Klengenberg (KAA) , Barb Adjun (KAA), Johnny Nivingalok (KAA), A Egotak, Anonymous, F. Katiak, Ida Ayalik McWilliams, KAA	<ul style="list-style-type: none"> Local harvesters will be able to continue traditional activities as the duration of the exploration program is brief and should not interfere Advice sought from local knowledge holders 	<ul style="list-style-type: none"> We did not encounter any local harvesters during the field program
Inuit harvesting activities	Kevin Klengenberg (KAA) , Barb Adjun (KAA), Johnny Nivingalok (KAA), A Egotak, Anonymous, F. Katiak, Ida Ayalik McWilliams, KAA	<ul style="list-style-type: none"> Local harvesters will be able to continue traditional activities as the duration of the exploration program is brief and should not interfere Advice sought from local knowledge holders 	<ul style="list-style-type: none"> We did not encounter any local harvesters during the field program
Community involvement and consultation	Tli Cho, North Slave Metis Alliance, Agnes Egotak, Barb Adjun (KAA), Johnny Nivingalok (KAA), Jennifer Waterhouse, Wekeezhi Renewable Resource Board, Ida Ayalik McWilliams, AANDC,	<ul style="list-style-type: none"> More in-depth consultation needs to and will take place with a broader audience to gain valuable advice and information Advice sought from local knowledge holders 	<ul style="list-style-type: none"> See consultation record
Local development in the area	Johnny Nivingalok (KAA) Ida Ayalik-McWilliams,	<ul style="list-style-type: none"> Advice sought from local knowledge holders 	<ul style="list-style-type: none"> There were no local development activities.
Tourism in the area			
Human health issues			
Other: aerial survey	Government of the NWT, Nunavut Wildlife Management Board, Wekeezhi Renewable Resources Board,	<ul style="list-style-type: none"> New dates for proposed exploration program approx. 15 July to 31 Aug. 	<ul style="list-style-type: none"> The program began July 15th and ended September 3rd
Helicopter activities	Anonymous, KAA	<ul style="list-style-type: none"> Minimize helicopter activities No low level flights with the 	<ul style="list-style-type: none"> The helicopter pilot was familiar with and adhered to

		<p>exception of take off/landing and in an emergency. First helicopter flight out to the sample site each day will be used as an initial reconnaissance flight to check for wildlife along the flight corridor and the vicinity;</p> <ul style="list-style-type: none"> • Helicopter pilot shall continuously monitor the flight corridor for wildlife during all flight activities; In the event wildlife are observed by the helicopter pilot along the flight corridor, the pilot will notify the local employee wildlife monitors and will attempt to choose an alternative flight path until the wildlife have moved on • If the wildlife are present and if a safe, alternative flight path is not possible then flying operations shall cease until the caribou have moved on; 	<p>our Wildlife Mitigation plan, which included avoiding any wildlife and low level flying unless safety was an issue and was necessary.</p> <ul style="list-style-type: none"> • The helicopter did not land or take off at camp if there were caribou present
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Appendix C. Wildlife Mitigation Plan and Wildlife Logs:

Following pages.



TUNDRA COPPER CORP. – Nunavut operating entity of KAIZEN DISCOVERY

WILDLIFE AND ENVIRONMENTAL MITIGATION PLAN

*COPPERMINE PROJECT
KITIKMEOT REGION, NUNAVUT*

May 2015 – DRAFT V2

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1 INTRODUCTION

Tundra Copper Corp. (Tundra) is a Vancouver-based mineral exploration company, owned by Kaizen Discovery, committed to the responsible exploration and development of resources within Nunavut.

Kaizen Discovery purchased Tundra in November 2014, which then held 352 square kilometers of crown land for which a water license and land use permits had been granted. Kaizen through Tundra then staked additional crown claims, applied for prospecting permits on crown lands, and applied for access to and mineral rights in two blocks of Inuit Owned Land, bringing total land holdings to approximately 3,500 square kilometers. These holdings are now collectively referred to as the Coppermine Project (the “Project”).

Tundra is proposing to carry out early-stage exploration activities within the Project, which is situated in the western Kitikmeot region of Nunavut.

In February 2015, Tundra submitted amended land-use and water use applications to Aboriginal Affairs and Northern Development Canada (AANDC) and the Nunavut Water Board (NWB) as well as new applications with the Kitikmeot Inuit Association (KitiA) and Nunavut Tunngavik Inc. (NTI). Tundra would like to begin exploration on the project, inclusive of geologic mapping, surficial rock sampling, drilling (one rig) and operation of one 16-man temporary exploration camp (Hope Lake), with associated aircraft landing strip.

Tundra acknowledges that exploration programs have the potential to impact wildlife and wildlife habitat. Potential impacts to wildlife and wildlife habitat include displacement from and avoidance of habitat, habituation and attraction to personnel and/or the camp, and unintentional interactions and disturbance. Tundra further recognizes that the Bluenose East Caribou herd is of particular sensitivity in the regional project area. Accordingly, Tundra will strive to prevent or minimize potential impacts on caribou and other wildlife and wildlife habitat, by implementation of a Wildlife and Environmental Mitigation Plan as presented in this document.

The main purpose of the Plan is to formally outline Tundra’s wildlife protection, avoidance and mitigation strategies. The Plan will function as a set of Standard Operating Procedures for Tundra staff and contractors working on the project and in lands proximal to the project, inclusive of those surrounding the local hamlet of Kugluktuk. The Plan commits to wildlife protection by preventing or minimizing personnel/wildlife interactions and wildlife impacts.

The plan addresses the following specific wildlife species, species groups and their critical habitats:

- those that occur within and immediately adjacent to the project site or along project flight paths during project operations,
- those that are important harvestable species, and
- those with special conservation status.

Table 1: Wildlife Species and Species Groups addressed by the Wildlife Management Plan

Species or Species Group	Species or Species Group
Barren-ground Caribou – Blue Nose East herd	Geese (and their nests)
Moose	Other Waterfowl and Waterbirds (and their nests)
Muskox	Ptarmigan (and their nests)
Arctic Fox (and their dens)	Short-eared Owl (and their nests)
Wolf (and their dens)	Peregrine Falcon (and their nests)
Grizzly Bear (and their dens)	Rough Legged Hawk (and their nests)
Wolverine (and their dens)	Gyr Falcon (and their nests)
Fish (and other aquatic life)	Other Falcons (and their nests)

Suggestions and additional comments received during all consultations are welcomed and will be given careful consideration in drafting the final version of this document. Tundra will maintain open communications with regulators and the HTO prior to and during the field program.

2 BLUENOSE EAST CARIBOU HERD

Bluenose-East caribou are one of eight mainland migratory barren-ground caribou herds that migrate seasonally across the Northwest Territories and Nunavut and are harvested by nine communities: Wrigley, Norman Wells, Tulít'a, Délı̄në, Whatì, Gamètì, Báhłı̄, Paulatuk and Kugluktuk.

Recent surveys have shown a significant decline in Bluenose East populations from 104,000 in 2000 to the current population estimate of 68,000 in 2013. In June 2014, reconnaissance surveys suggests that Bluenose-East caribou on the calving grounds have further decreased by 30% between 2013 and 2014, which is higher than the estimated annual rate of decline between 2010 and 2013.

The Bluenose-East caribou are an important resource to not only the communities of Nunavut but also communities of the Northwest Territories. With declining caribou populations, emergency measures have already been taken to restrict harvest in the Northwest Territories and management options are being considered in Nunavut.

There is overlap with the proposed locations of Tundra exploration activities and caribou calving and post-calving habitat for the Bluenose-East caribou population. Tundra will minimize potential negative effects by avoiding work during calving season and through caribou-focused mitigation and monitoring measures, detailed below Tundra's revised exploration schedule will also avoid potential interference with an aerial photographic survey of the Bluenose-East caribou herd scheduled for June 2 – 10, 2015.

3 EXPLORATION PROGRAM SCHEDULE

Tundra has revised its originally proposed exploration program schedule, which would have overlapped with the June and early July calving season in the Blue Nose East Caribou herd. Tundra has chosen to restrict activity until after July 1, and any helicopter supported activity until after July 15th. Tundra's revised schedule is as follows:

- | | |
|--------------------------------|---|
| • July 5 – July 15, 2015 | Camp construction |
| • July 15 – September 30, 2015 | Helicopter supported geological activities,
including drilling |

4 INTERNAL POLICIES AND MITIGATION MEASURES

Caribou and All Other Wildlife

All employees and contractors of the company will be trained in the internal policies, procedures and made familiar with the Terms and Conditions of the project's licenses and permits. Training will include, but not be limited to:

- Spill contingency/response
- Environmental policies
- Safety
- Bear safety
- Wildlife Mitigation Measures
- Caribou Protection Measures

Regional wildlife biologists, community members of Kugluktuk, and the Government of Nunavut have identified areas in proximity of the Project as being important for wildlife, especially the Bluenose East caribou herd, as well as for traditional hunting sites. The company will adopt the following best management practices to protect wildlife and wildlife habitat, and mitigate against disturbance to wildlife and sensitive areas.

These policies will be strictly enforced. Any employee or contractor who is found to be violating any of these rules will find their employment terminated and will be removed from site immediately.

- **Approaching and feeding wildlife is prohibited.** There are absolutely no exceptions to this rule. If wildlife are present in the area, all employees and contractors are to avoid any contact with wildlife.
- **Harassment and disturbance of wildlife is prohibited.** If any employees and contractors are approaching a work site where migrating caribou, caribou cows and

calves, muskoxen nurse groups or other wildlife are in the area, this work site will be avoided until the animals have moved on a distance of 2 km from the site.

- If employees and/or contractors encounter wildlife at any time, every effort should be made to stay out of sight of wildlife or redirect travel away from wildlife where possible, to avoid impact to the wildlife.
- **Hunting and fishing is prohibited.** While conducting business on behalf of Tundra Copper Corp., hunting and fishing is strictly forbidden. There are no exceptions to this rule.
- **Flight altitudes must be strictly observed and recorded.** Fixed wing aircraft and helicopters will maintain a minimum altitude of 610 meters above ground level if flying through places where there are migrating caribou, caribou cows and calves, muskoxen nurse groups and other wildlife. In areas where there are colonies of birds observed, the flight levels will be restricted to a vertical distance of 1000 meters and a horizontal distance of 1500 meters from the birds.

Low-level aircraft and helicopter flights will be kept to a minimum. Low-level (<610m altitude) aircraft and helicopter flights will avoid wildlife-occupied areas that are migration, calving, nesting and denning habitats. No aircraft landings will occur when migrating caribou, caribou cows and calves, muskoxen nurse groups or other wildlife are present.

- Helicopter pilots will be instructed that they are not to fly over wildlife in a way to cause them to change behavior, run or flee at any time, within or outside of migration. If such an interaction should occur incidentally, helicopter pilots will be instructed to divert and/or change altitude as quickly as safely practicable.
- In the event of bad weather or an emergency when low-level flights or landings are required, these instances will be recorded and reported to the Government of Nunavut (GN) wildlife biologist and the KitlIA and will be documented in the annual report.
- A trained, locally hired Wildlife Monitor will be present at the drill site at all times during drilling to look for approaching caribou and other wildlife, and advise the project manager and drill foreman if migrating caribou, caribou cows and/or calves are within 2 km of the drill site.
- Should caribou approach a worksite outside of the calving or migration period, workers will remain quietly out of sight where possible, will not approach the caribou, and will cease activities that incidentally draw the attention of the caribou or cause them to flee.

- Airborne Geophysical Surveys – Tundra does not currently have plans to conduct any airborne geophysical surveys over the Project area. Prior to conducting any airborne geophysical surveys, the Government of Nunavut, the KitlA and the Hunters and Trappers Organization (HTO) would be contacted and the proposed dates, duration and location of surveys would be provided. The Company would conduct a pre-survey reconnaissance of the area to ensure that there were no wildlife present, and would monitor for wildlife during the survey. If caribou and/or muskox were seen in the area, the geophysical survey would not be flown until they have moved a safe distance (at least 2 km) from the area to be surveyed.
- **Bear Safety Training will be provided.** All employees and contractors will receive Bear Safety Training. Bear safety information and material will be kept in a binder on site. The Government of the Northwest Territories published the “Territorial Safety in Bear Country Manual”. This document will be referred to in the safety orientation that all personnel, contractors and consultants receive when they arrive at site. A copy of the manual will be kept at the camp office and in Vancouver in the head office.
- If bears are present in the area, work will cease until the bears have moved safely out of the area. All human-bear interactions are to be reported immediately to the KitlA, the Government of Nunavut Department of Environment, Environment Canada, HTO’s and the Government of Nunavut Wildlife Biologist. A Wildlife Monitor trained in bear safety will be employed from Kugluktuk to ensure that camp employees and contractors are safe.
- **All den sites are to be avoided.** An environmental scan of the exploration areas is proposed prior to exploration activities to map out active den sites for avoidance. If an active den site is discovered, the GPS coordinates will be recorded so that the site can be avoided. These coordinates will be provided to the appropriate regulatory authorities. No dens are to be disturbed.
- The following buffers between active dens and exploration activities were agreed upon by the Kugluktuk Hunters and Trappers Association. Any exploration activities within these active den buffers will cease immediately.

Wolves	800 m buffer
Grizzly Bear	2 km buffer
Wolverine	1 km buffer
Fox	150 m buffer

Bear incidents and/or interactions, and wolf or fox den sightings will be reported immediately to:	
Bob Hansen, GN wildlife deterrent specialist bhansen@gov.nu.ca	867 934 2075
X, Sr. CO, Kugluktuk District, GN,	
Bear sightings/incidents and large herd sightings will be reported to:	
Mathieu Dumond, GN Wildlife Manager, Kugluktuk	867 982 2505
Paul Emingmak, KitlA, Executive Director	867 983 2458
Geoff Clark , KitlA, Director of Lands	867 982 3310
Luigi T, KitlA , Lands Use Inspector	867 982 3310

- **Breeding Birds are not to be disturbed.** An environmental scan of the exploration areas is proposed prior to exploration activities to map out nests for avoidance. No eggs or nests are to be disturbed by any activities. If any employee or contractor comes across any active nests, they are to cease all activities immediately to ensure that the nest is not disturbed. Coordinates are to be recorded on the wildlife sighting sheets and these coordinates are to be reported to Environment Canada. Moving or disturbing the nest of a migratory bird is in contravention of the Migratory Birds Convention Act.
- The peregrine falcon has been identified as species of Special Concern by Committee on the Status of Endangered Wildlife in Canada. If any nests are found, a buffer must be maintained. A 1.5 km buffer is recommended for the peregrine falcon. Any nests discovered will be recorded and the GPS coordinates provided to the applicable regulatory authorities and interested parties.
- **Sightings of wildlife will be recorded.** Sightings of wildlife will be reported by all employees and contractors to an appointed staff member who will record the wildlife sighting information into the Tundra Copper Wildlife Incidental Observation Log. (example attached) This information will be reported in the required annual reports provided to various regulatory agencies.
- **Aquatic Life will be protected.** Working in and around waterbodies must be done in such a way that prevents disturbance to aquatic life and habitat.
- Waterlines must be properly placed and screened in accordance with the “Freshwater Intake End-of-Pipe Screen Guideline” (DFO). No wastes are to enter any water-bodies. This includes any discharge from any exploration camp.
- All sumps, fuel caches and camps must be located at least 31 meters from the high water mark of any water-body unless otherwise approved by the appropriate regulatory authority.

- **Waste will be managed properly.** Proper food storage and handling of cooking wastes will prevent problems with attracting wildlife. Food waste will be stored such that it is not accessible to wildlife, and will be compacted and exported out of camp for disposal in Yellowknife on a regular basis. Nuisance wildlife will be reported immediately.
- **Firearms will only be carried for safety reasons.** Firearms may be carried for safety reasons, but only if such firearms are properly registered and stored in accordance with applicable legislation. All firearm discharges must be reported to the Project Manager.
- **Archaeological sites will be recorded and are not to be disturbed.** An archaeologist has been contracted to work with the community to identify any sites of concern. The archeologist will also conduct an Archeological Inventory of the proposed work sites. If any archaeological sites are discovered they will be left undisturbed, a 50 m buffer will be implemented, and their GPS coordinates will be recorded and reported to the Government of Nunavut Culture and Heritage Department and the KitIA.

I have read and agree to the Tundra Copper Corp. Wildlife and Environmental Mitigation Plan outlined in the above document:

Signature: _____

Date: _____

COMMENTS:

Wildlife Sighting - Coppermine Project 2015 (HOPE LAKE)

Date	Name	Wildlife Observed	Location	Notes
July 15/15	Don NIP	Caribou	Airstrip @ Hope Lake	About 50-100 Caribou heading north
July 17/15	Jeff NIP	Musk-ox	Airstrip @ Hope Lake	Head about 18 heading north
July 17/15	"	Caribou	East of camp 1-2 miles	Bedding and walking N/E
July 17/15	Jeff NIP	Musk-ox	50m south of Main Camp	Grazing from West End heading west of camp.
July 17/15	Jeff NIP	2 Caribou	Airstrip heading from East to West	2 Caribou heading south, 1st walking
July 18/15	Jeff NIP	1 Red Fox	East side of camp	Trotting along south, East.
July 18/15	Jeff NIP	2 Grizzly Bears	051.136.9E 747.797.3N Jack Showning	North of camp running south west.
July 18/15	Don NIP	1 White Wolf	Hope Lake Camp	Wolf walked by camp
July 19/15	Don NIP	1 Grizzly	East of Airstrip 1-2 km	Ran away heading south
July 19/15	Don NIP	2 Musk-ox	South of Bombardier Lake	Grazing
July 19/15	Don NIP	1 Caribou	Stout showing	Running West
July 19/15	Don NIP	1 Golden Eagle	Stout showing	Heading West
July 19/15	Don NIP	1 Musk-ox	North of Hope Lake	Grazing along bluff
July 20/15	Jeff NIP	2 Musk-ox	Northwest of Hope Lake Camp	Grazing along Eskers heading N/E
July 20/15	Don NIP	1 Caribou	South of camp	Grazing and heading North
July 20/15	Jeff NIP	1 Caribou	South of Bud Fox	Walking South
July 21/15	Don NIP	1 Caribou	HOPE LAKE Campsite	Walking by camp heading S/E.
July 21/15	Don NIP	1 Wolf	In between camp and Bud site	Trotting along
July 21/15	Don NIP	1 Grizzly Bear		Ran south west
July 23/15	Jeff NIP	30-50 Musk-ox	East side of Airstrip	Grazing heading south
July 24/15	Jeff NIP	1 Red Fox	Heading West from north east of camp	Walking West
July 25/15	Jeff NIP	1 Musk-ox	100m south of camp	EATING IN FRONT of Camp
July 26/15	Don NIP	1 Musk-ox (willy)	100m south of camp	Eating south of camp
July 27/15	Don NIP	White Wolf	Outside tents	Chased it away.
July 29/15	Kyle Alagona	2 Musk-ox	Bud site	Grazing
Aug 1/15	Jeff NIP	White Wolf	East of Fox Bay	Walking by camp
Aug 1/15	Jeff NIP	1 Caribou	3 km south of Bud site	Chilling foot.
Aug 1/15	Jeff NIP	1 Black Wolf	NARAKTAKTU RIVER	Washed hands us then went his way.
Aug 8/15	Jeff NIP	1 Grey/White/Black Wolf	Outskirts of tents	Being Curious
Aug 8/15	Jeff NIP	1 Grizzly Bear	North east of camp	Heading South
Aug 10/15	Kyle Alagona	12 Musk-ox	West side of Hope Lake	Munching out
Aug 10/15	Jeff NIP	15-20 Musk-ox	Coppermine River	Grazing
Aug 10/15	Jeff NIP	1 Bald Eagle		Flying around
Aug 11/15	Don NIP	1 Muskrat	Coppermine River	Grazing heading East
Aug 11/15	Don NIP Kyle Alagona	3 Wolves	South east of camp @ Runway	Checking out stuff @ Runway
Aug 15/15	Kyle Alagona	1 Grizzly Bear	South east of camp	Walking South
Aug 16/15	Kyle Alagona	1 Caribou	North of Hope Lake	Grazing walking South
Aug 16/15	Kyle Alagona	1 Musk-ox	South of camp	Grazing east
Aug 17/15	Kyle Alagona	1 White Wolf	North of camp heading east	Walking by camp
Aug 20/15	Kyle Alagona	2 Grizzly Bears	Strike lake area	Walking, eating berries
Aug 22/15	Kyle Alagona	13 Musk-ox	North of Hope Lake	Grazing

Please try to provide as many details as you can. Make note of number of animals, age (cow/calf), tracks of animals, etc.

Appendix D. Archaeological Impact Assessment Report:

Following pages.



POINTS WEST HERITAGE CONSULTING LTD.

23531 – 8th Avenue, Langley, B.C.
V2Z 2X9
604-534-5054

RR 1, Site 8, Comp 33, Carvel, AB.
T0E 0H0
780-905-2691

Technical Memo

Date: August 4, 2015

To: Sylvie Le Blanc, Territorial Archaeologist, Government of Nunavut

CC: David Broughton , Zach Flood, Tundra Copper Corp.

From: Julie M. Ross, Points West Heritage Consulting Ltd.

Introduction

Tundra Copper Corp. contracted Points West Heritage Consulting Ltd. (Points West) to assess 28 proposed drill locations identified in their application to the Nunavut Impact Review Board (NIRB 15EN009). Points West addressed concerns expressed by the Department of Culture and Heritage on May 11, 2015, as well as screening conditions contained within Appendix C of the Screening Decision Report issued by NIRB on July 7, 2015. The Department of Culture and Heritage stipulated that lands within a 50 m diameter of each proposed drill location as well as their associated waterline routes, be assessed for archaeological sites; and that a buffer of 50 m be maintained between the three previously recorded sites (MiPn-1, MiPn-2 and MiPn-3), and all land use activities.

The assessment of the proposed drill locations was completed between July 16 and July 18, 2015 by Julie M. Ross and Sean Desjardins of Points West, under the authorization of Nunavut Archaeologist Permit 2015-37A. Jeffery Niptanatiak, of the hamlet of Kugluktuk, Nunavut, assisted as bear monitor and local guide. The purpose of this technical memorandum is to summarize the results of this work.

The Coppermine River region is an important area for understanding past land use and the history of several archaeological cultures. Sites in the region are affiliated with the Arctic Small Tool Tradition, Thule, Inuit, Thattheilei Complex, and perhaps Paleo-Indian culture; the latter may date back as far as 7500 Before Present (McGhee 1970).

Methods

Archaeological aerial reconnaissance by helicopter was carried out on July 16, 2015. Each drill location, as well as the nearest water source suitable for drilling activity, was evaluated at an average elevation of 320 m, and representative photographs of the areas examined were taken, while each location was circled during this reconnaissance. The objective was to determine the potential for archaeological sites and to rate them from low to high.

Drill locations with moderate archaeological potential were subject to a pedestrian reconnaissance. The highest potential landforms near the proposed drill locations were the focus of examination. Shovel testing was not required at the drill locations because there was sufficient areas without vegetation cover.

A number of factors are considered in assessing the potential of an area to contain archaeological sites. High potential for archaeological sites is assigned to locations with several of the following attributes:

- proximity to previously recorded archaeological sites;
- relatively level and well drained terrain that is suitable for construction of known types of archaeological features and types of activities expected;
- near to preferential topographic features, such as larger lakes or rivers, esker or esker remnants, boulder fields or bedrock outcrops;
- near known subsistence or raw material resources;
- located along possible travel routes; and
- documented or oral evidence of past or current land use.

Moderate potential for archaeological sites is assigned to locations that have a few of the above listed attributes, or an attribute that is not as well defined. For example, usually eskers are assigned high archaeological potential, but a small or discontinuous remnant esker located far from a well-defined water body may be assigned moderate potential because the absence of freshwater and more difficult access makes the location less desirable.

Low potential is typically assigned if lands are wet, previously disturbed, low lying and not associated with preferential topographic features. Low potential may also be assigned if an area was previously and relatively recently subjected to a pedestrian reconnaissance by a professional archaeologist, with no sites being identified.

Results

A total of 28 proposed drill locations were assessed; of these, 25 were assessed as having low and three were assessed as having moderate archaeological potential (Table 1); no high potential locations were identified during aerial reconnaissance.

Table 1. Summary of Helicopter Assessment of Tundra Copper's Proposed Drill Locations and Associated Water Sources

Drill Identification	Northing	Easting	Land Status	Archaeological Potential Assessment	Comments
PROP_DD001	554194	7501317	Crown	Low	High ground with bedrock outcrops near the edges of drill location. Drill location is a wetter area, but was subject to pedestrian reconnaissance as a test of the aerial assessment. No archaeological sites found.
PROP_DD002	548065	7494217	IOL	Moderate	High ground with bedrock outcrops; there is also late-lying snow and substantial water sources nearby. Area subject pedestrian reconnaissance. No archaeological sites found.
PROP_DD003	550955	7493069	IOL	Moderate	High ground with stones available for feature construction, as well as a sizeable nearby water source. Low area could have been used for travel. Area subject to pedestrian reconnaissance. No archaeological sites found.
PROP_DD004	552340	7494757	IOL	Low	Moderate elevation, but no substantial water bodies.
PROP_DD005	559662	7502119	Crown	Low	Immediate drill location is low lying; however, there is a cabin in the vicinity.
PROP_DD006	561396	7499701	IOL	Low	Low lying and wet with heavy vegetation cover.
PROP_DD007	571241	7502528	Crown	Low	Low lying, though there is a small, raised esker with some potential located outside the proposed drill location.
PROP_DD008	525556	7506770	Crown	Low	Potential is lower the further away from the Richardson River. The proposed drill location is over 500 m from the river Landform is gently elevated.
PROP_DD009	533750	7501407	Crown	Low	Low lying. Outcrops found in the vicinity (~500 m), but drill area has low potential.
PROP_DD010	542891	7496703	Crown	Low	Overall, low lying. Some outcrops in vicinity, but none associated with drill location.
PROP_DD011	540503	7500111	Crown	Low	Low lying and flat; there is standing water on the land.
PROP_DD012	514531	7506229	Crown	Low	Outcrops near drill location, but few stones for feature construction. Location's distance from the river contributes to its low potential.
PROP_DD013	505363	7515110	Prospecting Permit	Low	Low lying and rocky; not situated near substantial water bodies.
PROP_DD014	489445	7516788	Prospecting Permit	Low	Low lying area with lots of standing water. Some elevated areas are located more than 50 m from the drill location.

Drill Identification	Northing	Easting	Land Status	Archaeological Potential Assessment	Comments
PROP_DD015	537855	7502132	Crown	Low	Low ridge is present, though surrounded by wet and patterned ground.
PROP_DD016	509927	7480259	Crown	Low	Low lying. Wood debris--likely from previous exploration--in the vicinity.
PROP_DD017	545870	7495388	IOL	Low	Low lying areas near drill location, with isolated rocky outcrops.
PROP_DD018	539386	7502167	Crown	Low	Low lying and flat; no stones for feature construction.
PROP_DD019	515914	7482840	Crown	Moderate	Archaeological site TC ¹ -1 recorded within 120 m of the proposed drill location. Other land use and archaeological features surround the drill location.
PROP_DD020	541640	7468630	Crown	Low	The location is far from substantial water or other useful resources.
PROP_DD021	511575	7483299	Crown	Low	Area is low lying and wet. Some elevated areas nearby, though these are some distance from the drill location.
PROP_DD022	547676	7500477	Crown	Low	Immediate drill site area low lying. Nearby ridge has moderate potential.
PROP_DD023	524207	7506533	Crown	Low	Potential is lower the further away from Richardson River. Proposed drill site located on an elevated location, though more than 500 m from water's edge.
PROP_DD024	511359	7477980	Crown	Low	Low lying, patterned ground evident.
PROP_DD025	536332	7499396.01	Crown	Low	Low lying, patterned ground in the area; few rocks or large stones in the area. No outcrops were evident.
PROP_DD026	529310	7504326.93	Crown	Low	Low lying and flat.
PROP_DD027	547580	7492781.46	IOL	low	Well-elevated location, far from sustainable water resources. Initially assessed as low, a potential archaeological feature was viewed from the helicopter. Area was then subject to pedestrian reconnaissance with no sites or features located.
PROP_DD028	549032.	7491893.02	IOL	Low	Well elevated, with no visible features. Few rocks present for feature construction.

¹¹ During field work report numbers are assigned to previously unrecorded archaeological feature. Archaeological feature were recorded at TC to indicate they affiliation with the Tundra Copper program and then with a numerical identifier. These report numbers will be replaced by Borden numbers and once assigned a Borden number the use of the sites Borden designation is the legally correct means of identifying them.

Surface reconnaissance at the moderate potential locations resulted in the identification of one previously unrecorded archaeological site. Features associated with this site are situated at distances of 120 m to 185 m from the proposed drill location, which is identified as PROP_DD019. In addition, the archaeological features are protected by a bedrock ridge, and will not likely be disturbed by activity at the drilling site. Land use features such as a can dump and recent stone markers might be affected by drilling activities, but these recent feature are not archaeological. Drill locations PROP_DD02, PROP_DD03, and PROP_DD19 were identified as having moderate archaeological potential and were subject to a pedestrian survey. Drill sites PROP_DD01 and PROP_DD27, which were assigned low potential during the aerial reconnaissance, but were subjected to pedestrian reconnaissance to 'spot test' the aerial assessments.

Three archaeological sites were recorded within walking distance of the camp location. Further, land use sites are located within walking distance of the camp. There is a cabin in the vicinity of PROP_DD05. The archaeological and land use sites will be reported on in the Final Archaeological Impact Assessment Report.

Recommendations

It is recommended that the drilling activity proposed by Tundra Copper Corp. be permitted to proceed from the perspective of risk posed to archaeological sites provided the position of the drills are within 50 m of the original locations identified to Points West (Table 1). Care should be taken at PROP_DD019, as there are recorded archaeological features in the vicinity; however, none of these features is within 100 m of the drill location and are separated from drilling activity by natural topographic features. Should drillers or wildlife monitors construct stone markers, or Inuksuit, during work at any drill site within the project area, these new features should be dismantled prior to the completion of work. In the event archaeological sites or artifacts are encountered during Tundra Copper Corp. activities, all work in the vicinity of the discovery should cease, and the Territorial Archaeologist should be consulted.