A PRELIMINARY ARCHAEOLOGICAL ASSESSMENT
OF NAHANNI NATIONAL PARK AND VICINITY:
STAGE 2, 1978
by Charles W. Amsden
(1979)
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Abstract

The second stage of the preliminary archaeological assessment of Nahanni National Park and vicinity, N.W.T. was conducted during the summer of 1978. The objectives of this stage were an extensive survey of the Flat River region, intensive survey and testing of the Yohin Lake area, and additional survey and testing in the Nahanni Butte locality, with emphasis on Site 107X at Chimney Point. All cultural remains observed in each of these areas are described, and the archaeological potential of each area is assessed. Isolated prehistoric remains and several sites associated with trapper-prospector activity were found near the mouth of Irvine Creek on the Flat River. At Yohin Lake, prehistoric sites, including one large multi-component site, were found to be concentrated around the northwestern shore. The investigations at Site 107X confirmed that the main occupation was intense and probably occurred in the 1890s or a few years later. A synthesis of current knowledge of the archaeological resources of the Nahanni region is presented as a basis for interpretation, and guidelines for the management of these resources are suggested.
Acknowledgements

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Introduction

In 1977 a multi-stage program of preliminary archaeological assessment was initiated in Nahanni National Park (Fig. 1). The overall aim of this program was the accumulation of an initial body of information on the park's archaeological resources as the basis for planning future interpretation and cultural resource management programs. The specific objectives were fourfold: an inventory of archaeological resources within the park's boundaries; an investigation of prehistoric and early historic patterns of resource utilization in the park; an assessment of potential development and visitor related impact on the park's archaeological resources, and development of the basic information for an interpretive program regarding local prehistory and cultural adaptation.

The first stage of this research program, conducted during the period July 1977 to March 1978, involved the preliminary reconnaissance of the area and collection of necessary background information. To this end, the investigation focused on assessing archaeological resources at eight present or potential impact areas in or near the park as a basis for planning more intensive research, and obtaining the relevant human and natural historical background necessary for further research and subsequent interpretation. The result of the 1977 research indicated that, for a variety of reasons, the potential for discovering significant archaeological remains in most areas of the park
along the Nahanni River was sufficiently low that further investigations were not warranted. Two areas, Yohin Lake and Nahanni Butte, were deemed to possess considerable archaeological potential. It was further indicated that, due to the dense vegetation cover and deep silt deposition along the south Nahanni floodplain, intensive survey and testing would be the only effective means of assessing these areas (Amsden 1978).

Stage two of the archaeological assessment of Nahanni National Park is the subject of this report. The field research of this stage was begun in late June of 1978 and was based directly on the recommendations of the stage one final report. The specific objectives were:

(1) Assessment of archaeological resources along the portion of the Flat River within the park boundary, including a detailed inventory of the remains of trapper-prospector activity and intensive examination of the mouths of Irvine Creek and the Caribou River.

(2) Assessment of archaeological resources and determination of the chronology and general nature of prehistoric and early historic utilization of the area immediately surrounding Yohin Lake.

(3) Assessment of the multi-component Chimney Point site (107X) at the Nahanni-Liard confluence to determine the dates and nature of occupation of the historic period structures and a more precise definition of the archaeological sequence there.

(4) Additional assessment of the archaeological resources on the left bank of the South Nahanni River from its mouth to the Nahani Butte to determine more precisely the chronology and general nature of prehistoric and early historic utilization of the area.
For all practical purposes the archaeological field work conducted in 1978 can be considered as consisting of three separate projects, each corresponding to a separate area of the park and consisting of a separate problem orientation, research design, and methods. The nature of the investigation and results of each individual project are therefore described separately in each of the next three chapters. Inasmuch as the background data relevant to the natural and human history of the entire South Nahanni watershed has previously been summarized (Amsden 1978: 5-39) this information is not duplicated here. Instead, the supporting data are introduced where relevant to specific topics under discussion. Following detailed discussion of the 1978 archaeological investigations in the park, the final two chapters integrate the findings of the total Nahanni National Park archaeological assessment program. Chapter Four synthesizes what is currently known of the archaeology of the park and surrounding region and suggests ways in which this information may most successfully be utilized for interpretive purposes. Chapter Five presents general guidelines and specific recommendations for managing the cultural resources of the park.
Flat River Area

Introduction
The Flat River is by far the largest tributary of the South Nahanni. It originates in the high mountains to the west of the park and flows a total distance of over 320 km to its mouth just above Third Canyon (Fig. 1). Only the lower 129 km of the river are within the park's boundaries. This stretch is navigable for the most part, although the presence of a few rapids and numerous sand bars can present problems. Although numerous small creeks enter the river from both sides, the three major tributaries within the park's boundaries are the Caribou River, which enters the right bank of the Flat 35 km from its mouth, a large unnamed creek entering the left bank 61 km from the mouth, and Irvine Creek which enters the left bank 97 km above the mouth.

Although the Flat River passes between rather spectacular high mountains of the Ragged Range upstream from Irvine Creek, for the most part its valley is broad and shallow. During Illinoian times the entire valley was filled with glaciers of Cordilleran origin and shortly thereafter was inundated by a glacial lake as far upstream as Irvine Creek. It is significant for archaeological purposes, however, that the entire valley was unglaciated during the Wisconsin period and has therefore been free for human occupation for over 100,000 years (Ford 1976).

Although there are no lakes of significant size in the Flat Valley within the boundaries of the park, just upstream of the boundary are McMillan, Clark, and
Figure 1. Nahanni National Park and vicinity, N. W. T. (Drawing by D. Milton).
Seaplane lakes. Seaplane Lake, in particular, is known to have substantial northern pike and whitefish populations.

The vegetation of the Flat Valley is similar to that of the rest of the park (see Amsden 1978), especially in the area around Irvine Creek. Upriver from there is considerable evidence of forest fire activity, and the resulting deadfall and secondary growth makes ground travel extremely difficult in places.

During the 20th century, the Flat River valley was probably the scene of more activity on the part of trappers and prospectors than any other area in the park. The general region including McLeod, Borden, and Bennet Creeks just south of the park has always been the scene of most intensive gold prospecting. The original find by the McLeod brothers at the turn of the century was supposedly in this vicinity (Addison and Addison 1977). This attracted a stream of subsequent prospectors which has continued even today, although the height of this activity was in the late 1920s and 1930s. This activity spilled over into areas further downstream which are now included within the park. This was especially the case around the mouth of Irvine Creek and the Caribou River. Albert Faille, in particular, spent most of his time in this area and built several cabins over the years (Neily 1977).

There is also evidence that around the turn of the century, and probably earlier, the middle Flat River region was the scene of more native occupation than other areas of the park. In the early 1900s, the McMillan-Bennet Creek area was used for trapping by Indians from Telegraph Creek and McDames Creek and occasionally by Slave from the Liard (see Addison and Anthony 1977: 280; Addison and Bates 1977: 73-74). Slave Indians overwintering near the headwaters of the Meilleur and Caribou Rivers occasionally traveled down the Caribou River, thence the lower Flat and
and South Nahanni in springtime. Irvine Creek was apparently also on a major travel route (Charles Yohin 1977: pers. comm.). Bill Clark (Addison and Anthony 1977: 255) reported seeing caches he attributed to Indians near the mouth of Irvine Creek.

**Methods**

Although the area about the mouth of the Flat River was investigated rather intensively in 1977 (Amsden 1978), the rest of the River was not; therefore, the middle Flat River was the only major portion of the park not surveyed at that time. For this reason, it was decided that the 1978 research, while focusing primarily on intensive survey and testing in the Nahanni Butte and Yohin Lake areas, should include an extensive survey of the Flat River comparable to that conducted for the rest of the park in 1977 (Amsden 1978: Chapt. 2). The objectives of this survey were the location of known cabin sites and a search for prehistoric sites in the Irvine Creek and Caribou River localities.

The Flat River survey occurred over a period of 10 days in early July. Park Wardens using a jet boat took the writer and two field assistants upriver to the mouth of Irvine Creek, which was as far as it was safe to proceed. The field party spent three days there surveying the lower portion of Irvine Creek and along both banks of the Flat River for a few kilometres both upstream and downstream from the creek mouth (Fig. 2). The party then canoed downstream, spending two days at the mouth of the Caribou River before proceeding on to the mouth of the Flat. En route, several locations above and below the Caribou River were examined in an attempt to locate cabins documented by Wayne Neily (1977).
Figure 2. Noteworthy features near the mouth of Irvine Creek, Flat River. (Drawing by K. Walton).
Specific methods of site survey during this segment of the research were basically the same as those employed in 1977 (Amsden 1978: 42). Essentially this involved examining the few available exposed terrace banks (near Irvine Creek) and placing small test pits at regular intervals in those areas covered by dense vegetation. As in 1977, the emphasis was on recording through drawings and photographs the location and general nature of any cultural remains recovered. Extensive excavation was intentionally kept to a minimum.

Newly Recorded Sites
Of the several localities investigated along the Flat River, the Irvine Creek vicinity proved to be the most productive of cultural remains. Here, in addition to several known features, were found three previously unrecorded sites. Each of these was assigned a provisional site number and is described in detail below.

Site 109X
Borden Grid: JjSp
Quadrangle: 95E/10 "Irvine Creek"
Military Grid Reference: 9VXU311262
Location. Site 109X is on a low floodplain approximately 35 m back from the left bank of the Flat River 2.5 km upstream from the mouth of Irvine Creek (Fig. 2). In contrast to most of the surrounding area, the immediate site vicinity is relatively open and grassy with scattered willows. There is a considerable amount of deadfall in the general area as a result of a fairly recent forest fire.
Description. The site occupies an area of approximately
70 m by 30 m. Within this area are scattered bone fragments, tin cans and artifacts, and five features (Fig. 3). Feature 1 is an earthen ridge approximately 25 cm high by 30 cm wide which defines a square measuring 4 m by 4 m. A brief shovel test failed to reveal the presence of any logs. The whole feature is overgrown by bush. The remains of what appear to be a barrel type stove and several sections of stove pipe were found inside. The feature probably represents a shelter of some sort: possibly a tent with banked walls or, less likely, a cabin. Feature 2 is an irregular shaped, steep-sided pit measuring 2.7 m by 1.6 m by 0.9 m deep. It is difficult to speculate on its function as it is too large and too close to Feature 1 to have served as a latrine or a pit cache. Feature 3 is a rectangular pit measuring 6 m by 0.9 m by 0.2 m deep. It appears as though it might have been partially refilled and may have served as a latrine or cache pit. Feature 4 is a similar rectangular pit measuring 2 m by 0.5 m by 0.8 m deep. It too appears to have been a latrine or pit cache.

Although artifacts, bones and other debris were found scattered throughout the site area, most of the artifacts were in close proximity to Feature 1. A Winchester model 94 .30-.30 cal. carbine (20 in barrel) was found leaning against a charred tree stump immediately behind (west of) Feature 1. This rifle, although rusted and pitted, is in fairly good condition; the action is rusted shut and the lower half of the tubular magazine is missing, as are all wooden parts of the stock.

A rather tight concentration of artifacts was found immediately in front (east) of Feature 1 (Fig. 4). Some of these artifacts were partially exposed to the surface, though many were covered by a thin mat of vegetation and litter. The most prominent item in this cluster was a Winchester model 94 .30-.30 rifle (26 in barrel) serial
Figure 3. Sketch map of Site 109X, Irvine Creek Area. (Drawing by K. Walton).
Figure 4. Artifact cluster at Site 109X, Irvine Creek area. (Photo by author).
no. 787210. All metal parts of this rifle are present, though rusted, and only the wooden stock is missing. Other artifacts in this cluster included a two-handled six ft. cross-cut saw blade, a hand saw blade, gold pan, 1 in diameter wood auger bit, metal punch, No. 4 trap ("South Oneida Community"), axe head with part of a wooden handle, one small spring trap, two tins containing 2½ inch nails, a segment of thin wire cable, coil of wire, meat grinder ("Marshall Wells No. 2 Chopper"), frying pan, two metal plates, and one metal spoon. All of these artifacts were missing their wooden parts but, except for rust, were in otherwise very good condition. Taken in combination, these items represent a nearly complete outfit for one or two persons engaged in trapping or prospecting. They may originally have been on a platform cache which subsequently burned and collapsed, but no direct evidence for this was found.

Other items found in the general site area, but separated from the main cluster, included a ten gallon drum, a metal pail, a second drum-type wood stove, the remains of what appeared to be a large radio, and the remains of a large wet cell battery. The latter was well separated from any of the other artifacts. Only the two rifles were collected. Everything else was left in situ, and the artifacts in the main concentration were covered over with a thin sod layer.

In spite of concentrated searching, no axe-cut stumps or the remains of a cache were found in the general vicinity of the site. It is possible that evidence of these may have been destroyed by the forest fire which swept the area within the last few decades.

Discussion. Site 109X presents some very interesting problems of identification. The nature and condition of the materials found suggest that the site could date anywhere from the 1930s to the 1950s. On an impressionistic basis, the latter part of this range seems more likely. Evidence clearly
indicates that this was a camp used by one or more trapper-prospectors, probably as a permanent base camp.

The most intriguing aspect of this site is the fact that nearly a full set of equipment, including two rifles, is present. Although there are many possible explanations for this, one of the more obvious is that the site's occupant(s) met with disaster either at the site or nearby. It might not be too unusual for a person to abandon a camp or a cache of equipment, but it seems highly unlikely that anyone would venture far from camp without a rifle.

The available documentary evidence relating to the locality of site 109X is reasonably abundant but tends to be more confusing than enlightening. Two different individuals are known to have had cabins at about this same location. The series of interesting events concerning the first cabin are described in some detail by Bill Clark (Addison and Bates 1977: 100-103), and Albert Faille (Addison and Anthony 1977: 389). Phil Powers built his cabin in 1930. When he failed to come downriver as expected in the summer of 1932, two R.C.M.P. officers went to investigate and, when they arrived at the site, met Albert Faille, who had gone upriver ahead of them. Faille had found Powers' broken up canoe on a drift pile on the Flat River just above Caribou River. His rifle (a .22?) and several traps were also found nearby along the river. Powers' cabin was burned to the ground, and a few fragments of burned human bones were found inside. When Clark and Kraus returned to the site a year or two later, they found several gold teeth fillings which, upon investigation, were taken to be Powers and the case was closed.

At first glance the Powers incident would seem to explain the remains at site 109X; however, several factors suggest that this was not the site of Powers' cabin. Both Clark and Kraus, who examined the cabin remains together, state that the
fire must have generated tremendous heat as everything inside, including a metal stove and porcelain pans, were fused into small masses. Furthermore, although a few furs were found in a cache, no guns or other personal effects were ever found there. This description obviously differs considerably from that presented above for the remains discovered at site 109X. It also seems highly unlikely that the R.C.M.P. officers who investigated the site in 1932 and again in 1933 would have left behind such potentially useful evidence for identification purposes as two rifles.

The nature of the second occupation at the Irvine Creek locality also supports the conclusion that site 109X is not the Powers' cabin site. Shortly after the Powers incident, Albert Faille built a cabin at the same site "just about 50 feet from [Powers' cabin]" and stayed there three winters (Addison and Bates 1977: 102). This would have been sometime in the period between 1935 and 1940. It is almost inconceivable that Faille would have lived on the site three years and left so many useful tools in such undisturbed condition if they had been there when he arrived. There also seems to be little likelihood that site 109X represents the remains of Faille's camp. He certainly didn't meet his demise there; and it seems improbable that he would have left everything permanently behind when he left even had he been burned out, especially when one considers that he later returned to the same general area for several years (see below).

On the basis of current evidence, therefore, it is impossible to identify site 109X. It is possible to conclude that it is probably not the remains of either the Powers or Faille cabins and it was probably occupied after Faille left in the late 1930s.
Recommendations. In addition to the mystery surrounding the fate of its occupant(s), site 109X represents an almost perfect undisturbed example of trapper-prospector activity of the 1930s to 1950s. On this basis this site would be a good candidate for future archaeological investigations, which should include excavation of Feature 1, the dwelling outline. Due to the isolation of the area and the fact that it is not likely to see heavy visitor use in the near future, the site is not in immediate danger of disturbance. Therefore, this should not be considered a matter of urgent priority. In any event, every effort should be made to obtain information from former residents of the region concerning possible occupants of the site and its relationship to the Powers and Faille cabins.

Site 110X

Borden Grid: JjSp
Quadrangle: 95E/10 "Irvine Creek"
Military Grid Reference: 9UXU323281

Location. Site 110X is located at the top of the exposed face of a high terrace overlooking the left bank of Irvine Creek, approximately 750 meters upstream from its mouth (Fig. 2, Fig. 5). The top of the terrace is fairly level and covered with forest fire deadfall. It affords an excellent view of the entire area.

Description. On the erosional surface of the terrace bank, a few centimeters from the top of the terrace, were found a small bifacially worked flake fragment and a tiny unidentifiable bone fragment. The flake is an asymmetrical roughly triangular shaped fragment of a coarse black chert measuring 25 mm by 20 mm by 5 mm thick. Broad flake scars cover the entirety of both faces, and fine marginal retouch along half of the broken edge and along one corner suggest that this artifact
Figure 5. High terrace above Irvine Creek, looking north. Site 110X is at the extreme left of exposed bank. (Photo by author).
may have functioned as a graving tool. Careful inspection of the surface and test pitting along the edge of the terrace failed to reveal any additional cultural remains. 

**Discussion.** Given that no further cultural remains were found in the immediate area, it appears likely that the single artifact and bone represent isolated finds rather than the remains of a campsite. Alternatively, it is possible that a former campsite here has nearly entirely eroded away. The terrace itself would serve as a good travel route and also provides an excellent view of the valley. The artifact itself is undiagnostic of temporal or cultural affiliation and provides little information beyond confirming aboriginal presence in the area in prehistoric or early historic times. 

**Recommendations.** Due to the nature and extent of this site, no further archaeological research there is warranted.

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**Site 111X**

**Borden Grid.** JjSp

**Quadrangle:** 95E/10 "Irvine Creek"

**Military Grid Reference:** 9VXU325277

**Location.** Site 111X is at the edge of a high terrace on the left bank of the Flat River, 350 m downstream from the mouth of Irvine Creek (Fig. 2). This terrace appears to be an extension, though at a slightly lower level, of the one on which site 110X occurred. Cultural material was found extending back to about 3 m from the top edge of the steep exposed bank, which drops approximately 30 m to the river below. A dense litter of deadfall on top of the terrace attests to recent forest fire activity.

**Description.** A small concentration of fire cracked rock and tiny burned bone fragments was found in a thin brown loam layer 5.7 cm below ground surface. The bone fragments were collected. No artifacts or flakes were found, and two
test pits a few metres away failed to yield cultural material. **Discussion.** The burned bone fragments and fire cracked rock undoubtedly represent the remains of a hearth. In the absence of any other material, however, it is impossible to assign an age to this feature. The extensive surface and subsurface evidence of forest fires indicate that the hearth material is unsuitable for radiocarbon dating. Like site 110X, the terrace provides a good travel route and excellent view. **Recommendations.** In view of the limited extent and nature of the cultural material at site 111X, it is best considered an isolated find. Further investigation is therefore not warranted.

**Other Cultural Remains**
In addition to the three sites described above, other cultural remains were also encountered in the Irvine Creek area and elsewhere along the Flat River. Although these were not designated as separate archaeological sites, they should be considered in assessing the archaeological potential of the area and are therefore described here.

**Faille Cabin Site at Irvine Creek**
A cabin is located approximately 40 m in from the right bank of the Flat River, 300 m upstream from the mouth of Irvine Creek (Fig. 2). The immediate area is densely vegetated with alder and immature spruce and is just south of a large open stand of mature spruce. The cabin itself faces northeast and measures 4.25 m by 2.8 m (14 ft by 9 ft) along the outside (Fig. 6). A porch across the whole width of the cabin extending 1.8 m (6 ft) toward the front has collapsed. Otherwise the cabin is in excellent shape. All logs, the roof, the door, and chinking are intact, as are the
Figure 6. Faille cabin near Irvine Creek, looking south. (Photo by author).
interior furnishings which include two stoves, a bed frame and shelves. Written in pencil on the front of the door are the words

"March 16 1944
Plane gone
over Micmillan [sic]
Lake Est
3 15 PM"

The 4 in 1944 is written boldly over a 5. Among the few items found inside the cabin was a 1954 edition of Life magazine.

Twenty-five metres northwest of the cabin, toward the river, are the remains of a large platform cache which has collapsed. A feature consisting of a pile of cut poles, which may have been some sort of cache, is located 6.6 m to the east of the cabin and there is a pit 5.6 m southeast of the cabin. Two cut pole features, scattered debris, and numerous cut stumps were found in the mature spruce stand northeast of the cabin itself.

This cabin is well known to park personnel and was featured in the recent John and Janet Foster T.V. film. It was built by Albert Faille, but its exact age is unknown. Faille is known to have been at the site from 1950 to 1952 (Addison and Addison 1977: 32-33). If the writing on the door can be accepted, the cabin must have been built at least as early as 1943, and the Life magazine suggests that it was occupied at least as late as 1954. Whether it was used by Faille or anyone else after that date is unknown. At any rate, the excellent shape of the cabin in comparison to others in the park would seem to belie its age.
Irvine Creek Campsite, Blaze, Cache
Along a good trail on the left bank of Irvine Creek, approximately 75 m upstream from its mouth, is a cleared area (Fig. 2). Two stone-ringed fire hearths, the remains of a lean-to, and scattered cut wood attest to the area's recent use as a campsite. Approximately 15 m east of the fireplaces is a large spruce tree which has been blazed. The blaze takes the form of letters which have been cut into the wood with a knife in an area where the bark has been removed:

8-23
64
CAPT. MALONE
CPL. BROWN 2 PPCLI
PESKETT
SIEGFRIED BUCHER
The dates are placed parallel with the ground while the names are along the vertical axis of the tree.

In the same area, 2 m east of the trail are several large saw-cut spruce logs. Some of these are notched, and the longest measures 4 m. Their arrangement suggests that this feature might possibly be a fallen cache, but this is not clear, and the general condition of the logs suggests a relatively recent date.

In the general area surrounding the campsite, several axe-cut stumps were observed. Some of these appear quite old while others are obviously more recent. An intensive search and several test pits failed to reveal any further cultural remains in the area.

Trails Near Irvine Creek
Trails were found paralleling the left and right banks of
the Flat River, from the mouth of Irvine Creek upstream to
at least as far as site 109X and downstream on the left bank
at least as far as site 111X. These trails are very clear
and well worn in some places but obscure and difficult to
follow in others. The occasional axe-cut stump suggests
these were for human use, perhaps as trap lines.

Cultural Remains Near Mouth of Caribou River
Approximately one kilometre downstream from the mouth of the
Caribou River (downstream major channel), a major though
shallow creek enters the right bank of the Flat River behind
a small island (Fig. 7). In this general location, Fred
Sibbeston built a cabin sometime prior to 1946, possibly
1944 (Addison and Bates 1977: 163-164; Addison and Addison
1977: 29, 32). This cabin was not found in spite of an
intensive search, and it has reportedly been washed into
the river (A. Cochrane 1978: pers. com.). However,
considerable evidence of human activity was found in the
form of several well worn trails with occasional cut stumps
and cut pole features suggestive of trap lines. These
occur along the left bank of the creek for an undetermined
distance, upstream along the right bank of the Flat River
an undetermined distance, downstream from the island, and
along a large snye paralleling the river downstream from
the mouth of the creek.

Cache Remains Below Caribou River
Approximately 8.4 km below the mouth of the Caribou River
(downstream channel) a deep, slow flowing creek enters the
left bank of the Flat River. Ten metres in (north) from the
left bank of the creek, approximately 250 m upstream from its
Figure 7. Noteworthy features along Flat River near the mouth of Caribou River. (Drawing by K. Walton).
mouth, were found the remains of what appears to have been a cache (Fig. 7). These remains consist of three long spruce logs—the longest is 4.5 m—arranged in the form of a triangle, with several smaller poles laying across the top of these logs. This feature is adjacent to several large standing spruce trees which may have supported the platform originally.

This feature is at the location where Neily (1977) reports the presence of a cabin built by Albert Faille. A thorough search of the entire area failed to reveal a cabin or any other cultural remains. There were no artifacts, debris, or axe-cut stumps to suggest that a cabin was ever in the area.

Archaeological Assessment of the Area

The area in the vicinity of the mouth of Irvine Creek was the only area examined in 1978 which demonstrated much archaeological potential. Although the prehistoric remains discovered in the locality can be described as minimal, at least something was found to indicate former use of the area. Additionally, the presence of exposed terraces and fairly shallow silt depositions along the flood plain enhance the chances for finding prehistoric remains there. Nevertheless, any additional prehistoric cultural material probably consists of isolated finds similar to those of sites 110X and 111X and are unlikely to produce sufficient information to warrant further archaeological research. Although Clark (Addison and Anthony 1977: 255) reported seeing the remains of a large cache complex in the area, it is likely that any evidence of this has been obliterated by forest fire activity.

The remains of trapper-prospector activity dating to the 1920s to 1950s is probably more densely concentrated
in this locality than in any comparable sized area within the park. The only site at which further archaeological research is likely to prove useful is site 109X, whose primary interest is due to the mysterious nature of the remains discovered there. If it were in a more traveled area of the park, the Faille cabin site would be an excellent interpretive site. Given the inaccessibility of the area, however, its usefulness in this respect would appear quite limited.

On the basis of the 1978 reconnaissance, though admittedly very superficial, the entire area along the Flat River from Irvine Creek downstream almost to its mouth appears to exhibit very little archaeological potential. The cabins formerly at the mouth of the Caribou River have apparently gone into the river. Of the three locations along this stretch of the river reported to be sites of Albert Faille's cabins (Neily 1977), only a cache was found at one. At the other two, not only was nothing whatsoever found, but the locations themselves appear highly unsuitable for cabin sites.
Yohin Lake Area

Introduction
Yohin Lake is 2 km southwest of the South Nahanni River near the eastern boundary of the park (Fig. 1). The lake is on the Mackenzie Plain at an elevation of approximately 200 m a.s.l. It is in the shadows of Yohin Ridge, 1 km to the west, and Mattson Mountain, at the north end of the Liard range 4 km to the south, both of which rise to over 1,000 m.

During Classic Wisconsin times a lobe of Laurentide ice, termed the Jackfish Glaciation, extended up the South Nahanni valley as far as Mattson Mountain. The ice dammed the valley to a height of 400 m, thus forming Glacial Lake Tetcela which completely inundated the Yohin Lake locality as well as the entire valley as far upstream as Third Canyon (Ford 1976). This lake probably drained rapidly at the close of the Pleistocene as the Laurentide ice receded so the Yohin area has probably been open for occupation for the last 10,000 years or more. Ford (1976) posits two pre-Wisconsin glaciations in the area, both of which submerged the Yohin Lake vicinity.

The present Yohin Lake is small, 3.4 km², but is still the largest of the few lakes in the park (Fig. 8). The lake is fed by several springs along its northern shore and two intermittent streams descending from Yohin Ridge to the west. It is drained by a small creek which flows to the Jackfish River a few kilometres to the south. The main
Figure 8. Yohin Lake, looking southeast, showing locations of sites discovered in 1978: a, 113X; b, 112X; c, 114X; d, 115X. (Photo by author).
part of the lake is no more than one metre deep and is littered with floating islands. At the northernmost end of the lake, however, are two very deep sinkholes. These belong to a series of several such features between the lake and the South Nahanni River which Ford (1974) has termed piping sinkholes.

The shoreline along the southern half of the lake is poorly defined and marshy. At the north end, it rises rather abruptly to a series of low, relatively level ridges. These are well drained and support good stands of mature poplar and occasional spruce, with rose and willow forming the understory.

Locally, Yohin Lake is known as "Jackfish Lake" or by the Slave term Chi-tu--"Duck Lake" (A. Koniseta 1978: pers. com.). These names suggest the biological productivity of the lake, which is probably greater than any other region in the park. The sinkholes at the north end of the lake serve as a major winter refugium for northern pike, and they appear to be abundant there during the other seasons as well. The marshy environs of the lake also provide prime waterfowl habitat. Although swans and common loons were the only species observed there during July of 1978, several species are apparently abundant during migration seasons. Beaver and grouse are plentiful in the immediate vicinity, and the larger area supports a good moose population.

Although one cabin is reported near Yohin Lake (Neily 1977), the area appears to have been rarely utilized historically by non-natives. On the other hand, Slave speaking natives of the Nahanni Butte area apparently used the lake more intensively than any area within the park. It is currently used by several families each winter for ice fishing. Charles Yohin (1977: pers. com.) reported that when he was a small boy approximately 70 years ago, an Indian named LAKONKOLI (approximate phonetic transcription) had a tipi-shaped cabin on the peninsula at the north end of the lake, and
the lake was a traditional fishing, trapping, and hunting area.

Methods
The Yohin Lake was investigated by the author and three assistants during the period July 17 to August 3. The first half of this period was devoted to intensive site survey. The remaining portion of the time was spent in testing sites.

The survey area encompassed all of the non-marshy portion of the shoreline of the lake. This included the perimeters of the sink hole and also extended along the high ridge which runs along the north end of the marsh to the South Nahanni River (Fig. 8). Because of the dense vegetation cover throughout most of the area, surveying consisted of placing small test pits every few metres along a transect and examining all naturally exposed surfaces, such as those surrounding deadfalls.

Cultural material was found in four separate localities, which were designated as sites and subsequently tested intensively. The precise location of each site was mapped onto an air photo using a Brunton compass and 50 metre tape. A central datum and grid system were placed at each site and one metre test units were excavated at selected intervals with trowels. The objectives of this testing were to define the site limits as nearly as possible, determine the density and nature of cultural materials present as well as their depositional characteristics, and to collect as representative an artifact sample as possible.

Site 112X
Location
Borden Grid: JhRw
Military Grid Reference: 10VDC581872 (at datum point 00)

Site 112X occupies the slopes and summit of a low hill at the eastern end of a peninsula which extends into the lake from the west, separating one of the northern sinkholes from the main body of the lake (Fig. 8, Fig. 9). From the summit of the hill, approximately 15 to 20 m above lake level, numerous small gently sloping ridges radiate to the north and west. The predominant vegetation consists of mature poplar and low shrubs, especially rose. Willows and alder occur at the base of the hill along the lake margin, and mature and immature spruce line the south-facing slope. A freshwater spring emerges near the tip of the peninsula.

Site Description

Cultural material was found to be concentrated in sub-surface deposits in four localities dispersed over an area of approximately 175 m by 50 m. In order to record the precise locations of remains dispersed over such a broad area, an east-west line (based on magnetic north) was laid out. This line extended from the eastern tip of the peninsula (North 0 East 62 m) to the most distant locality at the summit of the hill where it begins to slope down again to the west (N.0 W. 145). From this baseline perpendicular lines were staked out to the north and south as necessary to encompass all artifact localities. The general location of each locality and the nature of cultural material recovered at each are summarized below:

Locality A. Locality A occupies a poorly drained area at lake level near the eastern tip of the peninsula. On the basis of current evidence, it appears to encompass no more than a few square meters surrounding N. 8 E. 38. Cultural material consisting of one small chert chip, a fish mandible, and a few small bone fragments was found in a preliminary
Figure 9. Noteworthy features at northern end of Yohin Lake. (Drawing by K. Walton).
test pit and two of four excavated 1 m$^2$ units. The culture bearing horizon occurs in a thin layer of black mucky organic soil just below the modern sod level.

**Locality B.** Locality B occupies several square metres around the central datum point (N. 0 E. 0) on a fairly level low ridge approximately 1 m above lake level, below the main slope of the hill. The soil here is well drained and thinly developed. All cultural material was recovered from a very thin old humus zone, just beneath the modern sod level and overlying a sand and gravel layer. One preliminary test pit and five of six excavated 1 m$^2$ units yielded one biface, two scrapers and many flakes and chips of sandstone and chert as well as several bone fragments.

**Locality C.** Locality C is on a small northward projecting ridge at the northern edge of the summit of the hill. Most of the area tested is between N. 25-40 W. 63-70, but one test pit at N. 1 W. 75 has been assigned to this locality as well, and it might very well encompass much of the northwestern portion of the hilltop.

The soil on this part of the site is well drained and shows a well developed profile in most places (Fig. 10). Level 3, beneath the modern sod and litter and a very thin organic soil layer (Levels 1 and 2), is a 6 cm to 12 cm thick layer of reddish coloured silty sand. Soil analysis showed this material to consist of 48 per cent sand. Level 3 blends gradually into level 4 below, a yellowish coarser sandy material (80 per cent sand) which is up to 20 cm thick in places. Though not indicated in the profiles (Fig. 10), a deep test in one of the excavation units showed that the material underlying Level 4 is a greyish coloured material consisting predominantly of very fine silt or clay (17 per cent fine sand). This is probably lacustrine sedimentation, possibly representing Glacial Lake Tetcela deposits.
Figure 10. Profile of unit N. 30 W. 67 south wall, site 112X, Locality C. (Drawing by K. Walton).
Cultural material was found in two stratigraphically separated horizons. The main cultural horizon is at the top of Level 3, with a few items found further down in Level 3, but not at the bottom. In this level, the four excavated units and three preliminary test pits yielded one biface, one scraper, two possible microblade fragments, several retouched or utilized flakes, and a few hundred unmodified flakes and chips. Most of the flakes are of a siliceous siltstone material and occurred in dense concentrations isolated in two separate test units. Apart from one tiny burned bone fragment, no faunal remains were found.

The second cultural horizon, at the top of Level 4, was isolated in two units. Associated with this horizon are three chert flakes and one flaked quartzite cobble. The flakes are of a fine-grained chert material which is quite distinct from that found in the levels above.

**Locality D.** This locality is at the southwest edge of the hilltop in the immediate area of S. 8 W. 136. Here a concentration of siltstone flakes and large mammal bone fragments were found in the disturbed soil beneath an uprooted treee. These remains are probably associated with the humus just beneath the modern sod. Nothing was found in neighbouring undisturbed deposits.

**Artifacts**

The artifact collection from site 112X consists entirely of stone tools, flakes and detritis. With the exception of one tiny chert chip in Locality A and a few unmodified flakes in Locality D, all lithic remains were found in Localities B and C. Table 1 summarizes the distribution of various artifact categories by locality. The table excludes tiny chips, small flake fragments, frost falls, shatters, etc.,
Table 1. Distribution of Artifacts, Site 112X

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<tr>
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<th>C</th>
<th>D</th>
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</thead>
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</tr>
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<td>1</td>
</tr>
<tr>
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</tr>
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<td>-</td>
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<tr>
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<td>-</td>
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<td>-</td>
<td>2</td>
</tr>
<tr>
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<td>Julian chert</td>
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all of which were abundant in Locality B and, especially, Locality C.

Bifaces. Specimen 112X-7 (Fig. 11, a) from Locality B is made of a coarse grained grey-black chert. It is lanceolate shaped in outline, thinly plano-convex in cross section, with a slightly concave base. The flaking on the convex base is complete and irregular. A thick, roughly circular, hump remains in the center of this space. The flat face has a thick mineral crust (possibly original cortex) over most of the surface, and flaking is visible only along part of the margin. A series of flakes has been removed from the basal corner on this face, producing a unilateral shoulder. Discontinuous fine retouch scars along both lateral edges appear to be the result of wear and suggest the artifact was used as a knife, though it may have been a projectile point.

Length: 106 mm  Width: 35 mm  Thickness: 6.8 mm

Specimen 112X-88 (Fig. 11, b) from Locality C, Level 3 is a large, thin lunate biface, thinly biconvex in cross-section and tabular in longitudinal section. It is made of a mottled grey fine-grained siltstone or argillite material. Flaking is broad and irregular on both faces, and a fine bifacial retouch is discontinuous on both edges.

Length: 145 mm  Width: 64 mm  Thickness: 13.6 mm

Scrapers. Specimen 112X-9 (Fig. 12, a) from Locality B is incomplete and made on a black shiny chert flake which is roughly triangular in cross-section. At the thick end is a series of collateral flakes which form an irregular convex working edge at an angle of 55 to 70 degrees. Some crushing is evident along this edge. On the ventral surface of the scraper, a broad flake has been removed at an oblique angle to the working edge.

Length: 22 mm  Width: 22 mm  Thickness: 10.9 mm
Figure 11. Bifaces from Site 112X: a, 112X-7, Locality B; b, 112X-88, Locality C. (Photo by author).
Specimen 112X-47 (Fig. 12, b) from Locality B is a side scraper made on a linear decortification flake struck from a pebble of black and white banded chert. The flake is roughly triangular in cross-section and the cortex is retained on the entire dorsal surface. A steep (65 to 80 degrees) irregular retouch along one lateral edge of the ventral surface of the flake forms a sinuous, almost denticulate, working edge.
Length: 45 mm  Width: 21 mm  Thickness: 8.4 mm

Specimen 112X-235 (Fig. 12, c) from Locality C, Level 3 is made on an irregular-shaped fragment of siliceous siltstone. Each surface has a slight ridge at a right angle to the ridge on the opposite surface. Roughly one-half of one edge has been retouched at an angle of 70-75 degrees, forming a slightly convex working edge.
Length: 37 mm  Width: 30 mm  Thickness: 13.1 mm

Marginally Retouched Flake. Specimen 112X-206 (Fig. 12, d) is from Locality C, Level 3. Five frost-spalled fragments were reconstructed to form most of a small thin flake of highly lustrous dark grey chert. Broad flaking appears on the dorsal surface, and the ventral surface has a fine marginal retouch on all existing edges. One corner has been broken off in a manner suggesting that it may have been a graver tip.
Length: 27 mm  Width: 26 mm  Thickness: 3.3 mm

Flake-Chopper. Specimen 112X-5 (Fig. 13, a) from Locality B was reconstructed from nine small siliceous siltstone fragments to form a massive thin, irregular-shaped decortification flake. The flake is plano-convex in cross-section and the cortex is retained on all of the dorsal surface except for some flaking in platform preparation. Irregular bifacial retouch on the distal margin of the flake forms a concave-convex working edge.
Length: 106 mm  Width: 134 mm  Thickness: 13.4 mm
Figure 12. Scrapers and retouched flake from Site 112X: a, 112X-9, Locality B; b, 112X-47, Locality B; c, 112X-235, Locality C; d, marginally retouched flake 112X-206, Locality C. (Photo by author).
Cobble Tool. Specimen 112X-218 (Fig. 13, b) is the only retouched artifact recovered from the lower component (Level 4) of Locality C. It consists of half of a large rounded quartzite cobble. On one side two large flakes have been removed at right angles to one another; both are at right angles to the flat ventral surface. On the opposite side of the cobble is a continuous series of smaller flake scars along the edge at an angle of 80 degrees to the ventral face, forming a roughly convex working edge.

Length: 106 mm  Width: 119 mm  Thickness: 65 mm

Flake Gravers. Four unmodified siltstone flakes were recovered from Locality C, Level 3 (Fig. 14 a-d). Each has a ridge leading to a tip at the distal end. This forms a natural buttressed point which is triangular in cross-section. In each case, the tip is dulled suggesting use as a graving instrument.

Length: 30-16 mm  Width: 17-57 mm  Thickness: 4.2-11.6 mm

Core Fragments. Specimen 112X-48 from Locality B is a small, triangular-shaped banded chert pebble fragment. It is roughly tabular in cross-section and retains cortex on one surface. It exhibits evidence of multiple platform preparation and several flake scars in multiple directions.

Length: 41 mm  Width: 22 mm  Thickness: 10.9 mm

Specimen 112X-98 from Locality C, Level 3 is a roughly wedge-shaped multi-faceted fragment of siltstone. Cortex is retained on one face. There is evidence of flake removal on three different faces, each in a different direction.

Length: 66 mm  Width: 35 mm  Thickness: 23.4 mm

Microblades. Two siltstone specimens from Locality C, Level 3 (Fig. 14, e-f) have the morphological characteristics of microblade fragments. Given the nature of the material and the absence of any other microblade technology in the collection however, this may be fortuitous.

Specimen 112X-97 is a medial fragment with two facets.
Figure 13. Flake chopper and cobble tool from Site 112X: a, 112X-5, Locality B; b, 112X-218, Locality C. (Photo by author).
Figure 14. Flake gravers and microblades from Site 112X, Locality C: a, 112X-106; b, 112X-107; c, 112X-108; d, 112X-105; e, 112X-97; f, 112X-219. (Photo by author).
Specimen 112X-219 is a proximal fragment with three facets.

Retouched/Utilized Flakes. Twenty-four flakes exhibit marginal retouch on one or more edges (Fig. 15, a-g). This retouch is discontinuous and, for the most part, so fine that it is impossible to distinguish between intentional retouch and that resulting from use. Therefore, no distinction is made here.

Two flakes, one each from Localities B and C, are made of a highly lustrous fine grained chert tentatively identified as Julian chert (Fedirchuk 1975: 39). Two from Locality B are black and white banded chert and the remaining 21, all from Locality C, are siliceous siltstone.

There is no clear patterning exhibited in the flakes in this category, as a very broad range in size and shape is represented. On three flakes the retouched area forms a concave working surface; the retouch on two of these is on the ventral face (Fig. 15, c, f). Six others have retouch on two or three edges. Most common are flakes retouched along the dorsal surface of one lateral or distal edge. This edge may be straight, convex or irregular.

Unmodified Flakes. The bulk of the lithic collection from site 112X consists of unmodified flakes. Although several varieties of chert are represented, most of these flakes are siliceous siltstone from two concentrations in Locality C. These siltstone flakes are distinctive in several respects. Though the size range is continuous upwards from very small, they tend to be larger than the chert flakes. The majority of the flakes, especially the larger ones, are well formed, often bearing multiple flake scars. These flake scars are broad, and most are unidirectional but some are multidirectional.
Figure 15. Retouched/utilized flakes from Site 112X, Locality C: a, 112X-104; b, 112X-110; c, 112X-100; d, 112X-241; e, 112X-242; f, 112X-103; g, 112X-239. (Photo by author).
The majority of these flakes exhibit a distinctive platform preparation technique involving removal of a series of small flakes ending in hinge fractures prior to major flake removal. This is one of the distinguishing characteristics of the Julian technology at Fisherman Lake (Fedirchuk 1975: 39), although this technique was not applied to siltstone flakes there (Millar 1978: pers. com.). Primary flakes are clearly predominant in the collection, but there are a few biface thinning and sharpening flakes, and all stages of artifact manufacture are represented.

Raw Materials
On the basis of sheer numbers of specimens, siliceous siltstone is clearly the predominant raw material type in the lithic collections from site 112X. It should be noted, however, that all but a few pieces of this material are from two very dense concentrations in Locality C. In other excavation units in Locality C, and in Locality B, it is fairly uncommon. The material is quite brittle, and many of the larger flakes have broken in a tabular fashion after deposition. It is dull black in colour, though the surface of many flakes in one concentration has weathered to grey or buff. Siliceous siltstone is locally abundant, occurring in cobbles and boulders in the gravels of the South Nahanni River, and it was also encountered on the site itself in Locality A.

The other raw materials, with one exception, are all varieties of chert. One distinctive type is very lustrous and fine-grained, varying in colour from dark to medium grey, though the cortex tends to be light grey to buff. It closely resembles what Millar and Fedirchuk (Fedirchuk 1975: 39-41) term Julian chert, and it is tentatively identified as such. It is one of the most common types in Locality B, and a few
flakes were recovered in Locality C.

Another common chert, especially in Locality B, is coarse-grained and dull black. It is argyllicious and sometimes difficult to distinguish from siltstone, especially when weathered. Many flakes are banded with white, and pebbles of this material are common along the South Nahanni River and Yohin Ridge. Other cherts occur in the form of small flakes or retouched chips in Locality C. One variety is translucent and milk white in colour. Another is a very fine-grained mottled blue-grey. All of the cherts are probably local in origin, as various cherts outcrop on Yohin Ridge, and erosional pebbles are not uncommon along the river.

Welded tuff, the only raw material definitely known to be exotic to the Yohin Lake area, is represented by one tiny chip from Locality C. The chip itself is translucent, bluish-white in colour, and highly vitreous, although the parent material occurs in a wide range of colours and textures. The only known outcrop of welded tuff is in the Tertiary Hills area west of Fort Norman (Cinq-Mars 1973). It is commonly found in sites along the Mackenzie and is well represented in the Fisherman Lake collections.

Discussion
On the basis of the 1978 test excavations, site 112X appears to be a multi-component site. There is certainly good evidence for the existence of at least two cultural components in Locality C. The lower component in Level 4, though currently represented by only the cobble tool and three chert flakes, seems well separated from Level 3 above. The extensive materials in Level 3 apparently relate to a single cultural component; however, the current evidence is insufficient to determine this with certainty. Although
materials recovered from all seven test excavation units came from the same soil level, the non-siltstone artifacts and flakes did not occur in the same test squares as either of the two siltstone flake concentrations.

The artifacts from Locality B can be assigned with more confidence to a single component. Most of the artifacts and flakes came from the same very thin soil level in contiguous excavation units and are comparable in terms of raw material and morphology. The relationship of this component to the remains from Locality C is a matter of uncertainty. Differences in topographic situation and raw material and morphological composition of the lithic assemblages suggest that they represent separate cultural components. Considering the nature of the remains recovered from Localities A and D, very little can be said concerning their relationship to the rest of the site.

It should be noted that, although the present discussion of Site 112X is structured in terms of four separate localities, this is due primarily to the research design employed in 1978 rather than any archaeological reality. Only those areas where cultural remains were found during initial survey were reserved for further testing. Time limitations prevented further testing to determine the limits of any locality or the presence of other concentrations of cultural remains. Less than six man-days were devoted to the initial survey of the site 112X peninsula, and this survey involved placing small test pits at relatively large intervals. Therefore, it is highly probable that intensive testing at closer intervals would reveal the presence of other artifact concentrations and might indeed indicate a fairly continuous distribution over much of the total site area.

It is currently impossible to assign an age, even
imprecisely, to any of the cultural materials from site 112X as no materials suitable for radiocarbon dating were obtained. Given the small size and undiagnostic nature of the artifact sample, as well as the uncertainty of the integrity of the assemblage, it is impossible to compare it to assemblages of known age from neighbouring areas—e.g. Fisherman Lake. In fact, the various complexes comprising the Fisherman Lake sequence are themselves highly variable in content, suggesting that only large assemblages acquired under carefully controlled sampling conditions could be meaningfully compared.

The assemblage from Locality C, Level 3, as evidenced by the siltstone flakes, does exhibit a broad technological similarity to the Julian technology of Fisherman Lake as defined by Millar (1968) and Fedirchuk (1970, 1975). This technology is characterized by flakes and cores exhibiting a distinctive platform preparation technique and bi-directional flake removal, and reliance on a specific lithic type (Julian chert). It is usually associated with extensive workshop areas and a variety of wood working tools. Although the Julian technology is most evident at Fisherman Lake in the Pointed Mountain and Julian complexes, spanning the period roughly between 4,000 and 1,000 B.C., it is found to a lesser extent in complexes dating as late as A.D. 1,000. The Locality C flakes, though of a different material than that associated with the Julian technology, do exhibit similar flaking properties. Their sheer abundance suggests a workshop area, and many of those with retouch (e.g. Fig. 15, a, c, f) seem to represent woodworking activities.

One clue to the relative age of the site relates to the geomorphology of portions of the site 112X peninsula itself. Analysis of soil samples from Locality C strongly suggests that this locality may have been a lake beach at the time of deposition of the Level 4, and possibly the
Level 3, artifacts (L. P. Stene 1979: pers. com.). This would require the presence of a lake at an elevation of at least several metres above the current level of Yohin Lake and implies a relatively great antiquity--on the order of millenia--for at least the oldest Locality C remains. This would also imply that Locality C must predate Localities A and B., which would have been inundated when the former area was a beach.

A number of factors suggest that site 112X, at least Localities B and C., served as a major base camp site rather than an intermittent special purpose site. The location of the site in relation to a variety of relatively abundant resources, including fish, waterfowl, small mammals, a spring, etc., suggest that it is one of the better potential base camp locations in the entire area. The artifacts recovered indicate that a variety of workshop and maintainence activities were carried out at the site. Although the current evidence is inconclusive, it is most likely that the general site area was occupied at least seasonally on a regular basis over a considerable time period, and the remains of these occupations are scattered in varying densities over different parts of the site.

Recommendations
Site 112X is clearly the most important site discovered to date in Nahanni National Park, indeed in the entire South Nahanni drainage. It is also clear that the 1978 tests barely "scratched the surface" of the site and, as might be expected from preliminary testing, tended to raise more questions than answers. These tests did, however, demonstrate the potential of the site for providing data relevant to a number of important archaeological problems of both
cultural-historical and processual nature, especially if combined with more extensive research in the Yohin Lake vicinity. Therefore, the site, including the whole peninsula, should be preserved from any development or visitor activity until a well-conceived, problem-oriented excavation program has been completed. Piles of recently cut logs at locality D of the site indicate that at least some potentially destructive activity is occurring there. For the most part, however, the site has currently received little or no visitation except during the winter, and it is not threatened by natural forces, so excavation is not considered a matter of urgency. Nevertheless, the timing of future archaeological research there should be coordinated with long-range projections for development and/or increased visitor use of the Yohin Lake area in such a manner that strictly salvage excavations can be avoided.

Site 113X
Location
Borden Grid: JhRw
Quadrangle: 95G/4 "The Twisted Mountain"
Military Grid Reference: 10VDC58372
Immediately to the east of the peninsula bearing site 112X is another peninsula extending approximately 300 m to the southwest and separating one of the deep sinkholes from the main body of the lake to the south (Fig. 8). Along the southern edge of this peninsula is a narrow ridge approximately 5 m above lake level which extends in a series of short benches to the western tip of the peninsula. The locality designated as site 113X begins 60 m west of the tip of this peninsula and extends some 40 m to the northeast, where the ridge starts to rise more abruptly (Fig. 9). This area
is only about 1 m above lake level, and the peninsula in this section averages no more than 70 m in width. The vegetation here is dense and consists primarily of poplar, willows, and rosebush.

Description
Seven burned bone fragments were found in one of the preliminary test pits. A subsequent 1 m² test unit a few cm away yielded a concentration of 46 tiny retouched chips of fine grained grey-black mottled chert. A second test square 1 m away from the chip concentration was sterile. The bones and chert chip were found approximately 15 cm below the modern surface, at the base of a 5 cm thick brown humus zone situated between the modern sod and a layer of red to yellow silt.

Forty meters to the northeast in a slightly higher well-drained area at the base of the ridge, four moose foot bones were found in a preliminary test pit in the modern sod 8 cm below the surface. In the same level in an adjacent excavation unit an articulated marten skeleton was found. A second adjacent excavation unit was sterile.

Discussion
The materials collected at site 113X undoubtedly represent two separate occupations there. The earliest period is represented by the lithic chips and bone fragments at the western end of the site area. The chips are obviously all from the same artifact and indicated a sharpening or final retouch process. The few bone fragments were isolated and were not associated with ash or fire cracked rock indicating a hearth. Beyond this, little can be said about these materials except that they probably date to the prehistoric
period. Given the negative results from intensive testing in the area, the cultural remains must be restricted to a small area and probably relate to an isolated chipping scatter rather than a campsite.

The marten skull and moose bones in the eastern part of the site probably relate to the historic or recent period considering their position in the modern sod and their excellent condition. Although it is possible that the marten died a natural death, it seems more likely that the carcass was discarded after skinning. No other remains were found in this immediate vicinity in spite of intensive testing. It should be noted that the western end of the peninsula, including the ridge and low lying area near the tip, was tested more intensively than any other locality in the Yohin Lake area. Therefore, the sparse cultural remains located in 1978 can probably be considered indicative of low archaeological potential for this site area.

Recommendations
Given the limited nature of the cultural remains recovered, this site in itself does not warrant further archaeological investigation.

Site 114X
Location
Borden Grid: JhRw
Quadrangle: 95 G/4 "The Twisted Mountain"
Military Grid Reference: 10VDC581876
Site 114X occupies the level summit of a hill, approximately 10 to 15 m above lake level, between the north shore of Yohin Lake and a small sinkhole to the north (Fig. 8, Fig. 9).
The datum point of the site is 126 m due north (magnetic) of the shoreline of Yohin Lake and 93 m south of the smaller lake. This site affords an excellent view of both lakes as well as a low marshy area to the east. A freshwater spring drains into Yohin Lake just south of the site area. The modern vegetation consists of an open stand of mature poplar with a luxuriant carpet of grass and scattered rosebushes.

Description
The site was originally identified on the basis of a preliminary test pit which yielded one bone fragment and a finely made snub-nosed end scraper of black chert (Fig. 16, a). The distal edge of the scraper is convex and steeply retouched to an angle of nearly 90 degrees; the lateral edges contract slightly toward the base. It is retouched over the entire dorsal surface and near the base on the ventral surface. Both lateral edges exhibit very fine retouch, possibly due to use, and crushing is evident along the distal working edge. The artifact measures 42 mm in length, 37 mm in width and 10.8 mm in thickness. Both the scraper and bone occurred at the base of the humus layer underlying the modern sod and above a reddish brown silty sand.

In a subsequent 1 m² excavation unit immediately to the north of the original find, a large unmodified siltstone flake was found in the red sand level. Another excavation unit immediately to the south yielded a modified flake of the same material in the humus layer, a few cm beneath the surface. This artifact (Fig. 16, b) is a decortification flake from which one large flake has been removed from the distal edge on the dorsal surface. On the ventral surface are three flake scars along one lateral edge, forming a series of small concavities, and one flake scar on the
Figure 16. Artifacts from Site 114X: a, scraper, 114X-2; b, modified flake, 114X-1. (Photo by author).
opposite lateral edge near the striking platform. The flake measures 78 mm in length, 52 mm in width, and 11.3 mm in thickness.

The third excavation unit 15 m to the north near the northern edge of the hilltop yielded eight unmodified flakes of Julian chert in the humus layer on top of the underlying red sand. Excavation units 10 m south and 10 m west of the original test pit were sterile, as were two additional test pits to the north and east of the main site area.

Discussion
In the absence of datable material from site 114X, it is impossible to say much concerning its age. The few lithics collected from the site do not represent a sufficient sample for comparison even with site 112X. The scraper is distinctive. It is extremely well made and, in this respect, is quite dissimilar to any of those from site 112X. The cultural remains were dispersed relatively widely but thinly over the tested area. This site appears to be in an excellent location, and it is likely that intensive testing would reveal additional materials along the hilltop.

Recommendations
This site yielded relatively few cultural items in 1978. It appears to be rather shallow in deposition and is under no immediate threat of destruction. It is therefore not considered worthy of further excavation in itself, but it should be tested more thoroughly as part of any future program of excavation and testing in the area.
Site 115X
Location
Borden Grid:
Quadrangle: 95G/4 "The Twisted Mountain:
Military Grid Reference: 10VDC583875
Site 115X is on a narrow ridge, approximately 6 m above water
level, 60 m north of the northern shoreline of Yohin Lake. The
ridge at this point provides a good view of the lake but little
level space. Vegetation consists primarily of poplar and low
bushes. A freshwater spring enters the lake less than 100 m to
the east of the site.

Description
A preliminary test pit and subsequent 1 m² excavation units
yielded a concentration of burned bone fragments, including
small mammal and bird bones. Some ashy material was
associated with the concentrations, but there were no fire
cracked rocks or artifacts. The material was found at a
depth of approximately 5 cm to 7 cm below the modern
surface in a humus layer between the modern sod and a reddish-
brown sand and gravel. A second excavation unit 1 m to the
south was sterile as were two test pits a few meters to the
north and east.

Discussion
The bones and ash obviously represent the remains of a
campfire. Considering there were no associated artifacts,
the site provides little information. A well worn trail
parallels the lake shore just below the ridge on which the
site is situated, and it is likely that similar isolated
remains occur all along the ridge. The ridge itself is
narrow and not as suitable for major campsites as other localities in the area, e.g. site 112X and 114X.

Recommendations
Site 115X represents an isolated hearth, and no further action is warranted.

Other Cultural Evidence
Recent Campsites
Along the northern shore of the lake are several campsites attributed to recent activities in the area (Fig. 8, Fig. 9). The greatest concentration of these campsites is on the easternmost of the two peninsulas. At the eastern end of the peninsula, in the low lying area north of the ridge, are stove pipes, parts of a wooden tent frame, cut logs, a fireplace, willow fishing pole, and scattered debris. All of this is attributable to recent winter camping activities by Slave speaking natives from Nahanni Butte, who use the lake for ice fishing. Small isolated campsites were found at the northwest corner of the main body of the lake and on the high ridge along the northeast shore.

Trail Network
There is an extensive network of trails at the northern end of the lake (Fig. 9). The main trail to the South Nahanni River begins at the base of the easternmost peninsula and proceeds in a generally northeasterly direction, over a series of hills and between several small sinkhole lakes, for a distance of approximately 3.3 km until it reaches the bank of the river. An extension of this trail follows east along the ridge overlooking the north shore of the lake until
it reaches the northeast corner of the lake; it then follows east and north along this ridge, overlooking the marshy area below, to the river. A major side trail extends westward from the main trail along the north shore of the sinkholes forming the northern extremity of the lake. Another side trail branches off to the east approximately 100 m to a small separate sinkhole lake 400 m north of Yohin Lake.

Archaeological Assessment of the Area
The 1978 investigations at Yohin Lake resulted in the discovery of the densest concentration of prehistoric archaeological remains of any area in Nahanni National Park or the South Nahanni watershed. This was largely anticipated (see Amsden 1978). Even though a relatively short period of time was devoted to the investigation, and few separate sites were found, it is apparent that the area has abundant evidence of prehistoric cultural activities representing a variety of site types from large, multi-component campsites to small, isolated single components. Although none of the sites is dated, it is likely that the earliest components are several millennia in age, and the general impression is that all components represented by artifacts (site 112X Localities B and C; site 114X) probably date to the earlier portion of the prehistoric rather than the late prehistoric or protohistoric. In fact, one of the surprising results of the survey was the dearth of materials which can definitely be attributed to the protohistoric and early historic period. It is possible that sites of this age may be more difficult to identify as such in this area and perhaps seemingly nondescript sites such as 113X and 115X fall into this category.

It is probable that site 112X represents the largest site in area, as it seems unlikely that other comparable
sized sites in the survey area would have been missed. It is highly probable, however, that smaller sites comparable to site 114X remain to be discovered through more intensive testing techniques than time permitted in 1978.

It is also likely that the survey isolated the general vicinity of the lake area with the highest concentration of sites. Only one major locality with apparently high archaeological potential was not investigated. This is a low spruce-forested bench lying between the Jackfish River and Yohin Lake and approximately 2.5 km southeast of the lake itself. The bench is at roughly the same elevation as the top of the hill at site 112X (greater than 210 metres a.s.l.) and if, as suggested previously, the lake level was formerly several metres higher there than at present, then this bench would have been along the margin of the lake near a major inlet (the Jackfish River). Although time limitations and the difficulty of access to the area from the north end of the lake prevented examination in 1978, it should definitely be inspected in the future given the possibility of finding large sites there.

In addition to demonstrating the archaeological potential of the Yohin Lake area, the 1978 research there also provided a good indication of the general pattern of utilization of the lake. Basically this pattern is one involving intensive occupation of the area immediately surrounding the two deep sinkholes at the northern end of the lake to the almost total exclusion of the rest of the lake. This should not be surprising insofar as this sector provides excellent resources in the form of good year-round fishing, high well-drained ground for campsites, a good source of firewood and several, apparently perennial, freshwater springs. The eastern, southern, and most of the western
shore of the lake, by contrast, are dominated by muskeg, lack of firewood, and good fishing and are therefore unsuitable for habitation.

The 1978 investigation provided sufficient information so that the preliminary archaeological assessment of Yohin Lake can be considered essentially complete. This is obviously a significant area archaeologically, not only in terms of Nahanni National Park, but with respect to the entire lower Liard-upper Mackenzie area. Although site 112X is the only really extensive site clearly warranting excavation, other sites must be considered as important adjuncts and thus archaeological resource conservation measures should extend to the whole area. In combination, these archaeological resources can provide information relevant to a variety of problems of regional and broader archaeological interest. Of course, much of this information would also be useful in interpreting the park's prehistory. In fact, Yohin Lake is currently seen as the only area in the park capable of making a major contribution in this respect.

Specification of the precise nature of future archaeological work at Yohin Lake is beyond the scope of this report. To be effective, however, any such program must be carefully designed and should integrate excavation, testing, and survey with paleoenvironmental data in an attempt to answer specific questions of broad scientific interest. Such a program obviously requires time for formulation and, especially, for execution; any circumstances causing this process to be rushed would undoubtedly result in the loss of valuable, unretrievable, cultural information.

The archaeological resources of the Yohin Lake area do not currently appear to be under any immediate threat of destruction. Most activity in the area involves winter ice fishing, and associated campsites are not in the immediate
vicinity of significant archaeological concentration. Yohin Lake is seldom, if ever, visited by park visitors during the summer season and, even if this visitation should increase, the most likely camping spots are at the northeast end of the lake away from the major site area around the sinkholes. Thus visitor activity is unlikely to result in site disturbance in the short-term future.
Nahanni Butte Area

Introduction
The Nahanni Butte area includes the region surrounding the confluence of the South Nahanni and Liard Rivers (Fig. 1, Fig. 17). The area to the south and east of the confluence is on the western edge of the Great Slave Plain, with elevation generally below 180 m (600 ft) a.s.l. North and west of the confluence, the ground slopes upwards to Nahanni Butte, whose summit is nearly 1,400 m (4,800 ft) a.s.l. Nahanni Butte forms the southern tip of the Nahanni Range—the easternmost mountain chain in the Liard River region.

According to Ford (1976), advances of Laurentide glaciation submerged the immediate Nahanni Butte vicinity several times during the Pleistocene. The most recent advance occurred during the Classical Wisconsin, fifteen to thirty thousand years ago, as a lobe penetrated to the eastern face of the Liard Range approximately 15 km west of Nahanni Butte.

The Nahanni Butte region is currently the only inhabited portion of the South Nahanni River. The village of Nahanni Butte, with approximately 100 Slave-speaking natives, has been in its present location on the right bank of the South Nahanni River (Fig. 17) since 1958 (Addison and Addison 1977: 38). Since 1974, two wardens and their families have resided at the Nahanni National Park Warden Centre on the left bank of the river.

Historically as now the Nahanni Butte area has always
Figure 17. Noteworthy features in the Nahanni Butte area. (Drawing by K. Walton).
been the main base of operations for the entire Nahanni region. There has been a small Slave-speaking native population, at least on a semi-permanent basis, since the turn of the century or earlier (C. Yohin 1977: pers. com.), and at least a few families have resided more or less permanently in the area since the early 1900s. The main concentration of native cabins has been in at least two separate locations prior to the establishment of the current village. Before 1942 several cabins were in the general vicinity of the current Warden Centre. These burned in the forest fire of 1942, and the remains of most were later washed into the river. After 1942, a few cabins were built 3 km upstream on the north bank of the South Nahanni River, near the mouth of Bluefish Creek.

The first clearly documented trading post in the Nahanni Butte area was built by Jack LaFlair in 1915 (Addison and Addison 1977: 7; Usher 1971). From that time onward there was always from one to three traders operating out of the area. For the most part, all trading posts were on the north side of the river, in the general vicinity of the current Warden Centre (formerly Dick Turner's cabin and store) and have burned and/or washed into the river.

The Nahanni Butte area was one of eight localities examined during the 1977 field season. The archaeological study area was confined to a narrow corridor extending 5 km along the north bank of the South Nahanni River from tip of the Nahanni Butte to the river's mouth. At that time,

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1 An entry in the Addison and Addison chronology (1977: 7) stating that Poole Field started trading at Nahanni Butte in 1906 is probably a compilation error. Later entries in the same chronology indicate that Field first arrived in Nahanni Butte in 1928 or 1930 (Addison and Addison 1977: 9, 17).
the field party found two previously unrecorded sites and visited one locally well known site that had never been systematically examined (Amsden 1978: 91-109). The two newly discovered sites (105X, 106X) were each systematically examined (Amsden 1978: 91-109). The two newly discovered sites (105X, 106X) were represented by only a single artifact, but they did suggest prehistoric use of the area and potential for further archaeological discovery.

More significant were the findings at the third site, 107X. This site is at the exact point of confluence of the South Nahanni and Liard Rivers, a point well known locally as "Chimney Point" because of the presence there until fairly recently of at least three stone chimneys which predated the earliest Euro-Canadian occupation of the area.

The period and nature of the occupation associated with the chimneyed structures is unknown to long term residents of the area. The structures, though not the chimneys, had already collapsed by the time Jack LaFlair arrived in the area around 1914. Bill Clark (Addison and Anthony 1977: 303) thinks they might have been built by "old, old Indians," but several copper kettles found there suggest traders may have been responsible (Addison and Bates 1977: 150).

Surface inspection of this site in 1977 revealed several pit and pit and mound features as well as evidence of recent use of the area. Artifacts recovered from two test pits and the beach surface indicated at least two periods of occupation. The earlier occupation, believed to be associated with the former chimney structures, dated to sometime between 1884 and 1914 and was considered Euro-Canadian in origin. The later occupation was
attributed to local natives during the last few decades. A crude sandstone scraping tool found on the beach suggested the possibility of an earlier, possibly prehistoric, native occupation as well (Amsden 1978: 100-107).

The cultural evidence encountered in the Nahanni Butte area in 1977 was sufficient to suggest that this area warranted additional, more intensive, examination. It was specifically recommended, therefore, that the area be visited in 1978 in order to further test site 107X at Chimney Point and conduct additional surveying for prehistoric remains in the broader study area (Amsden 1978: 128).

Site 107X
The author and two assistants worked ten days in August at site 107X at Chimney Point. The objectives of this research were the preparation of an accurate site map, a more precise determination of the nature of the occupation associated with the former structures at the site, and a more precise determination of the sequence of occupation of the site. In order to achieve these objectives several different lines of investigation were pursued. The methods employed and results obtained from each of these different operations are described below.

Site Mapping
Although a preliminary map of site 107X was made in 1977 (Amsden 1978: 103), it was decided that a more accurate map
was necessary for purposes of the 1978 research. Using datum point 1 from 1977 as the central datum point, a 5 m grid was staked out over the entire area encompassing surface features, an area of 65 m by 25 m. This grid was based on magnetic north and was laid with the aid of a surveyor's site level, tripod, and 30 m tape. Though seemingly a straightforward operation, the task was hampered considerably by the extremely dense bush which it was necessary to clear in order to obtain a line of sight of more than a metre or two. The 5 m grid was then used as the basis for locating subsequent 1 m\(^2\) excavation units and smaller test pits as well as detailed mapping of all surface features, the river bank, and the bank of the two creeks on either side of the main site area (Fig. 18).

Feature Testing
Twelve surface features were identified at site 107X. In addition to a recent campsite, these include three boulder concentrations, five pits and three pits with associated mounds (Fig. 18). In order to gain additional information on the occupation associated with the early structures of the site, it was decided that one of the three pit and mound features should be tested intensively. Because of its size, location, and proximity to other types of features, Feature 3 was selected for this purpose.

Feature 3 is the largest of the pit and mound features (Fig. 19). On the surface it appears as a pear-shaped depression measuring 2.3 m by 1.8 m by 55 cm maximum depth. Immediately to the north of the pit is a rectanguloid mound. The main part of the mound measures 1.8 m by 1.4 m by 53 cm high. A lower tail, up to 28 cm in height, extends another 0.9 m to the north.
Figure 18. Site 107X, site map. (Drawing by K. Walton).
Figure 19. Feature 3 pit and mound, Site 107X, looking northwest. Pit is at foot of standing figure. (Photo by author).
A total of five 1 m$^2$ excavation units was excavated in and around Feature 3. One unit was in the pit, one in the mound, two just to the west of the feature, and one immediately to the east (Fig. 20).

**Pit.** Excavation within the modern surface outline of the pit revealed the floor and lower portion of the walls of the southeast corner of the original pit. The floor occurred at 128 to 133 cm below the modern surface. The lower 30 cm to 45 cm of the walls are vertical and are dug into an easily distinguishable layer of yellow-orange banded silty sand (Fig. 21). The upper portions of the walls were harder to trace, as they appeared to flare out at an angle through a level of coarser sand. The lip of the original pit was not revealed except possibly in the extreme northeast corner of the square, where it was obscured by slump from the adjacent mound.

The pit contained 90 cm to 120 cm of fill. This was covered over the entire unit by 2 cm to 13 cm of modern sod and litter. Just beneath the sod near the northern margin of the pit were small patches of a yellowish silt. The remainder of the fill exhibited complex stratigraphy but can be seen as consisting of four basic levels (Fig. 21).

The top level, up to 60 cm thick, was rubble, consisting of a brownish-grey silt interspersed with organic debris, pebbles, numerous larger boulders, and large slab-like sandstone rocks unlike any encountered on the river beach. Many pieces of wood occurred in this level. Most of these were small—50 cm or less—and some were chopped and charred suggesting firewood; but a few were longer, and nails were found in one suggesting structural wood. Of the many animal bones recovered from the rubble, most were unburned and most were from small mammals, with muskrat being the predominant species represented. Artifacts, which are described in more
Figure 20. Excavations in Feature 3 area, Site 107X. (Drawing by K. Walton).
Figure 21. Profile of unit N. 4 E. 7 north wall, Feature 3 pit, Site 107X. (Drawing by K. Walton).
detail in a later section, were not as abundant as in other levels of the pit and consisted primarily of nails and tin fragments, although the barrel of a percussion cap muzzle loading rifle, the top of a Dominion Cartridge primer box, and a small glass bead were also found.

The lower half of the pit fill consisted of up to 64 cm of fine grey sand and silt interspersed with a few large boulders, but no smaller pebbles or sandstone slabs. This material gives the appearance of being sterile, but a few bones and artifacts were found as deep as 10 cm above the pit floor. The artifacts include a few nails, two brass cartridge cases, and eight glass beads. The only wood found in this level was a log, 12 cm in diameter and 55 cm long, which had been cut to a point at one end. It was found in a vertical position with its point at the bottom of the pit and the remainder of the log protruding upward through the sand and into the overlying rubble.

Extensive burned areas occurred in two separate levels of the pit (Fig. 21). Both consist of reddish burned earth mixed with ash, small pieces of charred wood and wood chips, and tiny burned bone fragments. Boulders, as well as sandstone slabs, occurred in each. The upper burned area is embedded in the rubble area and varies in thickness from 11 cm to 45 cm. It is concentrated more towards the northern end of the pit and contained a greater density of artifacts than the surrounding rubble. These include one brass cartridge case, one glass button, several nails and wood screws, strips of tin, and tin fragments.

The lower burned zone separates the rubble from the lower sand levels in most of the excavation unit, but it is 10 cm to 15 cm below the top of the sand at its margins. This level, which is 5 cm to 28 cm thick and is more concentrated towards the western end of the pit, contained a denser concentration of artifacts than any other level.
These artifacts included a tin candle mold, gun flint, a wad of lead foil, several large fragments of clear plate glass, tin strips, and one nail. At the very base of the level, resting on the underlying sand, were a large, rectangular metal pan and a large sheet of tin.

Inasmuch as only about one-third of the pit was excavated and the stratigraphy of the fill was complex, it is presently difficult to interpret the function of the pit. On the one hand, it appears that the pit was used for refuse disposal. This is suggested by its size, the presence of two separate burn zones, the nature of the artifacts, and the presence of several pieces of what appears to be firewood. On the other hand, the presence of longer, unburned logs—including one which was notched and one pointed and placed vertically into the pit—as well as numerous nails and tin strips with screws or nails, is suggestive of a structure. The original nature and function of such a structure, as well as its relationship to the refuse in the pit, is currently totally obscure. Answering these questions would probably require total excavation of the feature.

Mound. In order to determine the composition of the Feature 3 mound a 1 m² unit (N. 5 E. 6) was excavated in the southwest corner of the mound (Fig. 20). Although a portion of the pit extends into the southern part of this unit, the mound was excavated only to the level of the original ground surface. Thus the pit fill in this unit was not tested.

The mound extends to a maximum height of 63 cm above the original ground surface and is covered by a thin layer of modern sod and litter (Fig. 22). Beneath the sod, most of the mound is a mixture of yellowish-grey fine silt, coarser silt, and sand, with numerous pebbles. Near its centre, the mound consists of a pile of rocks. The lower layer of this pile is comprised of large round boulders,
Figure 22. Profile of unit N. 5 E. 6 north wall, Feature 3 mound, Site 107X. (Drawing by K. Walton).
while the upper portion contains flat sandstone slabs of the type found in the pit rubble. The soil around the latter is stained reddish-orange, probably a result of weathering of the rocks rather than baking.

Although no artifacts or other cultural material were found in the mound material itself, a curious feature was observed on the original surface in the north wall. This feature consists of a small flat rock, surrounded by 2 cm to 3 cm of grey sand, adjacent to a 12 cm wooden stick or post embedded vertically into the ground's surface. The fine silt above and to the west of the rock is stained reddish brown, and a 3 inch wire nail was found in this material 10 cm above the rock. The function of this feature is currently unknown.

The most likely explanation for the mound is that it represents the spill from the original excavation of the adjacent pit. The neat arrangement of rocks near the centre of the mound is curious, however, and is not readily explained. The small stone and wood feature on the original ground surface apparently predates the mound, which subsequently covered it.

Adjacent Area. In an attempt to locate evidence of former structures, as well as to obtain additional information relevant to Feature 3, three 1 m² units adjacent to the feature were excavated. Two of these (N. 5 E.3, N.5 E4) were contiguous and are one metre west of Feature 3, while the other (N. 4 E. 9) is one metre to the east of the pit (Fig. 20).

The easternmost excavation unit proved to be the most productive of cultural material. Five stratigraphic zones were recognized there (Fig. 23). The modern sod zone is thinly developed, varying from less than 1 cm to 2 cm in thickness over most of the unit. Beneath this is 3 cm to 7 cm of brown silty sand with some organic detritus. Cultural
LEGEND

- Modern sod-litter
- Reddish-tan fine silt
- Brown silt/sand
- Fine grey sand
- Red/black silt, burned twigs
- Yellow-grey coarse sand & gravel
- River rock

Figure 23. Profile of unit N. 4 E. 9 south wall, Site 107X. (Drawing by K. Walton).
material was found primarily in this level. A few patches of mottled reddish-tan fine silt occurred between this level and the overlying sod. These patches were larger on the side nearest the pit and probably represent pit spill. Level 3 consists of 5 cm to 15 cm of fine grey sand which was devoid of cultural material except for a few items found in the uppermost portion. Level 4 is 5 cm to 10 cm thick and contains red and black silt with many small burned twigs, but no cultural remains. Below this is sterile yellow-grey coarse sand and gravel interspersed with river boulders.

Cultural material was confined to Level 2 and the very uppermost portion of the underlying sand. It consisted of cut logs, artifacts, and numerous bones. One log measuring 8 cm by 18 cm was just beneath the modern surface (Fig. 20). It was almost completely rotted away and may be natural and post-occupational. Another log lay beneath this one at the base of Level 2. It measured 80 cm by 15 cm by 6 cm thick and was sawed straight at both ends. A nail was found adjacent to, but not in, this log. A 2 in. square nail and a 2 ½ in. round nail were both found in an organic stain--probably a decomposed log--in Levels 2 and 3. Other smaller pieces of sod or cut wood were found near the longer cut piece. Taken in combination, the pieces of wood suggest this excavation unit is on or near the margin of a former structure of some sort.

This interpretation is supported by the density and nature of the artifacts recovered. Predominant among these are seven brass cartridge cases (.38-55 and .44-40 cal.), but there were also several pieces of structural hardware, including fragments of what appears to be a metal door lock. Other artifacts include two cut leather fragments, a fragment of a plastic instrument key or gaming piece, two small glass beads, a lump of quartz, and a small crystal of gypsum.
More than 125 bones and bone fragments were recovered from Level 2. These bones were found distributed throughout the unit. Almost all of these were small mammals or birds, and muskrat appears to predominate.

In contrast to the above-described excavation unit east of Feature 3, relatively little was found in the two squares west of the feature (Fig. 20). In the westernmost square, three nails and two bone fragments were found at the base of the modern sod, immediately overlying a level consisting primarily of river pebbles and boulders. A large humified log and many burned wood fragments, both probably non-cultural, were also in the sod.

In the eastern square closer to the Feature 3 pit, an 8 cm to 19 cm thick layer containing humified logs was encountered just beneath the modern sod zone. Beneath this was 2 cm to 9 cm of grey sand and silt, probably spill from the pit. Under this spill was a buried humus level 5 cm to 10 cm. thick in which was found a 4 in. square iron spike, two 3 in. square nails, and four large mammal bone fragments. A .22 cal. shell found a few cm above the nail appears to be intrusive. Beneath this buried humus zone was sterile sand, gravel and boulders. Although it is not clear whether the humified logs are natural or cultural in origin, it should be noted that they are separated from the lower cultural level by several cm of pit spill.

Occupational Sequence Testing
Most of the 1978 field work at site 107X was devoted to mapping the site and testing in and around the Feature 3 pit and mound. Some time was spent, however, in additional testing in an attempt to clarify the occupation sequence and determine the areal extent of the site. To this end,
two 1 m² excavation units were excavated in the western part of the site, and several smaller test pits were placed around the western and northern margins.

One of the 1 m² units (S. 34 W. 9) is less than 3 m from the river bank (Fig. 18). It was excavated to a depth of over 60 cm in order to reveal the natural stratigraphy as well as to isolate the stratigraphic position of bones eroding from the bank nearby. Inasmuch as a chi-tho (stone slab scraper) was found on the beach below in 1977, this general area was also felt to be a good place to test for the presence of prehistoric or early-historic native occupations of the site.

Figure 24 illustrates the natural stratigraphy in this unit. Basically this consists of 6 cm of modern sod overlying up to 24 cm consisting of a series of buried organic horizon alternating with flood-deposited silt layers, which in turn overlie a relatively thick deposit of sand and, finally, a deposit of fine silt/clay. The silt deposits attest to the fairly regular flooding of the bank and are useful for separating more recent occupations of the site.

Cultural material was found in two separate levels. Three wax candle fragments, a prune pit, and several small mammal bones and fragments were found in the modern sod and litter zone. These probably relate to local native use of the site within the last few decades. The second culture-bearing level was Level 5, a 4 cm thickness of buried humus 11 cm beneath the modern surface and just below the uppermost sand/silt layer (Fig. 24). Cultural remains consisted of several large and small mammal bones and fragments and numerous axe-cut wood chips. No artifacts were recovered. This is apparently the same stratigraphic level from which bones are eroding along the river bank, and it is tentatively identified as being associated with the occupation of the
Figure 24. Profile of unit S. 34 W. 9 north wall, Site 107X. (Drawing by K. Walton).
historic period structures.
A second 1 m² excavation unit (S. 22 W. 21) is between pit and mound features 9 and 10, about 5 m southwest of the former (Fig. 18). The natural stratigraphy was roughly comparable to that of S. 34 W. 9 described above (Fig. 24), but it was more compressed, with sand occurring as high as 7 cm below the surface. The cultural stratigraphy was also similar, as two separate occupations were represented. The modern sod and litter contained burned and unburned small mammal bones and fragments, but no artifacts. In the brownish silty sand beneath the modern sod were found a square nail fragment and two small gypsum crystals similar to that found near Feature 3. This level also contained several large fragments of ungulate long bones. A moose or caribou humerus fragment, which occurred in a discontinuous thick silt deposit separating this level from the sod zone, is probably associated with this earlier occupation as well.

As a means of determining the spatial extent of this site, two series of small test pits were excavated along the southwest margin of the site area and on a narrow ridge to the north. In four of the eight test pits along the southwest margin (Fig. 18), bone fragments were found in levels beneath the modern sod zone. This suggests that the earlier historic occupation of the site extended to the west bank and below, but apparently not very far north of the features. All of the test pits on the narrow ridge to the north were devoid of cultural remains.

Artifacts
In addition to furnishing information relevant to the features and occupational sequence, the 1978 investigation at site 107X also provided a substantial collection of artifacts. With the exception of the candle fragments and the .22 shell
from the sod zone; all are from contexts associated with the earlier historic period occupation of the site. All but a very few came from the Feature 3 area excavations, primarily the pit, but the excavation unit to the east (N. 4 E. 9) also yielded a relatively dense concentration. Although several tin can fragments (from the pit) and a few unidentifiable fragments of metal were found, the bulk of the collection consists of five categories: structural hardware, firearms and ammunition, clothing and personal adornment, household equipment, and a few miscellaneous items.

**Structural Hardware.** The largest category, comprising over half of the collection, is structural hardware. There are 30 nails and spikes in a broad variety of sizes ranging from 1 ½ in. to 6 in. in length. Both square and round wire varieties are represented, with the latter predominating. There are also two small wood screws. Five tin strips were recovered from the pit. All are 5/8 in. wide and have regularly spaced holes for nails or screws which were found intact in two specimens. Three larger sheets of tin were also found in the pit. Seven fragments of what appear to be a metal door lock were recovered from the excavation unit to the east of the feature. Seven large fragments of clear plate glass from the pit are tentatively assigned to this category as there is no evidence of coating, as for a mirror.

**Firearms and Ammunition.** The second most abundant category, and perhaps the most interesting, consists of 19 artifacts associated with firearms or ammunition. In addition to the previously mentioned .22 cal. shell, which is probably intrusive, 14 brass black powder cartridge cases were found. There are four W.R.A. .38-55 cal., eight D.C. Co. .44-40 cal., one W.R.A. Co. .32-20, and one U.S.C. Co. .45-70 cal. from the riverbank slump. Several single items in this category were found in the pit. This includes the barrel of a .55 cal. percussion cap muzzle loading rifle. The barrel is 45 cm
(18 in.) long, though the muzzle has obviously exploded. It is in two sections; the proximal half is octangle while the distal end is round. The word "London" is engraved or stamped on the barrel; other markings are obliterated by rust pitting. Other items from the pit include a gun flint showing evidence of use (crushing) on three of its four edges; the lid of a round copper primer box with intact label, indicating the contents were Dominion Cartridge Company No. 1½ copper primers; and a piece of lead which appears to be waste from a bullet mold.

Taken together, the artifacts in this category provide the most complete evidence of a single type of activity carried out at the site. There is direct or indirect evidence for the presence of at least six different firearms of at least three different basic types—black powder cartridge, percussion cap, and flintlock. With the possible exception of gunpowder, which may have been contained in one of the tin cans found in the pit, a complete selection of items necessary for reloading cartridges is represented.

Clothing and personal adornment. The third category of artifacts consists of items relating to clothing or personal adornment. Eleven glass beads were found in the pit and the unit to the east. All are very small, round, and vary in colour from white to light pink. They appear to be of tube type construction and would thus be classified as types IIa11, and IIa58 according to the Kidd system (Kidd and Kidd 1970). The three buttons recovered were all of different materials. One was of white glass, one of shell, and one of metal. One of the two fragments of leather is cut and has two buckle holes, while the other is attached by a brass rivet to a metal D ring and is reminiscent of a suspender strap.

Household Equipment. Only two of the artifacts, both from
the pit, are clearly recognizable as being household maintenance items. One is a crushed tin three tube candle mold with one tube missing. The other is a roughly rectangular tin pan measuring 38 cm by 20 cm by 5 cm deep. Due to its badly deteriorated condition, it was measured in situ and only partially retrieved.

Miscellaneous Items. The final artifact category consists of six items whose functions are not clearly identifiable. Perhaps the most interesting of these is a small, flat piece of ivory-coloured plastic with a grained pattern. The material is a cellulose derived plastic, probably cellulose nitrate, first produced in the mid-nineteenth century (Timmins 1967: 668; Scott and Roff 1971). An incised horizontal line and two indented dots suggest that this specimen is a fragment of a gaming piece or accordion (or piano?) key. Fragments of crystal and rock were found in clear association with the main occupation layer in two widely separated excavation units. Three appear to be gypsum, while the fourth is quartz (L. P. Stene 1979: pers. com.). None of the crystals is altered, and no function is immediately apparent. The most plausible explanation for their occurrence in the site is that they were collected in the surrounding area as specimens. A wadded piece of lead foil was recovered from the pit. Like the other artifacts in the miscellaneous category, its function is obscure.

Discussion
The 1978 investigations at site 107X were disappointing in the sense that less testing than anticipated was accomplished, and the results of this testing failed to provide conclusive answers to some of the questions posed. Nevertheless, a substantial body of useful additional information was
collected—enough to allow at least a preliminary assessment of the site's significance. For the most part, this information confirms and to some extent refines the conclusions of the 1977 investigation with respect to the occupational sequence, dating, and general nature of the site.

The available evidence indicates that site 107X was occupied during two distinct periods during the past 100 years or so. The most recent occupation period includes the last few decades, and occupations of the site during this time are fairly confidently attributed to natives of the Nahanni Butte village and surrounding area. Evidence for these occupations is confined to the surface (e.g. Feature 1) and within the modern sod-litter horizon. This evidence has been found on all parts of the site tested to date and consists primarily of manufactured items and small mammal bones and fragments. Some of the isolated pit features on the site, so far untested, may also be associated with this period.

Materials related to the earlier occupation period are associated with the pit and mound features and soil horizons immediately beneath the modern sod zone. This was both an intensive and extensive occupation, as material remains are found in relatively dense concentrations in all excavation units. These were distributed throughout the site area and consist primarily of large mammal, small mammal and other bones and wood chips. Closer to the features are black powder cartridge cases and other manufactured items as well as charred and uncharred wood.

The best indication of the age of this occupation is provided by the black powder cartridge cases found in excavations in two separate areas of the site and eroding from the riverbank. Cartridges of .38-55 cal., the most recent of the four calibers represented, were first
manufactured in 1884 (Barnes 1972); therefore this occupation must postdate that year, probably by at least a few years. According to Gus Kraus (Addison and Bates 1977: 150), the site was abandoned by the time Jack LaFlair arrived in the area (ca. 1914). This leaves a 30 year time span during which the site could have been occupied. Given the general nature of the remains and the fact that none of the area's old timers—native and non-native alike—knows their origins (Addison and Bates 1977: 150), it seems likely that this occupation occurred towards the earlier part of this period—perhaps during the 1890s.

Although the dates of the earlier occupations can be bracketed with some precision, the precise nature and function are more enigmatic, as no historical documentation has been encountered to date. The density of the faunal remains and the variety of firearms represented suggest a single, intensive occupation by several individuals over a period of up to a few years. Alternatively, it is possible that more than one occupation is represented, but these could not span a period of more than several years given the homogeneity of the remains and their restricted depositional context. In any event, evidence of former structures, though indirect at this stage, suggests that they were rather substantial and that this was probably more than a temporary encampment.

All the evidence accumulated to date indicates that the principal occupants were not Indians—at least culturally. All artifacts and features are of types associated with the Euro-Canadian way of life at the period surrounding the turn of the twentieth century. This does not preclude the possibility that natives occupied the site during or immediately prior to the non-native occupation; there was undoubtedly a substantial native population in the area at
the time. It should be noted, however, that no artifacts definitely ascribable to native origin have been recovered in direct association with this occupation level, though a sandstone cobble scraping tool ("chi-tho") was found on the river beach in 1977. Implements of this type are still made and used locally on occasion and thus could well be associated with the more recent occupation period at site 107X.

The purpose of the principal occupation of the Chimney Point site (i.e., the nature of activities carried out there) is as yet unclear. The bulk of the artifact collection can be attributed to basic subsistence (hunting) and household maintenance. There are only hints of more specialized activities. Several copper kettles found on the site by Jack LaFlair's son ca. 1940 led Neily (1977) to suggest a trading function. The preponderance of muskrat bones found in and near the Feature 3 pit suggests that trapping may have been at least one major activity. The several crystal specimens could possibly represent prospecting. This combination of activities is characteristic of almost every Euro-Canadian who has resided in the Nahanni Butte area for any length of time since 1914, so it would not be surprising if it characterized this earlier occupation as well. Verification of this speculation, however, is currently impossible. Additional intensive excavation of major areas of the site is necessary before this and related questions can be answered.

On the basis of currently available evidence, the late 19th century occupation period appears to be the earliest represented at site 107X. In spite of a concentrated effort to identify prehistoric or early historic aboriginal components on the site, none was found. Given the general distribution of isolated prehistoric remains in the Nahanni Butte area and the suitability of Chimney Point as a campsite, it is
still possible that one or more prehistoric components might be present. It is highly unlikely, however, that any such component would have gone undiscovered in the intensive testing of the site if it were represented by more than isolated artifacts or bone fragments. For this reason, the remaining possibility of finding significant cultural remains predating the main late 19th century occupation of the site should not be considered a major factor in assessing its archaeological potential.

Recommendations
Because the earlier component of site 107X may represent one of the earliest Euro-Canadian occupations of the Nahanni drainage, and because it represents a period in the history of the western Northwest Territories about which relatively little is known (R. Janes 1978: pers. com), the site should be preserved for future, more intensive, excavation. Although cultural remains are currently eroding from the river bank and this erosion will probably ultimately result in the destruction of the site, the main body of the site does not appear to be in immediate danger. For this reason, emergency salvage excavations are not considered as being necessary, but detailed investigation should not be postponed indefinitely. Such investigation would undoubtedly provide materials of considerable use in interpreting the history of the Nahanni area and would thus benefit the Nahanni National Park interpretation program. It should be clearly noted, however, that the site is well outside the boundaries of Nahanni National Park and, therefore, Parks Canada responsibility would appear to be limited to ensuring that their own activities do not endanger the site and advising the appropriate N.W.T. authorities of its significance.
Other Cultural Remains

Although site 107X was the primary focus of attention in the Nahanni Butte area, as much time as possible was devoted to site survey. A total of four man-days was spent in surveying the 2 km strip along the north shore of the South Nahanni River between Chimney Point and the N.N.P. Warden Centre (Fig. 17). This included inspection of the river bank as well as the series of terraces above it to approximately 200 m in from the shore. Additionally, the immediate vicinity of the Warden Centre was examined fairly intensively in order to isolate the source of bones eroding from the river bank there. The survey resulted in the discovery of isolated flakes in two localities. Each of these was assigned a provisional site number.

Site 116X
Borden Grid: JgRu
Quadrangle: 95G/3 "Nahanni Butte"
Military Grid Reference: 10VDC817685

Location. Site 116X is located on a high truncated terrace approximately 30 m above the South Nahanni River, 750 m upstream from Chimney Point (Fig. 17). Cultural remains were found at the tip of a narrow finger-like ridge, only about 6 to 8 m wide at this point, bounded on either side by a steep ravine. Vegetation in the immediate vicinity consists of immature poplar and willow. The site provides an excellent view of the entire South Nahanni-Liard confluence area to the south.

Description. Cultural material was limited to two items found in a test pit approximately 2 m from the southern edge of the ridge. One of these is a small unmodified flake of mottled grey-black chert. The other is a fist-sized quartzite cobble with some evidence of wear indicating use as a possible
hammerstone. Both items were approximately 5 cm beneath the ground surface in a thin layer of reddish-orange silt, between the modern sod and litter and a thick deposit of fine yellow sand. Additional testing in the immediate vicinity failed to yield other cultural remains.

Discussion. Due to the nature of the materials recovered, little can be said about the site except that it probably dates to the prehistoric or early historic period. The location of the site and the artifacts themselves suggest that this may have been a lookout site/chipping station rather than part of a habitation site.

Recommendations. Site 116X is best considered as representing an isolated find. No further archaeological investigation is warranted.

Site 117X

Borden Grid: JgRu
Quadrangle: 95G/3 "Nahanni Butte
Military Grid: 10VDC817685

Location. On the same high terrace as site 116X, 90 m upstream (840 m upstream from Chimney Point) are three recent graves of former Nahanni Butte residents. These graves are on a narrow linear knob behind which the ground is lower, relatively flat, and supports a stand of mature and immature poplar with scattered willows and rosebushes. Site 117X is in this area, approximately 60 meters north of the graves which are, in turn, only a few meters from the terrace edge (Fig. 17).

Description. Two unmodified flakes of siliceous siltstone were recovered from a single test pit. They were found at the top of a level of brown silt, 11 cm beneath the modern surface. Additional testing throughout the immediate and general vicinities failed to result in the discovery of
Discussion. The flakes probably date to the prehistoric or early historic period. Although the general area appears to represent an excellent site for a habitation camp, the failure to find any further cultural evidence suggests that if such a camp existed here, it was not extensive. The site is best considered, therefore, as representing an isolated occurrences.

Recommendations. Site 117X does not warrant further archaeological investigation. Given its proximity to the recent graves, such activity would not be advisable in any event.

NNP Warden Centre
While at Nahanni Butte, a considerable quantity of bone was observed eroding from the riverbank at the Nahanni National Park Warden Centre, which during the summer was cut back 3 to 5 m. Close inspection of the bank, and several test pits, indicated that the cultural remains occur in and just beneath the modern sod level along a 30 to 50 m stretch of the bank. Most of these remains are fragments of large mammal bones, many cut with a saw. The only artifacts found were two fragments of a phonograph record. A badly weathered moose metapodial fleshing tool, found by one of the Park Wardens while bulldozing near the adjacent helicopter pad during the winter, is probably also associated with this level.

The bones and other debris currently eroding from the bank are undoubtedly of relatively recent origin. Several native cabins were located at this site until they burned in the forest fire of 1942 and their remains subsequently fell into the river (Addison and Bates 1977: 152-153). In
addition, one or more traders resided in the area within the immediate vicinity from the late 1920s to the late 1960s, thus they probably accounted for some debris as well. Due to the recent origin of this deposit and the fact that most of it has already been destroyed, no further archaeological investigation is considered necessary in spite of the ongoing erosion. It would be advisable, however, for park personnel to continue to monitor the bank, particularly the levels beneath the modern sod zone in the event that prehistoric artifacts or other significant remains should be exposed.

Archaeological Assessment of the Area

Nahanni Butte was the only area investigated in 1977 which demonstrated sufficient archaeological potential to justify more intensive excavation. For the most part, this additional research tends to reconfirm and amplify the previous year's conclusions rather than provide any significant new discoveries.

While no prehistoric sites of significant size have been discovered, isolated evidence of prehistoric and early historic occupations occurs all along the terraces on the north bank of the river. Additional survey in the area would probably reveal further remains of this nature but, given the intensity of survey to date, it is unlikely that larger sites worthy of excavation will be discovered. These sites have probably fallen victim to active bank cutting over the centuries or are so deeply buried under flood deposited silt that they are unlikely to be found.

A similar situation characterizes the archaeological record of the historic period. The area has been continuously occupied since at least the turn of this century, and many
cabins are documented. Almost all of these, however, have been destroyed by forest fires and/or river bank erosion. One major exception is site 107X at Chimney Point. This is definitely a significant site. It is relatively undisturbed, and it provides evidence of perhaps one of the earliest non-native occupations of the area. On this basis, the site warrants further excavation and should therefore be protected from any future development in the area.
Introduction
The overriding objective of the archaeological assessment program for Nahanni National Park was the development of an initial information base to be used in managing and interpreting the park's archaeological resources. In this chapter, the results of the 1977 and 1978 field research are combined with data from other sources to form a brief synthesis of current knowledge of the prehistory and history of the park and vicinity as reflected in the archaeological record. This is intended as a basic outline for use in interpretation. Before presenting this synthesis, however, it is necessary to clarify what is here meant by "archaeological resources", how they may contribute to interpretation, and the adequacy of the archaeological resources in Nahanni National Park for this purpose.

In simplest terms, an archaeological resource is any material manifestation of former human activity. The totality of these resources for any given area, time period, etc. constitute the archaeological record. As defined here, an archaeological resource need not necessarily be an actual artifact but could be a bone fragment, campfire ashes, cut logs, a hole in the ground, or even a stain in a soil profile. In fact, the archaeological record may encompass such a variety of types of items that no comprehensive list of these can be compiled. It should also be noted that the archaeological record is not restricted to material
representing a particular time period or culture. For certain purposes, yesterday's garbage in Winnipeg may be just as important as an archaeological resource as a two million year old stone tool. In essence, then, the archaeological record is best considered not as informative about a particular subject but as a special type of information relevant to a variety of subjects. The only restriction is that for proper designation as an archaeological resource, an entity must be a material manifestation resulting from human activity.

Archaeological resources can contribute to a program of interpretation in two ways. First, when properly investigated, they provide a valuable source of information about lifeways during the prehistoric and historic past. This information, of course, is basic to the preparation of publications, exhibits, tours, and virtually every aspect of interpretation. The degree to which archaeological resources can contribute to our knowledge of the past and the specific types of information they provide varies to some extent with culture and time depth. Even well documented sites of recent date, whether of Euro-Canadian or native origin, can provide information on subsistence, structures, and other details which are often neglected in historical documents and personal accounts. In this case, the archaeological record can be seen as providing an important supplement to historical methods. For the late prehistoric period, the bulk of our knowledge comes from archaeology, though often supported by ethnographic and ethnohistoric data. Once one enters the realm of earlier prehistory, the archaeological record is essentially the only source of information. It is for this reason that archaeology is often equated with prehistory. For the reasons given above, however, this is not always the case in reality.
Certain archaeological resources can also contribute to interpretation in a more direct way as actual demonstrations or exhibits. There are basically two types of archaeological exhibit. One of these consists of on-site nonportable features such as structures, earthworks, pictographs, etc. Although these features may be photographed or reconstructed elsewhere, interpretation is usually enhanced by presenting them in the context of their original environment. More frequently encountered are portable items, primarily artifacts, which are more suitably exhibited in museums or visitor centres. Both categories of archaeological remains are effective in illustrating past lifeways only to the extent that they are supported by information documenting their significance in terms of age, function, manufacture, etc. Suggestions for potential interpretive exhibits of Nahanni archaeological resources are presented in a later section.

The extent to which archaeological resources of any region can be interpreted, and the amount and kind of detail encompassed in this interpretation, are largely functions of the amount of previous archaeological research in the region. In the Nahanni area per se, this research has barely begun and is therefore inadequate to support much interpretation. The program of archaeological assessment conducted in 1977-78 was directed towards locating and evaluating the potential of the archaeological resources in Nahanni National Park, relegating the actual realization of this potential to future projects. Thus, while the results of these investigations are useful in answering "where" questions, they are inadequate for dealing with "what" and "when" with any precision, particularly with regard to prehistory. For answers to these types of questions, we must turn to the results of research in the broader Lower Liard-Upper Mackenzie region.

Fortunately, research in this region has been fairly
intensive over the past several years. The main focus has been at Fisherman Lake, 80 km south of Nahanni Butte near Fort Liard (Fig. 25). The area was first surveyed and several sites were excavated by R. S. MacNeish (1953, 1954) in the early 1950s. In the mid-1960s, J.F.V. Millar (1968, 1978: pers. com.), later joined by Gloria Fedirchuk (1970, 1975) initiated a long-term project of survey, testing, and excavation which continued into the present decade. As a result of this research, an archaeological sequence spanning perhaps 10,000 years has been defined, and a vast collection of artifacts and other cultural material has provided a solid basis for interpreting changing cultural patterns over most of this time span. In fact, the Fisherman Lake region is currently one of the two most intensively examined localities in forested northern North America in terms of archaeology. As such, it serves as a keystone for interpreting the prehistory of the broader Liard-Mackenzie region.

In addition to the Fisherman Lake research, preliminary archaeological investigations have been conducted at Sibbeston, Clì, and Little Doctor lakes, 80 km north of Nahanni Butte (Fig. 25). The results of this work suggest this to be an important centre of prehistoric occupation, with cultural complexes comparable to those of the later portions of the Fisherman Lake sequence (Dice 1973; Millar 1978: pers. com.).

The following brief summary of the prehistory of the broader region which includes Nahanni National Park is based largely on the above-mentioned research in combination with two more general studies of the Mackenzie-Liard area (Cinq-Mars 1973; Millar and Fedirchuk 1975). The results of the preliminary investigations in Nahanni National Park are used to provide as much detail specific to the area as
Figure 25. Southwest MacKenzie District, N. W. T., showing sites and areas mentioned in the text. (Drawing by K. Walton).
is currently possible.

Aboriginal Occupations
Currently, the earliest evidence of man in the New World comes from the Old Crow Basin in the northern Yukon Territory. This evidence, which so far consists primarily of several bone artifacts and hundreds of modified bone fragments of Pleistocene mammals, indicates that the first human migrants from Asia arrived at least 30,000 years ago (Bonnichsen 1978; Irving 1978; Morlan 1978). Active field research programs are still in progress in the area, and the most recent results (unpublished) suggest that this date may ultimately be extended to more than 50,000 years ago. At this general time level during the later Pleistocene, most of Canada was inundated with glacial ice and was therefore inaccessible to human occupation. The Old Crow area, however, was at the eastern edge of a vast unglaciated refugium, known as Beringia, which included much of the northern Yukon and Alaska, the Bering Land Bridge (then exposed), and eastern Siberia. Recent paleo-environmental studies indicate that instead of a barren waste land, as one might suppose, Beringia was a lushly vegetated steppe-tundra supporting vast herds of large Pleistocene mammals.

The relevance of this to the Nahanni area lies in the fact that an ice-free corridor extended from Beringia southward at least as far as the Nahanni area, and probably all the way to the unglaciated portion of North America (Prest 1969; Prest et al. 1967). Although the latter point, due to fragmentary evidence, is still a matter of some controversy, it is nevertheless clear that most of the Nahanni area was free of ice throughout the later Pleistocene (Ford 1976). The implication is that the area could have
been occupied as early as 30,000 years ago or more and might have been on the route of the first migrants to the more southerly regions of the New World. It must be emphasized, however, that there is currently no evidence whatsoever from the Nahanni region of human or mammal remains dating to the Pleistocene, and the rugged mountainous terrain in the unglaciated portion may well have served as an impedence to travel.

In fact, there is currently no substantiated evidence of Pleistocene occupation in the entire Mackenzie corridor. The only possible candidate is a series of a few crude core and flake tools from Fisherman Lake, reportedly dating from the period of ice retreat in the area about 12,000 years ago (Millar and Fedirchuk 1975: 9). The dating of this material is ambiguous, however, and is not accepted by many archaeologists (cf. Cinq-Mars 1973). For the present, therefore, the presence of Pleistocene man in the Mackenzie corridor remains an enigma.

The earliest of the post-Pleistocene materials so far discovered in the Western Mackenzie district are two complexes at Fisherman Lake. The first of these, termed Cordilleran, probably dates to about 7,000 B.C. or earlier on the basis of stratigraphy (Millar and Fedirchuk 1975: 9). It is represented by large, leaf-shaped knives or spear points, large expanding-stem end-scrapers, multiple tip gravers, and flake burins. The second complex is associated with a radiocarbon date of 6,700 B.C. (Millar 1968: 316) and is variously termed Sandy Lake (MacNeish 1954) or Stemmed Point (Millar 1968; Millar and Fedirchuk 1975). Straight stemmed spear points, large side-and end-scrapers, and burins are the main diagnostics. Many of these artifacts (as well as some in later complexes) are made of a welded tuff material
which outcrops in the Tertiary Hills, some 475 km (300 mi.) to the north near Fort Norman (Cinq-Mars 1973). This suggests an active system of trade even at this early date. The area was probably not yet forested at this time, and hunting of large game such as bison and elk is the inferred subsistence strategy.

Assigned to the period between approximately 6,000 and 4,000 B.C. are several complexes and isolated assemblages whose primary distinctive characteristic is the presence of large and medium-sized lanceolate spear points. Materials believed associated with this tradition have been found along the Mackenzie corridor as distant as Great Bear Lake. Primarily because of the lanceolate points, which are similar to those found somewhat earlier in the Plano tradition of the Plains, MacNeish (1964) labelled this tradition the Northern Plano. MacNeish and several subsequent authors (cf. Millar 1968; Millar and Fedirchuk 1975) suggested that the Northern Plano represented a northward migration by the early plains bison hunters. Because of the often generalized nature of the northern lanceolate point forms and the relative recent age of their occurrence in several areas, some authors (cf. Clark 1975; Cinq-Mars 1973) are skeptical of any direct relationship with the earlier plains cultures. It does appear, however, that these northern hunters at this time probably continued to specialize in the hunting of large game, including bison, and that the vegetation, if not true plains, was at least more open than today.

Beginning approximately 4,000 B.C. and persisting into the first millennium B.C. are two similar cultural complexes, Pointed Mountain and Julian, which appear to represent the first technological adaptations to a forested environment. Far more components at Fisherman Lake are assigned to these two complexes than any other. The complexes share two distinctive lithic technologies. One of these is a well
developed microblade technology which includes both unmodified and retouched microblades, a variety of core types and several types of burins and gravers. These tools are generally considered to be a technological specialization for working with bone and antler, which are seldom preserved in the acidic boreal forest soil in sites of this age. The gravers and burins would be used for incising and cutting the antler or bone to form a round shaft, and microblades or fragments could then be inset into grooves in the shaft to produce a projectile point or knife with a sharp cutting edge (cf. Anderson 1968: 36).

Microblade industries similar to that in the Fort Liard area have been encountered at only a few sites in the Mackenzie Valley and at none to the east. They are fairly common, however, in the interior Yukon Territory and Alaska and are often associated with medium side-notched points and other tool types found at the Fort Liard sites. This led MacNeish (1964) to propose a Northwest Microblade Tradition as a possible ancestor to later Athapaskan cultures in northwestern North America. Subsequent research has shown that microblade technologies occurred over a considerable timespan (ca. 8500 B.C. to A.D. 1000) and are associated with a disparate variety of assemblages. For this reason, microblade industries are probably best viewed as being a common element of several regional traditions at different points in time rather than a single unified tradition (Clark 1975, Irving 1971).

The second technology common to the Pointed Mountain and Julian complexes is the Julian technology, characterized by the use of a certain raw material (Julian chert) and distinctive techniques of core preparation and flake removal (Fedirchuk 1970, 1975). Most of the Julian artifacts are core tools, and they are usually bifacially prepared. The
industry consists primarily of what are interpreted as wood-working tools such as axes, gouges, wedges, and spokeshaves (scrapers with a concave working edge). At Fisherman Lake, Julian artifacts are usually associated with extensive workshop areas consisting of retouched and unmodified flakes and detritus.

Although the limited collections of stone tools from Nahanni contain few diagnostic artifacts permitting comparison, at least one assemblage possesses characteristics of the Julian technology. This is the collection from site 112X (especially Locality C) at Yohn Lake. The flakes, particularly, and the few finished tools seem to resemble the Julian material more closely than any other known complex. This is significant insofar as Julian technology, unlike the microblade industry, has so far been identified only at Fisherman Lake. Radiocarbon dates associated with the Julian materials fall in the range of 3600 to 500 B.C. (Millar and Fedirchuk 1975: 11), thus suggesting a very general time frame for the site 112X component, which lacks more precise dating.

By this time, the environment in the southwest Mackenzie District, was probably essentially similar to that of today. A fairly generalized subsistence pattern, similar to that of more recent time, is also inferred. This includes hunting of moose, woodland caribou, and a variety of smaller game, and probably fishing as well.

The period from approximately 200 B.C. to A.D. 500 is represented by sites of the Mackenzie complex at Fisherman Lake, Sibbeston Lake, and Stewart Lake south of Fort Norman (Cinq-Mars 1973; Dice 1973; Millar and Fedirchuk 1975). This complex is characterized by straight-based bifaces, a variety of medium-sized lanceolate and stemmed points, and various artifacts made from coarse lithic materials such as quartzite, sandstone, etc. Included in the latter category
are *chi-thos*, large stone slab hide scrapers which have come to be nearly synonymous with northern Athapaskan cultures. Sites assigned to this complex have also yielded bone and antler artifacts, including barbed leisters and fish gorges, the first direct evidence for fishing. The Mackenzie complex appears to be essentially transitional between the earlier Julian-microblade tradition and the succeeding complexes attributed to Athapaskan speakers, or Dene (Millar and Fedirchuk 1975: 11). Indeed, some researchers (Clark 1975; Cinq-Mars 1973) view it as an early representative of the Athapaskan continuum.

From about A.D. 500 until the time of the first Euro-Canadian contact in the late 18th century, there is fairly clear evidence indicating that the southwestern Mackenzie District was inhabited by ancestral Dene, or Athapaskan speakers. The archaeological complex representing this period is termed Spence River (MacNeish 1954; Millar 1968) after the original type site at the mouth of the Spence River 60 km up the Mackenzie from Fort Simpson. Similar materials have been found over a broad area from Fisherman Lake to Stewart and Blackwater lakes in the north. It is obvious from ethnographic and other evidence that the bearers of this tradition utilized at least portions of the Nahanni area, and the complex may well be represented there by any of the several sites discovered in 1977 and 1978 which yielded only limited non-diagnostic material.

The Spence River complex is identified on the basis of small triangular and leaf-shaped points (often notched), small end-scrapers and gravers, and a profusion of coarse lithics such as *chi-thos*, boulder chip scrapers, cobble choppers, etc. The lithic industry of this latest prehistoric period gives the impression of being crude and sparse, but both archaeological and ethnographic data suggest
that it was supplanted to a large extent by well formed artifacts of other raw materials. In addition to awls and arrow points of native copper, there was an elaborate bone and antler industry. Moose metapodial fleshers, antler fish gorges, and bone awls have been found, and ethnographic accounts suggest that spear and arrow points may have been made of bone as well.

The settlement pattern throughout prehistoric times appears to be one emphasizing two types of locations: modern or fossil lake shores, especially inlet and outlets, and higher terraces along the confluence of major streams with the Mackenzie or Liard Rivers. Virtually every researcher in the Middle Mackenzie-Liard area has reported this same pattern (Cinq-Mars 1973; MacNeish 1954; Millar and Fedirchuk 1975). In this respect, it should not be surprising that two of the very few localities fitting this description in the Nahanni drainage--Yohin Lake and Nahanni Butte--are also the only two with evidence of significant prehistoric occupations. As previous authors (Cinq-Mars 1973: 45; Millar and Fedirchuk 1975: 267) have acknowledged, this apparent preference may be, at least partially, a function of sampling bias, inasmuch as previous surveys have been largely restricted to these types of locality. In fact, the 1977-78 survey of Nahanni National Park was apparently the first to systematically examine other types of location. It is significant, therefore, that only three sites of possible prehistoric age were found outside of the two previously mentioned areas. All were limited in content to a few stone chips or hearth remains and are undatable, and two (110X and 111X) were on high terraces at the confluence of two streams, while the third (101X) was at the outlet of a small lake. Given the basic reconnaissance nature of the Nahanni survey, this does not necessarily suggest
that only lakes and river or creek mouths were utilized—undoubtedly vast areas encompassing several types of terrain were necessary for subsistence, but it does tend to confirm the assumption that they were the focal points of occupation. It is this latter type of site that is most likely to be discovered through archaeological methods.

As early as the late 18th century, the Dene of the upper Mackenzie-Liard region probably had indirect and perhaps direct contact with Euro-Canadians, thus initiating what Helm et al. (1975) have termed the "Incipient-Early Contact Stage". It was not until the early 1800s when trading posts were established at Fort Liard (1805) and Fort Simpson (1822), that the "Contact-Traditional Stage" (Ibid) and major alterations of the native way of life began. Although there have been various agents of contact, and virtually every facet of the traditional culture has been affected, two trends are most obviously reflected in the archaeological record. Both are direct results of the fur trade, and both have been increasingly apparent up until recent times.

The first trend involves the gradual replacement of elements of the traditional technology with manufactured items. Such tools as metal axes and rifles were probably the first to be acquired, but articles of clothing and other goods—including staple foods, tobacco, and alcohol—also appeared early. In addition to obtaining Euro-Canadian items through trade, the Dene also adopted the log cabin and canvas tent, replacing the aboriginal log tipi and skin tent. Many traditional artifacts, however, have continued to be made until current or very recent times. These include chi-thos, metapodial hide fleshers, and spruce bark canoes.

The second archaeologically observable trend in native
culture resulting from the fur trade occurred in the realm of settlement and community pattern. The desire for trade items caused two opposing forces to alter the traditional settlement scheme. On the one hand, families were drawn to the trading posts, and permanent cabins were built in the vicinity of each post, ultimately forming the nuclei of the present villages in the area. On the other hand, the demands of fur harvesting required that households, singly or in small groups, spread out over the hinterlands during the trapping season in order to obtain the main items for barter. In the early years of contact, these trapping camps probably resembled the traditional winter hunting camps, and some of the same locations were apparently used, while in more recent times permanent cabins have been built along traplines.

It is somewhat enigmatic that so few sites dating to the earlier contact period have been found in the Nahanni region. Certainly, several which probably relate to this period have been located, but the number is relatively small considering the known intensity of occupation in many of the surveyed localities. The few more recent cabin sites documented as being used by natives are indistinguishable from those of non-natives of the same period.

Accounts obtained from local residents indicate that portions of the general area were used on a seasonal basis for hunting and trapping by at least three different groups during the decade surrounding the turn of this century (see Amsden 1978 for detailed documentation). The so-called "Mountain Indians" from the Fort Norman and Wrigley areas used to over-winter in the area around the headwaters of Wrigley Creek. Site 108X at the main forks of Wrigley Creek, only briefly visited in 1977, is a cache complex which apparently related to this occupation. In the spring, skin
boats would be built and the families would proceed down Wrigley Creek and the Nahanni, Liard, and Mackenzie rivers to Wrigley and Fort Norman for trading. Indians from the southeastern Yukon and northern B.C., who trapped on the headwaters of the Highland and Coal rivers, occasionally ventured into the Borden-McLeod Creek vicinity.

The most intensive use of the Nahanni region during the historic period appears to have been that by Slave speakers. According to Charles Yohin, (1977: pers. com.) a population of about 100 people inhabited the general area around Nahanni Butte and the Netla River at least as early as the late 1800s (and possibly for centuries previously) and formed a more or less permanent village in the early 1900s. Most activities seem to have been conducted in the area below First Canyon, with Yohin Lake serving as an important base for ice fishing and trapping in winter and duck hunting in spring, a practice which continues today. It was not uncommon, however, for some families to trap in the mountains in the Meulleur-Caribou headwaters area and even as far as Rabbitkettle Lake on occasion. It is interesting that the South Nahanni River itself, while sometimes important for transportation—though overland routes were more common, does not appear to have been a significant area for settlement except at its mouth.

Non-Aboriginal Occupation
In contrast to the several millennia of aboriginal prehistory and history, the history of the Euro-Canadian occupation in the southwest Mackenzie District, and especially the Nahanni area, has been quite brief. Also unlike the situation with respect to the Indians, the historical archaeology of non-natives in the general region is practically non-existent (Cinq-Mars 1974: 23). Apart from preliminary surveys along
the Mackenzie River in anticipation of pipeline construction (Cinq-Mars 1974; Losey 1974; Millar and Fedirchuk 1975), there has been little systematic survey and no excavation. For these reasons, the brief account presented here is restricted primarily to the South Nahanni drainage.

For present purposes, the history of the Nahanni can be divided into two major periods. The first corresponds to all but the last few years of the 19th century, and the second includes the subsequent years. The earlier period was largely one of exploration by traders and others and, on the basis of limited historical references, does not appear to have resulted in settlement in the area. As early as 1805, fur traders of the Northwest Company and later the Hudson's Bay Company are known to have passed by Nahanni Butte as they moved between the first trading posts along the Liard (Neily 1977). The first recorded visits to Nahanni country did not occur until 1823-24, when three separate expeditions were sent in by the new H.B.C. post in Fort Simpson for the purpose of establishing trade with "Nahani" Indians. At least one of these trips, under the direction of J. M. McLeod, involved a party of 20 or more men who traveled overland as far as the Caribou River, where Indians were contacted (Addison and Addison 1977: 5). According to Neily (1977), the H.B.C. made plans in 1828 to establish a post on the Nahanni, but there is no record that this was actually done. There were likely other explorations in the area during the following decades, but the next visit mentioned in the literature (Addison and Addison 1977: 5) was that of R. G. McConnell, who, in mapping the geology of the Mackenzie Basin, visited and described the Nahanni Butte area in 1887. Although the 19th century was primarily a period of exploration of the Nahanni region, exploration was not limited to that period. In fact, most of the serious scientific reconnaissances of the area did not begin until well into this century, and
some are continuing to the present.

No non-native archaeological remains discovered in the Nahanni region to date are attributable to this first period of Nahanni history, from about 1805 to 1890. This is not surprising considering the few visits to the area and the type of temporary campsites which were probably used. If remains dating to this period are to be found, the Nahanni Butte area would be the most likely candidate, as it serves not only as the point of departure for trips up the South Nahanni but also as a logical camping site for travelers on the Liard.

It was probably not until the last decade of the 19th century that non-natives began to occupy the Nahanni drainage on a permanent or semi-permanent basis. This was accomplished by two different (usually) groups of people: independent traders and trapper-prospectors. Although the first recorded trader arrived around 1914, it is now apparent that the Chimney Point site at Nahanni Butte was occupied as much as 25 years earlier. Whether the occupants of this site were trading, prospecting, or trapping is still unclear. There are hints of evidence that all three activities may have been practiced, and it is clear that a fairly substantial occupation is represented. From 1914 onward, there has always been at least one trader residing permanently at Nahanni Butte, and six different posts are officially recorded over the years (Usher 1971). With the exception of two temporary and part-time posts on the river between Nahanni Butte and the First Canyon, all trading operations have been at Nahanni Butte and formed the nucleus of settlement there.

In view of the number of trading posts in the area, the archaeological evidence for these is fairly scant. Most of the cabins where trading was conducted (apparently the "posts" were often no more than that) have burned and/or slumped into the river. Ironically, the only currently visible
remains are those of the earliest (assuming the Chimney Point site was used for trading) and the most recently abandoned—Dick Turner's complex, which now serves as the N.N.P. Warden Centre.

Euro-Canadian trappers and prospectors apparently first arrived in the Nahanni region at about the same time as traders. According to local accounts (cf. Addison and Addison 1970: 6); Neily 1977), one or more parties of prospectors attempted to reach the Klondike gold fields through the Nahanni in 1898, and cabin remains believed to date to that period have been seen in Deadmen Valley. From about 1900 until the 1960s, there was always at least one or two individuals or parties prospecting or trapping (usually both) somewhere in Nahanni country. There appear to have been especially concentrated flurries of activity "mini-rushes," along the Flat River beginning in the early 1900s and the late 1920s sparked by rumours of gold discoveries. The first of these, resulting from the McLeod disappearance, is probably the best known and the most dramatic.

In contrast to the traders, the trapper-prospectors tended to be temporary residents of Nahanni, spending one or two years or seasons and then abandoning the area. Only a very few individuals (notably Gus Kraus and Albert Faille) spent enough time in the region over a long enough period that it might properly be called their home.

The archaeological evidence of the trapper-prospectors consists of a few cabins and cache remains, areas of cut stumps, and traplines. For the most part, these remains date to the post-1930 period, but a few are from the 1920s, and one site (104X) in Deadmen Valley may be one of those believed associated with the "Klondikers". In terms of distribution, cabin sites occurred all along the South Nahanni and Flat rivers, though there were very few above Virginia Falls. Main
concentrations seem to be below First Canyon, in Deadmen Valley, and in the middle Flat River area, including McMillan and Sea Plane lakes. Apart from one or two early prospectors' camps and a few trapper's line cabins, almost all cabin sites are within several metres of the river or, quite often, one of its major snyes. From this and various personal accounts, it is apparent that the South Nahanni (especially) and Flat Rivers were foci of activity both for transportation as well as settlement. Unfortunately, this emphasis has also resulted in the loss of many cabins to the river.

Suggestions for Interpretive Exhibits
The preceding sections presented in summary form what has been learned from archaeological resources about the human history and prehistory of the Nahanni region. This section identifies those resources which are considered most suitable for interpretive exhibits of past lifeways in the area. Both currently and potentially available materials are discussed.

Prehistoric campsites in northern forested regions are valuable for the artifact collections they yield and, especially, the information they provide relative to earlier cultures. Unfortunately, there is very seldom any feature at the site itself worthy of exhibit. This is certainly the case in Nahanni National Park, where there is no surface evidence of any of the known sites, including the largest one (112X) at Yohin Lake. Even after excavation, there is usually nothing to see except the excavator's trenches, and it is standard practice to backfill even these. For this reason, there is little potential for on-site interpretation of the park's prehistory. In fact, it is not recommended that the locations of these sites (unless previously excavated)
be revealed to visitors in precise detail due to the possibility of disturbance (inadvertent or otherwise).

The on-site remains of the historic period are often visible on the surface, and they provide more potential for exhibition. However, even these present problems to the interpreter. The majority of the cabins along the South Nahanni River are either in very poor (often unrecognizable) shape or have disappeared entirely. The best preserved cabins are in the middle Flat River area near Irvine Creek and Wild Mint springs and are thus totally inaccessible to most visitors. This leaves three possible areas with some potential for interpretation, although all fall short of being ideal.

The most promising area in my view is in Deadmen Valley opposite Prairie Creek alluvial fan. There are two cabins behind the modern patrol cabin and a good trail leads to the remains of at least two more at the mouth of Sheaf Creek (Amsden 1978: 75-77). The Sheaf Creek cabins seem especially interesting to visitors because one was built by R. M. Patterson and Gordon Matthews and is described in some detail in Patterson's (1966) book. Unfortunately, this cabin is currently represented by only one layer of humified base logs in a very dense growth of immature spruce and is therefore nearly impossible to find, but many visitors seem to gain some satisfaction just from visiting the site. The other cabins and a fallen elevated cabin cache, dating to about 1945, are in fair shape and do provide good examples of certain construction details.

A second possible cabin exhibit is the Sibbeston-Faille site on the left bank of the Flat River (Amsden 1978: 61). Here, there is one cabin in excellent shape which is apparently still used on occasion (a possible drawback), and several metres behind it are the remains of another. The
latter was originally built by Albert Faille in 1927 and rebuilt by Gus Kraus and Bill Clark in the late 1930s. It currently consists of only two or three layers of logs and is in poor shape. Perhaps the greatest drawback to this site is its relative inaccessibility from the South Nahanni River.

The third area with some interpretive potential is in the Nahanni Hotsprings area. Although the former Kraus structures themselves are too recent to be of much archaeological interest, there is a good trail leading to Clausen Creek along which are several interesting features (Amsden 1978: 81-85). In addition to a relatively recent grave, which is probably too sensitive for interpretation, there is a whittled stump, a cross-bar between two trees, and the remains of a platform cache. Although far from spectacular, collectively these latter features are good, accessible examples of the types of more subtle features consistently encountered near trapping camps.

While the Nahanni prehistoric sites themselves possess little potential as exhibits, they have yielded artifacts suitable for display in a museum or visitor's centre. With the exception of one bone fleshing tool (Amsden 1978: Fig. 28, c), all of those collected so far are stone tools, primarily from Yohin Lake. The current collection is small and lacks adequate documentation with respect to age and precise cultural affiliation, though it does include a variety of tool types. Importantly, Site 112X, and possibly other sites at Yohin Lake, exhibit the potential to yield not only a large and representative artifact assemblage but also the supporting information necessary for its full interpretation and for those currently on hand.

The current collection of non-native artifacts comes almost exclusively from the Chimney Point site. Though fairly extensive, it consists largely of nails, cartridge
cases, metal fragments, and the like. There are only one or two specimens which might be considered of "museum quality". Future extensive excavations would probably increase this number considerably. The only other sites presently considered to possess much potential for providing artifacts representative of the Nahanni historic period are site 104X (or immediate vicinity) in Deadmen Valley and site 109X near Irvine Creek. The former site may be associated with the remains of the cabins which are believed to have been built by "Klondikers". If so, it could yield relics of an interesting period in Canadian history; but, on the basis of current evidence, this is pure speculation. Site 109X is known to possess a cluster of artifacts in good condition, and still in situ, which represent a nearly complete trapper-prospector outfit (Fig. 4); excavation of the site would likely yield more. It should be noted, however, that all of these artifacts date to the 1930s or later, and all seen so far can be purchased at any Marshall Wells store. A final source of historic period Nahanni artifacts is the former residents themselves, who likely possess not only a variety of items typical of the time and place, but also the knowledge making these significant for interpretation as well.
Archaeological Resource Management

General Considerations
Archaeological resources are non-renewable. Moreover, they are under constant threat of destruction through various forces, including archaeologists. Therefore, a management program is necessary to ensure the conservation and efficient utilization of these resources. For present purposes, this management can be considered to consist of four phases: assessment, mitigation, monitoring, and utilization control. The following sections discuss each of these phases, in turn, as they relate to Nahanni National Park. Together they constitute a set of general guidelines for the management of the park’s resources over the long term. These guidelines and the 1977-78 archaeological assessment are then combined as the basis for a series of specific recommendations for the short term.

Assessment
Archaeological assessment involves the identification of resources and potential resources and any threats and potential threats to these. The initial identification of sites has been completed—at a very basic level, but one which is considered sufficient for current management needs. These sites are discussed in detail throughout this and the previous report (Amsden 1978). Potential threats to archaeological resources include various natural forces, vandalism, and development and use activity. Nahanni
National Park is protected by law from vandals and development by outside agencies; therefore, the only major concern is protection from natural forces and the activities of Parks Canada itself.

The primary natural hazard endangering the archaeological record within the park is the active erosion of the banks of the South Nahanni and Flat rivers. Several historic cabin sites have already been lost to the river, and a few are currently threatened. Undoubtedly, countless historic and prehistoric aboriginal sites have been lost in this manner as well. Forest fires also represent a potential hazard to surface structures, but given the unpredictability of their occurrence, there are no practical protective measures which can be taken.

There are also certain activities associated with the use and administration of the Park which are potentially destructive to its archaeological record. The most important of these is future development of campgrounds, visitor centres, trails, etc. Clean-up and "beautification" operations and heavy visitor use can also pose a threat to some areas.

Mitigation
Mitigation consists of all those operations taken to prevent or minimize the loss of valuable information through threatened destruction of archaeological resources. There are two general ways in which this may be accomplished. Removal of the threat is the ideal measure, but often this is not possible and even when it is, through such actions as stabilization of river banks, it is seldom practical. It is possible, however, to eliminate destruction through development activity, especially in a National Park or other protected area. This is achieved through coordination of development plans with the results of archaeological assessment to ensure
that construction activities do not interfere with archaeological resources.

When it is impossible to eliminate the cause of potential destruction to archaeological sites, it is necessary to conduct salvage operations. These involve the retrieval of as much information as possible before destruction through intensive surface collection, testing and excavation in the threatened area. It is seldom possible to salvage whole sites or site areas and, even when it is, the quality of the data retrieved often suffers because of time and other pressures normally accompanying salvage excavations, especially those conducted under "emergency" conditions. Also, when a site is completely destroyed through excavation or other forces, it is no longer possible to re-examine it in future years in light of new technological advances or research problems. Therefore, it has become a basic tenet of archaeological resource management that salvage should be considered only as a last resort (cf. Lipe 1974).

The archaeological resources of Nahanni National Park enjoy a unique legal protection which ensures that salvage operations, at least those of an "emergency" nature, are never necessary except for mitigation of natural forces of destruction. Because the area is a National Park, particularly a wilderness park, it is by definition a resource preserve. Therefore, in theory at least, it should be a simple matter to avoid development or promotion of heavy visitor traffic in areas with major archaeological resources. This is further simplified by the fact that these resources appear to be relatively limited and restricted in distribution.

In practice, however, there may be occasions when there is no real alternative to activities which disturb the archaeological record. Even in these cases, the loss of
knowledge resulting from this disturbance can be minimized, if not eliminated, if the archaeologist is given sufficient lead time. This lead time allows for background research, problem formulation, and development of a detailed research design in order to maximize the amount and variety of information gained from the necessary salvage operations. Indeed, in some cases it may be possible to simply conduct planned research earlier than originally anticipated, thus avoiding a salvage situation entirely. There are also cases where investigations conducted early in the planning stage suggest minor modifications in the development scheme which remove the threat to the archaeological record. Specification of the means to assure this necessary lead time is beyond the scope of this report; however, preparation of a long-term development plan in which Parks archaeologists participate would appear to be effective. What should be avoided at all costs is creation of a situation where all archaeological investigations become emergency salvage operations.

Monitoring
As used here, monitoring refers to periodic surveillance of an area in order to discover "new" archaeological resources, to evaluate the extent to which known resources are currently endangered, and to ensure that previously specified conservation measures are carried out. The first two operations essentially ensure that archaeological assessment is kept up to date, while the third guarantees that recommendations based on this assessment are observed. While monitoring should be under the general supervision of a professional archaeologist, whose services may be required from time to time, much of it can be handled by those who are already in
the park for other purposes—Park Wardens and visitors.

Inspection of an area the size of Nahanni National Park is a difficult and expensive task. The Wardens at N.N.P. periodically conduct boat patrols and helicopter surveys of most of the park's territory, including many otherwise inaccessible areas. They are therefore in an excellent position to monitor archaeological resources in the course of their regular duties simply by observing and reporting any "new" cultural remains and any damage or threat to known sites. It would require only a few minutes and would be a fairly straightforward matter to apprise them of what types of evidence are significant and where they are most likely to occur as well as the locations of the known sites (the current Wardens already know most of these). In fact the Park Wardens were generally quite enthusiastic about archaeology during the 1977-78 survey and contributed a good deal of useful information regarding known and potential site areas.

In similar fashion, visitors to the park can also be of help in monitoring. Their participation can best be arranged in conjunction with the interpretive program. Assuming a pamphlet including a section on the park's prehistory and history is to be prepared, any discussion should include descriptions and/or illustrations of archaeological resources (not just artifacts). There should also be included two additional statements. One of these should specify the illegality of disturbing archaeological sites in National Parks (and the N.W.T.) and list the scientific and cultural reasons why this should not be done. The second statement should direct visitors to report any archaeological remains they should encounter to a Park Warden or other park official, including a precise location and description of the materials. This approach has been adopted by the government of the N.W.T.
in their Explorer's Guide and appears to be a very positive step towards limiting vandalism while enlisting limited participation of visitors. Most of the current visitors to the park tend to be avid conservationists who are likely to cooperate enthusiastically if given the chance. It is probably best, however, that the locations of known archaeological sites (other than those designated for interpretation) not be divulged lest someone becomes over-enthusiastic.

If the two suggestions above are implemented and prove effective, then most of the monitoring of the Nahanni's archaeological resources should become a routine affair. It would then be necessary for a professional archaeologist to visit the park only to evaluate newly reported or threatened sites deemed significant or for intensive assessment in anticipation of development.

Utilization Control
The archaeological record, unlike many resources, can be fully appreciated only when it is consumed. It makes little sense therefore to attempt to preserve archaeological resources indefinitely, as they are of little use in the ground. On the other hand, it is also pointless to carefully protect these resources from the ravishes of Nature and Enterprise only to subject them to the ravishes of archaeologists who are unprepared or unwilling to use them wisely. For this reason, a final phase of archaeological resource management necessarily involves careful control over utilization of the resource base to ensure that maximum benefits accrue from their destruction.

Utilization control is probably the most difficult aspect of management because so many variables must be considered
that it is impossible to adopt any hard and fast rules. It is possible, however, to suggest a few simple guidelines. First, it is necessary to distinguish between those uses of the archaeological record which result in its destruction and those which do not. There are some types of archaeological research which need not involve excavation at all. It is also possible to base major aspects of an interpretive program on those resources not requiring excavation, such as cabins and caches. Such uses of the archaeological record are to be encouraged whenever and wherever possible.

It is currently accepted (cf. Lipe 1974) that, except for mitigation purposes, excavation should be undertaken only when necessary for the solution of carefully formulated research problems of broad scientific interest. It is assumed that such research will be based on a detailed research design, that during excavation data of potential relevance to other types of problems will be collected insofar as possible, and that major portions of a site or area will be left for future investigation. It is also prudent to give first priority to sites requiring mitigation whenever possible. Excavations designed solely to increase artifact collections or to gain very general information for interpretation do not justify destruction of such scarce resources. However, any well designed excavation program will produce both artifacts and information useful for interpretation, and these should definitely be used for that purpose whether the research is funded or directly sponsored by Parks Canada or not.

**Specific Recommendations**

The previous discussion considered those factors which are considered most important in developing a program of
archaeological management for Nahanni National Park. It is intentionally general in nature because it is intended to apply to a wide variety of currently unknown circumstances which the long term future may bring. The following recommendations are more specific, and most are intended to apply over a shorter term. All follow directly from the preliminary assessment of N.N.P. and vicinity conducted in 1977 and 1978 and appear initially, in more elaborate form, in appropriate sections of this and the 1978 report. They are summarized here primarily for convenience.

1. Status of Research. The preliminary assessment stage of archaeological research in Nahanni National Park is considered complete. The preliminary status of this assessment should be noted, as it does not represent an exhaustive inventory of sites. This preliminary assessment should not be considered a substitute for more specialized survey and testing of certain areas which may become necessary or desirable in the future for purposes of mitigation or scientific interest. It is, however, considered adequate as an initial statement on the potential and distribution of the park's archaeological resources and as a basis for planning the management and interpretation of those resources.

2. Yohin Lake. The area at the northwest end of Yohin Lake contains the densest concentration of prehistoric sites in the study area. The area in general, and site 112X in particular, demonstrates considerable potential for problem oriented research on the prehistoric cultural development of the region. It should therefore be protected from any development, heavy visitor use, or any other activity which might endanger the archaeological resources. None of the
sites in the locality currently appears to be threatened, but the area should be closely monitored. Archaeological excavation should be permitted only for purposes of elucidating clearly defined problems. Any such research permitted will probably be the primary source of information and collections for interpreting the park's prehistory.

3. **Site 109X.** Site 109X on the Flat River near Irvine Creek should be closely examined to determine the relationship of this site to the death of Phil Powers or other individuals who may have disappeared in the area. As much information as possible should be gathered from knowledgeable local residents before initiating archaeological investigations. This site possesses a representative collection of recent historic trapper-prospector artifacts.

4. **Site 107X.** Site 107X near Nahanni Butte contains substantial remains of an extensive non-native occupation during the late 1800s or early 1900s, and it is currently the only such site so far discovered in the Nahanni region. This site is outside the boundaries of Nahanni National Park. It should be protected from any future development by Parks Canada until it can be excavated, and the Coordinator of Historic Programs of the Northwest Territories should be advised immediately of its significance. Any excavation at the site should provide a significant contribution to the interpretive program of N.N.P. The site is not in immediate danger, but it is slowly being eroded by river action and thus should not be ignored indefinitely.

5. **N.N.P. Warden Centre.** The immediate vicinity of the N.N.P. Warden Centre at Nahanni Butte, especially the riverbank in front of the compound, should be monitored by
park personnel. Bones and garbage related to the recent historic period are currently eroding from the banks at a rapid rate. Although this material in itself is not considered significant, the possibility remains that deeply buried prehistoric remains may be exposed, as an isolated biface was discovered there in 1977.

6. Mitigation. None of the significant archaeological resources identified to date are in immediate danger from destruction through natural hazards, and no archaeological mitigation should be necessary over the short term future.
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