

**PRAIRIE CREEK MINE ACCESS ROAD  
ARCHAEOLOGICAL INVESTIGATIONS, 2009**

**(NWT Permit 2009-023)  
(Parks Canada Permit NAH-2009-3917)**

**Prepared for:**  
**CANADIAN ZINC CORPORATION**  
Suite 1710, 650 West Georgia Street  
Vancouver, B. C.

**Prepared By:**  
**POINTS WEST HERITAGE CONSULTING LTD.**  
23531 – 8<sup>th</sup> Avenue  
Langley, B. C.

Gabriella Prager  
December 16, 2009

## EXECUTIVE SUMMARY

In September, 2009, on behalf of Canadian Zinc Corporation and at the request of the Nahanni Butte Dene Band, Points West Heritage Consulting Ltd. completed an archaeological assessment of selected portions of an access road between the Liard Highway near Nahanni Butte and the Prairie Creek Mine. The project area is in the South Mackenzie Mountains and extends into the southeastern portion of the expanded Nahanni National Park Reserve. The road will essentially follow a cutline prepared in 1980 by a previous owner of the mine.

The study assessed three sections of possible heritage concern that had been identified during a Nahanni Butte Dene traditional knowledge study:

1. The easternmost landscape feature is a pass known as Second or Grainger Gap.
2. The next pass of interest to the west is called Wolverine or Silent Hills Pass.
3. The westernmost area of the three identified is the crossing of the Tetcela River which is situated within the newly expanded Nahanni National Park Reserve.

The initial step of the study was for the archaeologist to meet with the Band members who were available to ask about the past uses of these particular areas. No previously recorded archaeological sites were found to occur within or in close proximity to the proposed road corridor.

Following the interviews, a team comprising the project archaeologist, a Canadian Zinc representative and two Elders proceeded to overfly the areas of interest. The cutline was still readily visible in most areas; therefore, the route was easily followed. Ground reconnaissance was completed of the entire length of the Second Gap pass and both banks of the main Tetcela River crossing. A brief stop was made at the second Tetcela (tributary) crossing for visual assessment. The Wolverine Pass area was very carefully visually assessed from the helicopter by repeated low and slow passes and circles. Shovel testing was conducted on both sides of the Tetcela River crossing as well as along a well defined terrace in Second Gap, in the vicinity of some camp remains.

All shovel tests were negative and visual surface inspection revealed no archaeological remains in any of the areas examined. The camp remains found in Second Gap suggest that the site probably dates no earlier than the cutline, that is, the 1980s. Therefore, it was not recorded as an archaeological site. No other cultural evidence was observed within or in close proximity to the specific portions of the project footprint assessed during this investigation.

## TABLE OF CONTENTS

	PAGE
EXECUTIVE SUMMARY	ii
LIST OF FIGURES	iv
LIST OF PHOTOS	iv
1.0 INTRODUCTION	1
1.1 Project Background	1
1.2 Setting	2
2.0 METHODS	7
2.1 Consultations	7
2.2 Field Methods	7
3.0 RESULTS	11
4.0 CONCLUSIONS AND RECOMMENDATIONS	16
REFERENCES CITED	17

## LIST OF FIGURES

		PAGE
1	Project Location	2
2	Locations assessed	3
3	Camp in Grainger Gap	15

## LIST OF PHOTOGRAPHS

1	Pedestrian survey in Grainger (Second) Gap	8
2	Shovel testing at Tetcela River crossing	8
3	Typical backfilled unit	8
4	Cutline through Grainger (Second) Gap	8
5	Cutline through Wolverine (Silent Hills) Pass	10
6	Tetcela River crossing	10
7	West bank of Tetcela crossing location	10
8	West Tetcela tributary crossing	12
9	Tree with peeling bark near Tetcela River	12
10	Upper terrace, east side of Tetcela River crossing	12
11	Test pit at Tetcela River crossing	12
12	Testing on cutline on west side, Tetcela River	13
13	East side of Grainger Gap	13
14	Traversing cutline in Grainger Gap	13
15	Camp with cut brush in foreground	13
16	Camp hearth	13
17	Tent frame remains	13
18	Tripod on other side of Grainger River	14

## **1.0 INTRODUCTION**

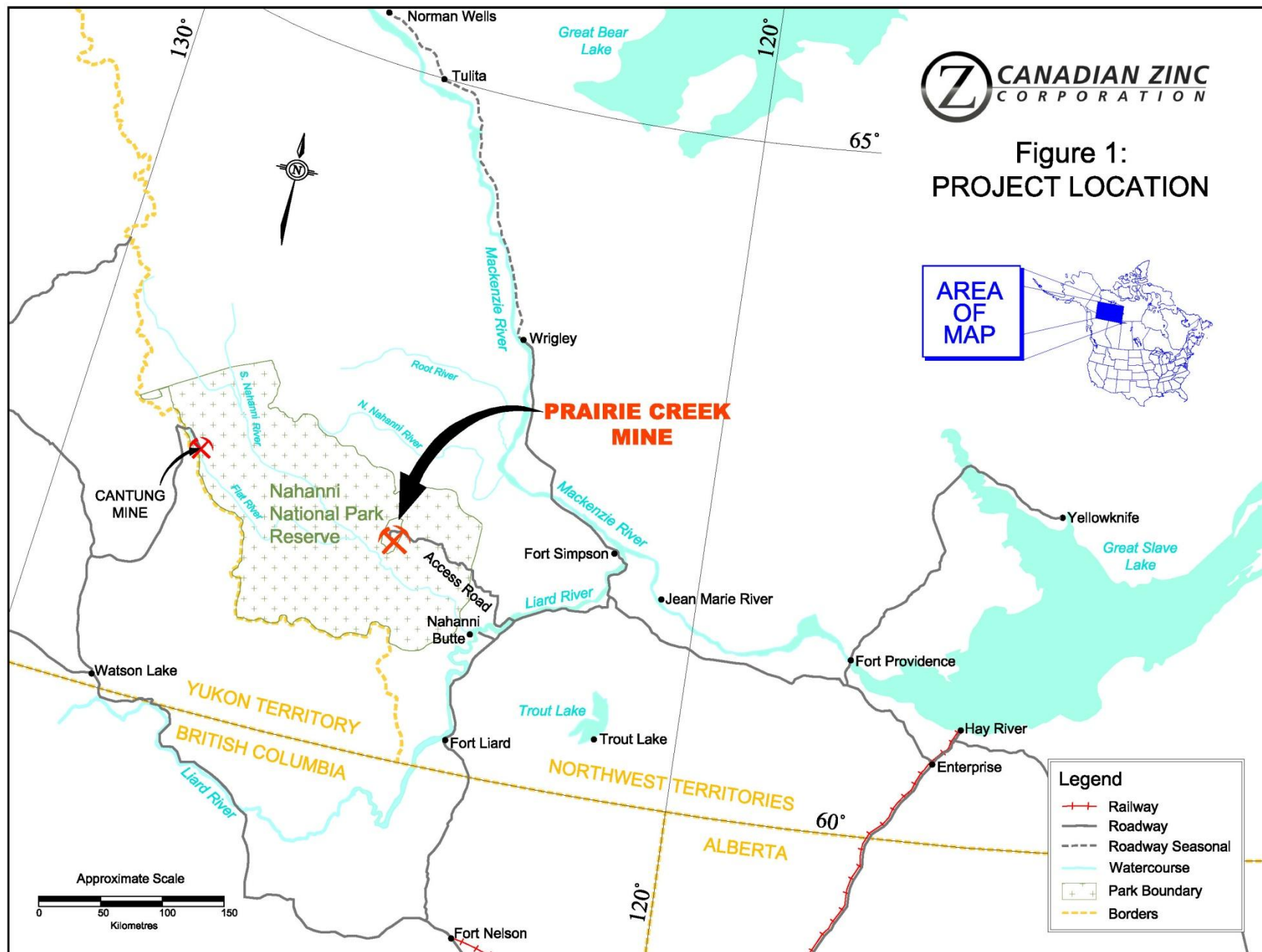
In September, 2009, Canadian Zinc Corporation (Canadian Zinc) requested that Points West Heritage Consulting Ltd. (Points West) complete an archaeological assessment of selected portions of their access road between the Liard Highway and the Prairie Creek Mine. This investigation was conducted at the request of the Nahanni Butte Dene Band. Field work was completed over two days in September, 2009 and was directed by archaeologist Gabriella Prager of Points West under Northwest Territories Archaeologist Permit 2009-023A and Parks Canada Research Permit NAH-2009-3917. Local members of the field team were Wilbert Antoine from Fort Simpson, and Leon Konisenta, Raymond Vital and Tom Betsaka, all from Nahanni Butte.

### **1.1 Project Background**

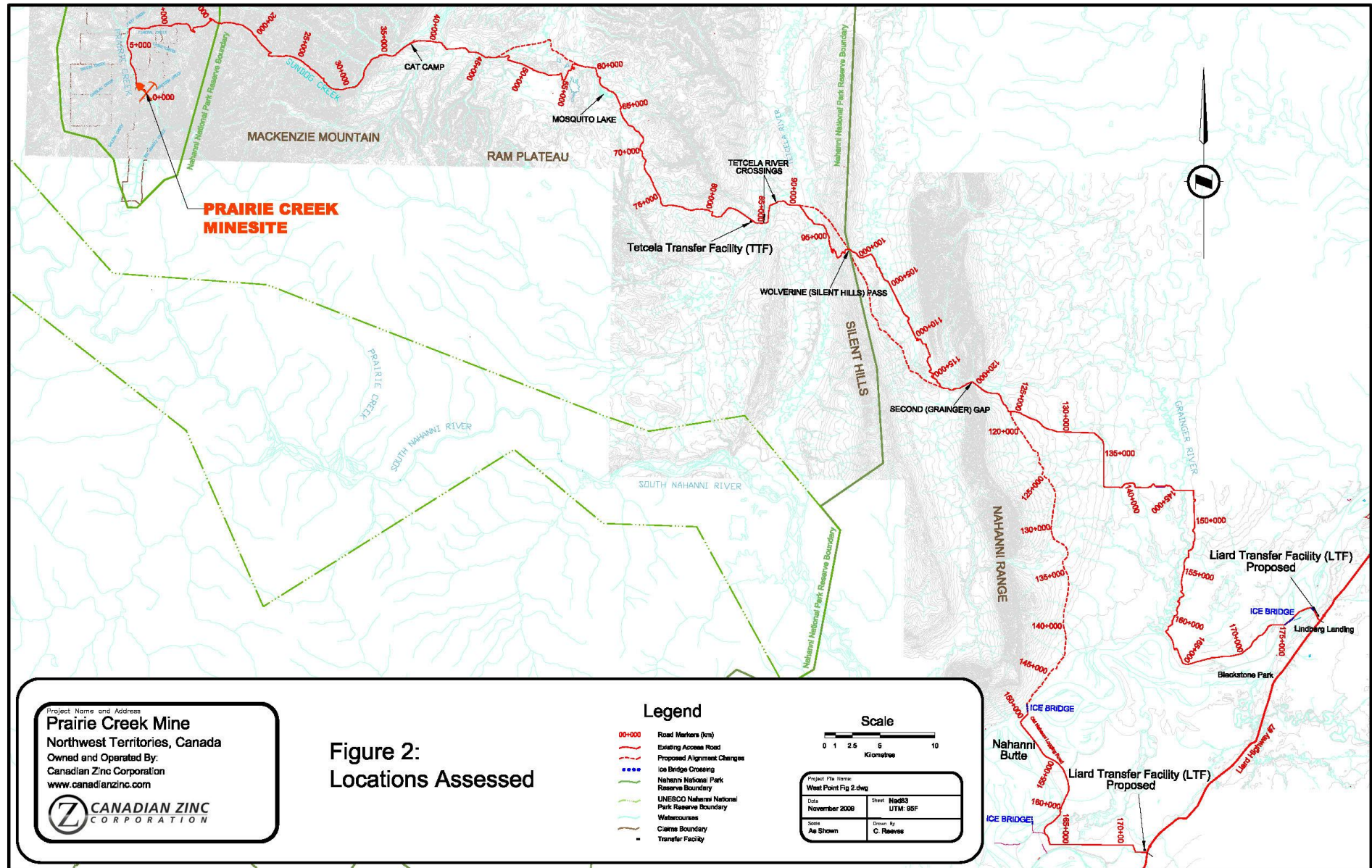
The Prairie Creek Mine is in the South Mackenzie Mountains approximately 150 km west of Fort Simpson and almost 1500 km northeast of Vancouver (Figure 1). The project area extends into the southeastern portion of the expanded Nahanni National Park Reserve. The access road is approximately 170 km long and is intended for use during the winter season. It essentially follows a cutline that was prepared in 1980 by previous owners of the mine. It was used to transport equipment and supplies for two winters.

Three sections of possible heritage concern were identified during a Nahanni Butte Dene traditional knowledge study (Figure 2). The easternmost feature of interest is a pass known as Second or Grainger Gap. The next pass of concern to the west is called Wolverine or Silent Hills Pass. The westernmost area of the three identified is the crossing of the Tetcela River which is situated within the newly expanded Nahanni National Park Reserve, thereby necessitating a Parks research permit. Points West was only asked to examine these three areas of interest to the Nahanni Butte Dene Band; consequently, no formal assessment of any other part of the road was conducted.

It should be clarified that the purpose of this study was to search for archaeological remains which are the physical signs of past human activities. In order for remains to be considered archaeological in the Northwest Territories, they must be more than 50 years old. Although traditional knowledge studies are related and certainly important from a cultural perspective, archaeological studies are, by definition, not concerned with traditional or cultural uses of the study area for which no physical evidence is present.







## 1.2 Setting

The study area is located within the South Mackenzie Mountains. The topography and vegetation vary from broad, low lying muskeg through boreal forest to mountain tundra. The main drainages within the project area are the Grainger River, part of the Liard River system, and the Tetcela River that flows north into the North Nahanni River. There is still debate as to whether the Nahanni region was glaciated during the last ice age, but it was certainly ice free by 12,000 years ago.

Major big game to be found on the eastern slopes include moose, woodland caribou, grizzly and black bear, Dall sheep and mountain goat. Beaver also occur frequently. Fish are found in all streams and lakes in the region and comprise trout, whitefish, northern pike and inconnu.

Due to significant elevation variations, a number of different ecozones associated with this boreal forest region are included in the study area. Consequently, a wide variety of plants grow throughout the region. Forests comprise varying percentages of spruce, aspen, willow and cottonwood. Edible berries include rosehips, blueberries, saskatoons, strawberries, and raspberries.

### Human History

Research of documentary sources is required in order to design appropriate field programs as well as to place study findings in proper context. It is probable that there was no permanent human population residing in the study area (other than at Nahanni Butte) in the recent past, and no evidence has yet been found to suggest that occurred in the more distant past either. This is likely because this region is fairly resource poor compared to adjacent areas. During the late prehistoric/protohistoric periods, the Nahanni region appears to have been used periodically by several neighbouring aboriginal populations (Amsden 1977:21) of Northern Athapaskan speakers. The most likely people to have used the study region most frequently were two groups identified by early ethnographers as Slavey Indians and Mountain Indians. The Mountain Indians exploited the eastern slopes of the Mackenzie Mountains (Gillespie 1981:326), that is, the northern part of the study area. The Slavey occupied much of the Mackenzie drainage system, including the vicinity of the Liard River and the lower South Nahanni River (Asch 1981:338). The following summary draws heavily from an ethnography by James Van Stone (1974) and an ethnographic review by A. McFadyen Clark (1974), both describing lifeways of northern Athapaskans in general.

Typical subsistence patterns and techniques were similar for all Athapaskan groups in this region. They were semi-nomadic hunters and fishers, exploiting all possible resources available; consequently, they travelled a great deal throughout the region. They had intimate knowledge of the seasonal patterns of the main animal resources, such as elevational movement patterns of the primary big game animals and seasonal schedules of fish spawning. Although the large mammals were of key importance, it was the combination of fish, small mammals and birds that often staved off starvation. In spring, family groups travelled to where they could snare or shoot muskrats or other



small game animals or where spring fishing was most reliable. The main fish utilized were trout, whitefish and pike. This was also the time to collect bark for canoes, baskets and shelter covers; birchbark was favoured, but spruce and cottonwood were also harvested. Whitefish were caught in traps made of thin strips of spruce tied with spruce root; weirs were also used. In late spring, migratory waterfowl were hunted with bows and arrows. Bears were killed as they came out of hibernation.

The summer season was spent gathering and drying as many food resources as possible in order to prepare for the inevitable difficult winter period. Summer camps were set up on larger rivers and lakes for intensive fishing. Traps or willow nets were used. Fish were generally dried on racks or lines. Moose was the most important game animal for the Slavey. They were hunted using large snares or bows and arrows. Bears were sometimes captured using snares in berry patches. Mountain goats and sheep were also hunted occasionally.

In early autumn, people moved to camps focused more on hunting, although fishing continued. Throughout the winter, moose were hunted whenever possible and wherever found using bows and arrows or snares. Bears were killed in their dens. Beaver were hunted at all times of the year. Small mammals such as hares were captured in deadfalls and snares. Birds such as grouse were hunted using bows and arrows or snares. Fishing continued through the ice using spears, lures and bone hooks as well as traps and nets.

Travel in winter was generally by snowshoes largely made of wood products. Winter houses were often domed tents with a framework of long, curved poles stuck into the ground and covered by moose hides. Spring and summer shelters were made of poles, brush and moose skins, or skin tents were used. A great variety of snares made of plant materials were used to capture animals of all sizes. Birchbark baskets were used for storing food as well as for boiling. Food was cached by burying in baskets or hanging in trees or was placed on elevated platforms.

#### Previous Archaeological Research

There have been no previous archaeological investigations within the specific project study area. The South Nahanni drainage system saw several archaeological studies from the 1970s on, aimed at documenting cultural remains in Nahanni National Park (Amsden 1977, 1978; Arthurs 2001). The closest prehistoric site concentrations south of the project area occur at the South Nahanni-Liard confluence and Yohin Lake within the Park Reserve (Amsden 1977). Further south, a long sequence of human occupation has been discovered at Fisherman Lake, just northwest of Fort Liard (Fedirchuk 1970). Those sites have been used to develop a culture history for the region. To the north, the Mackenzie Basin Corridor Survey (Millar 1972) recorded an impressive number of sites, both prehistoric and historic, on lakes draining into the lower reaches of the Tetcela River drainage system. On Cli Lake, eight sites were recorded, three of which were prehistoric and two of those may have buried components. Six sites were recorded on Little Doctor Lake, all prehistoric. At

Sibbeston Lake, 12 prehistoric sites were recorded, at least three of which contain possible diagnostic artifacts and one may contain multiple buried components. The interesting consistent feature of the use of these lakes is that the vast majority of the sites are situated at creek mouths, and the largest sites are at the lake outlets in all three cases (Millar 1972:13).

### Culture History

The following brief culture history summary has been prepared based on the previous studies in surrounding areas noted above. It is thought that the Nahanni area was ice free for at least the past 12,000 years, if not longer. The earliest dated cultural evidence comes from Fisherman Lake. This is called Sandy Lake or Stemmed Point complex and has been dated to around 8,700 years ago. Associated artifacts are large spear points and scrapers, and burins. Between 8,000 and 6,000 years ago, various complexes appear in the region that are characterized by large to medium sized lanceolate spear points. These have been called northern Plano and are thought to represent a focus on big game hunting. Between 6,000 and 3,000 years ago, two complexes were dominant at Fisherman Lake: Pointed Mountain and Julian. These are characterized by microblades, burins and graters indicative of bone and antler working as well as axes, gouges, scrapers and wedges associated with wood working. One of the sites at Yohin Lake in Nahanni Park revealed artifacts suggestive of the Julian complex (Amsden 1978:105).

Dated to about 2200 to 1500 years ago, the Mackenzie Complex has been recognized at Fisherman Lake to the south and Sibbeston Lake to the north of the study area. Characteristic artifacts include straight based bifaces, medium sized lanceolate and stemmed points, and the first appearance of large stone hide scrapers known as chi-thos, all made from coarse materials such as quartzite and sandstone. From about 1500 to 150 years ago, a complex known as Spence River is considered to be ancestral Dene. Artifacts are small, triangular and leaf shaped points, small end scrapers and graters, coarse lithics such as chi-thos and cobble choppers, and an elaborate bone and antler technology comprising such tools as metapodial fleshers and bone awls.

### Summary

Results of past archaeological studies together with ethnographic documentation of human history suggest that the specific project area is situated between two human use focal points: the South Nahanni/Liard and the North Nahanni/Mackenzie drainage systems. Traditionally, the region was used mostly by Slavey Indians from the Liard area to the south and the Mountains Indians from the north. Focal points for use were larger lakes and rivers with main river valleys providing travel routes. However, people may have travelled anywhere in the study area that the most important food resources - moose and fish - could be found. A large proportion of the tool inventory was made of wood, plant materials, and/or bone or antler but, because of the rapid deterioration rates in this forest environment, these tools are unlikely to be found. It is primarily the tools and tool components made of stone that can be expected.

## **2.0 METHODS**

The initial step of the study was to conduct a site file search for previously recorded sites. This not only identifies any known sites within the project footprint but also provides information on the types of sites and locations that may be important in the study area. No previously recorded archaeological sites were found to occur within or in close proximity to the proposed road corridor. A small scale map and coordinates of the three areas of concern were provided by Canadian Zinc. Topographic maps at scales of 1:250,000 and 1:50,000 were used for field reference.

### **2.1 Consultations**

Since the Nahanni Butte Dene Band had raised the concerns about these three areas, it was considered essential by the project archaeologist to first discuss with them the importance of these locations. Consequently, at the start of field work, the archaeologist visited the Band office to try to meet with Band members who were knowledgeable about the past uses of these particular areas. Unfortunately, the two people who were most familiar with the areas were unavailable during the field program period. The members who were available confirmed the importance of Second Gap as a use area for Nahanni Butte people for a considerable length of time. However, they had no specific knowledge of the use of either Wolverine Pass or the Tetcela River. The Tetcela River was simply identified as a possible north-south travel route.

An addendum document addressing Traditional Knowledge relative to the Prairie Creek Project (Nahá Dehé Dene Band 2009) was provided to the archaeologist for planning purposes during the field investigations. This provided additional mapped information used to assess the two areas for which the band members on the field crew had no specific details.

Wilbert Antoine, Canadian Zinc's northern development manager, capably handled logistics and participated in both days of the field work. Also present on both days was Leon Konisenta, a member of the Nahanni Butte Band and an employee of Canadian Zinc. On the first day assistance was provided by Raymond Vital, a Nahanni Butte band member, and on the second day, Tom Betsaka, also from Nahanni Butte, joined the field crew.

### **2.2 Field Methods**

Standard archaeological techniques were utilized for the ground reconnaissance. The initial preliminary assessment of potential was based on visual examination and assessment of specific landforms using low level aerial reconnaissance. The inventory and assessment portion of the archaeological field study involved on-foot traverses and close visual inspection of the specific areas of interest. Pedestrian traverses were focused within the cutline and immediately adjacent landform edges (Photo 1). Field team members were positioned at regular intervals, depending on visibility. The team members looked for any features or remains that appeared humanly modified. The visual





Photo 1. Surveying in Grainger Gap.

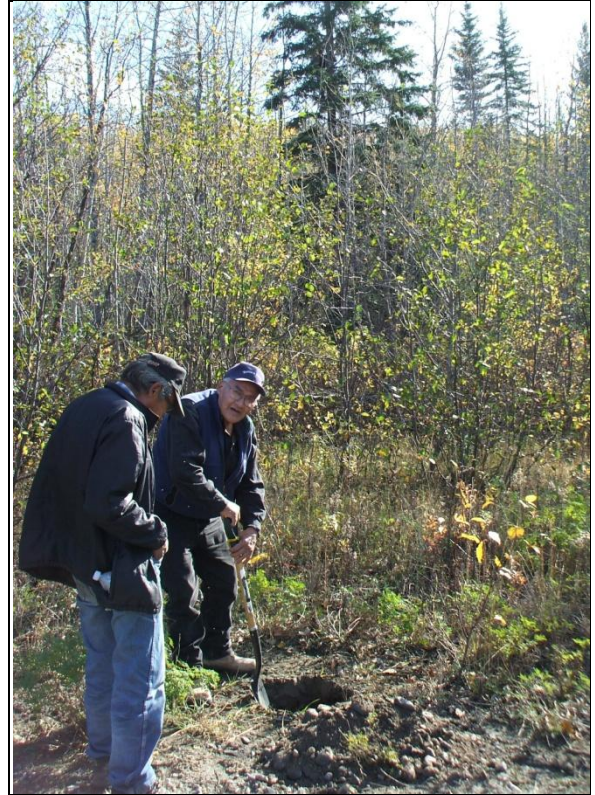


Photo 2. Shovel testing at Tetcela River.



Photo 3. Backfilled unit.



Photo 4. Cutline through Grainger Gap.

survey was supplemented by examination of ground exposures and subsurface shovel tests, where judged necessary. The spacing and number of tests depended on the size of the landform, amount of exposure and degree of soil deposition, and the potential for archaeological resources. Tests were generally 40 cm by 40 cm, although occasionally they were larger or smaller, depending on local vegetation and soil conditions (Photo 2). Depth varied from area to area, but tests were dug to sterile subsurface wherever possible. In this study area, because of extensive gravel deposits, maximum depths of subsurface tests ranged from 20 cm to 50 cm below surface. All soil removed was carefully sorted through by hand and closely examined. Matrix composition was described. Pits were carefully inspected for any stratigraphic changes. All subsurface tests were filled in (Photo 3) and the ground surface was restored as much as possible to its original state.

Field investigations began with low level helicopter overflights of all three areas of interest. The original cutline was readily apparent (Photo 4); therefore, the areas of interest could easily be identified from the air. Several low and slow passes were made to view the terrain from all possible angles. Then, two of the areas were examined by ground reconnaissance. The third, Wolverine Pass, was eliminated from further consideration partly due to the lack of visible landscape features with good potential for archaeological resources (Photo 5). Furthermore, on the basis of comparison of the existing cutline location to a specific past use locality identified in the traditional knowledge addendum on the east side of the pass, it was concluded that there appears to be a sufficient distance separation. The road cut likely crosses traditional trails on both sides of that pass and there was undoubtedly occasional travel through the pass. However, based on the visible terrain features and the traditional knowledge mapped information, it appears unlikely that there was a high or consistent degree of use of the pass itself as a camp location.

At the Tetcela River crossing, there appeared to be two former cutlines (Photo 6). The full width of both cutlines on the east side was thoroughly examined by pedestrian transects, and the surface exposures on the lowest and second river terrace were closely inspected. Six shovel tests were dug across the width of the cutline on the second terrace. These extended to between 30 and 50 cm below surface, with one corner of the deepest test being extended to 60 cm below surface. On the west side, there appeared to be just one line (Photo 7) and essentially one terrace level. Visible sections of the one metre high cutbank were examined. Surface exposures were limited, and two shovel tests were completed to depths of 35 cm and 50 cm below surface.

A brief stop was made at a second Tetcela River crossing, which is actually a small tributary of the main river. The traditional knowledge study had identified a possible use area on a height of land around which the river curves (Figure 2). This visit was simply meant as a visual assessment of archaeological potential since it had not been identified as a specific area of concern.

Ground reconnaissance completed at Second Gap involved pedestrian traverses conducted through the full length of the pass and extending to the headwaters lake just west of the pass, between the north bank of the Grainger River which flows through the southern portion of the pass to the northern limit of the existing cutline. An attempt was made to walk around the lake, but the south



side is very wet, including the cutline, making it essentially impassable. All ground exposures were closely examined. Subsurface testing was completed in the western portion of the pass, where the cutline is closest to the river bank and some cultural features were identified. Nine subsurface tests were dug in the vicinity. These test pits extended to between 5 cm and 30 cm below surface. Two of the shallower tests uncovered a larger surface area, approximately 75 cm square. A rough sketch map was completed of the camp remains and they were photographed.



Photo 5. Cutline through Wolverine Pass (west).



Photo 6. Tetcela Crossing (view west).



Photo 7. View across to west bank of Tetcela River.

### 3.0 RESULTS

The original cutline was still readily visible in most areas; therefore, the route was easily followed. Ground reconnaissance was completed of the road corridor through the entire length of the Second Gap pass and on both sides of the main Tetcela River crossing. A brief stop was made at the west Tetcela tributary crossing for visual assessment. At that location, archaeological potential is not particularly good (Photo 8), and the landform height that was tentatively identified as a possible cultural area is a considerable distance from the cutline; therefore, it is considered unlikely that archaeological remains will be encountered at that crossing location.

Ground traverses were completed on the east side of the main Tetcela River. The east side is characterized by fairly open forest of mature spruce and tamarack with young aspen in disturbed sections. A number of spruce trees were observed with bark peeling from the bottom (Photo 9). Close examination of several such trees revealed no visible cut marks and the appearance is not typical of known human uses of trees. It was decided that this is a most probably natural phenomenon, likely caused by disease, animal or micro-environmental conditions. Ground surface is cobble deposits with considerable amounts of exposure on the two terraces with about one half metre elevation difference (Photo 10). Very careful inspection of the exposed ground on both the lower and second terraces was conducted. Six shovel tests were completed across the width of the cutlines. All shovel tests contained sand, gravel and cobble deposits as deep as we could dig, down to 50 cm to 60 cm (Photo 11). No cultural remains were found nor was there any physical evidence of past unnatural soil substrate disturbances.

On the west side, the Tetcela River terrace is characterized by much thicker young aspen growth and irregular ground surface indicative of past flood episodes (Photo 12). Because the ground surface was obscured, the primary visual inspection comprised examination of the one metre high cutbank exposure. The profile confirmed flood deposition action. This was further confirmed when one of the two shovel tests revealed a 10 cm diameter log buried at about 50 cm below surface. The other test was halted at 35 cm upon encountering thick tree roots. No cultural evidence was observed.

Both the east and west ends of Grainger (Second) Gap are characterized by broad cobble and boulder floodplains of seasonal drainages coming from the north and running into the Grainger River (Photo 13). There are no terraces associated with those drainages. The central portion of the pass is slightly more elevated, dry and level. The bank of the Grainger River becomes more defined toward the central and western part of the pass but then flattens out again at the west end, near the headwaters lake and becomes very diffuse, spreading out over the broad cobble floodplain. Traverses along the cutline through the pass (Photo 14) did not reveal any cultural remains except a comparatively recent camp near the west end of the pass, immediately adjacent to the cutline.

Shovel testing and visual surface inspection along the section of well defined terrace along the Grainger River in Second Gap in the vicinity of the camp revealed no archaeological remains. The





Photo 8. West Tetcela tributary (view east).



Photo 9. Peeling bark.



Photo 10. Second terrace east side Tetcela River.



Photo 11. Test pit east side Tetcela River.





Photo 12. Cutline west side Tetcela River.



Photo 13. East side of Grainger Gap.



Photo 14. Traversing cutline, west side,  
Grainger Gap.



Photo 15. Camp, cut brush in foreground.



Photo 16. Hearth at camp, Grainger Gap.



Photo 17. Tent frame at Grainger Gap camp.



camp (Figure 3) contained portions of a wooden tent frame, some cut brush (Photo 15), a pail, glass jar, and a circle of rocks likely representing a hearth (Photo 16). The tent frame was apparently constructed by nailing 2x4 lumber using wire nails to a tree for the ridge pole, and attaching a tripod of young tree stems for the other end of the tent (Photo 17). A tripod of tree stems that likely served as a cache was observed on the other side of the river (Photo 18). Due to its proximity to the cutline and the types of remains found, the camp probably dates no earlier than the cutline, that is, the 1980s. Therefore, it was not recorded as an archaeological site.

Shovel tests were placed along the Grainger River bank between these camp remains and two rock clusters a short distance east. These clusters appeared somewhat circular, so two subsurface tests were completed at each – one inside and one outside. These tests were a larger size but quite shallow due to the large rocks encountered just below the surface, obviously part of the rock clusters. Because of the lack of cultural remains, it was decided that these clusters probably represent rock piles created during cutline or road preparation or by unusually large flood events.

Five other shovel tests were completed along the river bank. Four of these were halted at 20 cm below surface and one extended to 30 cm. All encountered heavy concentrations of pebbles and cobbles in a sandy matrix. No cultural evidence nor stratigraphic changes were observed.

The north side of the headwaters lake appears to have been the focal use point in this pass area at least in the recent past. The ground is considerably elevated forming a rim around that side of the lake. We observed an old cabin as well as a cabin that Raymond Vital currently uses in that area. As noted previously, the south lake edge is low and wet and therefore was likely not used. Some distance south, there is a terrain rise that could represent an old lake edge and likely has better potential. That terrain feature is well away from the current cutline; therefore, no impacts are anticipated.

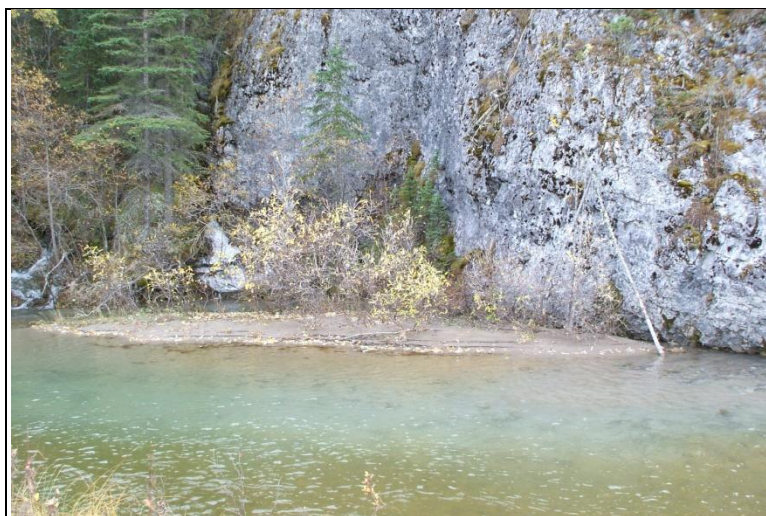
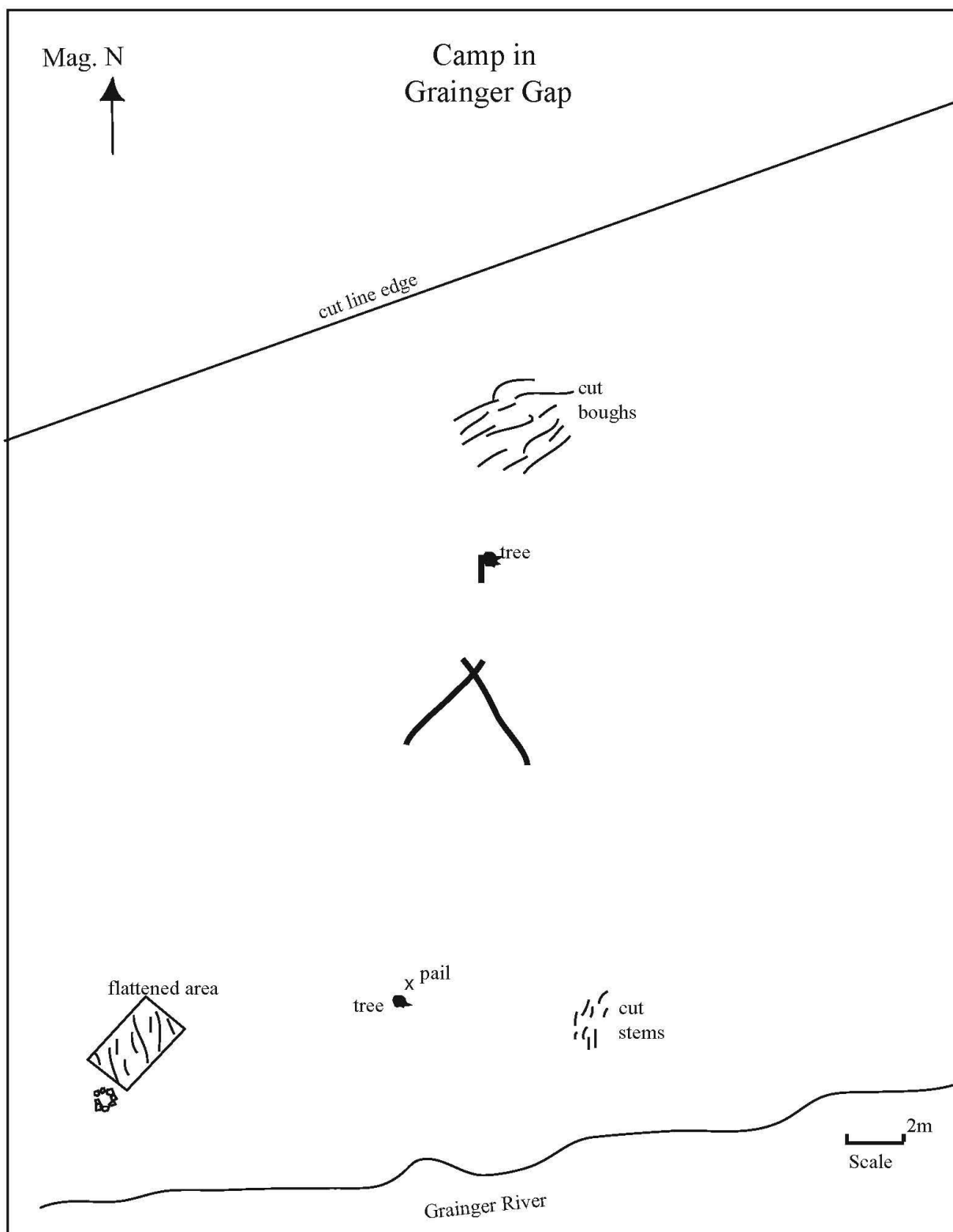


Photo 18. Tripod on other side of Grainger River.





#### **4.0 CONCLUSIONS AND RECOMMENDATIONS**

No archaeological remains were observed during this investigation. As long as the access road follows the existing cutline and it remains a winter use road, it is considered unlikely that there will be conflicts with archaeological deposits in the three areas assessed during this investigation. However, if there are deviations from the existing cutline in the vicinities of the three areas of concern to this study, there may be some increased potential for encountering cultural remains.

It may be possible that some deeply buried deposits exist on the west side of the Tetcela River crossing where there has been flood deposition, but this is not considered a major concern in the case of a winter road which typically involves comparatively little ground disturbance. Since this crossing is simply at a mid-stream point and not near a typical focal point such as a confluence, the chances of archaeological remains being present at this location are considered low.

In the absence of specific knowledge concerning use of the Wolverine (Silent Hills) Pass, terrain assessment coupled with traditional knowledge mapped information suggests there is low potential for encountering archaeological resources along the existing cutline.

In the vicinity of the headwaters lake on the west side of Grainger (Second) Gap, conflicts with archaeological resources are considered unlikely along the existing cutline. Due to the known levels of use in the past, any revisions of the alignment in this section, particularly to higher ground south and west of the headwaters lake, would increase potential for archaeological resources and additional investigation may be required.

This study involved only a small portion of the Prairie Creek Mine access road and does not represent a full impact assessment of the entire road. Further, the assessment was based on use as a winter road. In the event that the alignment changes or there is a change in the status of the road, for example, to an all season use, further archaeological inventory and impact assessments likely would be required.

It is always possible for a small archaeological site to be present in unexpected locations. In the event of an unanticipated cultural find during any project related activity, all activities in that vicinity must cease and the Territorial Archaeologist of the Government of the Northwest Territories must be contacted.

## REFERENCES CITED

Amsden, C.

1977 *A Preliminary Archaeological Assessment of Nahanni National Park and Vicinity, 1977.* National Historic Parks and Sites Branch Manuscript Report 277. Ottawa.

1978 *A Preliminary Archaeological Assessment of Nahanni National Park and Vicinity, Stage 2, 1978.* National Historic Parks and Sites Branch Manuscript Report 316. Ottawa.

Arthurs, D.

2001 Nahanni Cultural Resource Inventory Project, 2001. Report on file, Prince of Wales Northern Heritage Centre, Yellowknife.

Asch, M.

1981 Slavey. In *Handbook of North American Indians*, Volume 6, edited by June Helm, p.338. Smithsonian Institution, Washington.

Fedirchuk, G.

1970 The Julian Site, N.W.T. Master's Thesis, University of Calgary, Calgary.

Gilliespie, B.

1981 Territorial Groups before 1821: Athapaskans of the Shield and the Mackenzie Drainage. In *Handbook of North American Indians*, Volume 6, edited by June Helm, pp.161-168. Smithsonian Institution, Washington.

McFadyen Clark, A.

1974 *The Athapaskans: Strangers of the North.* National Museum of Man, Ottawa.

Millar, J.

1972 Preliminary Report: Middle Mackenzie Basin Corridor Survey 1972. Permit 72-326. Report on file, Prince of Wales Northern Heritage Centre, Yellowknife.

Nahá Dehé Dene Band

2009 Addendum to the April 2009 Document: Traditional Knowledge Assessment of the Prairie Creek Mine Operation. Report on file, Nahá Dehé Dene Band, Nahanni Butte.

Van Stone, J.

1974 *Hunters and Fishermen of the Arctic Forests.* Aldine Transaction, New Brunswick, U.S.A. and London, U.K.