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ARCHAEOLOGICAL INVESTIGATIONS OF TRANSIENT RESIDENCES ON THE HILLSIDES SURROUNDING DAWSON CITY, YUKON

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With Appendix A: Analysis of an Isolated Human Tooth
by Shannon Wood

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ARCHAEOLOGICAL INVESTIGATIONS OF TRANSIENT RESIDENCES ON THE HILLSIDES SURROUNDING DAWSON CITY, YUKON

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Appendix A: Analysis of an Isolated Human Tooth, by Shannon Wood, Department of Archaeology, Simon Fraser University.

Abstract

This report provides a summary of the Dawson City Hillside Archaeology Project. Two seasons of archaeological fieldwork were carried out on the Dawson City and Klondike City hillsides during 1998 (1 July and 14 September) and 1999 (8 July and 23 August 1999). The project was aimed at collecting archaeological data relevant to the lives of transient stampeders, who arrived with the gold rush and made their homes on the steep hillsides surrounding the fledgling town. Occupation of these areas began in 1898 as the bulk of the stampeders reached Dawson. Photographs of the community taken in 1898-1899 show hundreds of tents and small cabins on the hills behind the townsite. These areas were some of the first to be abandoned as the post-boom population decline began. By 1910 only a few scattered cabins remained on the scarp.

Three stages of archaeological research were conducted during the project. An inventory survey was made of the entire Klondike City hillside, and portions of the Dawson City hillside. More than 150 cabin platforms, as well as a variety of other features were recorded. Infield artifact recording was undertaken around two groups of platforms on each the Klondike City hillside and the Dawson City hillside. Finally, limited excavation was carried out on one platform on the Klondike City hillside.

The structures built on the hillside platforms tend to be of relatively basic construction. The use of sheet refuse disposal practices strongly suggests the inhabitants did not intend to stay permanently. The types of artifacts recorded around platforms also indicates a transient occupation. In particular, are the high frequencies of personal artifacts and the near absence of fragile ceramics. The majority of household artifacts recorded are those used in food preparation and consumption. The diet of the hillside occupants appears to have been fairly basic, with condensed milk, butter, lard, canned meat and sardines comprising the staple products packaged in tin cans. Fresh meat occasionally figured in their diets, and although there is no evidence for the packaging, flour, bacon and beans are inferred to have been staple foods, based on their prominence in the outfitter's lists of recommended supplies.

As home to a large transient population, the hillsides became marginal areas of the community. They lacked roads and other services. Tax assessments suggest that the hillside lots were considered less valuable and less desirable than lots in the townsite. Property title research indicates that large portions of the hillsides were inhabited by squatters, and in areas where lots were purchased, there was a relatively high rate of ownership turnover.

Issues of transience in Dawson City during, and immediately following, the gold rush are complex. Although thousands came to the area, few stayed. Documentation for this period is extensive, but focuses largely on the more glamorous aspects of the rush; day to day living received little attention amidst all the excitement. The archaeology of the transient habitations on the hillsides around Dawson and Klondike City provides another perspective on the daily experiences of large numbers of people. Coupled with archival materials, it is possible to explore the manner in which Dawson's large floating population influenced the development of the community.

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1

INTRODUCTION

As the nineteenth century drew to a close, the discovery of gold in the Klondike Valley created a phenomenon that seemed to proffer wealth to any who would accept the challenge. During an era when much of the western world was experiencing a depression, multitudes of willing participants initiated the last great gold rush of the century. Estimates of the number of people who left for the Klondike vary. Perhaps as many as 100,000 people from across the world, set out in search of gold (Innis 1936:191). There is no doubt about the impact of this event. The stampede is part of family history for tens of thousands of people. The number of tourists who visit the north every summer, searching for information about a grandparent, an uncle, or an aunt who had gone to the Klondike, amply demonstrates the continuing significance of the stampede. Their ancestors came seeking a quick fortune, with no intention of making a home in the Yukon. In time, many returned from whence they came, others followed the lure of gold to new districts.

At the heart of all this activity lay Dawson City, scarcely two years old at the height of the rush. Located at the confluence of the Yukon and Klondike rivers, this young community was the gateway to the goldfields. In many ways a typical mining boom town, Dawson City quickly consumed all available level ground. Three separate areas made up the core of the community of Dawson City (Figure 1). The townsite proper occupies a small floodplain on the right bank of the Klondike River at its confluence with the Yukon River. Bound on two sides by water, the town is flanked by steep hillsides along the north and east margins. The large scar from the Moosehide Slide at the north end of town is a significant landmark. On the left bank of the Klondike River

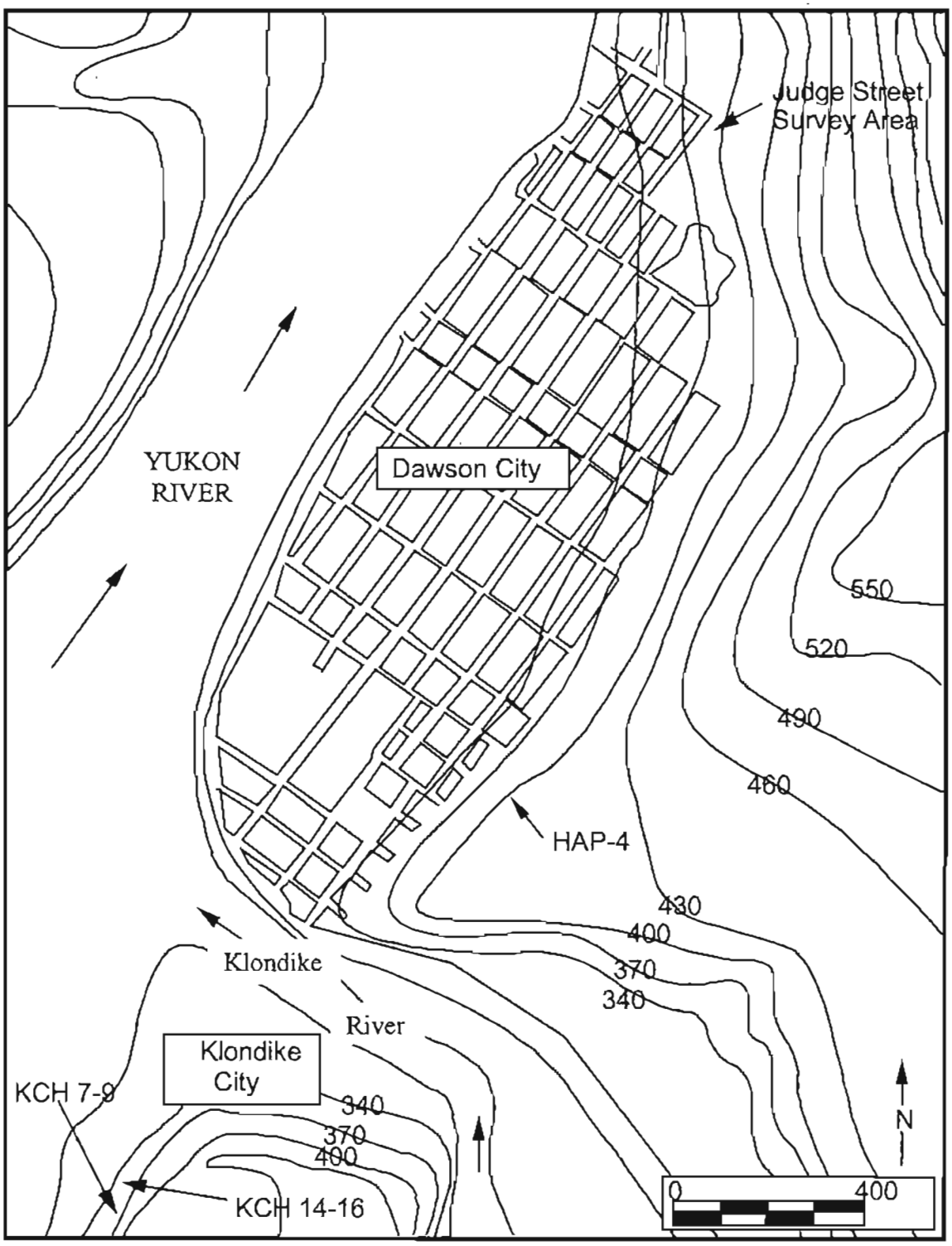

Figure 1. Map of Project study areas at Dawson and Klondike City.

directly south of Dawson City, sat Lousetown, or Klondike City. During the gold rush, this part of the community, bounded by a steep hillside on the south, consisted of two small lobes of level ground and a large island in the river's mouth. Following the gold rush, silt from upstream mining activity filled the channel and joined the two sections of Klondike City. Finally, as the population increased, the community expanded to the west side of the Yukon River, opposite the townsite, in an area that became known as West Dawson.

This report summarizes and offers some preliminary interpretations for two field seasons (1998 and 1999) of the Dawson City Hillside Archaeology Project (Brand 1999, 2000). The project collected archaeological data relevant to the lives of transient stampeders, who arrived with the gold rush and made their homes on the steep hillsides surrounding the fledgling town. Occupation of these areas began in 1898 as the bulk of the stampeders reached Dawson. Photographs of the community taken in 1898-1899 show hundreds of tents and small cabins on the hills behind the townsite. These areas were some of the first to be abandoned as the post-boom population decline began. By 1910 only a few scattered cabins remained on the scarp.

Project study areas consist of the steep slopes that surround Dawson (LaVk 11) and Klondike City (LaVk 10) (Figure 1). Starting at the eastern edge of the extant townsite, the Dawson hillside extends from the Moosehide Slide at the north end of town, south to Crocus Bluff, terminating approximately 300m from the north bank of the Klondike River. A portion of the townsite extends onto the lower section of the hillside, beginning at approximately Sixth Street, with Seventh and Eighth Streets on the slope itself. Above Eighth Street at approximately 330m above sea level (asl), the steepness of the hillside increases, and at present there is only a single structure on the hillside above this point. The maximum height of the hillside in this area is 390-400m asl. The height of the hillside increases steadily towards the slide at the north end of Dawson, which lies below the Midnight Dome (elev. 860m asl). The Klondike City hillside, referred to as Klondike Hill, extends from a steep rock bluff above the Klondike River (east) to a rock bluff overlooking the Yukon River (west). The slope begins at 320m asl and rises steeply

to approximately 400m asl. The transition from the flats along the rivers, to the hillside is abrupt. Similarly, at 400m asl the hill ends abruptly and levels out.

This research program follows archaeological investigations undertaken by Parks Canada archaeologists on the Dawson hillside during the late 1970s. Minni (1978) surveyed the Dawson hillside and conducted excavations on two platforms located approximately at the centre of this study area. Minni also conducted test excavations on some of the lower platforms on the Klondike City hillside. Burley and Ross (1979, Burley 1980) conducted a salvage project at the location of a borrow pit expansion on the Dawson hillside north of Albert Street and east of Fifth Avenue. While these projects are discussed in detail below, they contain three important conclusions for the initiation of the present research. Both studies indicate that the archaeological remains on the hillsides date back to the early years of the gold rush. Burley and Ross (1979:43,45) conclude the occupants of their study area were likely transient individuals who arrived with the stampede. Minni's survey of the hillside demonstrates the potential for further research in this area.

Research Questions

The goal of this research is to investigate the nature of transient life during the Klondike Gold Rush and the means by which stampeders were integrated into the community of Dawson City, and participated in its development. The archaeological component of this analysis examines the occupation of the hillsides, considering the question of transience and exploring the daily lives of the inhabitants, both during and after the gold rush. Questions of interest relate to subsistence, consumer choice and Victorianism.

A wide variety of questions can also be asked about the nature of the hillside occupation. Were the hillsides one large neighbourhood, or were the structures organized into clusters that represent smaller neighbourhoods? Similarly, were the structures

located individually, or were they organized into loose groups suggesting some level of cooperation between the inhabitants? Although historic photographs show the hillsides dotted with hundreds of tents and cabins, none of these structures remain today. Archaeological analysis makes it possible to rediscover the variability that existed in the types of platforms, structures, construction styles, construction materials and structure use life. Examining the use of space on and around platforms contributes to our understanding of the occupant's lives and the nature of the hillside occupation.

The use of space in Dawson City is another important aspect of the community that must be addressed. The landscape of the community is the result of the interplay between the social and physical environments during its development. Understanding this organization is key to understanding the social system in the community. Two levels of landscape organization can be examined, the community as a whole, and the hillsides themselves. An important element in determining how transients fit into the social system, is to understand how the hillsides fit into the layout of the town and the degree to which the hillsides represent marginal sections of the community.

Report Organization

In the chapters that follow the data collected during the two field seasons are described and some preliminary interpretations are offered. Chapter Two places the Klondike Gold rush within the context of other western mining activities, describes the first mining in the Yukon, the Klondike Gold Rush and the development of Dawson City. Chapter Three describes previous archaeological fieldwork in the Klondike, specifically on the Dawson and Klondike City hillsides, and describes the project methodology. Chapter Four discusses the features identified on the hillsides during the inventory survey. Chapters Five and Six describe the artifact assemblages from Dawson City and Klondike City. Chapter Seven describes the excavations conducted on one Klondike City platform. Chapter Eight examines transience in the archaeological record of the hillside.

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BACKGROUND

Transience in Dawson City in the Context of Western Mining

It is important to view the Klondike Gold Rush and the development of Dawson City within the larger framework of western mining. The events of the Klondike were not wholly unique, being, in a broad sense, similar to events associated with numerous other gold rushes in the western United States and Canada. The patterns of development and even some of the participants were the same. All these gold rushes were influenced by larger social and economic trends prevalent at the time. Praetzellis and Praetzellis (1992:81), in discussing the California gold rush of 1849, note the importance of the process of industrialization, and the resultant separation of capitalists from those who provided the labour. A gold rush, in such an economic climate, offered those at the bottom of the scale a potential means to better their condition without having large amounts of capital available.

The perceived opportunity to acquire large amounts of wealth in a short period of time, resulted in one of the primary characteristics of gold rush populations -- transience (Mann 1972:486). The majority of participants had no intention of making the rough mining camp or town their permanent home, they were there to make their fortune and leave (Paul 1964, Mann 1972, Praetzellis and Praetzellis 1992).

Rodman Paul (1964:9-10) has outlined a general model for the life cycle of a mining community in the American West. The process begins when an individual or small group of individuals discover gold (or other valuable mineral deposits). Once knowledge of the discovery becomes known it spreads quickly, often resulting in a rush

or stampede. Stampedes were commonly preceded by a small number of relatively experienced prospectors or miners, followed by large numbers of inexperienced people looking to make their fortune. The amount of available ground is always considerably smaller than the number of potential miners. Coupled with the high cost of living and mining in such locations, the boom quickly subsides and the population begins to decline. Individual mining activity often ends as capitalists move in and begin to buy up claims for large corporate mining ventures.

Such generalizations may possess limited interpretive value to our understanding of individual events, but it does indicate that after California in the 1840s, westerners had experience with this type of phenomena. Following the rush to California, the search for placer gold began to spread throughout the west and gradually worked its way north. In the late 1850s miners rushed to the Fraser River in what is now British Columbia. Following closely at the heels of the Fraser excitement were discoveries in the Cariboo, and the founding of Barkerville. The 1870s and 1880s saw the movement of miners into the Cassiar District in northern British Columbia. Gradually miners began to push further north into the Yukon and Alaska.

Early Mining on the Yukon

Robert Campbell had observed gold in the Yukon in 1847 (Koroscil 1970:46), and a Hudson's Bay Company employee posted at Fort Yukon, noted the presence of gold in 1864 (Ogilvie 1913:85-86). Prospectors did not enter the Yukon basin until July 1873, when Arthur Harper and four other men arrived at Fort Yukon (Weppler 1969, Friesen 1978, Helper 1945). Leroy "Jack" McQuesten, Alfred Mayo and James McKipp arrived several weeks later. Harper, McQuesten and Mayo were prospectors and traders, and along with Joseph Ladue, who arrived in the Yukon in 1882, are remembered by history as key figures in search for Yukon gold.

McQuesten had prospected in California. In 1863 he was prospecting along the Fraser River, subsequently going north to placer discoveries on the Finlay River (Gates

1994:7). McQuesten and Mayo's route into the Yukon drainage began in the Cassiar and Omenica mining districts. Ladue began his career as a miner in the Black Hills, and afterward prospected in Arizona and New Mexico before heading north to Juneau and the Yukon (Haskell 1998:270). While they continued to prospect, it was their role as traders that proved their most significant contribution. Initially encouraging others to prospect the tributaries of the Yukon River and, as the number of miners increased, supplying the outfits required.

In 1873, Harper and two others went up to the White River hoping to locate a copper deposit (Ogilvie 1913:96-98). En route they prospected at the mouth of the Fortymile River, spent the winter looking for copper on the White River, and prospected the mouth of the Stewart River on their way back down stream in the spring. In early June 1874, a number of prospectors, among them Harper, McQuesten and Mayo, travelled to St. Michael with Moses Mercier (the trader at Fort Yukon), and signed on as agents of the Alaska Commercial Company (A.C. Co.) (Wright 1976:126-127). On the return trip up river, Harper and his party disembarked at Tanana to prospect (Ogilvie 1913:97). McQuesten proceeded up river, and with the assistance of F. Barnfield, established Fort Reliance, some 9 miles downstream of the future site of Dawson City. The following year Harper and Mayo operated Fort Reliance (Wright 1976, Clark 1995). While at Reliance, Harper made a prospecting trip to the Fortymile River, eventually crossing overland and finding some gold on the Sixtymile River (Ogilvie 1913, Weppler 1969). McQuesten was back in charge of Fort Reliance in 1877.

George Holt made the next significant move into the Yukon, when he managed to cross the Chilkoot Pass and reported finding course gold in the interior. Based on conversations with miners who knew Holt, Dawson (1975:377) believed he made his trip in 1878. Members of the Chilkat First Nation closely guarded the pass, as this route was key to their trading activities in the interior. In 1878 they prevented at least two other groups from using the pass after news of Holt's discovery spread. Miners on the coast appealed to Captain L.A. Beardslee, United States Navy, for assistance. Beardslee sent two Indian constables with a group of thirty additional First Nations people to negotiate

permission for miners to use the pass (Friesen 1978:12). A compromise was reached and a party of 20 miners led by Edward Bean crossed the pass with the assistance of Chilkat packers, arriving at Lake Lindeman in mid-July 1880 (Wright 1976:137).

The numbers of miners entering the Yukon by the Chilkoot Pass increased during the early 1880's. Prospectors worked on the Big Salmon, Stewart and the Peel rivers. Prior to 1882 miners returned to the coast in the fall after the prospecting season. During the 1882 season a group of 12 miners, including Joe Ladue, wintered with McQuesten at Fort Reliance (Wright 1976, Friesen 1978). These were the first miners to enter the Yukon via the Chilkoot Pass and winter over. Stone (1983:204), citing Goodrich (1897:132), states that 50 miners wintered over in the interior in 1882, though he does not identify where they stayed.

During the 1883 season, the miners who had wintered at Fort Reliance prospected on the Fortymile and Sixtymile Rivers, but failed to find gold in paying quantities (Ogilvie 1913:110). With the arrival of fall, ten returned to the coast, only Ladue and William Moore remained in the Yukon. Richard Poplin and his partners, who had been prospecting on the Stewart River, proceeded downstream to Fort Reliance, but found the post deserted and were forced to continue downstream to Tanana (Ogilvie 1913:108).

Poplin and his party returned to the Stewart River in 1884. Poplin had shared news of their discoveries on the Stewart with Thomas Boswell and his partner (Ogilvie 1913:108). That season the miners discovered paying quantities of gold on Cassiar Bar (Friesen 1978:32). According to Ogilvie (1913:108), the entire Poplin party returned to the coast for the winter. The following season, 1885, Boswell and Fraser worked Chapman's Bar and a second group of miners worked Steamboat Bar on the Stewart River. Late in the summer Boswell made a trip to Fort Reliance for supplies. Weppler (1969:27) tells us that here Boswell broke the prospector's code of sharing news of discoveries with fellow miners. While returning to the Stewart River aboard McQuesten's steamer, Boswell waited until other miners depart at the White River, then told McQuesten of their good fortune on Chapman's bar. When they met another party

of miners, Bosewell downplayed the bars on the Stewart, but McQuesten freely gave them news of Boswell's success. Fifteen men wintered on the Stewart that year.

The following year, 1886, saw a number of significant events occur in the Yukon. News of the discoveries on the Stewart River eventually reached miners on the coast. In 1886 approximately 100 miners crossed the Chilkoot to work on the Stewart River (Ogilvie 1913:109). McQuesten and Harper opened a post at the mouth of the Stewart River that summer in response to the increased activity. While the Stewart River became a focal point, prospecting continued in other areas, such as the Big Salmon River. Harper opened a post near old Fort Selkirk and another, that he named Ogilvie, opposite the mouth of the Sixtymile River. In 1886, we also have the first reports of miners' meetings held in Canadian territory (Wright 1976:250). Frank Leslie (Gates (1994:29) gives his first name as Jack) and a man known as Missouri Frank were both banished from the district by miners meetings, Leslie for attempting to kill his partners and Missouri Frank for stealing butter.

The discovery of course gold on the Fortymile River, by Howard Franklin and Henry Madison, was perhaps the most important event of 1886. In October they returned to Stewart spreading the news of their discovery (Ogilvie 1913, Weppler 1969), and created a stampede to the Fortymile River. While this was going on, McQuesten was in California buying the next season's supplies (Gates 1994:32). Concerns over the number of miners entering the region made it necessary for McQuesten to be contacted so he could increase the quantity of purchased goods.

Dawson (1975:379) noted that in 1887 there were three men working Cassiar Bar, 13 men on the Teslin River, four on the Big Salmon River and two on the Pelly River. At least two men were working on the Beaver River (Stone 1983:205). A number also remained on the Stewart River. The Fortymile River had become the new focal point for mining in the territory. A miners meeting elected Fred Hart as recorder for the new district (Stone 1983:211). In May the ice went out from the Yukon River allowing a new contingent of miners to continue to the new discovery after crossing the Chilkoot Pass.

During the summer or early fall of 1887, McQuesten and Harper moved their post from the Stewart River down to the mouth of the Fortymile River. Approximately 200 miners were working on the Fortymile River during the 1887 season (Dawson 1975:380); 100 were expected to winter over. A small community began to develop around McQuesten and Harper's post. The first saloons opened in 1888 (Wright 1976:247).

In 1889, McQuesten was operating the Forty Mile store (I follow Gates [1994], in using Fortymile to refer to the river and Forty Mile to denote the community) and Harper had returned, with his family, to the Fort Selkirk post (Wright 1976: 213,218). Forty Mile remained the primary centre in the region for the next few years. Stone (1983:204), again citing Goodrich (1897:132), states that 300 miners wintered at Forty Mile in 1890. In 1892 Bishop and Mrs. Bompas established St. John's Mission on an island near Forty Mile, and Archdeacon Canham constructed a mission at Fort Selkirk (Helper 1945:17). J.J. Healy of the North American Transportation and Trading Company (N.A.T.&T.) built Fort Cudahy, across the mouth of the Fortymile River from Forty Mile.

In 1893, the Canadian government, at the urgings of a Yukon trader, clergy and William Ogilvie (Wright 1976:257), determined to send a contingent of Northwest Mounted Police (N.W.M.P.) into the Yukon. Inspector Charles Constantine and Staff Sergeant Charles Brown arrived in the Yukon in August of 1894 to collect taxes and duties and assess the requirements of the region for a permanent force. Constantine recommended a police force of 40, but the federal government sent only 20. They arrived at Forty Mile in June of 1895 (Wright 1976:268), and began construction of Fort Constantine on the left bank of the Fortymile River, between the townsite and Fort Cudahy.

The next significant discovery along the Yukon was Birch Creek, and led to the founding of Circle City. Ogilvie (1913:113) states that Sycosca and Pitka, grubstaked by McQuesten, discovered gold on Birch Creek in 1893. The population of Forty Mile was depleted as many miners headed for the new district. By September of 1894 McQuesten had established and supplied a post at Circle City. The N.A.T.&T. also constructed a

post at Circle. According to Gates (1994:115), the population was 300 in 1894, the following year it reached 700, and by 1896, Circle had become the largest community in the region.

Circle City's prominence was to be short lived. George Carmack, Keish, known as Skookum Jim Mason, and Kaa Goox, also known as Tagish Charlie discovered coarse gold on a tributary of the Klondike River in August, 1896 (Gates 1994). Miners at Forty Mile deserted the community as soon as they received word of the new strike. Circle suffered a similar fate as news of the Klondike made its way down river. Such established communities were not immune to the effects a new and promising strike had on prospectors.

Physical mobility is clearly one of the characteristics of early mining in the Yukon. Prospectors are transients. With the exception of Harper, McQuesten, Mayo and a few others, the early prospectors would enter the Yukon via the Chilkoot Pass, spend the summer and early fall prospecting and then return to the coast for the winter. Only after 1882 did the number of miners who stayed year round increase. One could perhaps make an argument against the idea of transience for some of these people, such as McQuesten, Harper, Mayo and Ladue, men who entered the Yukon and remained there the rest of their lives. Yet, such an argument could only be made at the regional level. Stone (1979:93) notes that prospectors, who invested a considerable portion of their lives in one district, still saw themselves as transient. Even traders moved constantly throughout the Yukon basin. McQuesten, for example, moved from Fort Reliance to Fort Yukon, then Stewart River, Forty Mile and Circle City, and finally to Dawson City. Their business depended upon the miners and the miners depended upon them. Miners were always moving, following the next strike and traders followed the miners.

During the early period the prospectors who came into the Yukon were primarily experienced miners. Their numbers remained quite small until 1880, when negotiations with the Chilkats opened the Chilkoot Pass to the miners. After which many Chilkats ran successful transportation/packing operations. Prior to 1882, it was common for the

miners to enter the Yukon in the early spring, spend the summer prospecting and return to the coast in the fall. These men typically worked in pairs, as partners, or in small groups. Their associations were very fluid (Power 1976). These men are generally known as Old Timers.

Power (1976) has identified a variety of characteristics particular to Old Timer society in the Yukon, including a communal and egalitarian organization. The Euro-American population was male dominated. Many of the miners were married to First Nations women. Their society lacked a hierarchical structure with the attendant positions of authority (Stone 1983:203). Instead, issues and conflicts that required the attention of a larger segment of the population were addressed through the miner's meeting, "a gathering of all those men who chose to attend when someone called an assembly to discuss a particular issue or dispute or to formulate any rules which were going to be recognized in a particular camp" (Stone 1983:212). Stone notes that one individual was elected to chair the meeting and the decision was made by an open vote.

The mining population was small and sparsely distributed throughout this vast region. Group membership tended to be quite fluid and a strong feeling of camaraderie existed (Power 1976:46). Supplies and information were for the most part shared freely whenever individuals met. Many people were concerned more with their lifestyle in the north, than obtaining wealth through their activities (Power 1976, Burley 1985). This was demonstrated by miners who headed south during the winter, spent their entire earnings living a life of luxury, and then returned to the north the following Spring to start the cycle again (Burley 1985:19).

In 1886, course gold was discovered in the Fortymile drainage, and a large segment of the mining population gathered at the new diggings. The primary method of mining had been skim-digging, which recovered gold from the upper two or three feet of the gravel bars. Below this miners encountered permafrost. During the winter of 1887, miners began using a fire thawing technique to get through the permafrost and access the rich gravels overlying bedrock. This change in mining technology had a significant

influence on social organization in the Yukon (Stone 1983). It allowed miners to work their claims all winter, stockpiling gravel to be run through sluices in spring. The result was a larger year round population, though it was still somewhat limited by the amount of supplies available in the fall. Here, we see the first shift from temporary camps to a larger community. While Forty Mile was by no means permanent, its population continued to turn over constantly, businesses in addition to the single trading post appeared. The N.A.T.&T. opened a post at Forty Mile to compete with McQuesten's A.C. Co. operation. In addition to the two trading companies, the settlement could boast saloons, dancehalls, bakeries, a blacksmith shop and a barber, among other establishments.

A number of different events make 1894 an appropriate place to mark another stage in Yukon's development. The N.W.M.P., represented by Constantine and Brown, arrived in Forty Mile, initiating the transition to Canadian authority from the previous self-governing society. The police quickly asserted their authority over that previously held by the miner's meeting (Stone 1979). News of the Forty Mile and Circle City goldfields began to draw large numbers of people into the Yukon basin (Weppler 1969, Stone 1979, 1983, Burley 1985). These newcomers did not share the values and rules of Old Timer society and the end of this type of lifestyle was imminent. This change is evidenced by the formation of the Yukon Order of Pioneers, which Burley (1985:20) views as an attempt by members of the organization to uphold and preserve the principles by which they lived their lives.

Klondike Gold Rush

Near the end of the summer of 1896, impressive quantities of gold were discovered on Rabbit Creek, a tributary of the Klondike River. Renamed Bonanza Creek, this discovery started the Klondike Gold Rush. As soon as the news reached Forty Mile, the miners dropped what they were doing and headed for the new strike. Forty Mile was nearly deserted. News soon reached Circle City with the same result. The second rush arrived as the river broke in the spring of 1897 and would-be miners on their way to

Circle arrived at the Klondike on their way down stream (Guest 1982). The rest of the world knew little about the new discovery until the summer of 1897, when miners arrived in Seattle and San Francisco laden with gold from their Klondike claims.

News spread quickly and the rush began almost immediately. There were four primary routes to the Klondike. The all Canadian route, the least popular of the four, started in Edmonton and followed a poorly defined trail (see MacGregor 1970), on which few ever reached the gold fields. Those who made it often spent more than a year on the trail. Three other routes involved passage from the west coast, generally from Seattle, San Francisco, Vancouver or Victoria, through the inside passage to Alaska. Those going via Saint Michael continued by steamer to the mouth of the Yukon River. From there they boarded a sternwheeler for a journey of nearly 2000 miles upstream. While this trip required the least personal effort, it was expensive and time consuming. Two mountain passes, the Chilkoot and the White, located near the head of Lynn Canal, were the shortest routes into the interior. Steamers from the south unloaded passengers and freight at the American towns of Skagway, for those using the White Pass, and Dyea for those determined to cross the Chilkoot.

Once the stampeder arrived in Skagway or Dyea arrangements had to be made to transport their requisite one ton of supplies over the passes. Individuals who could afford the extra expense hired packers to transfer their goods to the summit. The rest made as many as thirty trips themselves packing or pulling their provisions on a sleigh. It was possible to use pack animals on the White Pass trail, but the death toll of horses reached unbelievable numbers. Stampeders were met at the summit of the Chilkoot Pass by a detachment of the N.W.M.P. acting as customs agents. When the last trip to the summit was completed the task began again, hauling the supplies down to Lakes Lindeman and Bennett. Here the journey could continue on the water, as the lakes ultimately drained into the Yukon River. Large camps grew at the heads of both lakes as the stampeders sought logs, whipsawed them, and built their own boats. When the ice finally went out in the spring of 1898 the N.W.M.P. enumerated 7000 boats beginning the voyage to

Dawson. Julius Price (1898:118) reported that in one day more than 700 boats left Bennett.

The river trip offered hazards of its own, particularly for those people with no previous experience on the water, and too often travelling in poorly designed and constructed boats. A wide and ever changing river, the Yukon had to be watched constantly so the boats stayed in the deep channels. A wrong choice could leave one stranded on a gravel bar, far from assistance. Further testing the stampeders mettle were rapids such as Miles Canyon and the Whitehorse rapids. Here the great river was constricted into a canyon not 50m wide, with shear rock walls. The other side of the canyon was guarded by a whirlpool, and for those who passed beyond, lay the White Horse, rapids named for the appearance of the spray created by the accelerated water passing though the rocks. Further downstream were the Rink and Five Finger rapids.

At each step of the journey outfits were swept away and lives lost. Those who made it passed all obstacles and arrived in Dawson City found the community abuzz with life. Yet after such an arduous trip, most were forced to face the fact that the gold creeks were completely staked, in many cases even before they left home. The responses were varied, some simply sold out their outfit and headed home. The journey alone had been enough for them. Those that were able, bought claims, others took a lay on a claim, providing labour for a portion of the take. Many more simply waited around for the next big strike, creating an ebb and flow in the population as they rushed off to reported new discoveries, generally returning when things did not pan out (Guest 1982).

Dawson City

The history of Dawson City is relatively well known and has been covered by numerous authors, therefore the outline I present is relatively brief and largely oriented toward aspects relevant to the understanding of transience. Detailed historical information may be found in two contemporary sources, both recently re-published, William Haskell's (1998) *Two Years in the Klondike and Alaskan Goldfields*, and Tappan

Adney's (1994) *The Klondike Stampede*. Two recent histories of the event and community, Guest (1982) and Porsild (1994, 1998), are strongly recommended to the reader; the following summary is based largely on their work.

On 1 September 1896, Joseph Ladue (1897:5) started building the first cabin in the settlement he named Dawson City. According to Guest (1982:25-6), Ladue made the move from the Sixty Mile to the Klondike River based on Robert Henderson's work on Gold Bottom Creek and was already in the process of staking the townsite when Carmack, Skookum Jim and Tagish Charlie made their discovery on Bonanza Creek. Guest (1982:26, 30, 39) has identified three rushes to the Klondike. Wholesale movement of the population of Forty Mile to Dawson constituted the first rush. Ladue began selling lots in the fall of 1896 for $5.00 to $25.00, but as the population increased to approximately 500, land prices began to grow exponentially (Guest 1982:30).

A second rush, which doubled the population, occurred in the spring of 1897, as would-be miners bound for Circle City began to come down the Yukon River and found Dawson at the mouth of the Klondike (Guest 1982). The town consisted largely of tents, but by the summer of 1897 a business section was beginning to develop with the construction of a number of large log structures along the edge of the Yukon River. In June of 1897, the Northwest Mounted Police were beginning to become concerned with the "number of disillusioned men" (Guest 1982:36) in Dawson, and at this point few in the outside world even knew of the discovery.

News of the discovery had no real impact on the world's media until almost a year after the first claim was staked. The effect of the news was immediate, and thousands of people began the rush to the new El Dorado. By 1898 the N.W.M.P. census recorded over 15,000 people living in Dawson (Porsild 1994:341). In May, 1898, Dawson's first bank opened its tent doors (Guest 1982:51). Soon after the first edition of the *Klondike Nugget* appeared. Additional newspapers were not far behind, and soon people could also read the *Klondike Miner*, *Midnight Sun*, *Dawson Daily News* and the *Sunday Gleaner* (Bush 1971). Land prices in the townsite increased dramatically. Lots in the business section of

town could cost $20,000 to $40,000; a lot on Second Avenue would run $10,000, and it could cost $200 to rent a cabin for a month (Guest 1982:47). As the stampeders arrived the small floodplain quickly filled with tents. With the limited amount of level ground and the high costs of lots in town, tents soon began to appear on the hillsides around the community.

There can be no doubt that Dawson was a going concern at the height of the rush. Ingersoll (1981:63) stated that if Dawson was "not the largest city in the world, it now takes first rank among the liveliest and most thriving." It was not, of course, the largest city in the world, but Ingersoll's observation does convey a feeling for the amount of activity in the community. Julius Price's description of the crowds in Dawson's streets, during the summer of 1898, is a perfect illustration:

> "Here was a big city growing before our very eyes. It recalled one of those street scenes that have become so popular at recent exhibitions, only this was before the opening ceremony, and they were hurrying up so they could get it finished in time! The footway was blocked to such an extent with men walking, or standing about, or sitting on the piles of timber, that it was with difficulty that we could get along." (1898:169-170).

There is a common perception that during the gold rush Dawson was a wide-open town, booming with activity both day and night. Using indices of social disorganization, Helper (1945:68) concluded that early Dawson society was characterized by social disorganization. The presence of elements such as: the myth of the gold rush, individuals who did not fit into society in other parts of North America, the numerous saloons, prevalence of prostitution, and ineffectual and corrupt government, and a population with a substantial number of foreigners, prolonged the disorganization by hindering the development of communal institutions that would have produced a stabilizing effect (Helper 1945:89).

The Yukon was made a territory in June, 1898. William Ogilvie was appointed Commissioner the following month (Smyth 1991:6). According to Morrison, Ogilvie found that in addition to his duties as commissioner, he was in effect also the "mayor,

city engineer and fire chief" (1968:21). By midsummer, 1898, individuals within the community were already starting to think about incorporation (Guest 1982:82). A significant discovery was made at Nome, Alaska, and an estimated 4000 to 7000 people left Dawson for the new diggings in 1899. Guest (1982:63) notes that a number of these people returned to Dawson in 1900.

Burley (1979) views the years between 1901 and 1905 as a period of stabilization in Dawson. In 1901 the community had a population of approximately 8000 (Porsild 1994:126). The Canadian government's confidence in Dawson's future was demonstrated by the construction of the large Territorial Administration Building, a new courthouse (Guest 1982:64), post office and telegraph building. A proposal for incorporating Dawson was made to the Yukon Council in the end of 1901 (Guest 1982:90), and the first city government was elected early in the new year. In April they set the price for a transient trader's business licence at $500. In 1902 the city council spent $15,000 on road work, and issued the first municipal taxes (Guest 1982:95-6).

In 1903, people began leaving Dawson for the new discoveries in the Tanana district (Guest 1982:103). The exodus was a blow to the community, resulting in a downturn in the economy and cutting into the city's tax base. Faced with increased taxes a petition to return to governance by an appointed council was started, and a plebiscite was held in mid-September, 1904 (Guest 1982:105). The vote favoured removal of the city council, and despite allegations of tampering with the plebiscite process, the Yukon Council revoked the city's charter and once again assumed control of Dawson.

The approaching end of hand mining began in 1905 with the arrival of large mining corporations (Burley 1979, Guest 1982). After 1905, large companies began buying claims in blocks to facilitate the use of dredges. Although Burley extends this period to 1953, when the capital of the Yukon was moved from Dawson City to Whitehorse, the period of interest here ends about 1910, as the opportunities for the individual miner were essentially over, and thus the period of the transient stampeder had passed.

3

PREVIOUS ARCHAEOLOGY AND PROJECT FIELD METHODS

Previous Archaeological Research

Archaeological research on the Klondike Gold Rush has witnessed resurgence during the last five years. In the 1970s and 1980s, Parks Canada conducted a substantial archaeological program along the Chilkoot Trail (Vickers 1978, Murray and Hamilton 1986) and in Dawson City (e.g., Minni 1977, 1978, Burley and Ross 1979, Ross 1980, 1982, 1985, 1988, Naughton 1989, 1990). During the development of the Klondike National Historic Park, much of this work was service oriented, consisting of inventory surveys to identify archaeological remains and assess their potential, and excavations related to structure stabilization and reconstruction. This work has provided a database on a variety of different aspects of the stampede and the community that grew out of it.

During the mid-eighties the amount of archaeological research conducted in Dawson began to decrease. Hammer's (1999) excavations at Canyon City, just up stream from Miles Canyon, in 1994, mark the beginning of another round of Klondike archaeological research. Other recent projects include investigations at the site of the O'Brien Brewing and Malting Company, in Klondike City (Burley and Will 1999, this volume) and three seasons of survey and excavation at Klondike City and Forty Mile by T.J. Hammer. Excavations were also planned for West's Boiler Shop, in Dawson City, by Parks Canada this past summer (Paula Hassard, pers. com., July 2000).

The United States National Parks Service has published a substantial amount of archaeological excavation undertaken in Skagway (Blee, 1983, 1987, 1989, Cooper 1998,

Rhodes 1988, Spude et al. 1993). Research has also been conducted at Dyea and along the American side of the Chilkoot Trail (Carley 1981).

Dawson City Hillside

Parks Canada archaeologists conducted two projects on the Dawson hillside during the late 1970s (Minni 1978, Burley and Ross 1979, Burley 1980). During the 1976 and 1977 field seasons, Minni undertook a systematic survey of the hillside, followed by test excavations on two platforms on the central hillside in proximity to the Dome Road. She found the types of features present on the hillside varied with the topography and could be divided into three areas. The first area is located below the Moosehide Slide and contains about 20 rectangular stone foundations. The size of these features average approximately $4m^2$. There was no apparent order to the structure locations. Three circular features were also observed; all were located in proximity to stone foundations.

The second area encompasses the steep hillside along the eastern perimeter of the present townsite. The majority of features recorded in this area were platforms, with dry laid stone retaining walls. One platform used wooden poles in the retaining wall. These platforms tend to be approximately $10m^2$ in size. Minni (1978:85) found that the archaeological remains occurred in clusters; some parts of the hillside contained no remains.

The final topographic division includes the lower portion and crest of the hillside. Features observed were primarily rectangular structure outlines and depressions. In contrast to the features in the first and second areas, Minni (1978:94) found remnants of wood at a number of the features at this location. Foundation outlines averaged approximately $5m^2$. The features in this area were more evenly distributed. There were, however, areas where no archaeological remains were identified.

The 1976 test excavations were conducted on a platform located immediately adjacent to the A. C. Trail (Minni 1978:96-104, 109). The platform has an area of $215m^2$,

with a stone and wood retaining wall and a foundation outline consisting of three low earthen berms. Numerous artifacts were present on the ground surface. Structural remains uncovered by the excavations consisted of base logs on the north, south and east sides, with board footings between the logs. Flooring consisted of boards laid inside the base logs, that appeared to have been covered with a heavy fabric. The majority of artifacts date between 1903 and 1910. Artifacts recovered from the platform fill suggest a construction date prior to 1900.

The following year, Minni (1978:106-107) tested a second platform higher up the hillside. The platform has an area of 136m^2, with a stone retaining wall along the front. No other structural remains were located during the excavation. Recovered artifacts consist of construction related materials and household objects. Minni believes the platform was inhabited around the turn of the century.

Burley and Ross (1979, Burley 1980) conducted a mitigation project on the north Dawson hillside in response to proposed borrow pit expansion. Four platforms and one structural site consisting of a shallow depression and the remnants of a fence were recorded within the project area. The average size of the platforms was approximately 30m^2. A sample of 1,194 artifacts was collected from the area. Metal containers dominated the assemblage. Other types of artifacts recovered include: stove parts, utensils, ceramic fragments, glass bottles and jars, flat glass, pieces of footwear and a small amount of faunal material. Results of the artifact analysis indicated that the majority of material culture was related to subsistence. Burley (1980:5) interprets this as evidence that the inhabitant's lives were focused on survival.

Klondike City Hillside

Until recently, little archaeological work has been undertaken at Klondike City. In the late 1970s, Sheila Minni (1978) conducted survey and test excavations at the site. The survey on the hillside identified both isolated and grouped platforms. Household and personal artifacts were observed on many of the platforms; artifact scatters were also

observed in areas not associated with habitation features. Test excavations were conducted on a group of three platforms located at the base of the hillside. These platforms were designated as Site 10, by Skuce and Hogan (1991) and as KCH-38, 39, and 40* in the present study. These platforms are all connected, but are at three different levels, KCH-38 being the uppermost and KCH-40 the lowest. All have dry laid stone masonry retaining walls. Minni's excavation units were placed on each of the three platforms. Structural remains, consisting of base logs and planking, were located only on the highest platform. Few artifacts were recovered from these tests; those found were residential and personal in nature (Minni 1978:118).

During the late 1980s and early 1990s, a series of assessment and recording projects were undertaken in Klondike City, in response to the commencement of mining at the site (Ingram 1989, Robinson 1991, Skuce and Hogan 1991, Hogan and Skuce 1992). While largely concerned with the townsite area of Klondike City, each of these projects made mention of the archaeological remains on the hillside.

Field Methods

This project involved three stages of fieldwork. The first consisted of a survey aimed at creating an inventory of the archaeological features in both study areas. This information was used to guide the selection of specific areas for the second stage of the project, which involved selecting smaller areas of the hillsides and recording all the artifacts on the ground surface. The final stage involved excavating a number of platform features. Manageable fieldwork sites were created by dividing each study area into a number of survey areas. Two surveys areas were completed on the Dawson hillside. The Crocus Bluff survey area consisted of the hillside between the power-line at the east end of Mission Avenue, and Crocus Bluff to the south. The Judge St. survey area encompassed portions of Blocks K, O and S in the Government Addition, at the north end

* In earlier reports Klondike City platforms and features were designated with the prefix MJB, this has been changed to KCH (Klondike City Hillside); the feature numbers remain the same (i.e., MJB-1 = KCH-1).

of town. The Klondike City hillside was separated into three areas, all of which were surveyed.

Each survey was conducted by walking traverses across the hillside at 10m contour intervals. Each traverse was undertaken by two people spaced approximately 5m apart. An altimeter was used to follow the contour for each traverse. Features and artifact scatters were flagged and numbered sequentially for the entire study area. A hip-chain was used on each traverse in the Crocus Bluff survey area. Features located on the Klondike City hillside were mapped by running a 100m chain and a hip-chain along the top and base of the slope. Features in the middle of the slope were tied into lower feature locations by compass bearing and breaking chain.

Tent and/or cabin platforms were the most commonly recorded feature. The dimensions of each feature were recorded (length and width, height at front and height at rear of the platform), as were any other features associated with the platforms. Artifacts on the surface of each platform were recorded to establish a rough guide to the date of occupation. When the number of artifacts on the surface was relatively small all were recorded. In cases where there were large numbers of artifacts on the surface, a judgmental sample was recorded that attempted to include the range of artifact types.

During the second stage of the project, selected areas were mapped and all artifacts on the ground surface in the area were recorded. Surface artifacts were recorded in four different locations: (1) around a group of nine platforms on the Dawson hillside east of Judge Street, (2) around a single platform at Crocus Bluff (Platform HAP 4), (3) around two platforms on the Klondike City hillside (Platforms KCH 7 and 9), and (4) in an area around three platforms on the Klondike City hillside (Platforms KCH 14-16). At the Judge Street area and at Platforms KCH 14-16, a 5 x 5m grid was laid out over the subject areas to facilitate recording. A grid was unnecessary at the smaller subject area around the Crocus Bluff platform. Where moss covered the ground surface a trowel was used to probe for artifacts. All artifacts were recorded in the field. A limited number of artifacts considered to have interpretive potential were collected.

Excavation was limited to a single platform on the Klondike City hillside. The excavation grid was aligned with the platform (grid north = 320° True). A 2 x 2m unit was placed over part of the east foundation berm and also covered the northeast corner of the structure. A 1 x 1m unit was placed in the southwest corner of the structure. Units were excavated primarily by trowel. Shovel shaving was used in the 2 x 2m unit in the sterile platform construction fill. Excavation followed natural layers, using 5 cm arbitrary levels in thicker strata. All excavated material was screened through $^1/_4$" and $^1/_8$" nested screens. Due to the relatively small amount of cultural material recovered, all artifacts were recorded in the field. Photographs (colour print and slide film) and plan view maps were made of all layers/levels. Unit walls were profiled and photographed upon completion. Artifacts that possess interpretive value were sorted out for curation. All other artifacts were placed in labelled bags with a metal tag identifying the project, permit number and date, and were then placed back in their respective units. Both units were entirely backfilled at the completion of the project.

4

RESULTS OF THE INVENTORY SURVEY

Dawson City Hillside

Historic photographs of Dawson City show hundreds of tents and cabins dotted across the hillside. As the population of the town expanded, the price of real estate increased exponentially and few stampeders could afford to buy or rent property within the townsite. This, coupled with a large section of swampy ground in the central part of the community, led to an early occupation of the hillside. The demand for lumber in the early years resulted in the removal of all the trees from the hillside. The official town plan for Dawson extended up and over the hillside, however, above the lowest levels of the hill the plan was never developed on the ground. The only road present on the hillside was the A.C. Trail or Dome Road. This road runs uphill from the east end of King Street, across the central section of the scarp, to the cemeteries and goldfields.

A quote from William Haskell, who was in the Klondike soon after the discovery, provides an interesting perspective on the hillside areas:

> "As demand for building lots grew and the evidences of the unsanitary condition of the soil became more apparent, people began to pitch their tents and build cabins on the hillside. Such locations are some distance away from the business center, but none too far for such as desire to live quietly. The view from these hill residences, overlooking Dawson and the river, is fine and in time it will become, doubtless, a coveted residential quarter." (Haskell 1998:356).

Although the occupation of the hillside was residential (Minni 1978:80), there is no evidence that it was considered desirable. As the boom of the gold rush began to subside, the hillside areas were the first to be abandoned. Laura Berton stated that when she

arrived in Dawson, in 1907, the hillsides were inhabited by "a variety of curious men in tiny, immaculate log cabins." (1954:37). By the 1930's Dawson began to resemble its current size and the hillside was once again overgrown (Minni 1978:80).

Figure 2. Dawson City in 1899, showing cabins scattered on the hillside at left (Yukon Archives, MacBride Collection, YA3739).

Crocus Bluff

Platforms and Possible Platforms

The slope of Crocus Bluff survey area extends from approximately 330m asl to 400m asl, at which point it begins to level out. A total of 108 sites were identified within this area; 74 are tent/cabin platforms and 16 are possible platforms (Figure 3). Features recorded as possible platforms were relatively level areas that could have served as a building platform, but which lacked evidence of purposeful construction such as an obvious cut into the slope or a built up area at the front. Platforms were constructed by excavating into the hillside and pushing the removed material forward to create a level area for a tent or cabin. Dry laid stone masonry retaining walls are present at the front of

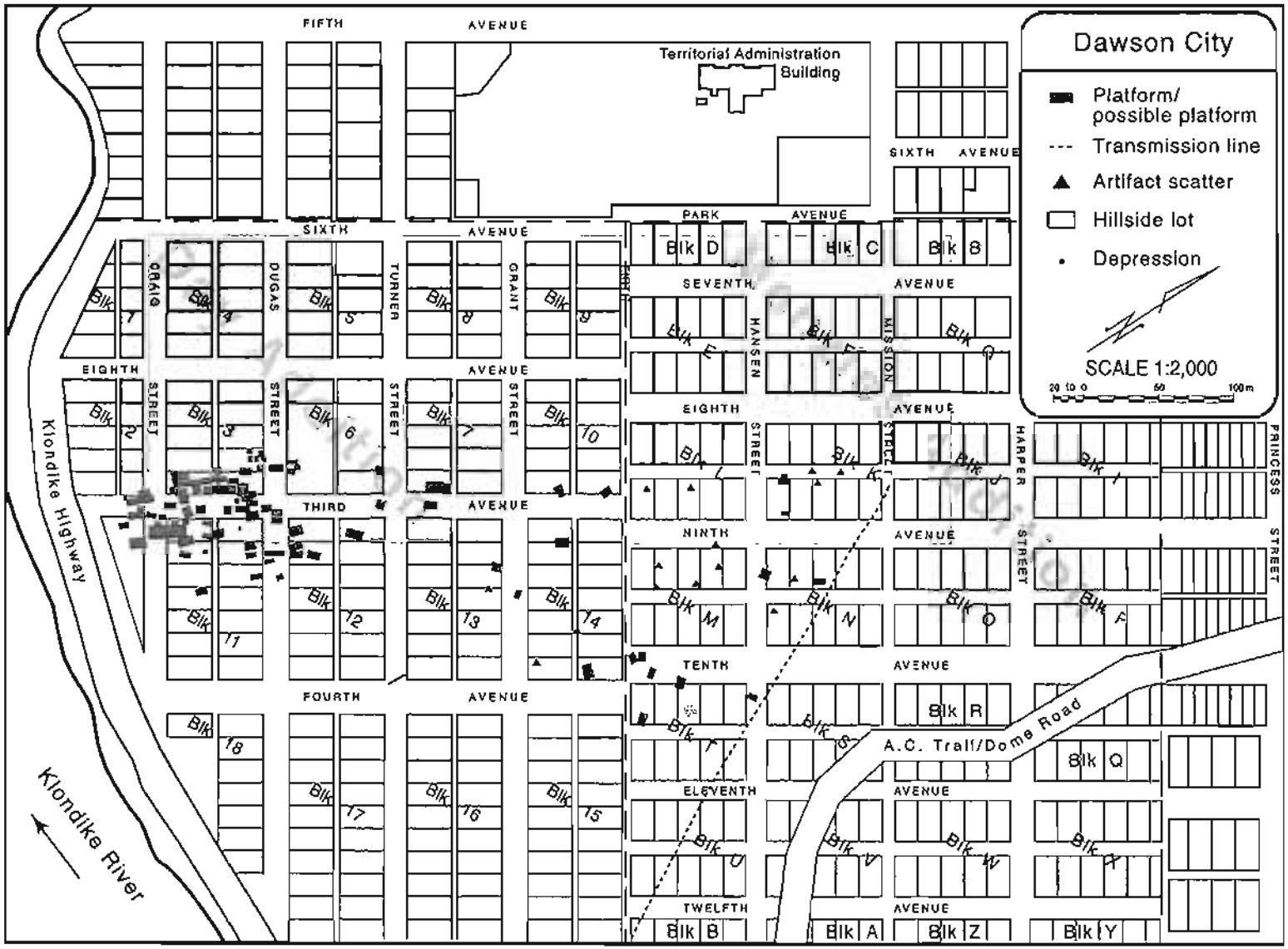

Figure 3. Platforms at Crocus Bluff, Dawson City hillside.

34% of these platforms. The maximum height of these walls range from .50m to 2.3m. (e.g., Figure 4). Stone retaining walls were recorded at the rear of only 13 platforms and in some instances these walls formed the front of a platform located above.

Figure 4. Large stone retaining wall at front of Crocus Bluff Platform.

The size of these platforms ranges from 5.5m^2 to over 200m^2 in area. The average size of the platforms is 30m^2. Three platforms (HAP-47, HAP-57, HAP-103) located in proximity to Crocus Bluff are large and probably held more than one structure. The possibility of multiple structures is most obvious at HAP-47, which consists of three distinct segments on the same platform, sharing a 30m long stone retaining wall with a set of dry laid stone stairs at its centre. The south end of the platform is approximately 30 cm lower than the centre. A low, three-sided foundation outline is located at the north end.

Foundation outlines or low berms possibly associated with former structures were identified on twenty platforms. If we assume that most structures were rectangular in shape, then at least two perpendicular berms are needed to derive a rough estimate of structure size. This calculation was possible for ten platforms. The area covered by the structural outlines averaged $22m^2$ (235 square feet), with a range from 11.2 to $48m^2$ (120 to 520 square feet). Two of the foundation outlines are located near the crest of the hill where the slope is quite gentle, as a result the structural outlines did not require much of a platform. The area of the foundation outlines compared with the total platform area, suggests that the structures did not cover the entire platform. In some cases structures appear to have covered only half or less of the platform surface. The presence of trenches located outside a number of these foundation outlines is believed to be associated with the construction of structures. These trenches may have resulted from removal of material to be piled up against the lower sections of the structure walls. This dirt may also have been used to cover the structure roof.

Small circular depressions were recorded in association with seven platforms. With one exception, these features are located behind one of the platform's uphill corners. In the only other instance the depression is located in front of the platform, at the base of the northwest corner. This depression has a low, dry laid stone retaining wall around the down-slope side. The depressions average 1.5m in diameter and have an mean depth of .5m. These holes may represent privies, or result from the removal of fill for platform or building construction. Identification of their function will have to await testing.

Artifacts Associated with Platforms

Surface artifacts were observed on of 72% of the platforms in the Crocus Bluff area. The majority of artifacts were metal food storage containers and household items, such as stove parts, fuel cans and buckets. Structural artifacts were noted at only 12% of the platforms, and consisted primarily of large pieces of metal and corrugated metal sheeting. Similar to the Klondike City platforms, personal items such as footwear, were found on 7% of the platforms recorded.

Table 1. Crocus Bluff platforms, Dawson City hillside.

Feature No. (HAP-)	Elevation (m asl)	Length (m)	Width (m)	Area (m^2)	Front Retaining wall	Wall Height (m)	Rear Retaining wall	Wall Height (m)
4	395	5.1	6.3	32.1	no		no	
6	395	5.0	6.5	32.5	no	0.4	no	.04
8	395	6.0	9.0	54.0	no	0.6	no	
18	370	7.1	2.7	19.2	no	0.9	no	0.9
19	370	6.1	3.4	20.7	yes	1.2	no	1.1
20	360	9.0	4.0	36.0	no	1.0	no	0.7
22	360	6.5	3.8	24.7	no	0.8	no	0.8
26	355-60	7.8	3.5	27.3	yes	0.9	no	0.7
27	360	8.0	3.5	28.0	no	0.7	no	1.0
28	360	5.6	3.8	21.3	yes	1.0	no	1.2
29	360	12.8	2.8	35.8	no	0.5	no	0.6
30	360	4.8	2.1	10.1	no	0.5	no	0.6
31	360	5.3	2.1	11.1	no	1.0	no	1.4
32	355	6.0	3.3	19.8	yes	0.7	no	1.0
33	350	6.0	2.8	16.8	no	1.5	no	1.2
36	350	11.0	4.0	44.0	no	1.2	no	1.4
37	350	5.5	4.9	27.0	yes	1.6	no	1.4
38	350	4.8	2.3	11.0	yes	1.1	yes	1.2
39	345	5.7	2.7	15.4	yes	0.6	yes	1.2
41	350	8.0	5.0	40.0	yes	1.0	no	1.2
42	350	5.0	3.2	16.0	no	0.5	no	0.8
43	350	7.5	4.2	31.5	yes	0.9	no	1.5
45	345-50	7.3	3.0	21.9	yes	1.1	no	1.4
46	345-50	9.0	5.2	46.8	yes	1.2	no	1.2
47	345	27.0	8.0	216.0	yes	0.8	yes	3.0
48	340-45	6.2	2.7	16.7	yes	0.6	no	1.3
49	340	8.3	2.7	22.4	yes	1.3	yes	0.8
50	340	7.2	3.0	21.6	yes	2.0	no	1.0
51	340	4.0	2.5	10.0	no	0.5	no	0.6
52	340	5.6	3.8	21.3	yes	0.8	no	0.9
53	340	4.6	2.6	12.0	no	0.4	yes	1.4
55	335	6.0	3.4	20.4	no	0.7	no	0.7
56	330	5.3	3.7	19.6	no	0.5	no	1.2
57	330	18.5	5.5	101.8	yes	1.3	yes	1.0
58	330	2.3	2.4	5.5	no	0.3	no	1.1
59	330	7.0	4.5	31.5	no	1.5	yes	1.2
60	340	3.4	3.6	12.2	yes	0.7	yes	0.9

Table 1. Crocus Bluff platforms, Dawson City hillside, continued.

Feature No. (HAP-)	Elevation (m asl)	Length (m)	Width (m)	Area (m^2)	Front Retaining wall	Wall Height (m)	Rear Retaining wall	Wall Height (m)
61	340	3.3	3.9	12.9	yes	0.5	no	0.9
62	340	4.9	2.1	10.5	no	1.0	no	1.0
63	340	5.0	3.7	18.5	no	0.3	no	0.8
64	340	5.8	8.4	48.9	yes	1.2	no	1.0
65	340	5.0	6.5	32.5	yes	1.7	no	1.1
66	335-40	5.2	2.6	13.5	no	0.6	yes	1.2
67	335	5.3	3.5	18.6	no	0.7	no	1.0
68	330	3.6	2.6	9.4	no	1.4	no	1.0
69	330	4.8	6.0	28.6	no	2.3	no	1.2
70	330	4.1	7.5	30.8	no	0.5	yes	0.8
73	340	6.1	3.0	18.4	no	0.8	no	0.9
74	335-40	4.6	5.0	23.0	no	0.6	no	0.5
75	335-40	4.1	2.9	11.8	no	0.7	no	0.9
77	330	7.2	4.5	32.4	no	0.8	no	0.7
78	335	2.3	2.8	6.3	no	0.6	yes	1.2
79	335	6.3	2.9	18.4	no	0.6	no	1.0
80	330-35	13.6	2.9	39.4	no	1.0	no	0.9
81	335	7.9	2.9	22.9	no	0.9	no	0.9
84	330-35	6.5	4.3	28.1	no	0.4	no	0.9
87	330	5.0	4.3	21.5	no	0.6	no	0.8
88	330	4.1	2.8	11.4	no	0.8	No	0.9
89	330	8.9	3.8	33.8	no	0.8	no	0.9
90	330	6.5	5.0	32.5	no	0.6	no	1.1
92	330-35	3.8	2.4	8.8	no	0.3	no	0.9
93	330-35	7.3	4.7	34.3	yes	2.3	no	1.1
95	330-35	3.4	2.2	7.3	no	0.9	no	0.7
96	330-35	6.4	2.7	17.3	no	0.7	no	0.5
97	330	6.5	3.3	21.5	no	0.3	no	0.6
98	330-35	9.3	4.4	41.1	no	0.4	no	1.6
100	335	4.5	3.0	13.5	no	0.4	no	0.7
101	330	7.6	4.7	35.7	yes	1.2	no	0.7
103	330	24.9	5.3	132.0	yes	0.8	yes	2.9
104	330	5.0	2.2	11.0	no	0.6	no	0.7
105	330	9.8	4.9	48.0	yes	0.7	yes	1.9
106	330	10.1	2.5	25.3	no		no	0.7
107	330	4.5	4.0	18.0	no	0.5	no	0.4
108	330	13.0	2.6	33.8	no	0.8	no	1.3

Table 2. Crocus Bluff possible platforms.

Feature No. (HAP-)	Elevation (m asl)	Length (m)	Width (m)	Area (m^2)	Front Retaining wall	Wall Height (m)	Rear Retaining wall	Wall Height (m)
1	395	5.1	3.4	17.3	no	0.3	no	0.8
2	395	5.0	8.1	40.5	no	0.7	no	0.7
5	395	5.0	7.4	37.0	no	1.0	no	
7	395	4.5	3.8	17.1	no	0.7	no	
9	395	6.0			no		no	
15	375	3.0	2.0	6.0	no	0.6	no	1.1
17	370	3.5	1.9	6.7	no	0.5	no	0.8
25	360	4.6	2.7	12.4	no	0.8	no	0.8
35	350	8.0	3.8	30.4	no	0.8	no	1.2
54	335	9.7	3.4	33.0	no	1.0	no	0.7
72	340	1.8	2.9	5.2	no	0.9	no	0.4
76	330	4.0	4.2	16.8	no	0.5	no	0.4
91	330	2.6	2.2	5.7	no	0.8	no	0.9
94	335-40	4.5	2.4	10.8	no	0.4	yes	1.7
99	335	4.0	3.7	14.8	no	1.3	no	0.8
102	330	3.7	3.4	12.6	no		no	1.2

Re-used or otherwise modified artifacts were recorded at 14 (15%) platforms and one possible platform. Large rectangular oil cans were the most commonly used object. Buckets made from these cans, by completely removing the top end and adding a wooden or wire handle, were observed on 7 platforms. Modified and re-used artifacts were also recorded by Gates (1985) during a survey of the Klondike Goldfields. While he notes the re-use of a variety of different artifact types, metal containers and wooden crates were the most commonly re-used objects.

Artifact Scatters

Fifteen artifact scatters not directly associated with a platform were recorded in the Crocus Bluff area. These scatters are located in the northern section of the survey area, where the density of platforms is considerably less than that in proximity to the bluff itself. These scatters all consist of less than 8 artifacts. The types of artifacts found in these scatters are very similar to those found on the platforms and consist primarily of metal food storage containers and household artifacts.

Trails

It is obvious that the hillside in the Crocus Bluff area has received limited, but consistent use since the gold rush. A well used trail runs up the edge of the bluff, and numerous other trails criss-cross the hillside north of the bluff. These trails are believed to be the result of children's activities as evidenced by a number of tree forts. As a result, it was difficult to identify trails that may have existed during the gold rush era. Only two short sections of gold rush era trails were identified during the survey, both connected with platforms (HAP-42 and HAP-63).

Other Features

Two other types of features were recorded in the Crocus Bluff area. HAP-3 consists of two linear mounds and a trench, all parallel to one another and all between 5 and 7m long and approximately 2m wide. The trench is .50m deep, and the mounds are both about 1m in height. The only artifacts associated with these features are milled lumber, plywood and two metal containers that appear to be of recent origin.

Two depressions, not directly associated with platforms, were recorded (HAP-40, HAP-44). Both depressions were created by digging into the slope and depositing the removed material on the downhill side. They are oval in shape, measuring approximately 1.5m in length (across slope) and nearly 1m wide (with slope). There were no artifacts associated with either of these depressions. The presence of the removed material at the front of the depressions suggests that they were not sources of fill for nearby platform construction.

Judge Street Area

The portion of the hillside referred to as the Judge Street Survey Area is located at the north end of Dawson and covers parts of Blocks K, O and S in the Government Addition (Figures 5 and 6). This location was selected for stage two of the project because of the numerous artifacts visible on the ground surface. A talus slope and nine

platforms (HAP J1-J9) are centrally located within this area. It appears likely that the artifact scatter was generated by the inhabitants of these platforms. Six additional platforms are located in proximity to the talus slope, but are not immediately adjacent to it.

The average size of the platforms in the Judge Street area is approximately $30m^2$, and is almost identical to those recorded at Crocus Bluff and on the Klondike City hillside. Nine of the 15 platforms have stone retaining walls along the front. Only a single platform had a retaining wall at the rear. While the majority of platforms were constructed by excavating into the slope and pushing the earth forward to create a level area, six platforms, built near the crest of slopes, were produced by excavation alone, without the necessity of adding fill to level one end (HAP-J3, J4, J10, J11, J12, and J16). There is no visible evidence of the earth that was removed during the construction of these platforms.

Platforms HAP-J1 through J5 are located along the top edge of the talus slope. Platforms HAP-J6 to J8 are half-way down the south side of the talus slope and sit side by side on the same platform. Platform HAP-J9 is located on the north side of the talus slope near the base. Platforms HAP-J5 through J8 are the only ones in this area that show evidence of previous structures. The areas of three structural outlines were calculated, producing an average area of $25m^2$ (265 square feet). When compared with the total platform area, these structures encompassed an average of 60% of the level space.

Four platforms (HAP-J5, J6, J7 and J12) have smaller areas dug into the slope adjacent to them, similar to one at KCH-7, located on the Klondike City hillside. Their function(s) are unknown. They may represent the places from which additional ground was removed during the construction of their platforms. Alternatively, they may indicate the location of a privy.

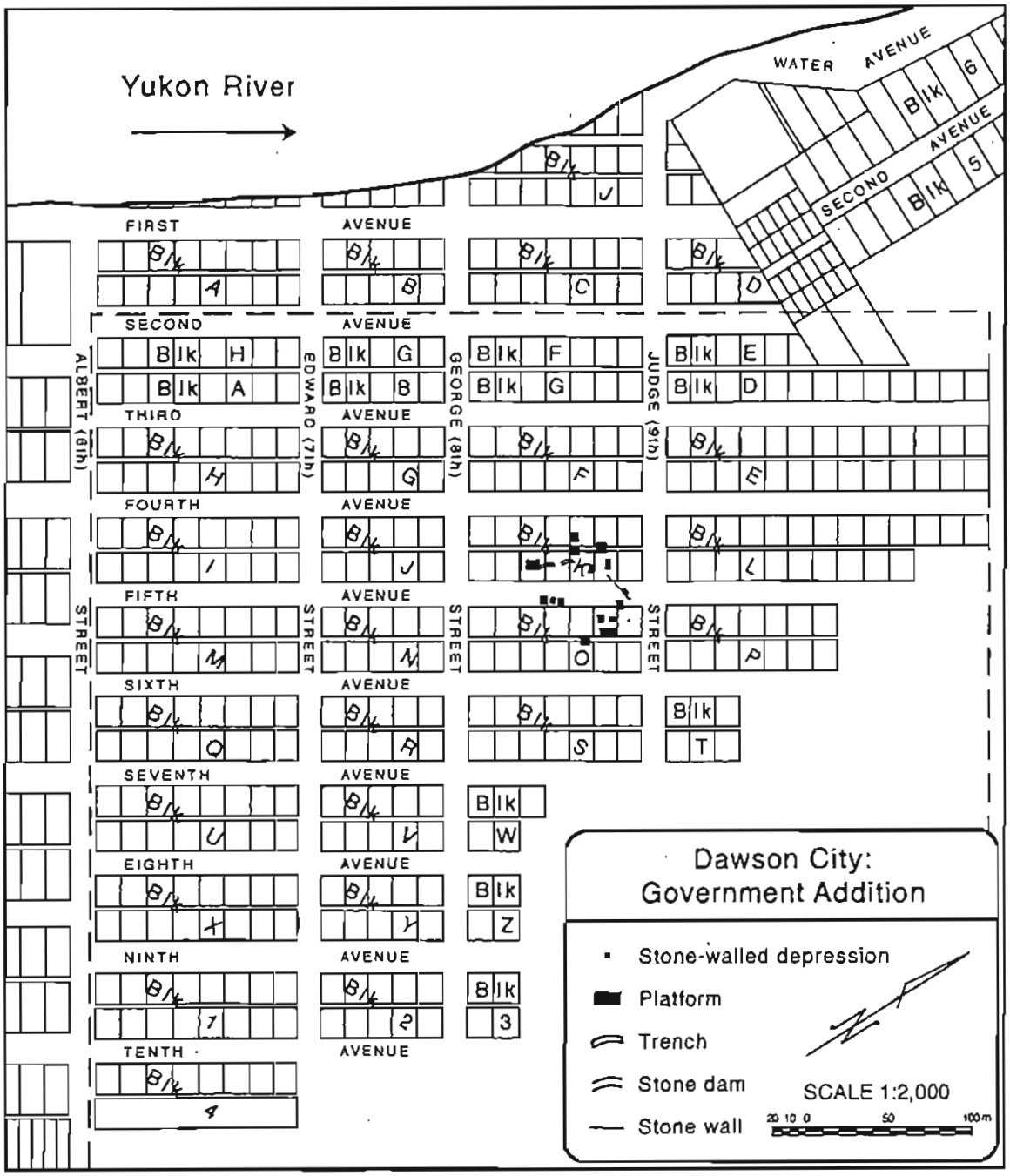

Figure 5. Map of Government Addition to Dawson townsite showing location of Judge Street platforms.

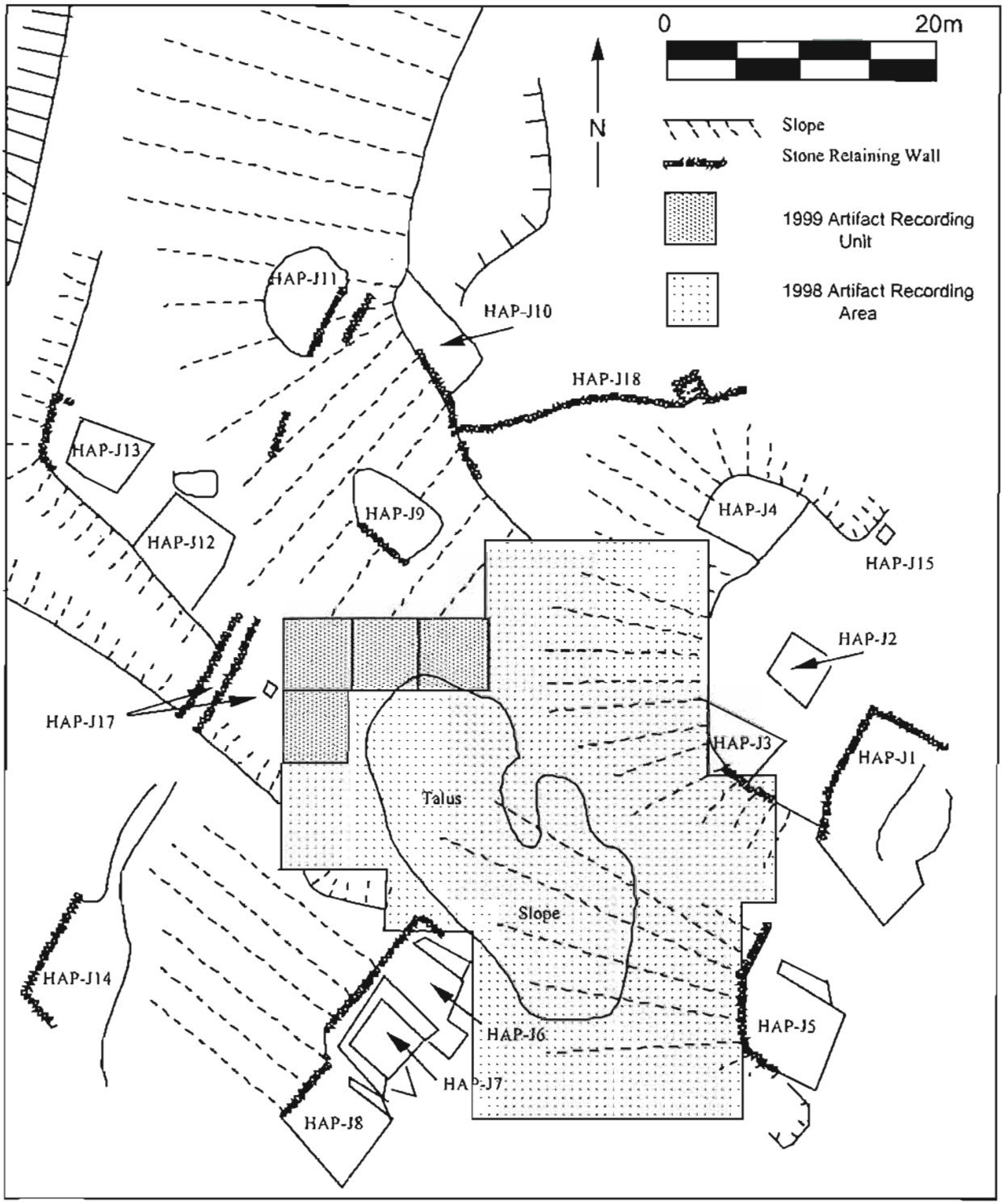

Figure 6. Map of the Judge Street Survey area.

Table 3. Judge Street Area platforms, Dawson City hillside.

Feature No. (HAP-J)	Elevation (m asl)	Length (m)	Width (m)	Area (m^2)	Front Retaining wall	Wall Height (m)	Rear Retaining wall	Wall Height (m)
1		12.7	4.7	59.7	yes	0.4	no	0.6
2		4.0	4.0	16.0	no	0.4	no	0.3
3		5.8	3.9	22.6	yes	0.6	no	0.6
4		5.0	6.0	30.0	no		no	1.0
5		8.6	5.0	43.0	yes	1.4	no	1.1
6		5.3	6.6	35.0	yes	1.7	no	0.5
7		6.5	6.0	39.0	yes	0.5	no	0.4
8		7.2	5.3	38.2	yes	0.4	no	0.7
9		4.9	5.0	24.5	yes	0.9	no	0.7
10		3.0	8.0	24.0	yes		no	
11		6.0	5.0	30.0	no		yes	
12		6.0	6.0	36.0	no		no	
13		4.0	5.0	20.0	no		no	
14		7.5	6.0	45.0	yes		no	
16		6.0	9.0	54.0	no		no	

There are four features in the Judge Street survey area that were not found in any of the other project areas. The first is a small drainage which runs northwest toward 4th Avenue at the base of the talus slope. Across the drainage, approximately 12m from the base of the slope, is a dry laid stone masonry dam (HAP-J17) 9m long and 1.5m wide, with a maximum height of 1m. Burley (pers. com., August 1998) has suggested that it was built as a walkway across the drainage. This idea is supported by the presence of small sections of stone retaining walls, running in the direction of the slope north of the dam itself. These retaining walls appear to be associated with a faint trail extending down from Platforms HAP-J10 and J11 to the north end of the dam. A rectangular depression (.60m x .60m), with at least one wall constructed of unmodified rubble, is located 2m behind the dam at the bottom of the drainage.

Figure 7. The Judge Street Area, 1899 (Yukon Archives, MacBride Collection, cropped from photo YA3739).

The second feature of interest consists of a rectangular depression (HAP-J15), similar to the one behind the dam, that is located at the head of another small drainage just north of platforms HAP-J1, J2 and J3. This depression measures .75m x .40m and 1m in depth. All four walls of the depression were constructed using dry laid stone masonry (Figure 8). There is a steep drop (~.60m) above the depression and the area on the downhill side has been built up (~.40m) to create a level space covering about $8m^2$, with the depression at the centre. The possibility that the two rectangular depressions may have served as wells was considered. A third depression in the rubble area near the base of the Moosehide Slide was observed in 1997. This feature consisted of a vertically oriented wooden pipe in a depression made in the rubble. Other possible functions of these depressions include cold storage features for perishable foods (Jim Kincaid, pers.

Figure 8. Feature HAP-J15 in the Judge Street Survey area. All four walls of this depression are constructed of dry-laid stone masonry.

com., September 1998), and privies (David Burley, pers. com., September 1998). Fecal material was observed in the preliminary analysis of test probes, taken in 1999, from the bottoms of both HAP-J15 and HAP-J17, indicating that at the very least they were last used as privies. A small outhouse shaped structure is visible in a photograph of the area taken in 1899 (see Figure 7).

The third feature consists of a 10m linear trench excavated across the natural slope, in line with, but starting 5m from the south end of the dam. The south end of the trench opens onto Platform HAP-J14. To date no explanation has been found for the presence of this trench. Both ends open onto level ground, so it was not made to carry water. At the same time, it seems unlikely that it was part of a trail coming across the dam, as the terrain could have easily been traversed without the trench.

The final feature is a 23m long, dry laid stone retaining wall (HAP-J18), constructed of unmodified rubble. This wall begins at the rear of Platform HAP-J9, and extends east to the base of the drainage below HAP-J15. At the north end of this feature is a staircase with four steps made of unmodified rubble, leading down onto a level area. There are no visible structural remains on this level area. The east end of the retaining wall stops at the base of a long slope. A relatively wide gravel trail runs along the south side of this retaining wall. Although the survey did not extend past the end of the retaining wall, a preliminary reconnaissance indicates that the trail continues up-slope.

The dam, depressions, trench, retaining wall and associated trails can all be viewed as projects that may have benefited all those living within this area. It is possible that these features were constructed as communal projects by the inhabitants of the nearby platforms.

Klondike City Hillside

The Klondike City townsite was originally comprised of two small, flat areas on the south side of the Klondike River, opposite Dawson City. The channel between an island in the river and the mainland portion of Klondike City silted up following the gold rush. The site now consists of a triangular piece of land backed by a hillside at the southern edge, which slopes steeply from 320m asl to 400m asl, at which point it levels out dramatically. The hillside extends from a rocky cliff above the Yukon River in the west to an equally steep rocky bluff above the Klondike River in the east. Currently, the only land access to the site is a narrow road following the old Klondike Mines Railway grade, which was cut into the base of the cliff along the edge of the Klondike River.

An abandoned road runs from the southwest corner of the townsite up the hillside to the bench above. This road was built, or improvements were made to an existing road, during the 1950s (Hogan and Skuce 1992:6). Skuce and Hogan (1991:6) note that proposed mining activities at the site may have resulted in overburden being piled on

platforms located on the hillside. Presently there is one section of the hillside where overburden has been piled, it is not known, however, if any platforms were buried. Mining on the bench at the top of the hillside occurred during the 1950s and may be responsible for a large drainage ditch (6.5m wide at the top) that runs straight down the hillside near the western end. Mining activities have also resulted in overburden being pushed to the crest of the hill in two locations.

The Klondike City hillside was divided into three survey areas. Area A is bounded by the road running up the hillside on the east and south, and on the west by the steep rocky bluff above the Yukon River. Area B consists of the area below the road up the hillside, extending east to a line running north from the point where the road crosses

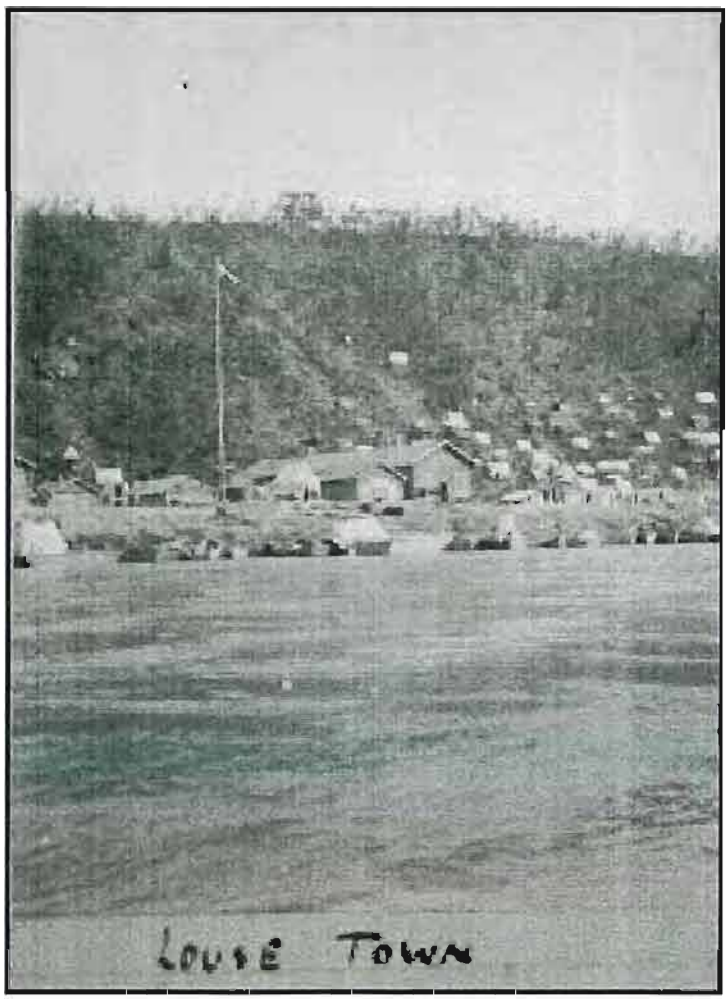

Figure 9. Klondike City, or Lousetown as it looked in 1898, with tents and cabins scattered on the lower portion of the hillside. Some of the trails on the hillside that provided access to the platforms and top of the bluff, are visible in this photograph as faint lines (Yukon Archives, T.R. Lane Collection, YA1386).

the 400m contour, to the base of the slope. Area C is the area east of the above mentioned line to the rocky bluff above the Klondike River. A total of 94 features were located and mapped, including: tent/cabin platforms, possible platforms, artifact scatters, trails, large depressions, cut and piled logs, cabin foundations and a standing cabin (Figure 10).

Archaeological remains in Area A consist of platforms, trails, artifact scatters, cabin foundations and a standing cabin. The majority of platforms are located in the centre of the slope between approximately 340 and 370m asl. The three largest artifact scatters, not directly associated with habitation features, are located along the top of the hillside in this area. The cabin foundations and standing cabin are also located in Area A. With the exception of a few small artifact scatters, platforms were the only features recorded in Area B. All of these platforms were located below 350m asl; the majority of them were located close to the base of the slope (325-330m asl). Archaeological remains identified in Area C include platforms and possible platforms, artifact scatters, depressions and cut and piled logs. All platforms and possible platforms in this area are located along the lower levels of the hillside (below 340m asl). No archaeological remains were found in the central portion of the hillside. The archaeological remains located at the top of Area C include a number of large depressions, artifact scatters and cut and piled logs.

Platforms and Possible Platforms

The hillside survey recorded 56 platforms, 16 possible platforms, four cabin foundations and one standing cabin. Dry laid stone retaining walls were present at the front of 77% of the platforms. These retaining walls were constructed with cobble to boulder sized unshaped rubble, likely collected from nearby rock outcroppings. The height of these front walls range from 0.6m to 1.9m. Rear retaining walls were only present at six of the platforms, and in some instances these were also the retaining walls at the front of a platform located above.

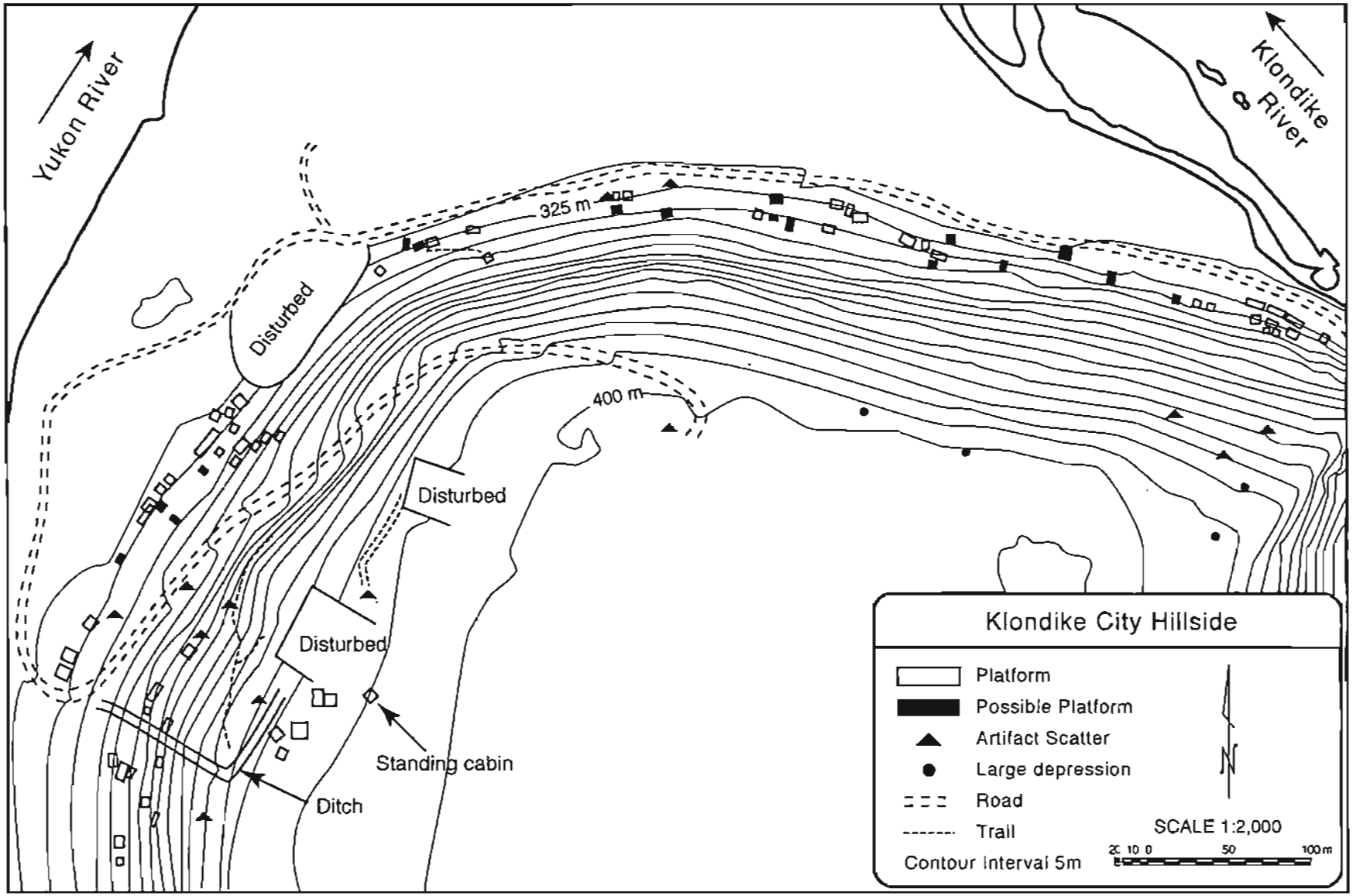

Figure 10. Platforms on Klondike City hillside.

Now largely overgrown, the build-up of organic material around the bases of trees, plus slumps at the rear of some features have left the platform surfaces uneven. Platform size varies considerably. Maximum length (measured across the slope) and width (measured in the direction of the slope) were recorded for each platform, and used to calculate the area for each feature. Areas so calculated are approximate sizes, as few of the platforms are truly rectangular in shape. The area of the platforms ranged from 3 to 76m^2, with an average size of 32m^2.

There are a few large platforms that may have held more than one structure. Unfortunately, very few of the platforms recorded on the Klondike City hillside exhibit any surface indication of the structures that sat upon them. Platform KCH-7 is the exception, and has three low berms covering an area of 16.5m^2 (176 square feet), approximately 60% of the total platform area. This suggests that the structures that existed on the hillside were smaller than the platform they were built upon. Artifacts related to structures, such as corrugated metal sheeting, were only located on three platforms.

Artifacts were observed on the surface of 70% of the platforms recorded. The majority of these artifacts were metal food storage containers and household items, such as metal cookware and fuel cans. Personal items, including footwear and a bone handled toothbrush, were found on only 7% of the platforms. Liquor bottles were observed on 18% of the platforms. Re-used artifacts were noted at 21% of the platforms, 19% of the possible platforms, at the cabin foundations at KCH-3, and in a number of the artifact scatters. The most frequently modified and re-used type of artifact on the Klondike City hillside was the large rectangular oil can.

Cabins and Foundations

The standing cabin on the bench at the top of the slope in Area A is a relatively recent structure. There is considerable evidence for ground disturbance in proximity to

Table 4. Klondike City hillside platforms.

Feature No. (KCH-)	Elevation (m asl)	Length (m)	Width (m)	Area (m^2)	Front Retaining wall	Wall Height (m)	Rear Retaining wall	Wall Height (m)
7	370	9.0	2.0	27.0	yes	0.9	no	1.1
9	360	5.0	2.5	12.5	?	1.2	no	1.2
10	350	5.3	2.6	13.8	yes	0.8	no	0.5
11	350	3.8	1.4	5.3	yes	0.8	no	0.5
12	350	3.6	1.9	6.8	yes	0.7	no	
14	340	10.7	5.4	57.8	yes	1.9	no	0.9
15	340	8.6	5.8	49.9	yes	1.0	yes	0.8
16	340	4.4	3.8	16.7	?	1.2	no	
17	340	12.1	3.6	43.6	yes	1.5	no	0.7
18	340	4.8	3.1	14.9	yes	1.3	no	1.2
19	340	2.2	1.6	3.5	yes	1.2	no	
20	330	8.9	3.6	32.0	no	1.3	no	0.9
22	345	9.0	5.0	45.0	yes	1.0	no	0.5
23	350	12.0	2.2	26.4	yes	1.0	yes	1.0
24	330	6.5	3.5	22.8	?	1.8	no	0.9
25	330	4.9	2.8	13.7	yes	0.7	no	0.6
26	330	6.7	4.6	30.8	yes	0.6	no	0.6
27	330	5.2	4.0	20.8	yes	1.0	no	0.6
28	330	7.3	3.6	26.3	yes	1.3	no	1.1
29	330	5.2	3.9	20.3	yes	1.0	no	0.8
30	330	5.6	3.0	16.8	yes	0.9	no	0.9
34	330	7.7	5.8	44.7	yes	1.0	no	0.8
35	330	5.0	4.5	22.5	yes	0.7	no	
36	320	6.7	5.3	35.5	yes	0.6	no	0.5
38	320	8.0	4.7	37.6	yes	1.6	no	0.7
39	320	4.7	4.6	21.6	yes	1.1	no	0.3
40	320	7.2	6.2	44.6	yes	0.8	no	0.4
42	320	5.7	7.0	39.9	yes	0.8	no	
43	320	5.3	4.9	26.0	no	1.1	no	0.6
44	320	19.0	4.0	76.0	no	1.2	no	2.0
45	320	7.6	4.6	35.0	yes	0.5	yes	0.9
46	320	7.2	3.0	21.6	yes	0.9	no	0.4
47	320	5.5	5.0	27.5	yes	1.0	no	1.3
50	320	8.8	4.9	43.1	-	-	-	-
53	320	6.2	4.2	26.0	no		yes	0.8
55	320	9.6	4.2	40.3	yes	0.8	no	0.9
63	330	5.5	2.8	15.4	no		no	0.6
64	330	5.9	4.0	23.6	no	1.5	no	0.4
67	330	7.4	4.3	31.8	yes	0.7	no	0.7

Table 4. Klondike City hillside platforms continued.

Feature No. (KCH-)	Elevation (m asl)	Length (m)	Width (m)	Area (m^2)	Front Retaining wall	Wall Height (m)	Rear Retaining wall	Wall Height (m)
68	325	10.0	4.4	44.0	yes	0.9	no	0.6
69	330	6.0	4.7	28.2	no	1.1	yes	0.6
70	330	6.2	7.2	44.6	yes	1.0	no	0.8
71	330	8.1	2.6	21.1	?	0.6	no	0.8
72	325	5.3	4.2	22.3	yes	0.6	no	0.5
73	330	8.2	5.2	42.6	yes	1.1	no	0.3
77	330	4.0	3.6	14.4	yes	1.0	no	0.4
78	330	4.8	3.3	15.8	yes	1.2	no	1.0
79	330	5.7	6.8	38.8	yes	1.2	no	0.7
80	330	10.0	5.0	50.0	yes	0.8	no	0.7
81	330	5.4	4.0	21.6	no	0.7	no	0.3
82	330	14.0	4.6	64.4	yes	1.1	no	0.4
83	330	11.9	5.8	69.0	yes	0.9	no	0.9
84	330	12.1	4.1	49.6	no	1.0	no	0.6
85	330	7.8	4.0	31.2	yes	0.8	no	0.5
86	325	4.7	4.4	20.7	yes	0.9	yes	0.6
92	325	10.0	4.5	25.0	no	1.6	no	0.3

Table 5. Klondike City hillside possible platforms.

Feature No. (KCH-)	Elevation (m asl)	Length (m)	Width (m)	Area (m^2)	Front Retaining wall	Wall Height (m)	Rear Retaining wall	Wall Height (m)
31	330	3.3	2.3	7.6	no		no	0.4
32	330	3.1	2.4	7.4	no		no	0.4
37	320	4.5	3.8	17.1	no	0.5	no	0.3
41	320	4.8	3.4	16.3	no		no	0.5
48	320	8.2	4.3	35.3	no		no	
49	320	5.0	4.3	21.5			no	1.0
51	320	35.8	2.6	93.1	yes	0.6	no	
54	320	4.3	3.6	15.5	yes	0.9	no	0.8
65	330	4.8	3.2	15.4	no	0.9	no	0.5
66	330	5.8	3.3	19.1	no	0.6	no	
74	330	3.6	2.5	9.0	no	0.5	no	0.7
75	330	3.9	3.0	11.7	no		no	0.5
76	330	3.6	3.1	11.2	no		no	1.2
87	325	4.2	4.0	16.8	no	0.5	no	0.5
88	325	5.6	3.8	21.3	no	0.5	no	0.5
90	325	9.5	3.0	28.5	no	0.4	no	0.3

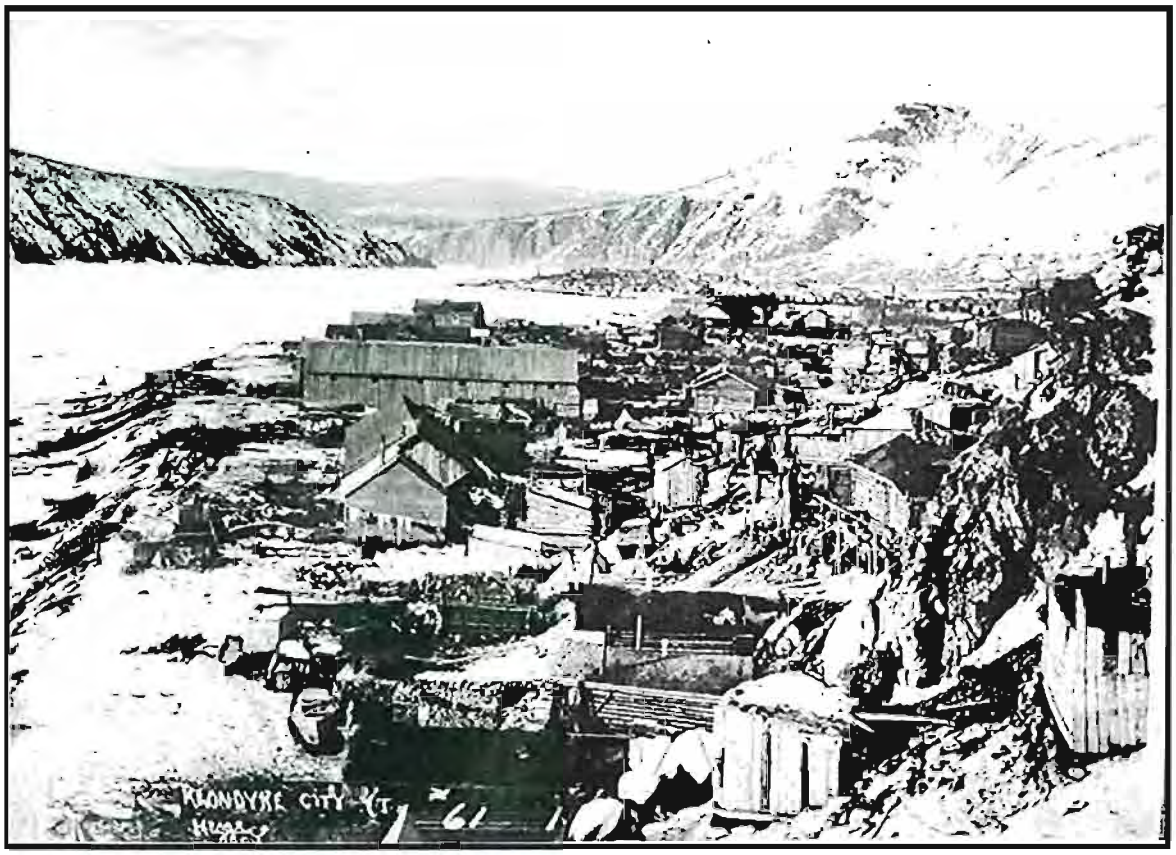

Figure 11. This photograph, taken in 1898 from the southwest corner of Klondike City, shows a number of the structures built on the rocky bluff overlooking the Yukon River (at left). Moosehide Slide, located at the north end of Dawson City, is visible in the upper right of the photograph (Yukon Archives, National Museum of Collection, YA 789).

the five cabin foundations also located at the top of the slope. The area south of these features is hummocky and a large bulldozer berm, resulting from recent mining activities is not far away. To the north, at the crest of the slope, is a large ditch that runs along the top of the slope and connects to the large drainage running straight down the hill.

The foundation outlines consist of three connected berms along the west, south and east sides. Once the walls were completed, earth was mounded up against them to at least the third or fourth course of logs. A large rectangular depression is located in the centre of Structure 4 and a small square depression is at the centre of Structure 5. These

depressions do not appear to be the work of recent artifact collectors, but are most likely features constructed as part of the structure. There are large numbers of artifacts scattered on the surface in and between these foundation outlines, particularly in association with Structures 4 and 5. These include a number of objects made from milled lumber, such as shelving and a table. These structures appear to be visible in a photograph of Klondike City dating from 1917-1918.

Artifact Scatters

Thirteen artifact scatters, not directly associated with habitation platforms, were recorded in the course of the hillside survey. Six of these (KCH-1, 6, 13, 21, 33 and 61) consist of a single artifact. KCH-1 was a short length of milled lumber found near the bulldozer push created by mining activity on the bench above the hillside, and is likely relatively recent. Four other refuse scatters consist of very small numbers of artifacts (KCH-8, 52, 89 and 91). The only artifacts of note among these include a rectangular metal container labelled "A.C. CO./STRICTLY PURE/ HONEY/ PACKAGED/ EXPRESSLY FOR/ ALASKA/ COMMERCIAL CO." at KCH-8. One of the three rectangular metal containers at KCH-91 was also of interest, as it appears to have had a piece of wood secured to the top end with seven nails.

Three large refuse scatters were recorded in Area A at the crest of the slope. Artifact scatter KCH-2 is located at the end of a rough cat trail that is now overgrown with trees. There are two adjacent groups of artifacts, one of which is in a depression. The artifacts include a variety of metal containers, bottles, stove parts and fragments of two ceramic teapots. KCH-4 consists of a relatively large number of metal containers. The only artifact with a visible label was a clear glass bottle embossed with "Curtice Brothers Preserves, Rochester, N.Y.". The bottle has a threaded cap with the company name embossed on it along with "Patented Sept. 25th 88". The slope below this scatter is quite steep and it appears that some of the artifacts have moved a considerable distance down-slope.

The final large artifact scatter, KCH-5, is located at the crest of the hill between KCH-2 and KCH-4, directly north of KCH-3 (four cabin foundations and one standing cabin). The majority of artifacts in this scatter are metal containers, but a number of other objects are present including: gold pans, stove parts embossed with "Cariboo", and a clear glass bottle embossed with "Heinz." This scatter has spread quite a distance down-slope, and may be responsible for some of the artifacts recorded as KCH-8. Also of interest is a piece of bare wire, measuring approximately 1/8" in diameter. This wire is located high in the trees near the scatter, and runs up over the crest of the hill ending at KCH-3. It seems likely that this refuse scatter is associated with the occupation of the cabins at KCH-3.

Trails

Early maps of Klondike City indicate that a pack trail ran up the Klondike City hillside from Mountain Street at the southwest end of the townsite. Trails are also visible in at least one historic photograph of the hillside (see Figure 7). Sections of four trails were recorded in Area A and one possible segment of trail was identified in Area B. There is an obvious section of trail that connects to the east end of platform KCH-7. This trail angles down across the slope (approximately northeast) from the platform and is visible for approximately 30m. The trail is cut into the slope on the uphill side and built up on the downhill side.

KCH-11 is located east and below KCH-7. This feature appeared to be a small platform. It has a 3.5m long dry laid stone retaining wall, which has a maximum height of .80m. The width of this feature is 1.4m, and the surface has a slight slope to the northeast. There are no visible artifacts associated with this feature. Its narrow width and northeast slope, as well as the lack of artifacts suggest that this feature may not be a tent/cabin platform, but is, instead, a segment of trail. The large drainage that runs down the hillside, noted above, is located immediately east of KCH-11. The idea that this feature represents part of a trail is supported by the existence of a section of a trail (just above KCH-15) at approximately the same elevation on the opposite side of the drainage.

There is no indication of the trail continuing southwest passed KCH-11, but the end of the trail connecting to KCH-7 is located just up-slope.

A small section of trail is associated with platform KCH-14 (located northeast of KCH-15). A large rock outcropping is situated immediately east of this platform. The trail leaves the north side of the platform and runs down-slope, in a northerly direction, near the end of the rock outcrop at which point it is no longer visible. The downhill side of this trail has been shored up with boulders.

The largest section of recorded trail (KCH-93) extends from a point on the hill just above KCH-6. This trail runs 140m north - south at an angle across the hillside from the top of the drainage ditch running down the hillside below KCH-5, to just above KCH-6. A second section of trail, 17m in length, branches off toward the northeast, from a point almost directly below KCH-5.

KCH-51 is a possible section of trail or road (in Area B), measuring approximately 35m in length, that leads up to a possible platform located directly below KCH-24. This feature starts uphill from platform KCH-50 and consists of a long, coarsely constructed stone retaining wall that runs at an angle upslope to the east. The feature is 2.6m wide at the lower end and narrows as the steepness of the slope increases. It becomes more obvious and widens out again below KCH-24.

Depressions

Large depressions were recorded at four locations along the top of the hillside (390-400m asl) in Area C (KCH-56, 57, 58 and 59). These depressions range between 1.7m and 4.0m in diameter and .55m to 1.7m in depth. Three of these locations consist of a single circular depression (KCH 57, 58 and 59) with no associated artifacts.

KCH-56 consists of a large rectangular depression, a circular depression, the remains of two wood frame objects, and a coffee tin. Depression 1 is located at the crest of the slope. There is a steep 'V' shaped drainage cut into the slope directly below this

depression. Depression 2 is located approximately 5m south of Depression 1. One rectangular shaped wood frame lies 20m to the west of the depressions; it consists of four relatively large milled lumber boards fastened together with large bolts. The second wood frame is located immediately south of Depression 2. This frame is comprised of two boards nailed together in the shape of a 'V' with a wood brace fastened on the inside near the pointed end. Metal strapping has been bolted to both sides of the pointed end of the frame, with a chain attached at the centre. Planks have been nailed (wire drawn nails) to one side of the frame. A 1 lb coffee tin was located near Depression 1.

Cut and Piled Logs

Two groups of cut and piled birch logs were identified (KCH-60, KCH-62) in Area C near the top of the hillside (380-390m asl). In both cases it appears that the piles have been there for some time as the wood is quite rotten and are covered by littermat and moss. KCH-60 consists of only a pile of logs. Part of a small milled lumber frame was located near the cut logs at KCH-62. This frame consists of a rail with two cross-members nailed (wire drawn nails) to it. One of the cross-members has a hole in the top, with a fragment of a rounded wood peg inserted into it. It seems likely that this frame was associated with wood gathering activities. Two old trails run straight downhill from the top of the slope in Area C. Near the top of one of these trails are four birch logs laid parallel to the trail. These may have been used as log chutes for wood gathering (Shane Christiansen, pers. com. 1998).

5

DAWSON CITY HILLSIDE SURFACE ARTIFACT ASSEMBLAGE DESCRIPTION

Judge Street Survey Area Artifacts

Infield artifact recording at the Judge Street Survey Area focused on the talus slope and adjacent gravel slope at the centre of this location, both of which are covered with historic refuse. A 5m grid was laid over each slope to facilitate artifact recording. With the exception of some faunal specimens, all artifacts on the talus slope were recorded in the field and left in their original locations. The faunal remains were collected for further analysis and identification in the lab, and were returned to the proper grid unit the following season. Due to time constraints, the majority of small artifacts located on the gravel slope were collected by grid square, taken to Simon Fraser University for analysis, and returned during the 1999 field season. Larger artifacts on the gravel slope were recorded in the field and returned to the proper grid square.

A total of 3,780 artifacts were recorded during the two seasons. Although a relatively broad range of artifact types were recorded, the vast majority are metal containers. Analysis of this material culture is ongoing, but the preliminary results are presented below.

There are obvious differences between the types of artifacts recorded on the talus and gravel slopes. The talus slope was covered by larger objects, primarily metal containers. The gravel slope contained a variety of small items, representing the largest proportion of the personal artifacts recorded. Taphonomic factors are clearly responsible for the differences in artifact assemblage. The slope acts like a filter; rubble cobbles and

Table 6. Surface artifacts recorded at Judge Street Area, Dawson City hillside.

Artifact	Quantity	Artifact	Quantity
Book Fragment	1	Metal Bowl	3
Bottle	3	Metal Buckle	4
Bottle Base	47	Metal Cap	2
Bottle Cap	2	Metal Clothing Clasp	7
Bottle Finish	32	Metal Clothing Snap	1
Bottle Glass Shard	341	Metal Container	2556
Bottle Lead Foil	1	Metal Container Key Strip	17
Button	8	Metal Cup	1
Ceramic Cup	1	Metal Foil	1
Ceramic Fragment	24	Metal Fragment	77
Ceramic Jar Fragment	1	Metal Hinge	1
Ceramic Plate Fragment	1	Metal insert for pail handle	1
Change Purse Rim	2	Metal Plate	7
Cloth Belt	1	Metal Sheet	2
Coffee Pot	1	Metal Strapping	131
Comb	2	Metal Object Unknown	6
Cooking Pot	1	Nail	6
Cooking Pot Lid	4	Nail - Cut	7
Cork Fragment	2	Nail- Triangular Shank	1
Fabric Coat	1	Nail- Wire	135
Fabric Fragment	11	Paper Can Label	3
Faunal	104	Plunger ?	1
Felt Hat	1	Pressed Glass	4
File	1	Rivet?	1
Flat Glass Fragments	19	Rubber Boot	31
Fork	2	Rubber Boot Fragment	10
Frying Pan	1	Rubber & Leather Boot	1
Glass Jar	7	Safety Pin	1
Glass Jar Fragment	5	Smoking Pipe Fragment	2
Human Tooth	1	Sprinkler Plate	1
Iron Object- Unknown	2	Stove Parts	20
Iron Ring	1	Table Spoon	2
Lead Foil	1	Tea Spoon	1
Leather Boot	13	Unknown Object	1
Leather Boot Fragment	30	Wash Tub	1
Leather Fragment	14	Watering Can ?	1
Leather Strap Fragment	2	Wire	20
Leather/Fabric Boot	1	Wire Mesh	1
Locket/Watch Fob	1	Wire Pail Handle	5
Metal Baking Pan	4	Wooden Box Fragment	1
Metal Band	6	Wood/Metal Composite	1
Metal Basin	1	Total	3780

boulders of the talus slope trap larger artifacts like metal containers, while smaller artifacts fall into the spaces between the rocks. The gravel slope, which is slightly steeper, has fewer obstacles to prevent the down-slope movement of metal containers. Smaller items, such as nails, detached ends of cans, glass and ceramic shards remain on the slope. Thus, the gravel slope provides a set of data not available from the talus slope.

Following Hammer (1999), artifacts are described in broad functional categories: subsistence, household, personal, structural and miscellaneous. Hammer's Leisure category, which includes tobacco, alcohol and gaming pieces has been subsumed under personal artifacts (tobacco and gaming pieces) and subsistence (alcohol), to minimize the number of categories containing small numbers of artifacts. Hammer also uses transportation, communication and working/industrial categories, but so few of these artifacts were found in the present study, that they have been included in the miscellaneous section. An additional category for modified artifacts was created to address the significance of re-used consumer items.

Subsistence Artifacts

Artifacts in this category include metal food containers, beverage and condiment bottles, food jars and faunal remains. Metal containers are the single most abundant artifact recorded in the Judge Street Survey area, accounting for 67% of the total assemblage. The majority of these were food containers. Metal containers holding non-food items are discussed in the Household and Personal artifact sections.

Metal Containers

While metal containers were in use prior to 1800, a means of hermetically sealing food (initially in glass jars) was not invented until 1809; canning food in metal containers began soon afterward (Busch 1981). The nineteenth century was a period of great technological development in the metal container industry (Rock 1987). Initial acceptance of these products was slow, but by the Klondike Gold Rush tinned food was an important part of life, particularly in isolated areas.

A total of 2540 metal containers, or portions of metal containers, were recorded during the two field seasons. These containers represent the bulk of data on the subsistence practices of the hillside residents, and as such discussion will focus on containers that can be associated with specific food products.

Although preservation of the cans on the ground surface was relatively good, that is, corrosion was minimal, few labels identifying the contents of the containers survived. Embossed marks, lithograph and paper labels, and ink stamps, were observed on 328 cans. Only 188 of these cans had sufficient information to identify the food product they once held (Table 7). In the absence of a label, the most useful indicators of the container's contents are its shape, closure and the means used to open the can. Five different metal container shapes were identified among the hillside assemblages, in order of abundance these are: cylindrical, rectangular, log cabin (polygonal), oval, and 'D' shaped.

Closure is the means used to seal a container once it has been filled with product, and may also refer to the methods available to remove the contents from the can. They are divided into "once-only" and "reclosable" (Murray and Hamilton 1986:113). Once-only closures in the assemblage include: hole-in-top, key strip, hole-in-top and key strip, key wind, matchstick, vent only, and open top. Reclosable closures include: cork spout, threaded cap, hinge lid, lever lid, slip lid, and spout with valve. A number of cans have a combination of once-only and reclosable closures, such as hole-in-top and slip lid, key strip and slip lid, and hole-in-top and lever lid. The most commonly occurring closure type in this assemblage is the hole-in-top, which was observed on both cylindrical and rectangular containers.

Table 7 . Metal container types for products identified by marks on cans.

PRODUCT	SHAPE	CLOSURE	SIDE SEAM	TOP SEAM	BASE SEAM	DIA. x HEIGHT or H x L x W	DIA. OF FILLER CAP	Quantity	COMPANY NAME
Baking Powder	Cylindrical	Slip Lid	interlocked	raw edge	single	303 x 614		1	N/A
		Threaded Cap	interlocked	double clenched	double	304 x 408		1	Prices Baking Powder Co
						404 x 602		1	Prices Baking Powder Co
Butter	Cylindrical	Key Strip & Slip Lid	interlocked	rolled inside	capped on	504-6 x 212-5		2	Elgin Butter
				raw edge	double	602 x 412		1	Robert Scott Manu.
				raw edge	single	500 x 308		1	
		Key Strip	lapped	capped in	capped in indented	404 x 313		1	Coldbrook
						506 x 304		1	Coldbrook
				capped in indented	capped in	405 x 314		1	Coldbrook
				double	double	300 x 204		1	PB
						402 x 202		1	PB
				raw edge	capped in	504 x 310		1	Coldbrook
				raw edge	capped in indented	404-8 x 308-11		8	Coldbrook
						504-6 x 309-11		3	Coldbrook
						506 x 412		1	Coldbrook
				raw edge	capped on	504 x 308-11		3	Coldbrook
						510 x 303		1	Coldbrook
				raw edge	double	500 x 207-8		4	PB
						505 x 301		1	Macdonald Manufacturing
				rolled inside	capped on	504 x 215		1	Elgin Butter
		Slip Lid	lapped	raw edge	double	500 x 208		1	PB
		n/a	lapped	rolled outside	double	510 x 301		1	Ayton Creamery
	Rectangular	Slip Lid	lapped	raw edge	single	603 x 302 x 302		1	N/A
Coffee	Conical	Key Strip & Lever Lid	interlocked	double	double	406 x 814		1	_A_/_Aoci_/Coffee

Table 7. Metal container types for products identified by marks on cans.

PRODUCT	SHAPE	CLOSURE	SIDE SEAM	TOP SEAM	BASE SEAM	DIA. x HEIGHT or H x L x W	DIA. OF FILLER CAP	Quantity	COMPANY NAME
Coffee con't	Cylindrical	Slip lid	press drawn			400 x 8		1	Lid Only, Dwinell-Wright
Condensed Milk	Cylindrical	Hole in Top	interlocked	capped on	capped on	215 x 303	110	3	Truro Cond Milk Co
						215 x 304-5	106-8	3	Bordens And Humbolt
			lapped	capped on	capped on	215 x 303	108-10	18	Truro Cond Milk Co
						215 x 303-4	108	5	Baldwin Condensed Milk Co
						215 x 304	108	1	Milk Co / [?]Ealow _ Condensed
						215 x 305	8	1	N-York Condensed Milk Co
						215 x 304-5	104-8	25	Bordens Condensed Milk Co
						215-300 x 304-6	104-8	49	N-York Condensed Milk Co
						215 x 308	108	1	Michigan Condensed/ Milk Co
						300 x 304	108	1	Canada Milk/Condensing Co
						404 x 413	208	1	Bordens Condensed Milk Co
Corn Flour	Rectangular	Slip Lid	interlocked	raw edge	single	600 x 312 x 209		1	Colman's
Evaporated Cream	Cylindrical	Hole in Top	interlocked	capped on	capped on	404 x 402	103	1	N/A
			lapped	capped on	capped on	215-300 x 305-6	108	2	N/A
		Open Top	interlocked	double	double	215-300 x 408-9		6	Canada First/Evaporated Cream
			lapped	double	double	215 x 408-9		7	Canada First/Evaporated Cream
Honey	Rectangular	threaded cap	interlocked	double clenched	single	603 x 501 x 308		1	Alaska E x ploration Co.
		n/a	interlocked	double clenched	single	603 x 500 x 306		1	N/A
Lard	Cylindrical	Slip Lid	interlocked	rolled inside	double	604 x 802-6		3	G.H. Hammond Leaf Lard and Two N/A
						709 x 802		1	G.H. Hammond Leaf Lard

Table 7. Metal container types for products identified by marks on cans.

PRODUCT	SHAPE	CLOSURE	SIDE SEAM	TOP SEAM	BASE SEAM	DIA. x HEIGHT or H x L x W	DIA. OF FILLER CAP	Quantity	COMPANY NAME
Molasses	Rectangular	n/a	lapped	single	single	412 x 412 x 412		1	Orleans / Molasses
Oysters	Cylindrical	Hole in Top	lapped	capped on	capped on	210-11 x 404-6	112-200	2	N/A
	Rectangular	Hole in Top	interlocked	single	single	700 x 408 x 113	105	2	The Morgan/Oyster Co/Packers Sf
Petits Pois	Cylindrical	Open Top	lapped	double	double	215 x 407-8		2	__ Des Primeur? De Lors... and Societa Per Le Conserve A Limentari
Sardines	Rectangular	Key Wind	lapped	capped in	capped in	13 x 404 x 300		1	_Runet Gaudremeau
						100 x 404 x 300		3	Capen Canning Co., Eastport, Mi; C. Couteau x Paris;
						103 x 410 x 306		1	J. Lemarchad
						104 x 412 x 308		1	J. Lemarchad
			press drawn	double	press drawn	14 x 400-4 x 215-301		3	King Oscar's
				single	press drawn	14 x 401 x 300		1	King Oscar's

The most abundant identifiable foods were milk products in the form of condensed milk and evaporated cream. Both products consist of cow's milk with a portion of the water content removed (Woodcock and Lewis 1938). Generally speaking, condensed milk refers to sweetened condensed milk, in which sugar is added as a preservative. According to Keen (1983), condensed milk has a viscous, semi-fluid consistency and is not easily poured. Evaporated cream, also known as unsweetened condensed milk, has some of the water removed, but no sugar is added and it retains a fluid consistency.

Nine different milk condensing companies are identified in the cans from the Judge Street area (see Table 7). All cans are cylindrical, have hole-in-top closures and capped-on top and base seams. One example of a large condensed milk container, measuring approximately 4 ¼" x 4 ¾" was recorded. The rest are approximately 3" in diameter and range from 3" - 3 ½" tall. The most commonly used method of opening the labelled condensed milk cans was to cut along ¾ of one end with a knife or can opener and bend back the tab. Similar methods include removing one end entirely, or cutting a cross on one end and folding back the tabs. These opening techniques are consistent with the viscous consistency of condensed milk (see also Rock 1987:43). Only two cans were opened by punching holes on opposing sides of one end, a method more commonly used for containers with liquid contents.

An additional 200 unlabelled cans with identical attributes and similar dimensions (3" x 3" - 3 ½") were recorded. Those opened by cutting ¾ of the way around one end probably contained condensed milk, but nearly half were opened using two opposing holes. According to Keen (1983), condensed milk and evaporated cream/milk were once packaged in similarly sized cans. Given the low number of labelled condensed milk cans exhibiting the 2-hole method of opening, it is likely that 2-hole cans held a more fluid product, such as evaporated cream.

Only three of the cans with evaporated cream labels have hole-in-top closures, and unfortunately the fragmentary labels no longer show the manufacturer's name. Their dimensions are approximately 3" x 3 $^{5}/_{16}$" (n=2), and 4 ¼" x 4 $^{1}/_{8}$" (n=1). The smaller one is identical to the condensed milk cans. The remaining evaporated cream containers are considerably different. They are embossed "CANADA FIRST/EVAPORATED CREAM", and have open top closures. They have a diameter of 2 $^{15}/_{16}$" and are approximately 4 $^{9}/_{16}$" tall. All but one was opened using the 2-hole method.

There are 27 probable evaporated cream containers with labels that do not identify the product. Instead, they offer instructions for opening and storing the can. Three cylindrical hole-in-top cans with capped on top and base seams are embossed "PUNCH HERE/TO OPEN CAN/AND HERE/KEEP IN A COOL PLACE". All three cans are 3" in diameter and 4 $^{3}/_{8}$" tall, with filler caps 1 ¼" in diameter. A slight variant of this label says, in part, "TO OPEN THE CAN" (n=12), and measures 2 $^{15}/_{16}$" x 4 $^{5}/_{16}$", with filler caps 1" in diameter. A third label says "TO OPEN PUNCH DOTS/KEEP IN A COOL PLACE"; eleven of these cans have hole in top closures, one is an open top can, all measure approximately 2 $^{15}/_{16}$" in diameter, and range from 4 ¼" to 4 $^{3}/_{8}$" tall. All but one of these cans have been opened using the 2-hole method.

Butter was the next most frequent product identified by labels on cans, and six different manufacturers or creameries are named (Table 7). Cans from the Coldbrook Creamery, San Francisco, were embossed with the year at the centre of the company's mark; three years, 1898, 1899 and 1900 are represented in the assemblage. The majority of butter containers are cylindrical in shape. A few had combination key strip and slip lid closures, allowing the container to be closed after each use. This type of closure may have been common for butter cans, as all would have held more butter than could reasonably be consumed at one time, but only key strip closures can be confirmed on most of the tins. The size of butter cans varies considerably, as indicated in Table 7.

Other staple foods identified by marks on cans include, Lard, coffee, corn flour, honey, molasses and baking powder. As one would expect the majority of these

containers had closures that could be re-fastened after each use, such as slip lids and threaded caps. Lard usually came packaged in small pails with slip lids. The only company identified for this product is G.H. Hammond of Omaha, Nebraska. The slip lid is all that remains of the Dwinell-Wright coffee can, and the label on the second coffee tin is too faint to see the entire brand name. The lithographed label on one honey tin states that it was expressly packaged for the Alaska Exploration Company. In 1901 the Alaska Exploration Company merged with the Alaska Commercial Company, to become the Northern Commercial Company (Ogilvie 1913:64). This tin must, therefore, have been packaged prior to 1901.

The most diagnostic part of baking powder tins are the slip lids, which are generally embossed with the manufacturers name. These lids are easily separated from the body of the can, and are often found alone. Four manufacturers can be identified from complete cans or isolated lids: Price's Baking Powder Co., Dr. Price's Cream Baking Powder, White Star Baking Powder and Royal Baking Powder. Only complete cans are listed in Table 7 (n=3), but eight cans or portions of cans were recorded in total.

Log Cabin Syrup was identified in the assemblage by 12 log cabin-shaped cans. Each of these cans has an interlocked seam along the bottom and single seams on either end, with the approximate dimensions 5 $^{11}/_{16}$" x 4 $^{1}/_{8}$" x 6" (L x W x H). Eleven of the cans have threaded cap closures, and the twelfth has a spout that would have been sealed with a stopper. The first log cabin shaped syrup can was made in 1896-7. It had a paper label and a wire handle, usually attached along the ridge of the can roof (Rock 1987:51). The cans were changed in 1909; the new design had a pry-up cap with an internal seal. Subsequent changes to the closure occurred in 1909 and 1919 (Rock 1987:51-52). The eleven threaded cap closure cans represent the earlier version, but the stopper tin could be the 1909 type. Further information is required on this method of closure before a positive identification can be made.

Canned seafood in the assemblage is represented by sardines and oysters. Twelve cans identify their contents as sardines, and two identical cans without labels were also observed. Each of these cans has a version of the key strip closure that removes one side, or a portion of one side, of the container, instead of just a narrow band. To differentiate them from the key (tear) strip cans, they are referred to here as key wind. Rock (1987:58-59) states that the first sardine cans were constructed from three pieces of tin

Figure 12. King Oscar Brand sardine tin from Judge Street area.

plate soldered together. Cans with press drawn bodies were first manufactured in 1897; machine made sardine cans started in the USA in 1904; and the double seamed can was first made in 1918. Keen (1983), citing Judge (1914) notes that the double seamed press drawn sardine can was first manufactured around 1900. Ten of the cans from the Judge Street area are made from 3 soldered tin plates with lapped side seams and capped in top and base seams. Three cans have press drawn bodies and double top seams, and one can has a press drawn body with a single seam. All of the press drawn bodied cans were from King Oscar Brand sardines.

Embossing on four cans identifies the contents as oysters. Two cylindrical containers, both with hole-in-top closures, indicate the product and, in one case, the volume (6 ozs), but the two cans are essentially the same size. The two rectangular cans are identical, and are embossed with "THE MORGAN/OYSTER CO/PACKERS SF" on one side and "EAGLE BRAND/TRADE MARK", on the other. On the trademark side is an embossed representation of an eagle. Opening instructions are embossed on the base of the can "CUT OUT/SOFT TIN END."

Meats were commonly canned in tapered rectangular containers, often with a combination hole-in-top and key strip closure. These cans came in a wide variety of sizes. No tapered cans with intact labels were discovered, but a fragment of paper label bearing the name "Libby, McNeill &..." and part of the word compressed was found in proximity to a tapered can. Similar blue colouring on the can and the back of the label suggests that the label had only recently been separated from the container. This can has a key strip closure and lapped side seam, with a raw edge top and a single seam on the base (i.e., the end without the filler cap) and measures 3" x 2" x 2 15/16" (L x W x H). On the Klondike City hillside (Platforms KCH 14-16) a tapered rectangular container with fragments of a paper label reading: "...ibby, McNi...Libby's/ COOKED ...ORNED BEEF" was located. This container also had a key strip closure and lapped side seam, with a raw edge top and a single seam on the base and measured 4 1/8" x 2 3/8" x 4" (L x W x H).

Using the technological data and dimensions of these two cans, similar tins can be identified from the metal container assemblage. When sorting these cans by shape and closure, two factors must considered: (1) many cans have been slightly crushed, which makes it difficult to identify tapering and, as a result, tapered cans may have been recorded as rectangular, and; (2) when the key strip is used to open the can, the hole in top end is often completely separated from the rest of the can. When sorting by size, it is necessary to use ranges of plus or minus 1/8" to account for measurement error (McCarthy 1977:77).

The bottom portions of 6 unlabelled key strip cans compare favourably with the Libby compressed can, and 23 fall within the range for the Libby corned beef can. Eight complete unlabelled tapered cans compare favourably with the base dimensions of the Libby corned beef can. The length of the top ends of these cans are identical to the base lengths, but the width varies between 2 7/8" and 3". Extrapolating from this data, it is possible to sort the unlabelled can tops exhibiting hole-in-top closures and key strip openings. Ten specimens fall within the range of the Libby corned beef can. Pairing base ends with top ends, provides a minimum count of 13 cans.

Faunal Remains

All faunal remains from the Judge Street survey area were located on the ground surface. Most are heavily weathered and poorly preserved. The collection is relatively small, totalling 104 specimens (Table 8). Sixty were small, badly weathered or calcined, unidentifiable bone fragments. Twenty-four of these had been burned. Eleven show evidence of saw cuts on at least one end.

One unmodified Bovidae specimen was identified. The rest of the identified elements could only be assigned to general categories such as medium and large mammal and artiodactyl. The most commonly occurring elements are the innominate, long bone shaft fragments, ribs, thoracic vertebrae and various foot bones. Few of these bones are complete. Thirty-five specimens have been cut with a saw. Identification of the types of meat cuts is ongoing. In addition to the bones, 11 small fragments of eggshell were identified.

Bottles

Three complete bottles, 28 finishes, 47 bases and 299 non-diagnostic shards were recorded on the talus and gravel slopes. The bottles may be divided into four categories: alcoholic beverage, non-alcoholic beverage, medicinal, and condiments.

Table 8. Faunal remains from Judge Street area.

Taxon	Element	Burned	Saw cut	No mod.	Total
Avies	eggshell			11	11
Avies Total				11	*11*
Bovidae	cuniform			1	1
Bovidae Total				1	1
Large Artiodactyl	innomiate		1		1
Large Artiodactyl Total			1		*1*
Large Mammal	femur			1	1
	innomiate			2	2
	long bone		1	1	2
	naviculo-cuboid			1	1
	rib		2	3	5
	rib		1		1
	thorasic vert		2	1	3
	tibia			3	3
	tibia/fibula			1	1
	uni		2	1	3
Large Mammal Total			8	14	*22*
Medium Artiodactyl	axis frag			1	1
	calcanium			1	1
	dist humerus			1	1
	dist tibia			1	1
	innomiate			1	1
Med. Artiodactyl Total				5	*5*
Medium Mammal	dist metacarpal			1	1
	long bone shaft			1	1
	scapula			1	1
Medium Mammal Total				3	*3*
Medium-Large Mammal	vert			1	1
Med.-Lge Mammal Total				1	*1*
Unidentified (uni)	dist rib			1	1
	long bone shaft		4	1	5
	uni	24	7	23	54
Unidentified Total		24	11	25	*60*
Grand Total		24	20	60	*104*

The majority of finishes (Table 9) are associated with alcoholic beverage bottles, including: champagne, beaded lager, flattened, tapered, and threaded. Crown closures may have been used for either beer or soda beverages. The two champagne finishes have sloped lips and are green and dark green in colour. One finish still has part of the closure wire around its neck. A small portion of the shoulder and body of the threaded bead bottle is intact and is embossed with "...ERS WINE". This bottle is completely machine made. One of the Lager finishes still has lead foil adhering to its neck. The tapered with string finish is represented by segments of brown coloured bottles. Two of these retain portions of the lead foil identifying the product as Canadian Club Whisky. A single Hiram Walker & Sons, Limited, Canadian Club Whisky, lead foil finish cover was also found. One of the crown finishes is from a green bottle and has a thin metal foil around the neck. The foil is not lead, but has a "pebbly" texture and may be a recent addition to the site.

Eleven alcohol beverage bottle bases were found with manufactures marks that could be identified. Ten are embossed with "A.B.G.M. CO." and were produced by the Adolphus Busch Glass Manufacturing Company (Toulouse 1972, Will 1997). This mark was used between 1886 and 1928. Each of these bases has a different mould number, the significance of which has not yet been determined. Another base is embossed with "A B Co" and was produced by the American Bottle Company. According to Toulouse (1972), this mark was used between 1905 and 1916. Based on similarly marked bottles reported by Will (1997), these bases all represent beer bottles. An oval shaped, colourless bottle base embossed with a boar's head may be a Gordon's Dry Gin bottle, produced by Tanquery Gordon and Company, London. This base consists of a number of fragments and the embossing is difficult to distinguish, making this identification somewhat tentative.

Table 9. Summary of isolated bottle finishes from Judge Street area.

FINISH	Brown	Colourless	Colourless w/ BlueTint	Dark Green	Green	Total
Beaded Lager	1	1	1			3
Champagne				1	1	2
Club Sauce		1				1
Crown		1			3	4
Flattened side		1				1
Flattened side & V shape	1	1				2
Prescription?		1				1
Stopper		1				1
Tapered	1	1				2
Tapered w/String	3					3
Threaded	1	3			1	5
n/a	1	1	1			3
Total	8	12	2	1	5	28

Only two bottle bases can be placed in the non-alcoholic beverage category. The first bottle was produced by the Dominion Glass Company, and is bright green in colour. Although a third of the base is missing, the embossing on the base is consistent with a Canada Dry Limited insignia illustrated in Will (1997:137), which was in use between 1913 and 1933. Two other bottle bases bearing the Dominion Glass Company's marks were recorded, but their contents have not been identified. The second bottle is a colourless glass with green tint soda beverage bottle with a round base, made in a two piece hinge mold. A large "W" is embossed on the base of the bottle. Above the base, the body is embossed with " WHEELER & Cº LTD CROMAC SPRINGS/ BELFAST."

Based on bottle shape and finish type, two reasonably complete bottles and two separate finishes fall within the category of medicinal bottles. The larger bottle is rectangular with chamfered corners, colourless glass and measures 5 $^{3}/_{4}$" tall; the base measures 1 $^{3}/_{4}$" x 1 $^{5}/_{16}$". This bottle was manufactured in a plate mould. The bottle has a prescription or extract finish and the base is embossed with "TCW & CO / USA". The

manufacturer has yet to be identified. The second complete bottle has a wide mouth prescription or extract finish (Illinois Glass Company 1903). The bottle is oval shaped, with a total height of 2" and was produced using a cup mould (Figure 10). There is no embossing on the base and no indication of its contents. The bases of two similarly sized bottles were found in the same general location, but their finish types could not be determined. The final two medicinal finishes are an oil and, what has tentatively been recorded as, a packing lip (cf, Illinois Glass Company 1903). The oil finish has a long, narrow neck with pieces of lead foil still attached.

Figure 13. Oval shaped bottle with wide mouth prescription finish (total height 2").

Two club sauce finishes represent the condiment category, one complete and the other fragmented. Part of the cork stopper remains in the intact finish. The neck and portions of the shoulder and body are also present. Embossing on the body indicates that this was a Worcestershire sauce bottle. The letters "WORCE" are embossed horizontally just below the shoulder of the bottle. Below this is an embossed "S" oriented vertically, which is consistent with the embossing on Lea & Perrins bottles.

Jars

Fourteen glass jar fragments have been identified, including two base fragments and portions of five finishes. A small base shard and a body/finish fragment of white glass were also recorded. The finish appears to have taken a slip lid (Mike Will, pers. com., April 1999). Two cap seat jar finishes were recorded. Both jars appear to have been octagonal in shape. Two threaded finishes were found with the metal caps still in place. In one case, the jar, which was produced in a cup mould, is complete (height = 5 $^{7}/_{8}$", diameter = 2 $^{1}/_{2}$") and the cap is a solid lid. The second cap is similar to a screw band, having an open centre. In addition to the threads for the finish on this cap, there are fine threads located around the opening at the top. An isolated screw band is also part of the collection, there are, however, no threads inside the opening at its top.

Embossing on two white glass jar bases indicates that they are from the Cudahy Packing Company of Omaha, Nebraska. Murray and Hamilton (1986:265) report a similar jar, from the Chilkoot Trail, which originally contained ham, bacon or pork meat paste. They note that the Cudahy Packing Company operated out of Omaha and Chicago from 1890 to sometime after 1896. The base of a second type of white glass jar is embossed with "MACLAREN"S IMPERIAL/ CHEESE", and depicts an "X" with loops on the top ends labelled "trade" and "mark". On either side of the "X" are cow's heads, with "RGSD" embossed below.

Part of the finish from a white glazed ceramic jar was also recorded. The finish has a groove inside the neck. A total of 22 ceramic shards were observed. While it was not possible to conjoin any of these, the presence of grey/black lettering on many of the shards suggests that they formed part of the ceramic jar.

Household Artifacts

Household artifacts are items associated with everyday events or tasks that take place in a dwelling, such as food preparation and consumption, or objects such as furniture. Household related artifacts recorded at the Judge Street Survey area fall primarily into the food preparation and consumption categories. Artifacts used in the

preparation of food include: baking pans, a coffee pot, cooking pot lids, a frying pan, a metal basin and a variety of stove parts and stove pipe sections. Two of the four rectangular baking pans recorded were homemade. The material used for these pans appears to have been obtained from a large rectangular metal container. These two homemade pans measure approximately 9" x 6". The two factory made pans measure approximately 11" x 9".

A coffee pot, metal basin and 4 pot lids were found on the talus slope. One lid was badly rusted; the other three measure between 6" and 9" in diameter. An Acme frying pan was located near the base of the talus slope. It has a diameter of 9 $^{5}/_{8}$", and its handle is embossed with "COLD HANDLE - ACME - N.Y.S.Co.". The Dawson Hardware Company's 1903 catalogue advertises Acme frying pans ranging from $0.40 to $1.25, depending on the size.

Stoves were a necessity in Dawson City, and were used to heat the tent or cabin, as well as, for cooking. One rectangular tin stove body was located on the talus slope. It measures 24" x 16 $^{1}/_{4}$" x 10 $^{3}/_{4}$", and has two unequal sized doors on one side. There is a circular hole (diameter = 4 $^{1}/_{2}$") in one corner of the top surface, which presumably held the stove pipe. Four isolated stove doors were recorded, each with two hinges on one side and a latch handle on the opposite side. One of these doors also had a flue hole centrally located near the base of the door. The cover for the flue hole pivots on a single rivet located just above the hole. Two objects that appear to be roof flashing for stove pipe were also recorded. These consist of a circular or rectangular piece of sheet metal with a cut out circular hole that is approximately the same size as stove pipe.

Twelve sections of stove pipe, all but one of which were factory produced, were recorded. These sections range in length from 10" to 20"; the diameter could only be measured on two sections of pipe, one at approximately 4 $^{3}/_{4}$" the other 5". The homemade section of stove pipe has a rain cover attached at the top that appears to have been made from two pieces of large rectangular metal container, which were joined by a

folded seam and attached to the pipe by wire (Figure 14). The pipe sections are held together with small gage wire.

Figure 14. Home made stove pipe with rain cover.

Artifacts associated with food consumption include a variety of metal plates, bowls and a cup. A small number of eating utensils were recorded, including two table spoons, a tea spoon, a cast iron fork and a large fork with its handle missing. One table spoon and the tea spoon were marked "WB/B" on the back. The second table spoon is marked "L.B.", which may be a mark of Richard Thomas & Co. (Woodhead 1991:248). There were no marks on the cast iron fork, but it is similar to a U.S. military issue fork, found at Ft. Bowie (Herskovitz 1978:66). In addition to these purchased items, two small metal containers, possibly condensed milk cans, were made into cups. This was accomplished by removing one end of the can and adding a small loop handle to the top edge. The handles appear to have been made out of strips of metal derived from tin cans. These cups are discussed in more detail below (see Re-use).

Four small pieces of pressed glass were found. The pattern has yet to be identified. Ceramics were present in a very limited quantity. A plate with green rose transfer printing around the rim is represented by a single shard, similar to a pattern manufactured by John Maddock & Sons, of Newport, England. Half a plain white glazed cup, a small fragment of a refined earthenware, white glazed bowl and a number of conjoining shards of a white glazed vessel with a gold line and clover leaf design were recorded. There are no visible maker's marks on either of these pieces. A small fragment of a white glazed, decorated porcelain cup or vase was also collected. This shard has a small section of the rim present, with a gilded band around the inside of the lip. On the outside of the vessel a leaf and flowers have been added as separate pieces. The leaf has blue glaze with gold detail and the flowers are light blue with gold detail.

One unusual household artifact is an object that appears to have been a watering can. The body consists of a cylindrical metal container 8 $^{1}/_{2}$" high and 8" in diameter, with an interlocked side seam and double base seam. There is a small hole near the base on one side with a larger oval shaped solder mark around it. The spout, or whatever was attached at this site, is missing. Solder marks near the top edge, opposite from the hole near the base of the can, and solder marks on the top edge, suggest that the can had two handles; one over the top and the second on the body. Inside the can is a 6" piece of board. The board, along with a piece of rope, a wire pulled nail, and a fragment of cloth, are stuck in a hardened pitch-like substance in the bottom of the container.

The final household artifact is a large galvanized wash tub with cast iron handles. The tub is approximately 22" in diameter and 10 $^{3}/_{4}$" high. The base of the tub is missing, but does not appear to have rusted out.

Personal Artifacts

Artifacts in this category include those used by a single individual, for example, footwear, clothing and smoking pipes. The most common personal artifact found in the Judge Street area was footwear. All 84 of these artifacts were boots. Three types were recorded: leather, rubber, and a combination of leather and fabric. Table 10 summarizes

the boots and boot fragments observed during the two field seasons. The portion column describes the part of the boot identified. Boots recorded as complete have a substantial portion of the sole and upper, including the eyelets on leather boots, present, but may not be completely intact. The Lower category, used primarily for rubber boots, includes boots that have the sole and bottom of the upper, but are missing the portion that extended up the leg. Sole includes isolated fragments of boot soles. Upper contains isolated portions of boot uppers only, these may have eyelets and speed/lace clips, part of the tongue, or simply fragments of the upper.

Table 10. Footwear from the Judge Street area.

Portion	Leather Boot				Leather/ Fabric Boot		Rubber boot				Grand Total
	Left	Right	N/A	Total	Left	Total	Left	Right	N/A	Total	
Buckle									1	1	1
Complete	4	3		7			5	3	1	9	16
Eyelet			2	2							
Screw			1	1							
Heel			1	1							
Lower			1	1	1	1	11	8	2	21	23
Sole	2	4	10	16				1		1	17
Upper	1		14	15					8	8	22
Total	7	7	29	43	1	1	16	12	12	40	84

Seven reasonably complete leather boots were recorded, three right and four left. It was not possible to match right and left boots to make pairs. In addition to the complete boots, 16 leather sole fragments were recorded, two identified as left and four identified as right. Examination of the footwear is still in progress, so it is not possible to discuss the variety of boot types present. A small, headless screw found on the gravel slope was identified as belonging to a boot sole, based on similar screws observed in more complete boot specimens.

A total of 40 rubber boots, or rubber boot fragments were recorded. These artifacts generally consist of the sole and a portion of the upper. Sixteen left and twelve

right boots were recorded. Analysis of the rubber boots has not been completed, however, it is possible to provide some description of the types present. Six boots have parts of labels still visible. A rubber tag located on the front of one boot, near the top of the upper, reads "UNION INDIAN RUBBER COMPANY/ CRACK PROOF/ BE SURE THE HEEL IS STAMPED". Two boots were found with a diamond shaped label with, what appears to be, a bear on it. In both cases, the lettering is difficult to read, but the manufacturer was most likely Goodyear. One of these boots has an additional tag that reads "PURE GUM". A single specimen is labelled NEW BRUNSWICK /RUBBER CO/5. Three specimens had numbers stamped on the soles just forward of the heels, most likely indicating the size of the boot, two read '9' and the other '11'.

The rubber boots can be roughly divided into three types. The first, is a common rubber boot design with the upper extending to just below the knee. The second, is referred to as a hip-boot, and has a much larger upper that can be folded down over the lower portion or pulled up, in which case it would extend to the top of the thigh. A number of the rubber boots with only the lower foot section remaining cannot be assigned to either of these types. The third type of boot has ladder-like adjustable buckles. One side of the buckle consists of a ladder-like curved metal band with a series of slots running perpendicular to its length. The opposite side of the buckle has a hinged tab. When in the open position, the tab is inserted through one of the slots and then folded back to the same side that it is anchored.

Two different types of heels were identified on the rubber boots recorded, a heel moulded as a part of the sole, and a harder rubber heel attached to the moulded sole with nails. Five different tread patterns are represented among the boots recorded, the most common being a cross-hatched pattern. In most cases these boots have little if any tread remaining on the soles, indicating a good deal of use. A split on the top of the toe area of one boot, which extended from one side toward the centre, had been stitched shut, as evidenced by a series of small holes along both sides of the split. One rubber boot had a leather sole nailed onto the bottom of the original moulded rubber sole.

Two boots made of composite materials were observed. One of these has a rubber lower half and a leather upper. The second boot has a leather sole and a fabric upper.

Two sections of leather strap, too thick to have been part of a boot, were recorded. Both pieces are approximately 5" in length, 1" wide and $^{3}/_{16}$" thick. The holes punched in the two pieces have the same pattern. Three holes were punched in the centre of the strap, spaced along its length, leaving approximately 1" between the last hole and the end of the strap. Four smaller holes, two on each end of the strap, were punched near the sides.

All identifiable articles of clothing represent outer wear. A felt hat was recorded near the top of the talus slope. Although it is in poor condition, it appears to have been approximately 4" in height, with a 2 $^{1}/_{2}$" wide brim. A double stitch line runs around the outside edge of the brim. A large piece of heavy fabric, likely a coat, was also recorded. Due to the poor condition of this artifact no attempt was made to unfold this garment to confirm its function, however, a button hole and a large wooden button were visible. A second large mass of fabric was located near the coat, but there was nothing to indicate the type of garment.

The only belt observed is represented by a fragment of a loosely woven cloth with a metal buckle still attached. Faded and moss covered, the belt now appears pale yellow or green. It is 2 $^{3}/_{8}$" wide, and approximately 12" in length. The buckle measures 2 $^{7}/_{8}$" x 2", and has two parallel slots in the centre, and a row of small raised dots around the outside edge. One end of the belt is looped around the bar between the two slots, then sewn back onto itself. A piece of yellowish cloth and three fragments of a black/brown cloth were also recorded, all are in poor condition. One of the black/brown pieces does, however, still have a finished edge present. A small piece of a tighter woven fabric has also been sewn to it. There is no indication of the type of garments to which these pieces belong.

A variety of buttons (shell and glass), metal clasps, snaps and buckles from clothing were recorded on the gravel slope. The majority of clasps appear to have been the type used on suspenders (Figure 15). One of the clasps is almost identical to a ladies' shoulder brace and hose supporter buckle pictured in Herskovitz (1978:38, figure 12,b). The final artifact which may be associated with clothing is a large safety pin, approximately 4 1/4" in length.

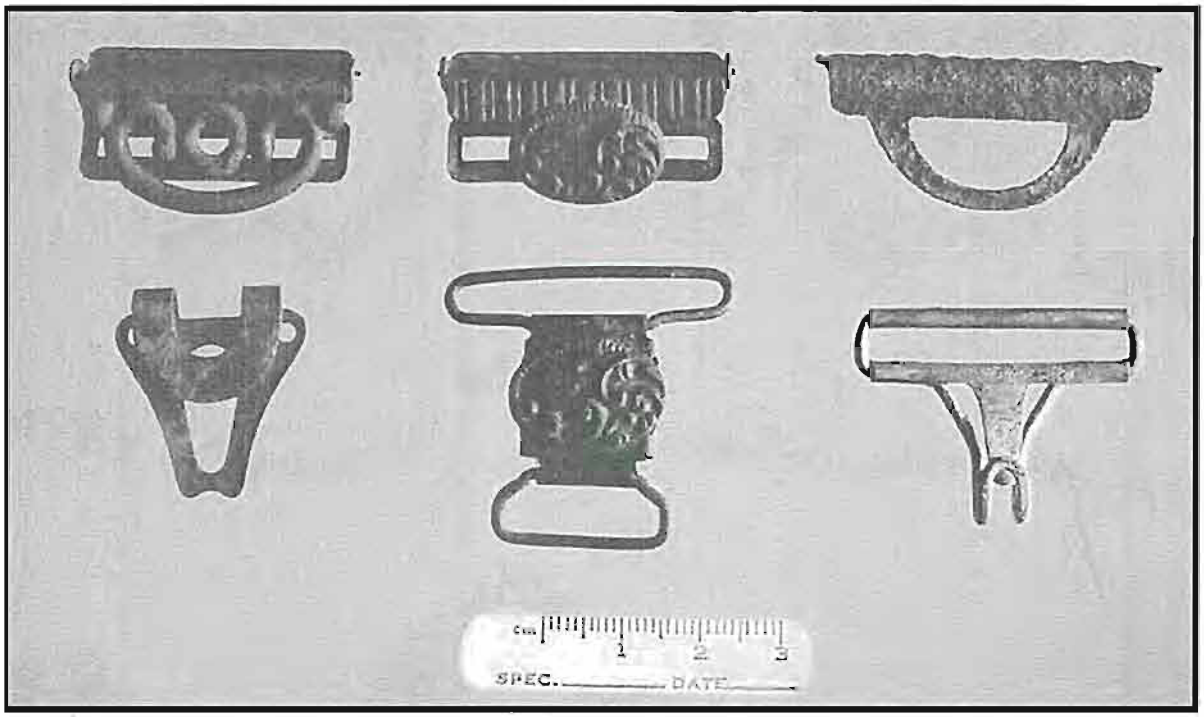

Figure 15. Suspender clasps and clips recorded in the Judge Street area.

A small number of other personal items were recorded long the upper sections of the gravel slope. Complementing various types of tobacco containers are the remains of one clay and one wooden smoking pipe. There are no marks on the clay pipe. Only part of the wooden pipe bowl remains. The stem of the pipe appears to have threaded onto the bowl. Eight metal containers were recorded with marks that identify the contents as tobacco. The following manufacturers or brands of tobacco are identified: The American Tobacco Co of Canada, "PEDR_ /CUT PLU_/ SMOKING TOBAC_O", "SEALO__ NORTH CAROLINA/PLUG CUT" (Figure 16), "LOUIS BRIER"S/BEHRING SEA MIXTURE/ ESTABLISHED 1890 DAWSON, Y.T.", "VELVET TOBACCO", "NCCos/MIXTURE/NORTHERN

COMMERCIAL CO", "W.D.& H.O. WILLS/ BRISTOL LONDON", and "DERBY PLUG OLACE SMOKING TOBACCO/D. Richies Co. /MONTREAL CAN".

Figure 16. Seal of North Carolina tobacco tin.

Five of the cans are cylindrical in shape, two are rectangular and one oval. The closure for one rectangular can is unknown, and the other has a key strip. The remaining six cans all have reclosable slip lids, one of which is hinged to the body of the can. Only the Velvet Tobacco can looks like it was meant to be carried on one's person. It is oval in shape, about 4'' tall, 3" wide and 1" thick. The Northern Commercial Company can must post-date 1901, when the company was formed by the merger of the Alaska Commercial Company and its competitors. Dawson, Y.T. on the label of the Louis Brier can is interesting. To date no further information on this company has been acquired, but it must have manufactured product specifically for the Klondike market, as Dawson did not exist in 1890.

The rims and clasps of two small change purses were identified; both appear to be a non-ferrous metal. In both cases there is no evidence of the pouch section of the purse. Fragments of two bakelite combs were found. The smaller of the two had 36 teeth, all of which have been broken off. The larger comb is 8" long and had 39 widely spaced teeth and 69 narrowly-spaced teeth, the majority of which are missing.

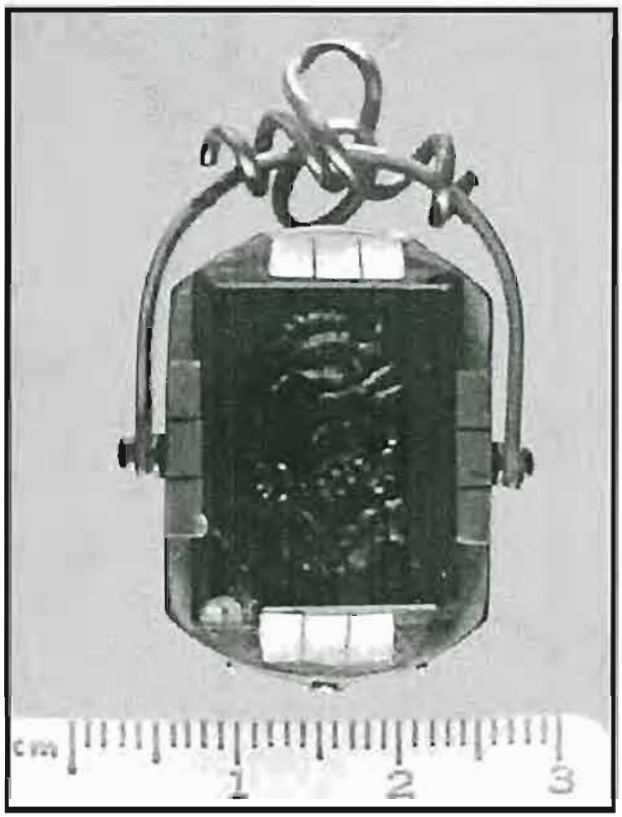

Figure 17. Gold watch fob with a dark glass "stone" set in one side bearing a negative image of a soldier's head.

A gold plated watch fob was collected (Figure 17). It has a dark glass "stone" set in one side with a negative image of a soldier's head pressed in it. When light passes through the "stone" it appears dark orange-red in colour. The opposite side of the fob once held a piece of flat glass. The fob is hinged on the top end. An upside down 'U' shaped piece of metal is attached at the centre to opposite sides of the fob. A piece of wire, the same colour as the fob, has been wound around this; a single link of a chain remains attached to it.

The final artifact in the personal artifact category is a fragment of a book, which was found in a cavity between the rubble of the talus slope. The remaining pieces of the pages cannot be separated without causing damage. Only one section could actually be read, but no complete sentences are visible. Words, such as "...nervous system controlling..." and "Asphyxia", suggest the book was some type of medical or first aid text.

Structural Artifacts

Three types of artifacts are included in this category: nails, flat glass and a hinge. One hundred and forty-nine individual nails were recorded, primarily from the upper areas of the gravel slope. Three types of nails were identified: wire drawn nails were the most common; a small number of cut nails were observed; and a single nail with a triangular shank (5 d) and flat head was located. A total of seven machine cut nails were recorded. These nails are all quite small ranging in size from a small tack to 6d. Two flat head nails and one rose head nail were present. The head type of the five remaining cut nails could not be determined.

Table 11. Machine cut and wire drawn nails from the Judge Street Area.

Penny Weight	Machine Cut	Wire Drawn	Total
3 d		3	3
4 d	1	22	23
5 d	1	19	20
6 d	2	16	18
7 d		5	5
8 d		17	17
9 d		4	4
10 d		12	12
12 d		5	5
20 d		9	9
30 d		2	2
60 d		1	1
n/a	2	20	22
Tack	1		1
Total	7	135	142

The majority of wire drawn nails were common nails with flat heads. The most frequently observed sizes are 4d, 5d, 6d, 8d and 10d. Cooper (1998:233) refers to 1-5d nails as non-structural, while 8d nails were used for a number of purposes in the construction of framed structures. Larger nails, such as the 10d and 20d, are represented by approximately 10 specimens each, and would have been used for general framing purposes. A large number of wire nails (n=35) were recorded within a 50 cm^2 area at the crest of the gravel slope. The condition of the wire nails varied considerably. Some had only a small amount of rust on the surface, while others were so corroded that it was difficult to confirm they were wire nails. A single 4d brad head wire nail was observed.

Nineteen pieces of flat glass were recorded, including eighteen colourless shards and one piece of white glass (thickness = 5 mm). One piece of colourless flat glass had a bevelled edge, and another appears to have one finished edge. The average thickness is approximately 1.5mm. These fragments most likely represent window glass, but the pieces are all so small that this can not be confirmed.

A single large metal hinge was recorded at the top of the talus slope. The hinge is just over 3" in length and has 3 holes on each plate.

Miscellaneous Artifacts

A wide range of objects are included within the miscellaneous category. The majority are present in very small numbers. The largest artifact group in this category is metal strapping (122 pieces). This material was likely used in the construction of packing crates. Seven different varieties of metal strapping were identified, these include: plain band, band with two parallel rows of raised dots, band with two offset rows of raised dots, band with two offset rows of raised diamonds, plain narrow band with lengthwise slits for holes, wire spilt lengthwise at set intervals for holes, and a type that looks like two pieces of wire attached to one another. The widths of the strapping range from $^1/_4$" to 1". With few exceptions these sections of strapping are all quite small. Numerous pieces have nail holes present, some at consistent intervals, others more randomly placed along

the length of the strapping. The majority of nails found attached to fragments of the metal strapping range from 3d to 6d.

A variety of other metal artifacts, which could not be attributed to a specific function, were also found in this survey area. One of these is an iron ring (diameter = 2 $^{5}/_{16}$"). A second unidentified iron object consists of a flanged ring, 7 $^{13}/_{16}$" in diameter, which has a second cast iron ring attached to one side with five bolts. Although the heads of the bolts are missing, the nuts on the opposite side are present. The diameter of the hole in the centre of the ring is 6". A small unidentified cast iron bracket was also present. Twenty isolated pieces of wire averaging 1/16" in diameter and 4 metal bands were also recorded. A large piece of coiled wire mesh, firmly embedded in the ground, may have been part of a bed.

A thin metal frame was recorded with a flat bottom and dome shaped top; measuring 11 $^{1}/_{2}$" in length, $^{5}/_{8}$" wide at one end and $^{1}/_{2}$" at the other; at the narrow end is a 90° corner, and a further 2 $^{1}/_{2}$" of the frame. On top and in the centre of the longest section is a looped piece of wire in a "T" shape, formed by soldering the two ends side by side to the frame, bending the remainder parallel to the frame, and restraining it approximately $^{2}/_{3}$" the way along its length by a small wire loop also soldered to the frame.

Seventy-seven non-diagnostic metal fragments were observed. The majority appear to have been part of metal containers. If this is the case, these fragments may be indicative of the extent to which the inhabitants of this area were re-using and modifying artifacts to serve other purposes. There is one piece that appears to be zinc coated and another that is a rolled sheet of copper.

Some of the miscellaneous artifacts, such as leather and rubber fragments, are most likely unidentifiable portions of footwear. The two cork fragments may have been associated with a bottle closure. A metal file was located on the upper portion of the gravel slope. A small metal rivet may have been part of an article of clothing. Lead foil

and a piece of some other metal foil were present. The other metal foil may be tin foil and a recent inclusion. A hard rubber plunger handle was located on the gravel slope, but the object it to which it belonged cannot be identified.

A few wooden artifacts are included in this assemblage. A small piece of $^1/_4$" thick milled lumber with the remnants of dovetail joints along one side, may have been part of a wooden box. A composite wood artifact, consisting of three pieces of wood held together with two rivets and two nails, has yet to be identified. The final artifact with wood as a component, consists of a piece of metal sheeting with 7/8" of one side bent at a 90° angle. A piece of milled lumber $^7/_8$" thick sits on the metal sheet abutting the upright side, and is held in place by a single nail.

Re-used Artifacts

One hundred and twenty-six modified metal containers were recorded in the Judge Street Survey Area. The types of modifications vary, but those made simply to gain access to the can's contents are not considered modified for the purpose of re-use. Modified artifacts can be divided into: those altered to serve a new function, those created from material obtained from metal containers, and metal containers that show evidence of being used as a source of raw material.

Fourteen metal containers were modified into buckets, or show evidence consistent with re-use as a bucket. Large, rectangular oil cans were most frequently used for this purpose. Typically, the top of the can was removed and holes were punched in opposite sides of the container, near its upper edge. Nine isolated oil can top ends found at the site provide some idea of the extent to which these containers were reused. Most of the ends have embossing indicating the Standard Oil Company, Star Oil, or the Pratt Manufacturing Company. Twelve of the 14 buckets were made from rectangular cans, and two from cylindrical containers. Four have wire handles looped through holes punched in the sides. One has a factory-made wire handle of a type characteristically found on cylindrical pails. The single wooden handle bucket has nails driven through the

container into the wood. The remainder of the containers no longer have handles, but the holes are consistent with those observed on other buckets.

Among the Judge Street artifacts were two handmade cups, fashioned from condensed milk can-sized containers to which had been added a small loop handle (Figure 18). Although the cups look much the same, the handles have been applied in slightly different ways. Both handles are made of strips of tin, likely obtained from other metal containers, the edges of which have been folded over to create smooth sides. On one cup, two slits were made $^{3}/_{4}$" apart near the upper edge of the can. The handle was added by inserting one end of the metal strip through each slit to create a loop, and folding back each end to prevent them from slipping out of the slits. The handle on the second cup was added via a single slit near the top edge of the can, through which both ends of the looped handle were fed. Again, each end was bent 90° to hold the handle in place.

Figure 18. Mugs made out of hole in top metal containers, most likely condensed milk cans.

Another particularly interesting re-used artifact from this area is a "bug" (Gates 1985:4), or candle holder. This is a rectangular metal container with one long side removed and a piece of wire added through the upper end to create a handle. A small "x" cut into the centre of the bottom end provided space for a candle to be inserted and the resulting triangular tabs held the candle in place. The shiny interior reflected light out the open side of the can.

The purpose of one commonly observed modification is somewhat more elusive. The artifacts consist of metal containers with a series of holes or slits punched through the base or, occasionally, the sides. The location and number of holes vary considerably. It is possible these artifacts were used as colanders or strainers. Six examples of this type of artifact exhibited round holes, rectangular holes and small knife slits.

A third type of modified container is represented by three artifacts. Each consists of a rectangular container with the top half removed and the resulting raw edge folded over to create an open topped box.

The majority of artifacts created from metal containers have been discussed in the previous sub-sections. These include two homemade, rectangular baking pans, and a section of stove pipe with attached rain cover. Three objects interpreted as flashing for stove pipes were also recorded. These consist of a sheet of metal with a large circular or oval hole cut into the centre of the sheet with a series of small nail holes around the outer edges. Two of these pieces have wire threaded through the smaller holes around the outer edge.

Three large piece of tin sheet were discovered. Two are firmly embedded in the ground, the third, measuring 35"x 27", appears to have been formed from a number of large, flattened, rectangular metal containers. There are numerous nail holes in this metal sheet, particularly around the edge, which suggests it was used as roofing or wall covering for a structure. Use of flattened tin cans for roofing material was noted at the

cabin foundations (feature KCH-3) recorded on the top of the Klondike City hillside, and is also discussed by Gates (1985).

Other indications of the use of metal containers as a source of raw material include cans cut open and folded flat, and large rectangular metal containers with one or more sides cut out. Small pieces of metal cut from tin cans, which show no further evidence of modification are the most abundant evidence of re-use activity. In some cases these artifacts may represent end products, whose function is no longer recognizable, but it seems most likely that they are associated with raw material collection.

Human Tooth

A isolated human tooth was found in a cylindrical tin can, at the top of the talus slope just below platform HAP - J5. The tooth is an upper right molar from an individual approximately 15 years of age. This tooth has been examined by Shannon Wood, and her report is included as Appendix A.

Infield Artifact Recording at Platform HAP-4, Crocus Bluff

Platform HAP-4 is located on the Dawson City hillside, at 395 m above sea level, approximately 300 m northeast of Crocus Bluff (Figure 1). The top of the slope lies just above the platform, after which the ground levels out. The platform is 32m^2 in size, measuring 5.1m in length and 6.3m in width. Its location near the top of the hill, where the slope begins to decrease, means relatively little work was required at HAP-4 to level the area for construction. The most prominent features associated with the platform are three connected earthen berms, approximately 60 cm high, at the rear and both sides of the platform. Outside the berms are corresponding trenches, 1-2 m wide and 70 cm deep, which probably represent the source of material for the berms.

There is one platform 12 m northeast of HAP-4, and two platforms located 6 m and 12 m respectively to the southwest. Natural seeps are present on both sides of this group of four platforms. While relatively large numbers of artifacts were visible on the slope in front of HAP-4, very few were evident around the three other platforms. Although artifacts were recorded from platform HAP-4 and the area immediately around and in front of this feature, the majority were located directly in front of the platform. A total of 258 artifacts were found (Table 12). Metal containers comprise 95% of this assemblage.

Table 12. Surface artifacts recorded at Platform HAP- 4, Crocus Bluff, Dawson City hillside.

Artifact	Quantity
Ink Well	1
Leather Boot	1
Metal Containers	248
Metal Fragment	4
Metal Strapping	2
Stove (?)	1
Stove Door	1
Total	258

Subsistence Related Artifacts

All but one of the subsistence related artifacts at this platform are metal containers. While the largest proportion of these are cylindrical shaped cans with hole-in-top closures, a wide variety of other closure types were present in small numbers, including hole-in-top with key strip, key strip, matchstick, lever lid, slip lid and open top. Thirty rectangular shaped containers were recorded; the most common closure for these cans was the slip lid. Other closures present in small amounts include key wind, hinge lid, hole-in-top, threaded cap, cork spout, slip lid and hole in top with key strip.

Only six of the metal containers indicated the product and/or manufacturer. Two small cylindrical cans were embossed with "N-YORK CONDENSED MILK CO/EAGLE BRAND". Two cylindrical shaped slip lids were embossed with "DR PRICES CREAM BAKING POWDER/1 lb". One Coldbrook Creamery can was recorded, with the year 1899 embossed in the centre of the label. All three of these products have been recorded in other areas of the Dawson and Klondike City hillsides. Finally, a small can, approximately the same size as the N-York condensed milk cans, with a hole-in-top closure, was embossed "THE _HITOS_/ WINNIPEG MANITOBA".

A single, colourless glass bottle was recorded at HAP-4. This specimen consists of a base (diameter $2\ ^{3}/_{4}$") and body; the neck and finish are both missing. The bottle was made in a cup mould and the thickness of the glass in the body varies considerably. The body is embossed with "B____NG CO./ BUFFALO, N.Y." near the top, and "C.G.W." on the opposite side near the base.

Household Artifacts

Four household artifacts were recorded at HAP-4: a metal bowl, a stove door, a small tin stove (?) and a coal oil can made into a bucket. The stove door (measuring 13" x 11") consists of two layers of tin joined by folding the edge of the outer piece over the inner piece. A latch handle and small circular hole (diameter = 2") with a pivoting cover, are located in the centre of the door. Two hinges are present along one long side.

The small folding stove component (?) consists of a large rectangular piece of tin with a 7" diameter hole located just off centre (Figure 19). The hole does not appear to be factory made. Hinges have been used to attach a rectangular piece of tin to one of the long edges of the main section and a triangular piece to each short side. Riveted to each triangular attachment is a strip of metal with a single curved edge, forming a brace, or guide, into which something could be slid. Small clusters of four to nine nail holes have been punched in two places on the main tin sheet, in three places on the attached rectangular piece and on one of the triangular pieces. On the opposite surface, metal strips are attached to the long edge of the main piece by a rivet at either end. The metal

strip is now in two parts and it is not clear whether they were once a single strip. Two inch long clips are affixed to the apex of each triangle.

Figure 19. Possible folding stove component recorded at platform HAP-4.

Personal Artifacts

Only two personal artifacts were recorded. The first is a leather sole from a left boot. Stitch lines are still visible along the outside edge. The heel consists of six additional layers of leather affixed with nails. The second personal artifact is a green tinted, colourless, glass inkwell. Although complete, the base is been broken and has become detached from the body. There is no embossing on this specimen.

Miscellaneous Artifacts

Two fragments of plain metal strapping (width = $^{7}/_{8}$") were recorded. The longest fragment consists of two pieces riveted together, and has six 10d wire pulled nails still

present in it. The shorter piece has a single 10d wire pulled nail in it. Four unidentifiable metal fragments were recorded, each of which is likely a corroded fragment of a tin can.

Artifact Re-use

Three artifacts recorded at HAP-4 show evidence of modification. Two of the items have been discussed in greater detail under the heading of Household Artifacts. The first is a large rectangular metal container, likely a coal oil can, with the top end removed and small holes punched near the top edge on opposite sides of the can. These modifications are consistent with numerous cans, found throughout the hillsides, that have been converted into buckets. The second item may have been a small folding tin stove that has been modified by the addition of a 7" diameter circular hole cut in the main tin sheet, and small clusters of nail holes punched in six different parts of the artifact. The purpose of these modifications remains unknown.

The third modified artifact is a metal fragment with evidence of seams along all four sides, suggesting that it was once part of a metal container that was cut apart, likely for raw material. Three additional metal fragments may also have been the result of re-use activities as all appear to be part of metal containers, but they are too badly corroded to be certain.

6

KLONDIKE CITY HILLSIDE SURFACE ARTIFACT ASSEMBLAGE DESCRIPTION

During the second stage of the project, two platforms in Area A (KCH-7 and 9) were mapped and all the artifacts visible on the ground surface were recorded (Figure 20). These platforms are relatively isolated and there are few upslope features that could have contributed artifacts through down-slope movement. The exception, is a large artifact scatter KCH-4, located at the crest of the hill on a steep slope just east of these platforms. Although there has been down-slope movement of artifacts from this scatter, they are readily distinguished from those of the two platforms.

Infield Artifact Recording at Platform KCH-7

Platform KCH-7 is located at approximately the 370m contour and measures 27m^2 in size. Three low berms on the west side of the platform indicate the presence of a structure encompassing approximately 16.5m^2 (Figure 20). There is a break in the eastern berm, suggestive of a doorway. A .90m high dry laid stone retaining wall marks the front of the platform. At the east side of the platform, a trail leads downward across the slope, ending at a ditch. Approximately 10m west of the platform, a small rectangular area has been dug into the hillside.

A total of 218 artifacts were recorded on the ground surface around this platform (Table 13). The moss on the slope in front of this platform is thick and covers the majority of artifacts. Artifacts were revealed by cutting through the moss and rolling back

the edges. The majority of artifacts were located directly in front of the east side of the platform.

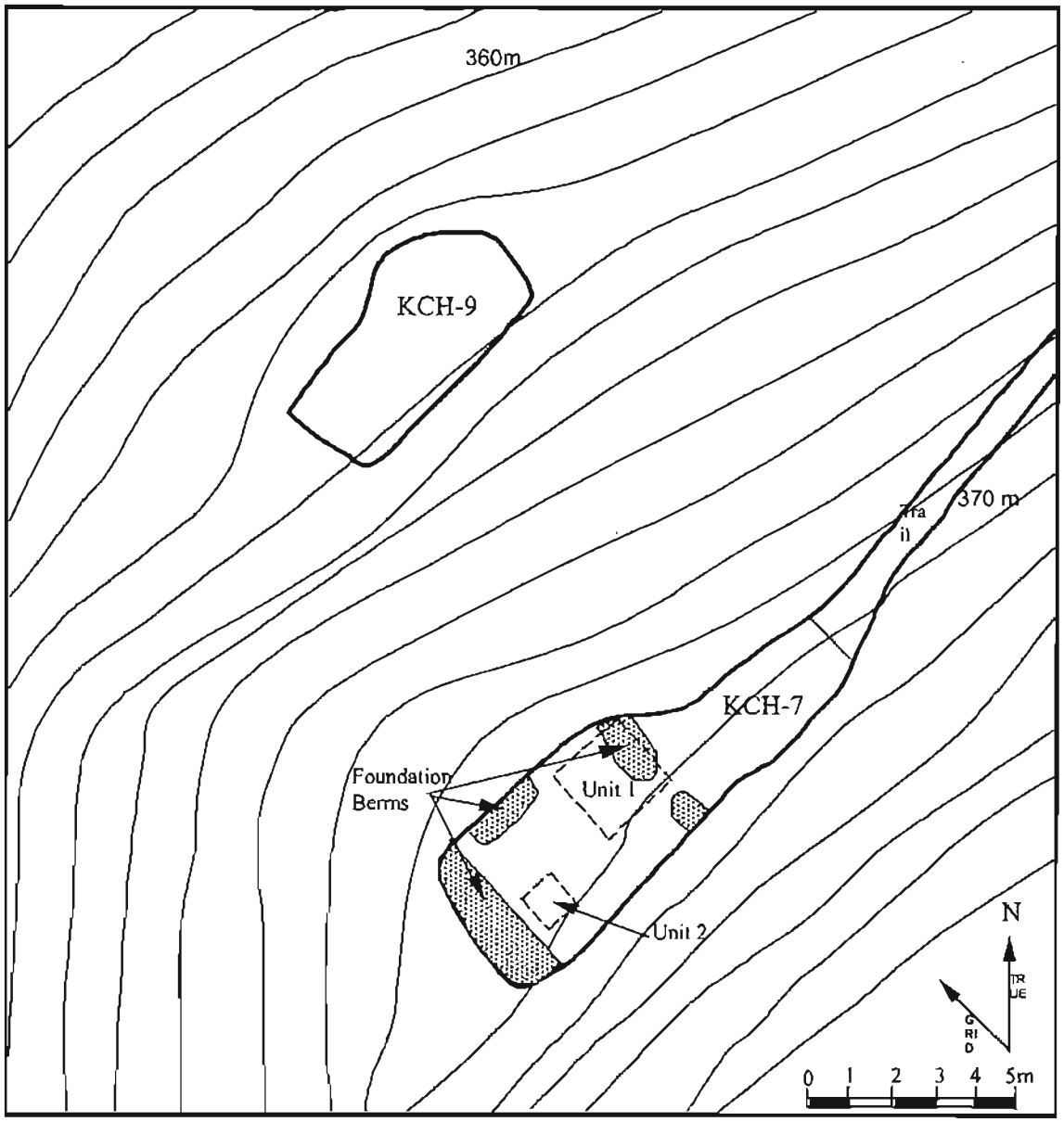

Figure 20. Map of Platforms KCH-7 and 9, showing location of foundation berms and excavation units on Platform KCH-7.

Table 13. Surface artifacts recorded at Platform KCH-7, Klondike City hillside.

Artifact	Quantity	Artifact	Quantity
Bottle	4	Metal Container	169
Button	1	Metal Fragment	4
Cloth Fragment	1	Metal Pan	2
Coffee Pot	1	Metal Strapping	2
Cooking Pot Lid	4	Nail- Wire	2
Faunal Remains	3	Pencil Fragment	1
Flat Glass	2	Rubber Boot	3
Leather Boot	5	Rubber Boot Fragment	4
Leather Boot Fragment	2	Toothbrush (bone)	1
Leather Strap	1	Wire	5
Mica Fragment	1	Total	218

Subsistence Artifacts

Metal containers comprised 78% of the artifacts recorded. Cylindrical containers with hole-in-top closures, in a variety of sizes, were the most common. The assemblage also included cylindrical containers with matchstick filler holes, slip lids, key strips, and threaded caps. One of the tin cans with a matchstick filler hole was found in close association with the platform. Three others were found along the trail in an area that suggests they were originally part of the artifact scatter at the crest of the hill (KCH-4). A small number of rectangular containers, a few oval tins and one 'D' shaped can were recorded.

A variety of manufacturers and products are represented in this assemblage (Table 14). They were identified from embossing on the containers and/or small sections of paper labels. Five different condensed milk companies are represented, as well as three types of tobacco products. The "Don Amenez" container is a sardine can. Two additional lid fragments had "Absolutely" embossed on them, and are likely from baking powder tins.

The only faunal remains associated with the platform is a small, unidentifiable fragment of calcined large mammal bone.

Table 14. Companies and products identified on labelled metal containers from KCH-7.

Can Shape	Mark/Label
Cylindrical	-"BORDENS CONDENSED MILK CO./EAGLE BRAND"
Cylindrical	-"CANADA MILK/ CONDENSING CO./"
Cylindrical	-"COLDBROOK CREAMERY/1898/C.E.WHITNEY & CO. SAN FRANCISCO"
Oval	-"C.P.W./S.C. CAL"
Cylindrical	-"CROSSE & BLACKWELL/LONDON"
Rectangular	-"DIXIE QUEEN/PLUG CUT/A.H.MOTLEY CO."
Rectangular	-"DON ARNENEZ OD RANO____"
Rectangular	-"LORD STANLEY SMOKING MIXTURE/SMOKE COOL/ SUPERIOR QUALITY"
Rectangular	-"MILD /__APSTAN/__VY CUT/..."
Cylindrical	-"+N-YORK CONDENSED MILK CO+/EAGLE BRAND"
Cylindrical	-"ST.CHARLES/UNSWEETENED/EVAPORATED"
Cylindrical	-"____GAN CONDENSED ____/EK CO___"

Very few bottles were found. Those that were, are largely complete and include two prescription finish bottles, a Lea & Perrins Worcestershire Sauce bottle, and a flattened side finish, clear glass bottle.

Household Artifacts

Household artifacts include a number of cooking pot lids, metal pans and a coffee pot.

Personal Artifacts

Personal items found include rubber and leather boot fragments, a bone handled toothbrush, a metal button embossed with "Levi Strauss & Co./SFCAL.", a fragment of unidentified cloth and the eraser end of a pencil.

Structural Artifacts

Structural artifacts were represented by two wire drawn nails and two small pieces of flat glass.

Miscellaneous

A relatively complete canid skeleton was uncovered, on the slope in front of the platform, in association with the artifacts under the moss. Unlike the artifacts, the majority of bones are partially embedded in the ground. Although a complete inventory was not possible as there was no time for excavation, the visible elements are representative of the entire skeleton. The cranium and pelvis are intact, and at least one front and one rear limb are present along with a number of vertebrae. The pelvis, one femur and the sacrum are articulated. The other bones appear to have shifted out of anatomical position by down-slope movement. There is no evidence of damage on the visible elements. The cranium was positioned upside-down (facing upslope) with the mandibles in place. Leather straps with metal rivets were situated posteriorly along both sides of the cranium. On the east side, three leather straps, two of which cross, were held together by two rivets. One strap extended along side the skull to the middle of the snout, where it crossed under the cranium and connected to another fragment of leather strap via a single rivet.

Artifact Re-Use

The only evidence for the modification and re-use of artifacts at this platform consists of a metal pail that had a twisted copper wire handle added to it, and four metal fragments that may have been cut from metal containers.

Infield Artifact Recording at Platform KCH-9

This platform is located 8m north (below) of KCH-7 (Figure 20), covering an area of 12.5m^2 (Figure 21). There is no evidence of a retaining wall at the front of the platform, nor for a structure on the platform. The number of artifacts visible on the surface of this platform suggested that a considerable amount of material would be found under the moss. This was not the case and very few artifacts were recorded overall, possibly due to the steepness of the slope in front of the platform, which would have facilitated artifact movement down-slope.

Figure 21. Platform KCH-9, Klondike City hillside.

The artifacts associated with this platform will be discussed as a group, rather than in individual artifact categories, since the total number is so small (n=36). The majority of artifacts in this assemblage are metal containers; cylindrical containers with hole-in-top closures are the most common. The only identifiable container is a Log Cabin syrup can.

Additional artifacts include: an aluminium pan (recent), the base of a dark green glass bottle and two large mammal tibiae (one complete, one distal end only). Two cylindrical metal containers had small holes punched in opposite sides near the top end, which may have held, or have been intended to hold, a wire handle. A large rectangular metal container had a circular hole cut into one side, by producing a series of intersecting slits and peeling back the resultant tabs. A wire drawn nail protrudes from the same side of this container, and a second nail extends from the opposite side.

Infield Artifact Recording at Platforms KCH 14-16

Platforms KCH-14, 15 and 16, are located in the west half of the Klondike City hillside at approximately 340m elevation (Figure 22). KCH-14 and 16 are situated side by side, approximately 8m apart. KCH-15 is located between these two, approximately 8m upslope. These platforms were selected for infield artifact recording based on the results of the 1998 survey. There are no platforms or other features/artifact scatters above KCH-15. The area around the three platforms is bound on the east by a large rock outcrop, which separates them from platforms further east. The abandoned road up the hillside passes approximately 10m below KCH 14 and 16. On the west, the area is bound by a large drainage ditch that runs straight downhill.

Documentation regarding the origins of the ditch could not be located. It does not appear to be a natural drainage, and likely dates to sometime after the initial gold rush. At the top of the slope the ditch makes a sharp turn to the east, and parallels to top of the slope for approximately 50 m, ending near the standing cabin noted above. At the base of the hill the ditch turns to the west, avoiding the road up the hillside, and runs toward the Yukon River. It seems probable that this ditch was associated with mining activity conducted on the top of the hill.

Platform KCH-14 is 10.7m in length and 5.4m wide, creating a level surface approximately 58m^2 in size (Figures 22 and 23). A dry-laid stone masonry retaining wall extends along the entire front of the platform. Constructed of large boulders and cobbles, the wall is well made and reaches a maximum height of 1.85 m. The terrain in front of the wall is very steep. There is no evidence for a retaining wall at the rear of the platform. A trail extends down from the east end of the platform, along the front of the rock outcrop, then turns and runs with the slope, ending approximately 2 m short of the cut created by construction of the old road. The downhill side of the trail has been shorn up with large rocks.

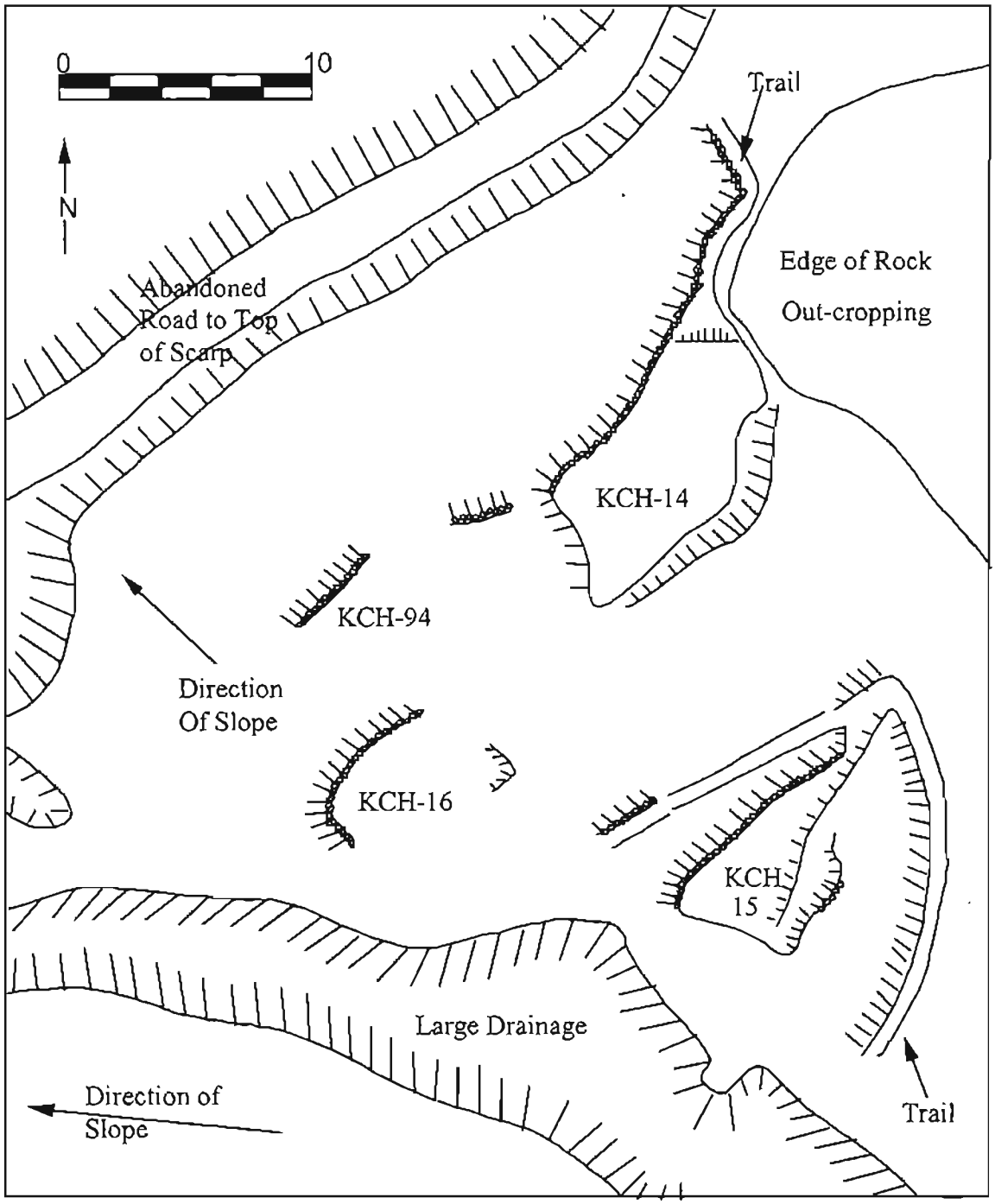

Figure 22. Map of Platforms KCH 14, 15 and 16 on the Klondike City hillside.

Figure 23. Platform KCH-14, Klondike City hillside.

Platform KCH-15 is 8.6m long and 5.2m wide, with a surface of approximately 50m^2 (Figure 23). There is a small dry-laid stone retaining wall, 1.7m in length and .75m high, at the rear of the platform. This wall was built using medium to large cobbles. A second dry-laid stone retaining wall extends along the front of the platform. The front wall is approximately 1m high. Unlike the front wall of KCH-14, the front retaining wall of KCH-15 is not vertical, but instead slants out from top to base. This platform appears to have two separate levels. From the rear retaining wall the platform extends approximately 2.4m to a row of large stones. This section of the platform is relatively

level. In front of these stones the platform slopes gently 2.8m down to the top of the front retaining wall.

A trail starts at the east edge of the drainage ditch approximately 4m above the west end of platform KCH-15, and extends across the slope to the east end of the platform. At this point the trail makes a sharp turn to the southwest and runs across the slope in front of the platform. There is no rock work associated with the trail above KCH-15, but there are rocks along the downhill side of the trail below the west end of the platform. The trail ends below the west edge of the platform.

Platform KCH-16 measures 4.4m in length and 3.8m in width, creating a platform surface area of approximately 17m^2. The surface of this platform slopes down slightly to the front edge, which is not bounded by a stone retaining wall. The front of the platform has a maximum height of 1.2m. A small excavated area forms the southeast corner of this platform.

A low rock wall, KCH-94, is situated between KCH-14 and KCH-16. The wall is 6m in length and runs across the slope. It is difficult to discern the purpose of this feature. It seems unlikely that it was a tent/cabin platform, as the ground behind it slopes gently for 1.8m, after which the slope becomes quite steep. It could have potentially been associated with a cabin if the front was supported by poles, and the back of the cabin rested on and behind the wall. It also seems unlikely that this feature was part of a trail, as it does not appear to continue at either end of the wall. All confirmed trails exhibit a small, but steep cut into the slope on the uphill side, an attribute not present at KCH-94.

A total of 303 artifacts were recorded on and around the three platforms (Table 15). While these include a wide variety of different artifact types, the majority are represented by very low numbers. The analysis is still ongoing. Each type of artifact is discussed briefly in the artifact class sections below.

Table 15. Surface artifacts recorded at Platforms KCH 14-16, Klondike City hillside.			
Artifact	**Quantity**	**Artifact**	**Quantity**
Aluminium Bowl	1	Metal Container	205
Bottle	1	Metal Cup	4
Bottle Finish	1	Metal Fragment	28
Bottle Body	1	Metal Object Unknown	4
Ceramic Plate Fragment	1	Metal Pipe	1
Cloth Fragment	1	Metal Pot Lid	1
Crampon	1	Metal Sheet	1
Faunal Remains	2	Metal Strapping	1
Flat Glass Shard	1	Nail- Wire	1
Flour Sifter	1	Paper Label Fragment	4
Frying Pan	1	Pail Handle	1
Glass Shard	7	Pitch/Resin	3
Glass Jar	2	Rubber Boot	3
Lead Foil Package	1	Rubber Boot Fragment	1
Leather Boot	2	Sleigh Runner	4
Leather Boot Fragment	1	Stove Pipe	3
Leather Fragment	2	Wire	2
Metal Band/Hoop	1	Wood Fragment	3
Metal Basin	1	Wooden Smoking Pipe	1
Metal Bracket	1	Total	303

Subsistence Related Artifacts

Metal containers are the most common artifact around these three platforms, comprising 68 % of the assemblage. The majority of these containers held food items. Products identified on surviving packaging include: condensed milk, baking powder (KC Baking Powder), baking soda (Price's), corned beef (Libby, McNeil & Libby), leaf lard and butter. The three brands of condensed milk identified, Borden's Condensed Milk, N-York Condensed Milk, and Truro Condensed Milk, are also the most commonly recorded manufactures in the other hillside areas examined. Cans from the Coldbrook Creamery, C.E. Whitney & Co. of San Francisco, are also common in other areas of the hillside. Of the six creamery cans recorded in this area, three are embossed with 1898, one is embossed 1899 and two are embossed 1900. A lead foil package, bearing the label "Pure Ceylon/Blue Ribbon/Tea" was also recorded.

The quantity of bottle glass recorded in this area is small, and consists of one complete bottle, one neck and finish fragment, two body sections and seven small body sherds. The complete bottle was manufactured in a post-bottom mould, with an applied finish; the glass is colourless. The lead foil on the neck of the bottle reads "SEAGRAM'S CANADIAN WHISKY". Two colourless with green tint bottle bodies were recorded. The only other diagnostic bottle fragment is a champagne finish from a green glass bottle. Four of the seven bottle sherds recorded are likely fragments of this bottle, that could not be refitted.

Two complete glass jars were recorded, one on platform KCH-14, and the second just west of the platform. The jar from the platform is wide mouthed, made of colourless glass and has an octagonal body. The base is embossed "BREFFIT'S/9409/LONDON". The second, is a small white glass jar, with "THE CUDAHY PACKING CO/OMAHA" embossed on the base. Similar jars have been recorded on the Dawson City hillside and would have contained ham, bacon or pork meat paste (Murray and Hamilton 1986:265).

Only two faunal specimens were recorded in this area. The first is the distal end of a large mammal humerus that had been sawn off the rest of the bone. The second is half a large mammal thoracic vertebra, which had been sectioned lengthwise with a saw. Cut marks are visible on the transverse process of the vertebra.

Household Artifacts

Twelve household artifacts were recorded, the majority of which are associated with subsistence. These include: metal basins, a frying pan, a pot lid, flour sifter, small metal cups and a fragment of ceramic plate. The frying pan handle is embossed "COLD HANDLE - ACME - NYS__". An identical pan was recorded on the Dawson City hillside. Four small metal cups were recorded, and though similar in size, there are three different styles of handles represented. Two of these cups were found together, rim to rim in a small pail, with the bowl of a wooden smoking pipe between them (see below). A single fragment of a white glazed plate was found on the slope in front of KCH-14. Finally,

three sections of stove pipe were recorded in the area, two 12" in length, and the third piece 24" long.

Personal Artifacts

Like the other hillside areas examined during the course of this research, relatively few personal items were recorded around platforms KCH 14-16. The most common type of personal artifact recorded was footwear; leather and rubber boots. The artifacts usually consist of a sole with small fragments of the upper remaining attached, or isolated fragments of the upper. One striking feature of the rubber boots is the extent to which the tread on the soles is worn off, not only on the specimens from this area, but also on most of the boots recorded in other locations. Of particular interest is a rubber boot to which a leather sole has been added. A similar repair job was recorded on a rubber boot from the Judge Street area.

A small, cylindrical shoe polish tin was found in between the stones of the rear retaining wall on platform KCH-15. Its location offered protection to the lithographed label, which reads "AMERICAN DRESSING CO/ BOSTON & MONTREAL/ RUSSET LEATHER/ POLISH/ DIAMOND". The base is labelled "FOR POLISHING/ LIGHT OR DARK RUSSET/ LEATHER SHOES/ KEEP COVER ON TIGHT/ APPLY WITH FINGERS/ OR WITH A SOFT CLOTH/ AND RUB TO A POLISH/ WITH A DRY CLOTH." The slip lid is now permanently rusted in place, but dried pieces of polish can be heard rattling around inside.

One particularly interesting piece of footwear is what appears to be a type of crampon for a right boot. It has a leather support for the heel of a boot, which is larger on the lateral side to provide greater outward stability. Two leather straps are riveted to the support, one at the centre on the back, and the second on the upper corner of the outside edge. A small piece of strap is still attached to one side near the toe. The sole of the crampon is covered with square/rosette shaped nail heads approximately $^{1}/_{4}$" square and $^{1}/_{8}$" high. These line the outside edge and cover the front surface of the sole. Mixed in among the nail heads on the front part of the sole and the heel are 15 small, conical shaped spikes. The spikes are approximately $^{1}/_{4}$" inch in length.

The bowl of a wooden smoking pipe, marked "FRANCE" and containing some tobacco, was found associated with four other artifacts on the slope between KCH-14 and KCH-16. The pipe, two metal cups and the white glass Cudahy jar described above, were all found in a leaf lard pail. The jar was at the bottom of the pail with the two metal cups placed rim to rim, with the pipe in between, on top. The top of the lard pail was crushed slightly, presumably to help retain the contents.

The final artifact in this category is a small piece of woven fabric. There are two different types of stitching visible on the fragment. One edge is folded over, the other three are tattered.

Structural Artifacts

There is no evidence remaining of the structures that once sat on the three platforms in this area, and very few structural artifacts were identified. A single wire drawn nail was recorded, but it is not possible to say unequivocally that it was used for construction purposes. Eighteen pieces of flat glass were found at the top of the retaining wall in the southwest corner of Platform KCH-14. Five of these pieces conjoin, forming a triangular corner section of a pane, with maximum dimensions of 6 $^{3}/_{8}$" x 6 $^{3}/_{8}$". Since the remaining shards were found in the same location, it seems probable that they were part of the same window.

Miscellaneous Artifacts

The function of a number of objects in this category are unknown. They include: two pieces of thin gauge wire; a few pieces of metal/tin sheeting; two pieces of milled lumber with associated wire pulled nails, both of which had been partially burned. Three pieces of pitch or resin from the surface of platform KCH-15 are identical to the pitch, used for sealing barrels, identified in association with the cooperage structure at the O'Brien Brewing and Malting Company site in Klondike City, located at the base of the hillside (Burley and Will 1999:61). A metal band, which may have been a barrel hoop, was also recorded at KCH-15.

Four sleigh runners were recorded among these three platforms. Each consist of a long metal strip ranging from 44" to 86" in length, and either 1 $^{3}/_{4}$" or 2" in width, which curves up and back at one end. Two specimens have wooden strips riveted along the top side of the metal. One has a metal eyelet attached to the wood near the front of the runner, and wooden dowels at either end, which are inserted into holes and held in place by wire pulled nails driven in from the side. The other two specimens have been bent almost in half, and while there is no wood present, the pattern of holes down the centre of the strip is similar to the two just noted (rivets are still present in some of the holes).

Among the artifacts recorded in this area are six manufactured objects that are currently unidentified.

(1) Metal bracket, 12 $^{1}/_{4}$" long, with a 'T' on either end. The central bar has five unequally spaced holes along its length. There are two holes on each 'T' end for securing the bracket.

(2) Composite metal object consisting of a 3 $^{3}/_{8}$" x 1" metal plate with a hole drilled in the centre. A $^{3}/_{16}$" diameter rod has been inserted through the hole, and the ends have been flattened to secure it to the plate. Approximately 2" from the plate the rod is bent at a 90° angle. The end of the rod is broken.

(3) 36" iron rod (octagonal cross section) with both ends curled into loops, at one end the rod has been bent at 90° approximately 3 $^{1}/_{2}$" from the loop. Three non-ferrous metal plates have been folded over the rod and the two ends riveted together much like a hinge.

(4) 14 $^{1}/_{2}$" section of non-ferrous metal pipe (2 $^{1}/_{2}$" in diameter) with an interlocking side seam. One end is crimped to slide into another piece of pipe, the other end is folded over. The object is coated with a silver/grey material (possibly zinc). There is a hole in the side approximately 3" below the folded end of the pipe. On the inside, approximately 1 $^{1}/_{2}$" below the folded end is a wooded plug, 2" thick with a $^{9}/_{16}$" hole through its centre.

(5) A section of angle iron, 10" in length, with a second strip of metal held to the inside by four rivets. A third, broken piece of metal is riveted to one end of the angle iron.

(6) a 'Y' shaped piece of iron (length = 6 $^{1}/_{8}$") with all three ends bent up at 90°, the single end has an inverted "w" shape creating two small points, the other two ends are triangular in shape. A second piece of metal has been riveted across the open section of the 'Y', with iron rivets. There is a copper rivet in the centre of the single end, just before the upturn, which does not affix anything.

Artifact Re-use

A total of 41 artifacts from this area show evidence of re-use or modification. The most common source of raw material for these artifacts is tin from cans. Small pieces of metal cut from tin cans (n = 25), which show no further evidence of modification, are the most abundant evidence of this activity. Cans that show some evidence of modification, such as having been cut in half, had one whole side removed, or had holes punched in them, are also common. In some cases, these may represent an end product with unrecognized function, but it is more likely that they are associated with raw material collection.

Three types of homemade artifacts are present in this assemblage. The most common of these are buckets, four of which were made from cylindrical metal containers and one from a large rectangular can. Three of the five buckets had wire handles attached. Two pieces of roof flashing made from large, flattened rectangular metal containers were recorded. Both have a large hole cut in the centre, possible to allow stove pipe to pass through. They have nail holes at the corners and along the sides.

A lamp made out of a condensed milk can was found. The can had been cut 3/4 the way around its circumference approximately half way down the body. The bottom end of the can was removed and a lengthwise slit made down the body along one side. The resultant flap was rolled back and left attached to the can. Inside the lamp was a hard white substance with a piece of wick in it. A second artifact made from a condensed milk can, may also have been used as a lamp. One end had a cut made in it and the sides peeled back. Covering this opening is a piece of cloth mesh. Inside the can is a yellow, waxy substance. This substance is still awaiting analysis.

7

EXCAVATIONS AT KLONDIKE CITY PLATFORM KCH-7

Platform Description

Platform KCH-7 is located at the 370m (asl) contour on the western side of the Klondike City hillside, not far from the point at which the hillside meets the Yukon River. The platform measures 9m in length and 3m wide, creating a level surface approximately $27m^2$ (Figure 20). Evidence of the structure that once sat on the platform is present in the form of three low earthen berms, which run along the front of the platform, and the eastern and western extents of the structure. There is a break in the middle of the eastern berm, which suggests the location of a door way. This structure would have been approximately $16.5m^2$.

Near the centre of the platform, along the front, is a .90m high dry-laid stone retaining wall. The eastern corner of the structure was located directly above the wall. The eastern half of the platform, consisting of an area approximately $10m^2$, appears to have remained open. A well-developed trail connects to the eastern edge of the platform. The trail has a prominent cut into the slope and the downhill side has been built up. This trail extends across the slope to the east and ends just before the large drainage ditch. The end of this trail and the beginning of the trail above Platform KCH-15, are at approximately the same elevation, and it seems probable that they are the same trail, bisected by the later construction of the ditch.

Excavations

This platform was selected for excavation based on the presence of the foundation outline, and the fact that all the artifacts on the ground surface had been recorded during the previous season. The purpose of this excavation was to recover structural data and information regarding construction techniques for the cabin that had existed on the platform, and to obtain a sample of the material culture remaining inside the structure's perimeter. A 2 x 2m unit (Unit #1) was laid out in the northwest corner of the foundation outline, aligned to bisect the length of the east berm, from the front corner of the platform to the possible door location in the middle of the berm. This unit also gave considerable coverage inside the structure itself. The second unit (1 x 1m) was placed at the rear of the platform in the southwest corner.

Prior to excavation the platform was mapped. The excavation grid was aligned with the platform, therefore grid north is actually 320° true north (Note: directions given below are referenced to the grid). Both units were excavated primarily by trowel. Shovel shaving was employed in Unit #1 in the sterile construction fill layer. Excavation followed natural layers, using 5cm arbitrary levels in the thicker strata. All excavated material was screened through $^{1}/_{4}$" and $^{1}/_{8}$" nested screens.

Structural Data and Construction Techniques

Unfortunately, the excavations provided little structural data or information regarding construction techniques. The majority of wood originally used to build the cabin was likely scavenged quite soon after its abandonment, either to be reused or burned as firewood. The placement of the excavation units was designed to uncover evidence of the nature of the foundation type and identify the type of floor used in the structure. The eastern berm was sectioned in order to reveal the foundation, cabin wall, and to confirm that the break in the berm was a doorway. There was no solid indication of the foundation type or flooring at KCH-7. While removing the organic layer from

Unit #1, a piece of rotting wood (50cm long, 8-10cm wide and 2cm thick) oriented roughly north-south was revealed, extending into the unit beginning 9cm from the north wall. It was not possible to determine whether or not this was milled lumber. As excavation continued, a smaller section of wood was found near the north wall immediately west of the larger piece. Two wire pulled nails were found in direct association with this wood (one 10d, the other was broken). Approximately 30cm west of this wood is a short section of log (25cm long, 11cm wide), oriented roughly east-west. There does not appear to have been any preparation of the underlying matrix, and there was a 10cm difference in depth between the two ends of the 50cm long piece of wood. The evidence is equivocal. There are other explanations for the positions of these pieces, which are just as viable as their potential relation to the floor. They may simply have been dropped and left behind when the structure was dismantled.

Evidence for structural remains is only marginally better in Unit #2. Just below the organic layer in the northeast corner of the unit were three boards, each 6cm wide, lying side by side. These boards are oriented north-south, and extend 45cm into the unit from the north wall. While no artifacts were found in direct association with this wood, a nail hole was evident in one of the pieces. In addition, a small fragment of wood with a wire pulled nail (16d) was found just above these boards.

Berms along the outside of structure walls are a common feature of many cabins in the Yukon (Gates 1987:13). Piling dirt along the lower sections of the walls helps prevent drafts from entering the structure (Figure 24). The berms on platform KCH-7 are likely the result of this practice. Although the berms are now low rounded features, they would have originally been somewhat higher, having rested against the outside wall of the cabin. When the cabin was taken down, and the walls removed, the berms would have had a vertical face on the inside where the wall had been. This is demonstrated at the cabin foundations (KCH-3) recorded at the top of the hillside just east of KCH-7. Here the berms still have one vertical face, and in some cases the lower courses of logs remain, or their imprint is still visible on the inside of the berm. With time the vertical side of the

berm collapses taking on the characteristic rounded shape present on platform KCH-7 today.

Figure 24. Log cabin located at the site of Forty Mile (LcVn-2), showing dirt mounded up against the first three courses of logs.

Given this type of construction one would expect evidence for the cabin foundation to be found near the centre of the berm. Minni's (1978:99) excavations on a Dawson hillside revealed base logs along the inside edges of the three berms present on the platform. At one corner, the cut squared notches were still present. The excavation of the east berm on platform KCH-7 did not, however, uncover any evidence for base logs. The berm was excavated as a feature using arbitrary 5cm levels (below datum) within

natural layers. Layer 1 begins immediately below the organic surface material and consists of a dark yellowish brown, sandy silt, with abundant pebbles and a few small cobbles. The matrix is relatively loose and contains numerous small plant roots. Very few artifacts were present in this layer. The largest part of the berm is made up of Layer 1.

Layer 2 is the base matrix of the platform itself, underlying both the berm and the interior of the foundation outline within this unit. Layer 2 appeared first in the south portion of the east berm, almost immediately under the organic surface material. The matrix is dark brown with a reddish tint and is a sandy silt similar to Layer 1. While a variety of artifacts were recovered from this layer, they are most closely associated with the interface between Layer 2 and Layer 2b.

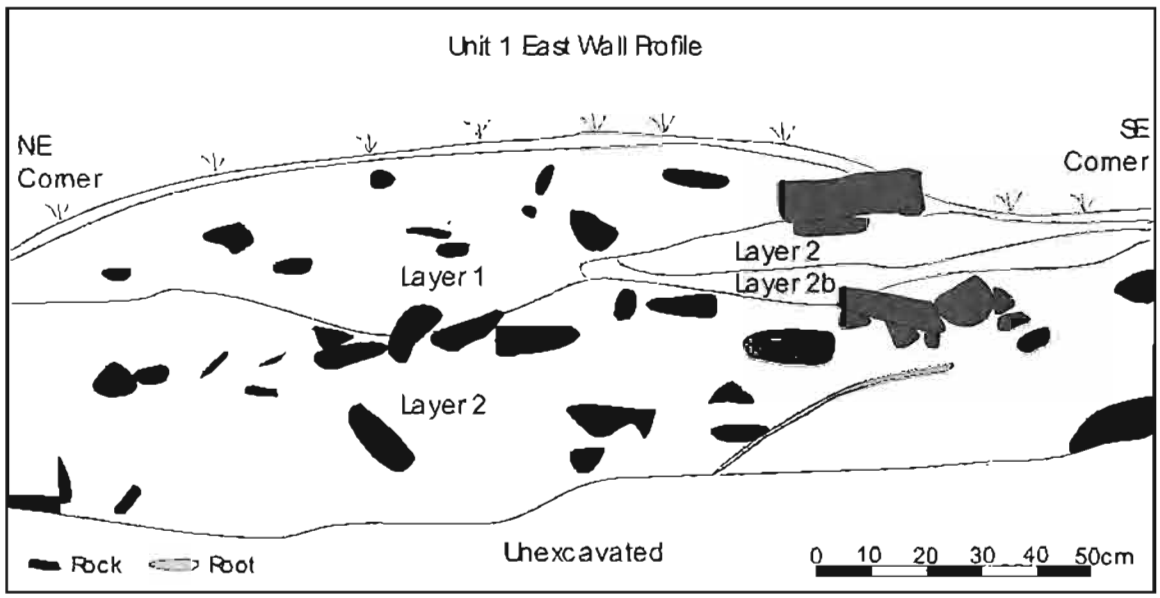

Figure 25. Platform KCH-7, Unit #1, east wall profile. This side of the unit bisected the eastern berm of the foundation outline.

The upper portion of Layer 2 is very thin in the southeast corner of the unit and overlies Layer 2b, a dark greyish brown, sandy silt. At its maximum, this layer is only 7 cm thick. While Layer 2b is present in both the east berm and the southwest portion of the unit, these two parts are continuous only in the unit's southeast corner. Below this layer is the reddish tinted Layer 2 matrix. In the north half of the unit Layer 2b is absent and Layer 1 overlies Layer 2. The majority of artifacts recovered from this unit were

found within Layer 2b. The Layer 2b matrix in the east berm contained fragments of wood, two pieces of which were directly associated with wire pulled nails, and bits of matted tree bark and wood chips. At least one piece of wood shows evidence of burning and small flecks of charcoal were present in the matrix. Once through Layer 2b, the matrix continues as Layer 2.

Artifact Description

A total of 194 artifacts were recovered from the two excavation units (Table 16). Only five of these artifacts came from Unit #2 (three wire drawn nails, a small piece of lead sprue and the base of a shotgun shell). Of the 189 artifacts from Unit #1, more than half consist of nails (of various sizes) and what appears to be fragments of matchsticks. Standard flat head, wire pulled nails are most abundant. The most common sizes were 6d and 8d nails. Cooper (1998:233) notes that the 8d nail and larger were generally used in the construction of buildings, while 2d to 5d nails served primarily non-structural purposes. Seven small square nails, which appear to be copper, are probably from the sole of a leather boot.

Seven small fragments of mammal bone and a number of small pieces of eggshell were recovered. Half of a large *Prunus* sp. seed (C. D'Andrea, pers. com., 2000) was also recovered. Parts of two metal containers are represented in the assemblage. One is rusted beyond recognition, the second consists of the key and strip from a key strip closure container, such as those used on canned meat tins.

The presence of firearms is indicated by six bullet primer caps, and the base of a shotgun shell stamped "U.M.C. CO/ No. 12/ BLACKCLUB". All six primers have been fired. The shotgun shell was unfired. A piece of lead shot and nine small pieces of lead sprue were also recovered. The six primers, which had been removed from the casings, and the lead sprue, suggest that the shells were being reloaded by hand.

Table 16 Artifacts recovered from excavations at Platform KCH-7.

Artifact	Quantity	Artifact	Quantity
Boot Speed Clip	1	Metal Nut	1
Bullet Primer	6	Metal Object Unknown	5
Button	4	Metal Screw	3
Copper Sheet Fragment	1	Metal Washer	2
Cork Fragment	2	Nail	14
Faunal	10	Nail -Cut	3
Glass Shards	15	Nail- Cut ?	2
Lead Foil	2	Nail- Wire	29
Lead Shot	1	Paint Chip ?	1
Lead Sprue	10	Pencil Lead	2
Leather Fragment	1	Rivet	1
Match Sticks (1)	53	Seed (Prunus sp.)	1
Metal Chain	2	Shot Shell Base	1
Metal Container	3	Tack/Nail	9
Metal Disc	3	Wooden Smoking Pipe	1
Metal Foil	2		
Metal Fragment	2	Total	194

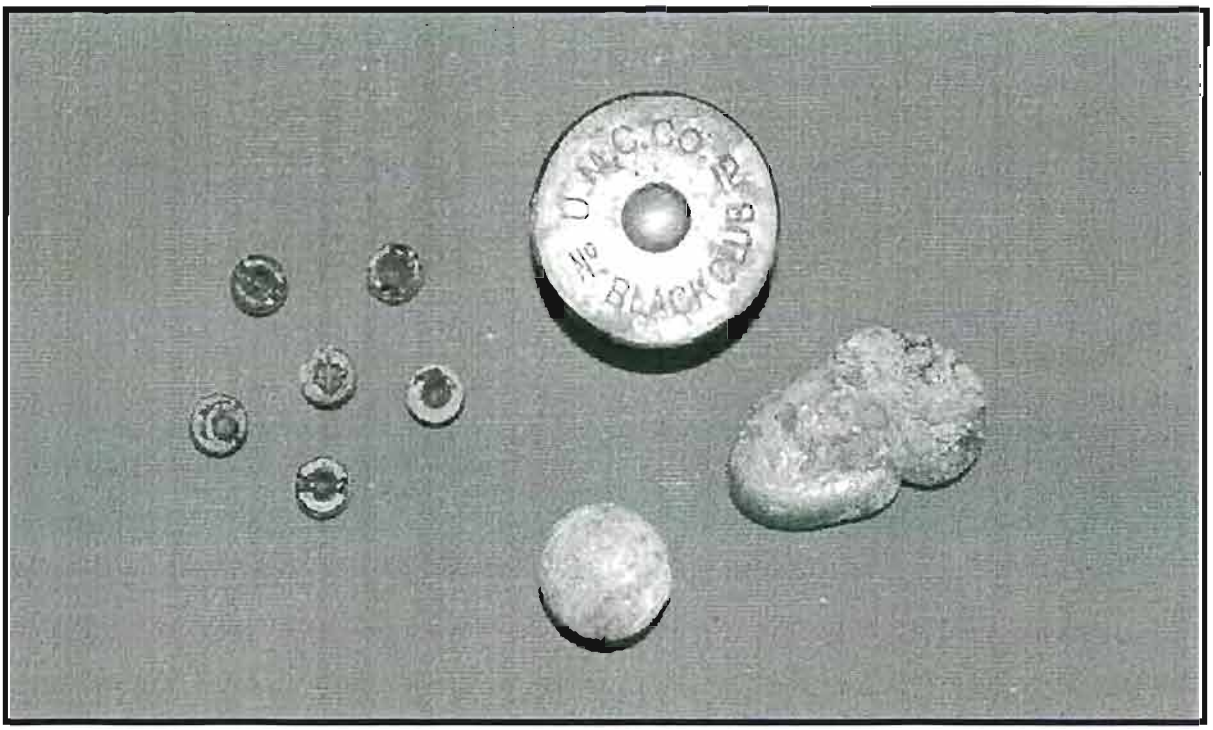

Figure 26. Six bullet primer caps (left), a shot shell base (upper centre), lead shot (lower centre) and a piece of lead sprue (right), excavated from Platform KCH-7.

The remainder of the artifacts from Unit #1 occur in very small numbers, these include: metal washers and a nut, sections of chain, small chips of glass, buttons, a rivet, lead foil and a speed clip from a boot.

8

DISCUSSION AND SUMMARY:

TRANSIENCE AND THE ARCHAEOLOGICAL RECORD OF THE HILLSIDE

During the gold rush era, most of the people in Dawson City were drawn to the Klondike for a single purpose, acquiring wealth. While their goal was the same, their methods differed. In some respects, the diversity of people attracted by the lure of gold presents a problem for an analysis of transient life in the community. The standard definition of transient, passing through or of short-term duration, fails to capture the essence of transience during the gold rush. There was no homogeneous set of "transient" people. Instead, the community consisted of a number of transient groups coexisting and interacting, to varying degrees, with the established population.

Mining, particularly placer mining, is an inherently transient occupation. Miners work a claim until it is exhausted, or something better comes along. The Canadian government sent its representatives to the Klondike, many of whom signed on for limited periods of time. Others recognized the potential to profit indirectly from the rush. The booming community provided numerous business opportunities, and Dawson attracted a variety of transient traders. Such individuals arrived in town with a consignment of goods, took advantage of the high demand and prices, then headed south, possibly to ready another shipment. Prostitutes were transient members of all mining communities, and many followed a circuit through a number of different camps (Blee 1991: 38, 56; Porsild 1994:188, Spude 1997:30; Morgan 1998:100). The lure of fast money also drew from the ranks of professional gamblers.

From an archaeological standpoint, the lifestyle of boomtown transients can be somewhat elusive when viewed through material culture. Many lived in hotels, boarding

houses or above saloons, leaving little of their personal mark in the archaeological record. The hillsides around Dawson are a valuable exception, providing archaeological evidence of the daily life of the inhabitants, from the foods they ate and clothes they wore, to the ingenuity expressed in homemade household items.

Transience in Dawson City During the Gold Rush

In her analysis of social disorganization in the community, Helper (1945) devoted considerable attention to Dawson City's large floating population during the Gold Rush. Social disorganization, the "decrease of existing social rules of behaviour upon individual members of the group" (Helper 1945:67), is indicated by elements such as crime, alcoholism, unemployment, transience, prostitution, poverty, sickness, insanity, suicide and political corruption, in a society. According to Helper (1945:68), early Dawson society was characterized by social disorganization, prolonged by factors that hindered the development of stabilizing communal institutions. Transients are a key factor in Helper's argument. The stampede brought a tremendous number of people who had to be absorbed into the community. They were inexperienced with mining and the environment, did not adhere to the Sourdough's Code, and had no commitment to the community; their only goal was to make a fortune and depart. This was a mixture sure to create chaos.

Guest (1982) also recognizes a direct connection between the large floating population in Dawson and many of the community's social problems. His demographic analysis of Dawson City's population presents some interesting insights into transience in the community. Most significant for this analysis, was the realization that the gold rush did not end in 1899, as abruptly as so many have thought. Using Polk's directories, Guest determined that a large proportion of Dawson's population shifted continuously over the ten year period from 1900-1910, at a four year turn-over rate greater than 50%. Given the nature of the directories, the transient element of the population is likely under-represented (Guest 1982:69,73).

Porsild (1994) takes a community studies approach to the experiences of the inhabitants of Dawson City during the gold rush. While not denying the existence of a floating population, she argues that the population of Dawson City demonstrated a high degree of persistence during this period. Where Guest emphasized the effects of the large floating population on the character of Dawson, Porsild (1994:5) asserts the importance of the permanent residents' role in community development. Using the Manuscript Census of 1901, Porsild (1994:60) employs persistence to measure the residents' commitment to their community. Residence in the community for a period of three years was considered evidence of an individual's persistence. Based on this measure, 65% of the 1901 population of Dawson City demonstrated persistence. Forty-four percent of the population had been in the community for four or five years and five percent had been residents for more than five years (Porsild 1994:353). The highest degree of persistence was observed among merchants, professionals and miners (Porsild 1994:60, 141).

This leaves the issue of transience in Dawson City at somewhat of an impasse. Interpretations vary depending on one's definition of transience. The key to this controversy seems to be duration. How many years does it take for transience to become persistence, and how do we differentiate the two during the early stages? Another approach is to look at transience from a perspective not tied solely to length of occupation. Brooks (1995) has made an important step in this direction by adapting the idea of "anticipated mobility" to mining sites in the American west.

Anticipated mobility is the idea that one's intended duration of stay plays a more significant role in site organization than the actual length of stay (Kent and Vierch 1989, Kent 1992). Dividing the mining populations of two districts into prospectors, wage labourers and capitalists, Brooks confirmed that the archaeological remains of her target groups were a reflection of anticipated mobility, rather than social class. Capitalists, merchants and professionals tended to form the permanent base of the community. They moved into an area with the intention of staying, and brought their Victorian values with them (Brooks 1995:20). Prospectors, on the other hand, were the first into a district and

the first to leave. Brooks (1995:11-12) argues that prospectors lived at the edges of larger society, both physically and psychologically. They formed a subculture unto themselves and operated with their own set of rules and behaviours, principal among which was mobility. This idea fits quite well with the early prospectors in the Yukon drainage. It would not be surprising if many of these miners had passed through the very districts discussed in Brooks' study.

There are, however, significant differences between these miners and the bulk of the people who made up the Klondike Gold Rush. Most stampeders were not initiates of the prospector subculture as described by Brooks. They were individuals from all walks of life, and though an unknown number of them continued the search for gold after the Klondike, during the stampede they were not necessarily committed to a lifestyle based on constant mobility. Similarly, although the frenzied pace of the rush allowed many people to step beyond the strict confines of Victorianism, they could only escape it on the trail. Dawson may have had a carnival-like atmosphere, but the structure was there, and its basis was southern Canadian society.

The primacy of anticipated mobility over social class in the formation of the archaeological record and the interpretation of transience, is important as the stampeders' financial situations no doubt varied greatly. Certainly, transients with sufficient funds could stay in hotels, boarding houses, or rent a house in town, but one cannot assume that those living on the hillside were poor. Frederick Wombwell (n.d.) is a good example; in the Klondike for just a year, he was in the enviable position of being able to purchase a claim. He rented a cabin on the Dawson hillside, prior to acquiring a claim, and maintained it afterward as a place to stay when he was in town.

Identifying Transience on the Hillsides

Brooks (1995:39-40) derived a set of four expectations for the archaeology of transient mining sites from Kent's ethnoarchaeological research on anticipated mobility.

Using these expectations as guidelines, the hillside occupants around Dawson and Klondike City clearly demonstrate a transient pattern of material culture. The first of these expectations relates to the construction of structures. At sites intended to be of short duration, energy and time investment are kept to a minimum. Habitations are simple, with little in the way of design embellishment. Evidence of structures on the hillsides around Dawson and Klondike City is limited, but any structure erected in Dawson City was an expensive undertaking. Logs cost as much as three dollars each, nails (10d) were sixty cents a pound and flat glass for windows was priced by the pound at fifty cents (Haskell 1998:369). Haskell summed up what was likely a common experience:

> "The tenderfoot found himself in a city of log houses and tents, facing a situation something like this: He could live at a tavern for about twelve dollars per day or build himself a log house. As, perhaps, he never drove a nail in his life, he had to hire carpenters at fifteen dollars a day, and, as they were not in the country for their health, they made a long job of it unless others are waiting. Finally, with his pockets sadly depleted, he moved in." (1998:352).

In a letter dated 18 September 1898, Fred Dewey (1898), who built a hillside cabin, noted that he used 60 logs (6" to 8" in diameter), 130 saplings (3" to 4" in diameter) and some 50 bags of moss. The few photos that show the hillsides structures up close indicate that log cabins were the dominant construction style. A rough count of the logs used in the construction of the pictured cabins suggests that Dewey's 60 logs was probably average. Attention to detail in the construction of the cabins varies. Some contain logs of similar sizes, others appear to be a mix of different sized logs. The majority are rectangular in style with a gable roof, although a smaller square cabin with a shed roof is visible in one photo.

The results of the hillside survey suggests there was no formal organization to the placement of platforms. The only factor that may have influenced their location was the presence of previously constructed platforms. Minni (1978) observed that platforms were clustered, but lacked an obvious order to their individual placement. Platform size ranges

from $3m^2$ to $200m^2$, with larger platforms holding more than one cabin. Stone retaining walls were present at 34% of the platforms at Crocus Bluff, and at 77% of the platforms on the Klondike City hillside. A stone retaining wall at the rear of a platform is uncommon, and in the majority of the cases where they do occur, the wall also serves as the front retaining wall of the platform above.

Evidence of structure size was found on only 21 platforms, and of these only 11 could be used to calculate a rough cabin size; they range from 11.2 to $48m^2$. Average platform size in each of the three areas surveyed by this project is a consistent $30m^2$, and it is unlikely that the cabins would have covered the entire level surface. Platform KCH-7 is a good example, its total surface area is approximately $27m^2$, and the cabin outline covers only $16.5m^2$.

Almost all hillside cabins pictured in the historic photographs have a stovepipe coming through the roof. Stove parts and stovepipes were commonly observed artifacts on the platforms and in the artifact scatters recorded during the project survey of both the Dawson and Klondike City hillsides. They were also recorded by Burley and Ross (1979:87) in an area off 5th Avenue. Homemade stovepipes were also recorded.

On the whole, however, the surface artifact assemblages contain very few structural artifacts. The two main artifact types in this category are nails and flat glass. While nails are present in relatively large numbers, they are primarily sizes that had non-structural uses according to Cooper (1998). Given the innumerable uses of nails there is no solid evidence to connect the larger nails with cabin construction. The flat glass most likely represents broken windows, but with the exception of a number of conjoining pieces from one platform on Klondike Hill, the shards are so small that this cannot be conclusively demonstrated. A small fragment with a bevelled edge, as one would find on a mirror, suggests that there are possibilities other than window glass.

Finally, the excavations conducted for the present project revealed little information on cabin construction techniques. Nails were found in direct association

with rotting wood inside the structure outline, although these could not be securely linked to the presence of a wooden floor. The absence of a compact floor layer in the excavation units suggest that the cabin did not have a dirt floor. Furthermore, there was no evidence of the foundation in the section of the berm excavated. It is likely that the cabin was scavenged for wood following abandonment.

Minni (1978) excavated test units on a series of three platforms at the base of the Klondike City hill. Structural remains, in the form of "decomposed base logs and associated planking" (1978:118) were found on one of the platforms. Her excavations at one platform on the Dawson City hillside revealed considerably more information about the cabin's construction. Structural remains uncovered by the excavations consisted of base logs on the north, south and east sides, with board footings between the logs. Flooring consisted of boards laid inside the base logs, which appeared to have been covered with a heavy fabric. Test excavations at a second platform did not find structural remains, and while she notes the presence of construction hardware, the specific artifacts are not discussed.

Refuse disposal can be a key indicator of anticipated mobility. Expectation two states that people intending to stay for a short period of time give little consideration to trash removal, that is, using sheet refuse disposal practices, instead of a designated midden (Brooks 1995:137). Brooks found that at sites in her study areas, where a short stay had been intended, artifact distributions indicate that refuse was simply thrown out the cabin door; a practice at odds with Victorian sensibilities (Brooks 1995:138).

The almost uniform use of sheet refuse disposal practices on the Dawson hillside is a strong indicator that the residents did not consider this location to be their permanent home. In a contemporary observation of the area Harry Graham noted "As we approach the confines of the town the chief object that attracts the eye is the immense number of empty tin cans, of every size, which lie in the thousands upon all sides of the innumerable log cabins dotted about the rocky hillslopes." (Streamer 1900:110). All the artifacts recorded at Judge Street and those recorded by Burley and Ross (1979:45) were found on

the ground surface around the structure platforms. The survey at Crocus Bluff also supports the dominance of this type of refuse disposal.

Ross (1987) made a comparison of refuse disposal patterns at established residences in town and the cabins on the hillside. Excavations at three locations within the townsite, St. Andrews Presbyterian Manse, Dr. John Brown's house and the married officers quarters, at the Northwest Mounted Police post, all recovered small quantities of artifacts in the front yards of these structures, and small clusters of artifacts in the backyards. Ross interprets this pattern as an adherence to Victorian codes of behaviour by the occupants of these three houses. In Ross' own words, "The constant concern over respectable public image and public scrutiny was translated into a behavioural pattern whereby the yards and houses of the Victorian middle class were maintained in immaculate condition and appearance" (1987:194). This is in contrast to the hillsides where refuse was discarded in areas immediately adjacent to structures.

The third expectation of transience is that fewer objects will be present at sites where the inhabitants did not intend to remain long (Brooks 1995:40). This makes sense from an intuitive standpoint; if one does not intend to stay long the required supplies are reduced, and there would be little need to expend additional energy transporting unnecessary items. In an effort to determine the contributors to a gold rush era dump in Skagway, Alaska, Blee (1991) developed characteristic assemblages for a variety of different social and economic units, among which was the transient male household. To create a typical transient male assemblage, Blee (1991:176) used artifact collections from ten sites in the American west known to have been inhabited by men only. One of the attributes of these assemblages is their small size, ranging from 14 to just over 200 artifacts (Blee 1991:176, 299; Spude n.d.:27), which Blee suggests is due to the residence serving merely as shelter for the occupant and his belongings. Meals and other social activity would have taken place in public restaurants and saloons.

As a result of differential preservation, and other difficulties in quantifying and comparing the tin cans between different assemblages, Blee (1991:102) removed them

from her analysis. Once the metal containers are removed from the Dawson and Klondike City hillside assemblages, the quantity of artifacts compares favourably with the sites in Blee's analysis. On the hillside east of Judge Street area, 1216 artifacts were recorded (not including cans), in an area with at least 14 platforms that could have contributed to the midden (note: additional artifacts could be seen in the general vicinity, but were not part of the recording area). On Crocus Bluff, 12 artifacts were recorded around platform HAP-4. Ninety-eight artifacts were recorded in the vicinity of platforms KCH 14, 15, and 16. Seven artifacts were recorded on, or around platform KCH-9. Finally, a total of 239 artifacts were recorded on the surface and from the excavation units on platform KCH-7; 53 of these were matchsticks.

Contents of artifact assemblages are suggestive of anticipated length of stay. The fourth expectation then, is a difference in the types of artifacts found at transient versus permanent habitation sites (Brooks 1995:40). There are two primary aspects to consider in this regard, the diversity of the artifact assemblage, and the presence of artifacts associated with Victorian lifestyle (Brooks 1995:117). The artifact assemblage associated with the mobile life of a prospector is expected to be much less varied than that of a permanent residence (Brooks 1995:115). One would not, for example, expect to find fragile or bulky domestic items. Blee's (1991:259) investigation confirmed that the presence of decorated ceramics in an assemblage are indicative of a long term residence. Dishes in transient miners' sites tend to be tin (Blee 1991: 87, 179), and even these often occur in very low numbers. Although, it is interesting to note that a small number of decorated ceramics were found at some of the transient sites used in Blee's (1991:160) study.

Brooks (1995:116,123) found that the artifacts at short term sites in her study areas were largely those associated with subsistence and work. Most prominent are tin cans and bottle fragments, primarily alcohol bottles, but medicine bottle were also recorded. Other artifacts included stove parts, barrel hoops, fuel cans, pails and a few inexpensive ceramic sherds. These correspond well with the high frequency artifacts in Blee's (1991:99) typical transient male artifact assemblage; tin cans, liquor bottles,

tobacco-related items, condiment bottles and firearms. In contrast to the short duration sites in the White Pine District, permanent sites in Shermantown contained a more diverse artifact assemblage (Brooks 1995:123). Prominent in these assemblages were artifacts associated with Victorianism, such as personal hygiene objects, dinnerware and architectural artifacts.

To test the hypothesis that the artifact assemblages from nomadic and permanent sites are different, Brooks (1995:124) created richness values based on artifact types. Due to differences in recording procedures for some of these sites, richness had to be measured by a count of the number of artifact types based on presence/absence data. Fourteen artifact types were used, including: tin cans, alcohol bottles, food bottles, medicine bottles, glassware, stoneware, teaware, tableware, other ceramics, personal, leisure, nails, furnishings, and oriental ceramics. The results show broad trends that seem to suggest that permanent sites had higher richness values. The modal value for permanent site was 5 artifact types, with a range of 0 to 12 types out of the total 14. Sixty-seven percent of the permanent sites have an artifact richness value of 4 or greater. Transient sites had a modal richness value of 0, with a range of 0 to 7 types out of a possible 14. Eighty-three percent of transient sites have richness values less than 4.

While interesting, there is some ambiguity in these results. Fully one third of the permanent sites have richness values more in line with transient sites, and more than a quarter of the transient sites had richness values within the range of permanent sites. Brooks made her comparison using architectural data to classify each site as transient or permanent. If one ignored the architectural information and simply plotted each site's artifact richness value, excepting points at the upper end (i.e., above eight), it would be very difficult to separate the sites deemed transient from the permanent. For sites with richness values below four, there is a one in three chance that the site selected would be permanent. Brooks (1995:132) is aware of this problem, and suggests that further investigation is needed to determine whether the permanent sites with low artifact richness values are the result of differences in sampling methods, looting, or habitation by semi-nomadic individuals.

There are a number of other problems associated with using presence/absence data for this analysis. For instance, the number of artifact types will increase, to a point, as the sample size increases. Presence/absence comparisons become tenuous when some assemblages are derived from excavation and others from surface recording, in which only artifact types, and not counts, are noted. The types of artifacts found in assemblages from excavation can be considerably different from surface assemblages, due to taphonomic and behavioural factors. Compare, for example, the types of artifacts recorded on the surface of and around platform KCH-7 (page 93) with the artifacts recovered from excavation units (page 113) on the same platform.

Presence/absence data is also problematic when some of the predicted differences between the two site types are based on artifact classes such as teaware, tableware and other ceramics. Richness values cannot account for the quantities of these diagnostic artifacts, which are important in differentiating transient from permanent sites. Small quantities of ceramic fragments were found at some of the transient sites in Brooks' analysis, and have also been noted in small quantities at transient sites by Blee. In the presence/absence comparison one small ceramic plate fragment is equivalent to an entire table setting, but it is the presence of the tableware or teaware set that is the key element in identifying a permanent home site. Brooks identifies a related problem, that tableware as a category can include tin plates as well as ceramic plates, and while the obvious function is the same "they reflect two different sets of cultural values" (1995:132).

Categories such as alcohol bottles and personal items may not be strictly representative of transience or permanence. Brooks suggests that personal items are indicators of permanent residences, and a quick scan of her artifact types tables shows only one transient site with personal artifacts. Blee (1991:178-179) notes that two unexpected findings came out of her analysis of transient male artifact assemblages. First, a surprisingly high number of personal items were found in the transient male sites. Aside from generic personal items, identified personal artifacts associated specifically with men included: collar stays, cuff links, remnants of men's clothing, shaving cream

jars and suspender clasps (Spude 1997:29). Second, while present, alcohol bottles occurred in much lower frequencies than expected. Factors that may be responsible for this result include prohibition, managers not allowing liquor in the camp, or drinking away from home. Saloons and like institutions in the mining west offered more than refreshments to the potential miner, as it was here that valuable information could be obtained (Blee 1991:299).

Brooks (1995:115) found the presence of work related items to indicate a short stay had been intended. Separation of the public and private spheres of family life was a primary characteristic of the Victorian era. Work related items would not be expected at the site of a permanent residence. Spude (1997:29) also notes the presence of occupationally related artifacts in transient male sites. Few occupational objects are found in the artifact assemblages associated with transient sites on the Dawson and Klondike City hillsides. Gold bearing creeks in the Klondike are located far enough from Dawson that commuting daily between a residence on the hillside and a claim in the gold fields was not feasible. Those with claims tended to live in cabins constructed on, or near the claim itself, although some maintained cabins in town to ensure they had a place to stay when they went for supplies.

In her analysis of the contributors to Skagway's Mill Creek Dump, Blee (1991:176) used artifacts from ten separate sites to developed a representative assemblage for transient, male only sites, containing the frequencies for each artifact category. Four artifact types stand out in the transient male assemblage, generic personal items, male-specific artifacts, artifacts related to firearms and decorated dishes. When compared to the representative assemblage for families, the proportion of male specific artifacts is five times greater in the transient assemblage (3% versus 16%) (Blee 1991:79). Arms and ammunition also show considerably higher frequencies, whereas ceramics, particularly decorated ceramics, are far less common.

Using Blee's artifact categories, the assemblages from the Judge Street survey area, Platforms KCH 7 and 9 and, platforms KCH 14-16, were compared with the

transient male and family characteristic assemblages. Blee (1991:102) eliminated metal containers from her analysis, and as the assemblage from Platform HAP-4 consists almost entirely of cans, it cannot be used in the comparison. The frequency of male-specific artifacts from the three area compares favourably with Blee's transient male assemblage. Firearm related artifacts were only found in the excavation units of Platform KCH-7, where they comprise 17% of the assemblage, almost twice the frequency found in the transient male assemblage.

The low frequencies of decorated dishes in the hillside assemblages are also very similar to that of the characteristic transient assemblage. Decorated ceramics were only found in the Judge Street area, and the five pieces recorded likely represent three different items. The low number of ceramics in these assemblages is significant, as Blee (1991:259), found that such artifacts are indicative of long term residence. Armaments aside, the hillside assemblages seem to be in accordance with the characteristic transient assemblage on most of the key points differentiating it from the household assemblage.

There are, however, some important differences between the hillside assemblages and Blee's transient male assemblage. It is noteworthy that the Judge Street assemblage differs from the two Klondike City hillside assemblages in some of these categories. Primary among these is the liquor related category. Blee (1991:178) found unexpectedly low frequencies of liquor bottles in the transient sites. Liquor related artifacts comprise only 5% of the representative transient male assemblage, and their frequency is almost the same in the Klondike City hillside assemblages. Liquor related artifacts in the Judge Street assemblage, however, are approximately three times more numerous, and much more in line with the characteristic family assemblage.

Consumption of alcohol was prohibited at some of the sites used to create the characteristic transient male assemblage (Blee 1991:178). While this explains the low frequency of related artifacts at these sites, the fact that all the other sites, save one, also had low frequencies of liquor related artifacts requires explanation. Blee suggests that the residents of these sites may have been drinking in local saloons rather than their own

homes. This was also a likely pattern for transient males in Dawson City. Further research is required before the high frequency of liquor related artifacts in the Judge Street assemblage can be explained. It is possible that errors in classification may have inflated this category. There are a number of bottles with marks on them that have yet to be identified. Blee's (1991:117) correlations between bottle colour and contents were used to categorize bottles with unknown contents. Blee notes that these correlations are best used with bottles made prior to the turn of the century. Some of the bottles in the Judge Street assemblage were manufactured after 1900, and may have been improperly assigned.

All three hillside assemblages have higher frequencies of Other Household artifacts (i.e., furnishings, food preparation items etc.), than both Blee's characteristic transient male and family assemblages (5.7 % and 8.9% respectively). The artifacts in this category comprise just over 20% of the assemblages from the Klondike City hillside, and 12% of the Judge Street assemblage. While the frequency of this category is lower in the representative assemblage, three of the five sites from the Rochester gold mining district (used in to calculate the transient male assemblage (Blee 1991:159)), show Other Household frequencies similar to the Judge Street assemblage (the remaining two sites from Rochester have considerably lower frequencies).

Dawson City Settlement Development

The landscape, or physical characteristics, of mining towns contain a wealth of important information about the community (Francaviglia 1991). The landscape is the result of the interplay between the social and physical environments during the community's development. Understanding this organization is key to understanding the social system of the community. While there is insufficient space to go into great detail here, even a preliminary examination of Dawson City's landscape has the potential to offer insight into the place of the hillside and transient life in the community. The following paragraphs consider Dawson's place within the region, the layout of the town and the hillside areas themselves.

The discovery of course gold on the Fortymile River marked a shift in the form of mining settlement in the north as a number of related factors combined to create a substantially different settlement. Forty Mile became the centre of the region. The number of miners coming into the region had increased steadily as new routes into the interior opened up, prompting the trading companies to increase the amount of supplies they brought in, which allowed more people to winter over. The quantities of gold available on the Fortymile River resulted in the congregation of a large number of miners. Developments in permafrost thawing techniques by the miners allowed, for the first time, mining to be carried on all winter (Stone 1983). As a result, Forty Mile developed a large year round population; a situation that allowed a variety of different services to develop, such as saloon, barbers etc. There was enough business for two trading companies and the growing population and service industry lead the Canadian government to send a detachment of Northwest Mounted Police (N.W.M.P.) into the region.

Forty Mile was clearly the offspring of the earlier pattern of prospecting, a minor discovery and the subsequent establishment of a trading post. McQuesten and Harper moved their post from the Stewart River to Forty Mile, setting up on the right bank of the Fortymile River at its confluence with the Yukon. Similar to previous posts, miners built their cabins in proximity to the traders. It appears that structures were located in the same informal manner as the community grew.

The map of Forty Mile provided by Gates (1994:72) shows a community that fits into what Francavilia (1991:32) calls a convergent layout. The main townsite occupies a roughly triangular shaped area and is bisected by a slough. The majority of structures are aligned with the banks of the two rivers and along both sides of the slough. The primary businesses in the community were located along the bank of the Fortymile River (Guest 1982:73-74). The overall visual effect consists of four lines of structures, following the river and slough banks, converging on the trader's building. In between these lines are a variety of cabins that have no strict alignment or organization (the only exception is a

second line of buildings roughly paralleling the row of cabins along the west side of the slough). Ogilvie surveyed the Forty Mile townsite early in the summer of 1896. In his own words: "I made a complete survey of Forty Mile, locating and taking the dimensions of every house in it, and it's the worst jumble I ever saw." (Ogilvie 1975:395).

Although Circle City outgrew Forty Mile, the latter remained the focal settlement on the Canadian side until the discovery of gold in the Klondike Valley and the rise of Dawson. The N.W.M.P. moved their headquarters to Dawson, the A.C. Co. and N.A.T.&T. Co. both constructed stores, a number of different religious denominations opened churches, and as the gold rush progressed, the Canadian federal government began to install a considerable bureaucracy to run the territory. Dawson's role as the capital of the Yukon Territory, and as the largest city in the north, significantly influenced the social and physical organization of the community. As the primary supply centre for the district, many miners who lived on their claims out in the gold fields came to town occasionally for supplies and entertainment. The general population consisted, to a large degree, of people not directly involved in mining, such as merchants and others in the service industry, those in government harness and people waiting around, perhaps involved in casual labour or prospecting.

Dawson was the focal point for much of the movement along the Yukon River. It held a central location and served as the hub for the river steamers that provided the region's primary means of transportation. Large numbers of people picked up and left Dawson when gold was discovered in the beaches of Nome. Guest (1982), notes that many of these people returned to Dawson the following year. One may speculate that the community functioned as a temporary base for many people. While waiting for another large discovery, casual work was more easily obtained in Dawson than anywhere else in the territory and it was an optimal location for keeping abreast of the latest reports of new discoveries.

A prominent difference between Dawson and the mining camps that preceded it, was the government's involvement in the townsite from the beginning. Early on, the

N.W.M.P. received six requests to purchase the townsite (Guest 1982:28). Inspector Constantine believed that the Federal government should retain ownership of the land and handle lot sales within the townsite itself. Ogilvie made a preliminary survey of the townsite early in 1897 using a standard grid pattern, beginning with Ladue's 160 acres (Guest 1982:29). Avenues and streets were laid out using standard widths. Constantine made a forty acre block at the southern end of town the Government Reserve. James Gibbon, DLS, arrived in Dawson during the summer of 1897 and set to completing the townsite survey (Guest 1982:34). In addition to Ladue's 160 acres and the Government Reserve, Gibbon surveyed the Day and Menzies Additions near the south end of town, and the Government Addition, Akins Addition and a block of land for St. Mary's Hospital all at the north end of the townsite. The patent for Day's addition to the townsite was not issued until May 30, 1900, and Menzies was issued the following month. Lots were also laid out in Klondike City, across the Klondike River from Dawson.

Dawson City during the gold rush is commonly portrayed as chaotic in its organization and lacking formal structure. While there is no denying that Dawson was a lively camp, authors such as Stone (1983) and Porsild (1994) have argued that there was a definite structure, which was present early in the community's existence. The physical layout of the town (grid pattern, standardized streets etc.) certainly seems to support the presence of this organization when compared to the more informal organization of earlier settlements. Undoubtedly many decisions regarding the settlement's layout were made on the ground during the survey. Gibbon's (1898) plan of the Dawson and Klondike City townsites, however, indicates that the town plan was not entirely an in the field development. The early plan extended over the scarp and indicates areas set aside for both a public and Roman Catholic cemetery.

Guest (1982) argues that there were no strict divisions into upper and lower class areas, based on the fact that the doctors in the community all lived in different parts of the town. A level of concern in the community with activities carried out in specific locations is indicated by the restrictions placed on prostitutes and their movement within

the city through time, best illustrated in Morgan (1998:57). In 1898, Paradise Alley is shown near Second Avenue, between Princess and Queen streets. Following a fire started by one of the prostitutes, the N.W.M.P. moved the demimonde one block north and two blocks east to Forth Avenue. According to one newspaper editor, the prostitutes had become to showy on Second Avenue, and as the town developed the real estate had become quite desirable, leaving few in the business sector sad to see the women move (Morgan 1998:104-5). In 1901 social pressures within the community resulted in the prostitutes being moved outside the limits of the city; in 1902 they moved into south Dawson and in 1903, across the river to Klondike City.

Although the neighbourhood organization of Dawson City has yet to be established, the multiple relocations of the prostitutes certainly suggests that the whole of Dawson was not regarded as equal in the eyes of its citizens. From this base, one can consider the place of the hillside areas within the physical and social organization of the community. From a physical standpoint alone, the hillsides would appear to be marginal areas of the community. Francis (1970) discusses the use of the concept of marginal areas in reference to the settlement of regions, particularly small agricultural settlements away from major centres. Much of his discussion also applies to fringe areas of communities.

Francis (1970:23) uses marginal in reference to locations at the edge of settled areas, largely due to their lack of services that are available to people in the regional centres. In this sense, the term marginal carries negative connotations through comparison with a central area. At a community level one may compare the development and services extended to different parts of Dawson. At the end of 1899, the city boasted graded and drained streets with side walks, and electric street lights (Innis 1936:212). On paper, the grid pattern for the town extended up the hillside, but with the exception of Seventh and Eighth avenues on the lower part of the hill, no other roads were constructed in the areas surveyed for this project. Transportation routes for residents of the hillside consisted of a single road, the A.C. Trail that was built to access the goldfields, and numerous foot paths, which appear to have developed in a haphazard way. Residents of

the townsite (i.e., on the flat flood plain) enjoyed utilities such as telephones and electricity and the protection of a system of water hydrants (Guest 1982). To date no indication that these services were also supplied to those on the hillside have been found, although the water tank that supplied the town was apparently located on the hillside (Guest 1982:195).

Francis (1970) suggests that fringe areas that experience rapid population, or depopulation tend to be even more poorly serviced than stable fringe areas. This is partially attributed to a time lag in the development of services in these areas, and is particularly pertinent to frontier situations. This factor may have had particular consequences for the Dawson hillside, as the population influx into Dawson at the time of its initial occupation was immense, and was in fact responsible for its existence as a residential area. Since the depopulation of Dawson began almost as quickly as it had begun, one could argue that there was not enough time for services to reach these areas.

Clues to the community's perception of the hillside areas are scarce. William Haskell (1998) seemed to have considered the scarp to have good potential for residential development. Laura Berton (1954) paints a rather quaint picture of the hillside when she arrived in Dawson. In the Ladue Estate portion of the townsite, the plan shows all the lots on the hillside, starting on the west side of Eighth Avenue, to be half the width of the lots in town. Town lots measure 100' x 50'; hillside lots are only 100' x 25'. This certainly indicates a difference between the two areas in someone's mind. Hillside lots in the Menzies and Day additions are full size lots, which may suggest that Ladue or his company requested smaller lots.

The Assessment and Tax Roll for the Year 1902 (Yukon Archives, GOV 1191) for Dawson City also provides an indication that the hillside was considered less desirable than the main townsite. Time limitations allowed only a cursory review of land valuation in the community, focusing primarily on the hillside lots and lots at the base of the hill in the Day, Menzies and Government additions. Block 10 of the Day addition (Lot 5 Group 2), contains 10 lots, and is located at the base of the hill, north of Grant

Street and east of Second Avenue. Land value assessment for the lots in this block range from $400-500. Blocks 11-14 are located on the hillside in the Crocus Bluff area, and Blocks 15-18 are located on the top of the scarp where the hillside levels out. In 1902 title to all of these blocks (11-18) remained with Albert Day, and were accordingly assessed as a group for $3000. Dividing this figure by the 124 lots contained within the block, means that taxes for each lot were about $25. Blocks M through P in the Menzies Addition, all on the hillside, also had low assessments, valued at an average of $50 each (all lots in these two additions measure 100' x 50').

Tax assessment in the Government Addition, at the north end of Dawson, is slightly more complex. Lots in this addition are smaller than elsewhere in the townsite, measuring only 50'x 60'. The portion of the addition examined in the tax assessment lies east of Fourth Avenue and north of Albert Street. The majority of these blocks (N – Z and 1 - 4) are located on the hillside and never had street access. In general, land value was lower for lots on the hill. Assessment values appear to be highest for lots in the blocks located in proximity to the streets, and decrease the further one moves up the slope. Many of the lots in blocks higher up the slope remained in the possession of the Dominion Government, accordingly no land value is given.

The Judge Street Survey area is located in Blocks K (east half), O and S in this addition. Lots 1-7 in Block K (west half) front onto Fourth Avenue. Six of these lots have been divided, but total land assessment for each is $100. Three of the lots in the east half of Block K were also valued at $100, the remaining four were assessed at $80. Moving up-hill (east) is Block O, with three lots valued at $100, two at $80 and the remaining six assessed at $50-60 (three were owned by the government). Block S, the upper most in this line remained largely in the hands of the government, the three privately held lots were valued between $50-60. In the general area of Block S the slope of the hill increases considerably, likely making even platform construction impractical, and probably explains why most of the lots remained in the Dominion's possession.

The results of this analysis are preliminary in nature. A representative sample of land values in other areas of the townsite is necessary. Details on the methods used to assess land values throughout the community also needs to be researched. The data presented here, however, indicate that this line of investigation offers considerable potential for understanding the organization of the community.

Life on the Hillside

The Klondike stampede was a well documented event. Hundreds of the participants wrote journals and letters home, a variety of these have been published, but many more can be found only in archives. We even have a few journals, or letters written by people who lived on the hillsides. These documents record a whole range of information about the Klondike. Often missing, however, are detailed descriptions of their cabins, and any mention of the day to day activities carried out there. Generally, only special meals, such as Christmas, are mentioned. Archaeology offers a different perspective from which to view these people's lives.

The hillsides around Dawson and Klondike City had a substantial number of inhabitants during the gold rush and the subsequent decline. The inventory survey covered the entire Klondike City hillside and recorded 56 platforms and an additional 16 features that may also have served as cabin sites. Even added together, these numbers probably under-represent the actual number of structures once situated on the slope. The situation is similar at Crocus Bluff and it is only one quarter of the Dawson hillside. Even in the absence of a full enumeration of the number of cabins on the hillside, one can speculate that the population of the hillsides was at a minimum a couple hundred people.

Joseph Ladue, Stewart Menzies and Albert Day were each granted additions to the Dawson townsite that contained portions of the hillside, only the north end of the hillside remained in the governments possession. Each of these four areas was girded into blocks and lots. Unlike the Dawson hillside, the street plan of blocks and lots shown

on Gibbon's map of Klondike City does not extend up the hillside. Therefore, those people who built on the Klondike City hill were most likely squatters. Research in the Land Titles Office (Whitehorse), indicates that none of the 56 hillside lots (Blocks 11-14) in the Day Addition (Crocus Bluff) were ever sold individually. Portions of specific lots were sold to the Northern Light, Power and Coal Company in 1909, and title to the remainder was not transferred to another owner until 1931. It would appear then that none of the inhabitants of the more than 40 platforms recorded in this area owned the land they lived on. No evidence has been found to date that would suggest Day had rental agreements with these individuals, though that remains a possibility.

In the Menzies Addition Blocks M, N, O (ten lots in each) and P (12 lots) are located on the hillside. Of these forty-two lots only 19 appear to have ever been sold. Block N was purchased as a whole by Susan Harken in 1902, and passed to her husband following her death in 1907, along with a number of lots in the Ladue Estate. The 1902 Tax assessments list building and improvement values of $100 for two of these lots and $50 for five others. It seems unlikely, however, that Harken ever lived on the property herself, and may have purchased it as real estate investment. It is possible that the purchase of Lots 2-5 in Block O by Louise Callinet early in 1902, was done with the same idea in mind.

Two lots were sold a number of times during a relatively short period. Lot 1 in Block O first sold in June 1902 for $150. It sold again in October for $750. The 1902 tax assessment lists the value of the property at $50, and an additional $200 for buildings and improvements. The lot was sold again in 1903; a notation on the tax assessment indicates that the sale price was $100. Lot 1 Block P was purchased in 1902, and sold again in 1907 to an individual who also owned two other properties in the Menzies Addition. Lot 2 in Block P, was first bought in November of 1901. It sold again one year later, and then again in 1906. The 1902 tax assessment indicates that the owner lived in Grand Forks (in the gold fields).

Property ownership in the Government Addition of the townsite was much higher than in either the Menzies or Day Additions. For the purposes of this discussion the focus here will be the area at the east end of Judge Street. There are 42 lots in Blocks K, O and S; three lots in Block O and 11 lots in Block S were never titled. Four sources of ownership information were examined for these lots, Applications for Town Lots Dawson, Government Addition (Yukon Archives, GOV 1684); Land Title Patents Records; the Assessment and Tax Roll for the Year 1902 (Yukon Archives, GOV 1191); and the Dawson Tax Roll 1903 (Dawson City Museum 1903). The town lot applications were all made in 1898, and the patents were issued primarily in 1899 and 1900. Ten lots appear in both the application and patent records and half show a change in ownership between the two. Of the 29 lots that appear in both the patent and 1902 tax assessment documents, eighteen changed ownership between 1899/1900 and 1902. Listed owners for these lots are identical on the 1902 tax assessment and 1903 tax roll.

A high turn over rate in property ownership is suggestive of transience. It is also interesting to note that the majority of these properties went to the City of Dawson in the mid 1920s as a result of tax sales. It is possible that during the decline it may have been difficult to sell properties, especially those in marginal areas, and the owners simply abandoned them when they left town.

Exactly who the people living on the hillsides around Dawson and Klondike City were is difficult to assess. Few records exist for the ownership of cabins on Klondike Hill and in the Day Addition, nor for most of the Menzies Addition. Ownership of hillside lots in the Government Addition is relatively well recorded, and in some case the documents also provide the occupation of the owner. A potential difficulty is that in most cases there is no way to tell if the owner actually lived on the lot. In a couple of cases the application to purchase town lots describes a cabin on the lot and indicates it was occupied by the applicant. If we assume for the moment that the majority of people who owned the lots also lived on them, the most common occupation listed for owners in Blocks K, O and S, is miner. Other identified occupations include: contractors, a hotel keeper, a lumberman, an inspector, and a dominion land surveyor.

Investigation of household composition on the hillside, while one of the most interesting subjects, is unfortunately hampered at this point by a want of data. It was not uncommon for people heading off to the gold rush to form partnerships of two or more. On this basis it would not see unwarranted to assume that most cabins likely had more than a single inhabitant. In the areas where ownership information is available, very few lots are registered with more than a single name, which of course does not mean that there was only a single occupant. Blee (1991:34) has suggested, based on data from Skagway, that miners chose to live individually whenever possible.

Gold rushes have generally been considered male events (e.g., Weppler's (1969) *Yukon Territory: A Community of Men*) and the role of women in boom towns is relegated to a few well known stereotypes. Recent research, however, has taken women in the Klondike as a focus (Moore 1994, Porsild 1994, Ryley 1995, Morgan 1998). In addition to making a serious analysis of the role of prostitution and prostitutes in the Dawson, these investigations explore the myriad of other roles played by women within the community. The gender mix of the hillside areas has proven relatively difficult to assess to date. There is no question that women, as well as men lived on the hillsides. Probably the best known example is Martha Black (1976) who lived on the Klondike City hillside when she first arrived in the Klondike. Sue Harken owned lots in the Menzies Addition, and at least 15 of the hillside lots in the Government Addition were owned by women, as listed in the 1902 assessment and tax roll.

Identifying the presence of women in the archaeological record is generally based on female specific material culture, such as jewellery, remnants of clothing and grooming items (Blee 1991:104). The only female specific artifact identified is a shoulder brace and hose supporter buckle (matched with figure 12,b in Herskovitz 1978:38) from the Judge Street area. All other personal artifacts are male specific, or are generic and cannot be definitely associated with either men or women. The possibility remains, however, that additional female specific artifacts were unrecognized in the assemblage.

Burley and Ross (1979:42) also noted the near absence of female specific artifacts in their study area; only a pair of women's shoes were identified.

Lawrence (1999:123) states that an absence of female specific artifacts is not evidence of the absence of women, and has suggested that instead of a presence/absence approach to identifying women in that archaeological record, the focus should be on the recognition of patterns that demonstrate how gender structures household activity. Unfortunately, an analysis of this sort lies beyond the scope of this paper.

Little in the way of structural evidence remains on the hillside platforms. It would appear from photographs that the log cabin was the typical structure. Duerden (1971:86) notes that the structures on the hillsides tended to be of poorer quality than those in the town. The few platforms that have foundation outlines still visible indicate that these cabins were quite small. It is unlikely that any consisted of more than a single room. Excepting parts of stoves, there is no evidence for the interior furnishings that these cabins contained. Almost all of the stoves recorded were of sheet metal construction. This in itself is suggestive of transience, as large cast iron stoves would have been expensive and difficult to move. The only lighting devices found were homemade.

Household items identified near the platforms consisted almost entirely of artifacts associated with food preparation and consumption. With few exceptions these are made of tin, and include plates, bowls and cups. All are very plain, enamelled tableware was uncommon throughout the hillside areas surveyed. The few ceramic pieces recorded do not represent a matched set. Pots and pans are relatively rare, but pot lids are relatively common in the collection. Utensils, such as forks and spoons were found only in limited numbers, but those present are better quality than expected. The larger of the two forks would have been used for food preparation rather than consumption. The flour sifter found at Platform KCH-14, seems out of keeping with the relative simplicity of other food preparation artifacts, however, Burley and Ross (1979:87) also recorded a flour sifter.

In addition to the manufactured household items, the majority of reused or homemade artifacts recorded also related to food preparation and consumption. The most common homemade artifacts were buckets. An illustration from a contemporary journal (reproduced in Bunting 1973:23), shows a person carrying water in two buckets made from rectangular metal containers. In the Judge Street area other homemade artifacts included baking pans, cups and colanders or sifters. The presence of these items may be a product of a lack of such articles for purchase in Dawson, or may suggest a reluctance of the inhabitants to buy items. People who do not expect to stay in an area very long may not want to spend their money on such artifacts, and/or they may not want to accumulate household goods that they will have to take with them when they leave.

Issues surrounding food supplies in Dawson during the first two years were particularly acute, and many feared starvation on a large scale. Although the situation was effectively managed, one of the important outcomes for those involved in the stampede was a requirement, by the N.W.M.P., that everyone entering the Yukon have the minimum amount of supplies and money to support themselves for one year. For most, this added up to about one ton of baggage. A variety of guidebooks and outfitters supplied prospective stampeders with lists of provisions and equipment. In *The Klondike Official Guide*, Ogilvie (1898:137-37) provides a list of food necessary for one year, which by itself totals 1,319 pounds. For the majority of stampeders this would likely have formed the core of their subsistence during the first part of their stay in Dawson.

It is important to note, however, that this would not have been their only source of provisions. Food could, of course, have been purchased from the trading companies and other stampeders who could not wait to leave the country. Dawson's isolation, and the difficulties of transporting goods to the community, meant that food prices were very high. Fresh food in particular, such as meat and vegetables, while available the costs would have been prohibitive for many people (Burley and Ross 1979:33). Remarks about food prices in the Klondike are a common element in stampeder's journals and letters home. Eating in restaurants was another option for those who could afford it.

Evidence for the subsistence practices on the hillside consist of metal food containers and faunal remains. Preserved foods, canned and dried, figure prominently on the recommended supply lists, and likely formed the basis of the average stampeder's diet. There are a number of apt quotes from historical sources for the use of tinned food, particularly respecting the hillsides, most of them offered in a humorous light. Among them is Mary Hitchcock's (1899:200) picture of a cabin bearing signs advertising groceries and provisions and a barber shop. Strewn about the slope in front of the cabin are masses of discarded tin cans; the caption reads "A VEGETABLE GARDEN IN THE KLONDIKE."

For the purposes of this paper, discussion of the metal food container collection focussed on products that could be identified by labels on cans. Items found frequently, such as baking powder, condensed milk, evaporated cream, butter, lard, canned meat and sardines, were probably dietary staples. Canned vegetables and fruits are undoubtedly also well represented in the collection, however, the absence of labels, which were probably paper, makes identification of these cans difficult. These goods were also packaged in a variety of container shapes and sizes (Burley and Ross 1979:33), adding to difficulties in identifying can contents.

Although the metal container collection is the most abundant subsistence related artifact, canned food was only part of the stampeder's diet. Other staple foods, such as flour, bacon, beans, rice, and sugar, were packaged in sacks or boxes that have not survived in the archaeological record. All these goods appear on the various supply lists. Flour is generally first on the list and accounts for approximately one third (around 400-450 lbs) of the weight of the entire grocery list. On the list provided by Ogilvie (1898:138), bacon and beans together comprise another 30% of the weight.

Faunal remains from the study areas indicate the presence of fresh meat in the diet of the platforms inhabitants. All of the faunal specimens are from large to medium mammals. To date only one specimen has been identified as Bovidae. Many of these

bones have been butchered with a saw. A variety of different types of fresh meat would have been available in Dawson. James Cartmell (1950) made his living hunting wild game, caribou and moose being the most common, to be sold in Dawson. A variety of ventures were also undertaken to bring meat into the Klondike, such as Lee's (1991) attempt to drive 200 cattle from the interior of British Columbia into the Yukon.

On the whole, the subsistence data available is comparable to that reported by Burley and Ross (1979) for the section of hillside they examined, and suggests relatively plain fare. The exception, of course, is the luxury suggested by the three oyster cans. During the rush such delicacies were expensive. Archibald's (1981:128-129) research into provision prices between 1897 and 1907 indicates that a tin of oysters would cost between $18 and $25 during the winter of 1897. By the spring of 1900 a case of canned oysters could be purchased for $13, and in 1902 the price had dropped to fifty cents a tin. Unfortunately the number of tins in a case is not given, but for comparison fruit and vegetables were selling for 50¢ and 25¢ a can (2 lb) in 1900, and the prices remained similar in 1902. Therefore, by 1902 the price of a can of oysters was comparable to a can of fruit, though the fruit can was likely larger.

Summary

The purpose of this analysis is to obtain an understanding of transient life during the Klondike Gold Rush and investigate the place of transients within the larger community. The current project surveyed the entire Klondike City hillside and portions of the Dawson hillside, recording more than 200 tent/cabin platforms. Surface artifacts were recorded around small groups of platforms in four different areas, and excavation was undertaken at one platform. Precisely dating the occupation of the platforms has proven difficult. Many of the diagnostic artifacts provide date ranges that overlap with the gold rush and following decline, indicating these areas were inhabited from early in the rush through the first few years of the community's decline. Historic photographs

offer a potential means of narrowing the dates during which structures were present on various platforms, but much of this work remains to be done.

A small salvage project on the Dawson hillside, led Burley and Ross (1979) to the conclusion that the hillside platforms were occupied by people who did not intend to stay permanently in the community. This interpretation is supported by the present research. The structures built on the hillside platforms tend to be of relatively basic construction, utilizing locally available materials. Few structural artifacts were recorded. The use of sheet refuse disposal practices by the inhabitants strongly suggests they did not intend to stay permanently. The size of the hillside assemblages is comparable to those from transient sites in other areas. Finally, the types of artifacts recorded around platforms indicates a transient occupation. In particular, are the high frequencies of personal artifacts and the near absence of fragile ceramics.

Having established the transient nature of the occupants, the next step was to examine the way in which the hillside areas fit into the physical, and social layout of the community. Comparison of the layouts of Forty Mile and Dawson City contrasts the fluid, unorganized development of the former, older settlement, with the more structured grid pattern of the latter. Under the seemingly chaotic character of the rush, was a solid structure both physically, and by extension socially, as evidenced by the official movement of prostitutes from one part of the town to another. These findings are in contrast to the usual boomtown social patterns, in which all have equal standing.

As home to a large transient population, the hillsides became marginal areas of the community. They lacked roads and other services. Tax assessments suggest that the hillside lots were considered less valuable and less desirable than lots in the townsite. Property title research indicates that large portions of the hillsides were inhabited by squatters, and in areas where lots were purchased, there was a relatively high rate of ownership turnover. The analysis presented here has demonstrated the potential of this material for future research, and identified several gaps in the data. Additional research will include similar information from areas within the flat part of the settlement for

comparison to the hillside. Tax assessment records from a number of different years will permit tracking of changes in property value and ownership.

A considerable number of people lived on the hillsides behind Dawson and Klondike City during the gold rush and the following years. Although the majority of personal artifacts recorded suggest a largely male occupation, a small number of female specific items were recorded by this project and by Burley and Ross (1979). The actual nature of the gender mix is a topic for further research. The majority of structures built on platforms were log cabins, and the artifacts suggest they were rather sparsely furnished. Many of the furnishings, beds, chairs, tables were probably homemade. The majority of household artifacts recorded are those used in food preparation and consumption, and a number of these were items made out of re-used tin cans. The relatively high numbers of re-used and homemade artifacts is particularly interesting in the context of transient sites.

The diet of the hillside occupants appears to have been fairly basic, with condensed milk, butter, lard, canned meat and sardines comprising the staple products packaged in tin cans. Fresh meat occasionally figured in their diets, and although there is no evidence for the packaging, flour, bacon and beans are inferred to have been staple foods, based on their prominence in the outfitter's lists of recommended supplies. The presence of oyster cans is suggestive of some disposable income and some dietary variety, but by 1902, when the Judge Street platforms were still occupied, oysters had dropped considerably in price compared to the height of the rush.

Issues of transience in Dawson City during, and immediately following, the gold rush are complex. Although thousands came to the area, few stayed. Documentation for this period is extensive, but focuses largely on the more glamorous aspects of the rush; day to day living received little attention amidst all the excitement. The archaeology of the transient habitations on the hillsides around Dawson and Klondike City provides another perspective on the daily experiences of large numbers of people. Coupled with

archival materials, it is possible to explore the manner in which Dawson's large floating population influenced the development of the community.

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APPENDIX A

ANALYSIS OF AN ISOLATED HUMAN TOOTH FROM THE DAWSON CITY HILLSIDE

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During the Dawson City Hillside Archaeological Project, a single isolated human tooth was found inside a tin can in the Judge Street Survey Area. This tooth, an upper right molar, displays a number of interesting features. These include a large carie and a complex feature consisting of pits and a groove on the mesiolingual crown surface. The latter is likely a variant of Carabelli's trait. The tooth is thought to have been lost from an individual aged between 12 to 18 years.

Tooth Morphology and Identification

The tooth is an isolated upper right, three-rooted molar. It appears to be a four, or possibly a five, cusped tooth, although the presence of a large carie and enamel fracturing preclude a full description of crown morphology. The carie has eroded the occlusal surfaces of buccal cusps (paracone and metacone) and has likely contributed to or caused the fracturing away of enamel from much of the buccal tooth surface, and part, if not all, of the distal surface of the metacone. The carie appears to be bounded lingually by the buccal groove. There is the suggestion of a metaconule, a small cusp that occasionally occurs between the metacone and the hypocone, but the destruction of the dentine and the enamel by the carie makes this difficult to determine with any certainty. There also appears to be a small mesial accessory tubercle located on the mesial marginal ridge between the protocone and paracone. The hypocone is present although somewhat reduced in size (see below). The lingual groove separating the protocone and the hypocone runs deeply across the occlusal surface and descends along the lingual tooth surface to end in a large pit. There is a complex of features on the mesiolingual surface of the protocone -a faint 'U' shaped groove, ending in two pits, that outlines a slight bulge in the enamel. This is probably a variant of Carabelli's trait. There appears to be only one interproximal contact facet, on the mesial surface. The destruction of part of the distal surface of the tooth crown by the decay and fracture may explain why there is no distal interproximal facet, however enough of the distal surface remains that some evidence for this facet should have survived. The tooth has a mesiodistal diameter of 10.12 mm and an

approximate buccolingual diameter of 12.67 mm (the size and location of the carie make this a minimum measurement).

It is difficult to distinguish between first, second and third molars when an isolated tooth is recovered, partially because a number of the defining characteristics of each molar are comparative - the first molar is larger than the second, the roots are more divergent, etcetera (Schwartz 1995; White 1991; Bass 1987; Woelfel 1984). Further, although distinguishing between isolated first and second molars is particularly problematic (Steele and Bramblett 1988), enough variation exists within third molars such that the possibility of the tooth being a third molar cannot be ruled out. Difficulties in identification are further increased in this case by the destruction of much of the occlusal surface of the tooth by the carie.

Despite these caveats, based on what can be observed, it is most likely that this tooth is a second upper right molar. It has the rectangular rather than the square shape more characteristic of a first molar. Third molars are more commonly characterized by a triangular shape (Schwartz 1995; Steele and Bramblett 1988). The hypocone is somewhat reduced in size [scoring 3.5 on the ASU Dental Anthropology System (Buikstra and Ubelaker 1994; Turner et al. 1991; White 1991)]. First molars are more likely to have cusps of equal size, and third molars are least likely to have a hypocone at all (Schwartz 1995; Hillson 1986). The molar's roots diverge; they are not fused as would be more generally expected if this was a third molar (White 1991; Bass 1987; Woelfel 1984). There appears to be only one interproximal contact facet, on the mesial surface of the tooth. Again, while it is possible a distal interproximal facet existed on the portion of the tooth enamel that has been lost due to effects of the carie and fracture, enough of the distal surface is left that some evidence of this facet would likely have survived. First molars have both mesial and distal interproximal contact facets; third molar agenesis, delayed eruption, or uneruption due to age, can account for the lack of a distal interproximal contact facet on a second molar (Bass 1987). Finally, while the Carabelli's trait is most likely to be found on first molars, it does occur on second molars, but only rarely occurs on thirds (ibid.).

Age

While tooth development is considered the one of the most accurate ways to estimate age, it is best to use as many teeth as possible in this assessment (Liversidge et al. 1998). Teeth from the same individual can give different ages that can vary by more than two years (Owsley and Jantz 1983). Estimations of age from a single tooth have a larger standard variation for error than occurs when averaging a number of teeth from an individual. Accuracy of ages from an isolated tooth have a standard variation of +/- 0.56 years as opposed to a standard variation of +/-0.09 years from averaging five or more teeth (Smith 1991). This heightened inaccuracy should be taken into account in assigning an age to this molar.

The tooth shows some wear, indicating that it had erupted and reached occlusion, but the wear is slight. Wear facets on the cusps not affected by the carie are large, but have not resulted in a rounding of the cusps or an obscuring of surface features. This translates to Stage 2 from the Scott system for scoring wear on molars (Buikstra and Ubelaker 1994).

First molars have been determined erupt and reach occlusion anywhere between 5 to 9 years, depending on the study (Ubelaker 1989; Gustafson and Koch 1974 as cited Hillson 1996 and as modified by White 1991; Schour and Massler 1941 as cited in Hillson 1996). Second molars have erupted and reached occlusion anywhere between 12 to 18 years - again, depending on the study (ibid). Third molars are more variable but have generally erupted and reached occlusion by age 21 years (Ubelaker 1989; Schour and Massler 1941 as cited in Hillson 1996). In general teeth erupt slightly earlier in females than males (Schwartz 1995).

Tooth development, the formation and calcification of the crown and the formation of the root, is a better assessor of age than tooth eruption as it is less susceptible to environmental factors such as caries, tooth loss, and severe malnutrition

(Smith 1991). However, variability of tooth formation increases with age, and teeth that develop earlier will tend to give a more accurate age (Liversidge et al. 1998).

The root lengths of this molar are complete but the root apices have not fully closed, and x-rays indicate that the walls of the root canal of the lingual root are still parallel. This would indicate the following stage of tooth development: A1/2, or an MFH score of 13 (Buikstra and Ubelaker 1994).

*Table 1: **Tooth Development Age***

Study	Stage	M1		M2		M3	
		Male	**Female**	**Male**	**Female**	**Male**	**Female**
Demirjian et al. 1976 & Kahl and Schwarze 1988 (as cited Liversidge et al. 1998)	Stage G: parallel root canal walls but open apical end		9.7 +/- 1.3 years		13.3 +/- 1.5 years		20.7 +/- 1.5 years
Ubelaker 1989	root apex not totally closed	9 yrs +/- 24 months		15 years +/- 36 months			
Trodden 1982 (Indian)	Stage 10 (root complete, open apex)	9.17 +/- 1.11 yrs	8.41+/- 1.10 yrs	14.05+/- 1.65 yrs	13.58+/- 1.34 yrs	20.96+/- 2.6 yrs	20.25+/- 1.06 yrs
Trodden 1982 (Inuit)	Stage 10 (root complete, open apex)	9.77+/- 1.27 yrs	7.87+/- 1.97 yrs	15.36 +/-2.62 yrs	15.48 +/- 1.76 yrs	17.99 yrs	20.83 yrs
Nevile 1973 (White) (as cited Trodden 1982)	Stage 10 (root complete, open apex)	10.22 +/- 1.59 yrs		14.53 +/- 1.69 yrs			
Haaviko 1970 (as cited Liversidge et al 1998)	Root length complete*	8.1 +/- 0.74 yrs	7.5 +/- 0.55 yrs	13.6 +/- 1.13 yrs	12.5 +/- 1.84 yrs	18.1 +/- 1.25 yrs	18.1 +/- 1.05 yrs
Haaviko 1970 ✦(as cited Hillson 1996)	Ac (apical closure complete)**	9.8 yrs	9.2 yrs	16.2 yrs	15.1 yrs	19.5 yrs	19.6 yrs
Gustafson and Koch 1974✧ (as cited Hillson 1996)	root complete **	9-11.25 years, Mean age: 10 years		14-16 years, Mean age: 15 years			
Gustafson and Koch 1974 (as modified White 1991)	root complete **	By 11.5 years		By 16 years		By 19+ years	

* stage younger
** stage older
✧ Hagg and Matsson 1985 found it be more accurate for boys (as cited Liversidge et al. 1998)
✦ differed from the true age by 3.6 months in a study by Shaaf et al. 1991 (as cited in Hillson 1996) although did tend to be more accurate for children under 10 years (as cited Liversidge et al. 1998). Mornstad et al. 1995 found to be more accurate aging boys than girls (bid).

The table above lists the studies, the stage that best reflects the score of this particular molar, and the possible age of the individual at the time of tooth loss. Different ages for the same stage of mineralization are a reflection of the populations, sample sizes, and methodologies used in the various studies. While not all these studies were constructed with the aim of being useful as a predictor of age, nor is the degree of error known for applying the data from one population to another, age can be assessed with a reasonable degree of accuracy (Smith 1991).

Although the tooth has tentatively been identified as a second molar, ages for each molar are given, as the possibility remains that it may be a first or third molar. Ages are also given, when known, for males and females. Ideally, one would use growth standards that are appropriate for the sex, the historical time, the population group and the subsistence pattern of the individual being assessed (Liversidge et al. 1998; Owsley and Jantz 1983). This is not often possible. In this case, for example, no attempt has been made to sex the tooth from its metrics. While some work has been done on sexing individuals by tooth size (Teschler-Nicola and Prossingler 1998), this is not a recommended technique for a single tooth – especially one that cannot be precisely measured buccolingually. Variability within sexes is nearly as great as the overlap between sexes and comparisons of single measurements of isolated teeth will not effectively differentiate on the basis of sex (St. Hoyme and Iscan 1989; Steele and Bramlett 1988). In terms of subsistence strategy, the presence of the carie may suggest an agricultural diet, or an introduction of European foods to the area. However, whether the tooth belonged to a European or a First Nation individual or someone from another population group is not known.

Roughly averaging the ages from the above studies for a tooth at this molar's stage of development the following ages can be obtained. If the tooth is a first molar, and from a male, the estimated age is 9.5 years with a range (plus or minus one standard deviation) of from 8.06 to 10.88 years. The age is only slightly lower if the molar is from a female: about 9.4 years with a range of from 7.21 to 11 years. Pooled ages for males and females for the first molar range from 7 to 11.81 years. It the tooth is a second molar

and from a male, the estimated age is 14.76 years with a range of between 12.41 to 17.98 years; if from a female, the estimated age is 14.39 years with a range of 11.8 to 17.24 years. Pooled sex ages range from 12 to 18 years. If the tooth is a third molar and from a male, the estimated age is 19.5 years with a range of from 17.99 to 23.62 years; if from a female: 20.59 years, with a range of from 19.19 to 22.2 years.

Keeping in mind all the problems inherent in assigning ages based on a single tooth, if the tooth is a second molar, it was probably lost from someone between 12 to 18 years of age. However, studies by Gustafson and Koch (1974 as cited Hillson 1996 and as modified White 1991) and Haaviko (as cited Hillson 1986) would indicate that root completion, a stage higher than that found here, would be reached by 15 or 16 years of age. This, along with the tendency of age means for this stage of tooth formation in the various studies to cluster around 14 and 15 years of age, would seem to indicate that although individual's age at tooth loss could be as high as 18 or as low as 12, the age was more likely around 15 years.

Pathologies and Non-metric Variations

The predominate feature of the tooth is the presence of a large carie that has destroyed the occlusal surfaces of the paracone and metacone and contributed to or caused the fracturing away of the buccal surface of the tooth crown and part, if not all, of the distal surface of the metacone. The sharp edges of these fractures indicate the tooth fractured at, or shortly before, the time it was lost from occlusion. Had fracturing occurred much before, some rounding of the edges should have occurred. The discoloration and staining of the fracture edges, comparable to the rest of the tooth, makes it unlikely that fracture is a 'fresh' break that occurred at discovery.

A carious lesion can develop anywhere on a tooth crown or exposed root surface. The size of this carie and the fracturing of the tooth do not allow for an exact identification as to where it first began forming, although it was likely occlusal. Caries form when the pH in the mouth is lowered, creating an acidic environment that leads to

the demineralization of tooth enamel. Prerequisites for the disease are the presence of dental plaque and fermentable carbohydrates or food sugars in the diet (Schwartz, 1995; Lukacs 1989; Hillson 1986). There is a slight amount of calculus (mineralized plaque) present on the tooth - a narrow line along the buccal, mesial and lingual surfaces. High caries rates are clearly associated with a shift to an agricultural subsistence system, and with diets rich in soft, sticky, and sweet foods (Lukacs 1989; Hillson 1986).

The carie has exposed the tooth's pulp chamber, making it vulnerable to infection. It is likely that this led to abscessing and the resultant destruction of the supporting tissues (Hillson 1986; Ortner and Puschner 1981). The presence of calculus might also have added to this destruction as calculus often irritates the gingival tissues and results in periodontal disease. The tooth may have exfoliated naturally as a result, or alternatively, may have been easily pulled or dislodged.

There is a slight discolouration on the mesial surface of the lingual root, a small reddish brown oblong shaped stain near the point where the roots diverge.

There are two pits joined by a shallow upside-down "U" on the mesiolingual surface of the protocone. The "U" outlines a slight swelling in the enamel. This feature complex is likely a variant of the Carabelli's trait. Although the Carabelli's trait generally refers to an extra cusp of varying size, there are a number of variations, including pits, grooves, grooves and pits, a pit distally alongside a cusp, a small tubercule, etcetera (Scott and Turner 1997; Tsai et al. 1996; Schwartz 1995; Mayhall 1992; Steele and Bramlett 198; Bass 1987). While the variant observed here has not been exactly described elsewhere, it would seem to fit within this continuum.

The pit formed at the end of the lingual groove on the lingual tooth surface may also be a part of this feature. "Also, a pit can occur in the medial lingual groove (differing from the mesiolingual position of the pit of Grade 2), which is suspected of being related to Carabelli' s trait. This pit has not yet been incorporated into the Carabelli' s trait standard" (Turner et al. 1991).

There have been numerous studies of Carabelli's trait. Unfortunately, methodological differences, particularly in regards to how the trait is scored or defined have made the majority of these studies contradictory and difficult to compare (Hillson 1996; Mayhall 1992). Some studies have found sex differences in trait expression - more frequently in males than female (Tsai et al. 1996) - other studies find no such pattern (Scott and Turner 1997). Some studies suggest that Carabelli's cusp is found more frequently in one population group than another - specifically more frequently in Caucasian than other populations. Again, other studies do not reflect this (Scott and Turner 1997, Harris and Rathburn 1991).

Despite these problems, certain generalizations can be made. A pronounced expression of Carabelli' s trait such as a defined bulge or cusp is found in a higher percentage of groups from Western Eurasia, Sub-Saharan Africa, Southeast Asia, Polynesia and Australia. Moderate to absent expressions of the trait are more commonly found in North Asia, Eskimo-Aleuts, American Indians, Jomon and Ainu populations (Scott and Turner 1997; Mayhall 1992).

The trait expressed in this molar would probably be classed as a moderate expression. However, given the isolated nature of the tooth, and the fact that this presumed variant on the Carabelli's trait has not been describe elsewhere, the moderate expression of this feature alone should not be used to determine ancestry.

Summary

In conclusion, the isolated tooth found during the Dawson City Hillside Archaeological Project, is an upper right, probably second, molar that had either been pulled or exfoliated naturally from an individual who may have been around 15 years of age. The presence of the large carie and the slight ring of calculus on the tooth would indicate a diet that included soft, sticky, sweet food, and possibly, less than perfect dental hygiene practices. The sex and ancestry of this individual could not been determined. A

variant of Carabelli's trait, a suite of pits and a semicircular groove, can be seen on the mesiolingual surface of the protocone.

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