LOOKING FOR GOLD
HISTORIC SITES SURVEY OF KLUANE NATIONAL PARK,
SOUTHWEST YUKON

by

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B.A.(Hons.), Simon Fraser University, 1976

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS OF THE DEGREE OF
MASTER OF ARTS
in the Department
of
Archaeology

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Looking for Gold. Historic Sites Survey of Kluane National Park, Southwest Yukon

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ABSTRACT

In the summer of 1978 a team of archaeologists from Parks Canada, Prairie Region, employing a combination of ground and aerial survey, conducted an inventory and assessment of sixty-six historic archaeological sites in Kluane National Park, Southwest Yukon. Most historic sites were found to be associated with placer gold mining activities ranging from the late 1890s up to the near present. This thesis presents the empirical findings, substantive results and theoretical contributions resulting from that survey.

The major objectives of this thesis sought to document a tentative culture history of historic period settlement within the Kluane area and to formulate and test hypotheses relevant to understanding formation processes of the cultural past and culture process in general. It was realized that historic sites archaeology with its expanded data base potentially offered control of a number of variables not usually managed in prehistoric archaeology.

A summary of historic land use and settlement within the Kluane area and descriptions of all archaeological sites and their important artifacts and features is followed by discussions concerning patterns of historic period settlement through time and space. The contradictory nature of archaeological and historical evidence pertaining to the
the Kluane gold rush - an important and significant event shaping land use during Kluane's recent past - is also discussed. From a theoretical and anthropological perspective, respectively, this thesis documents how differing abandonment processes affect the formation of the archaeological record and investigates the differences between the sourdoughs (oldtimers) and cheechakos (stampededers) - the two main socioeconomic groups known to have participated in the Klondike and Kluane gold rushes.
Numerous individuals and institutions in a variety of ways have contributed to this thesis. While I cannot adequately express my gratitude here it is my pleasure to acknowledge their assistance and support.

Thanks first of all are due John Combes and Parks Canada for giving me a job which afforded the opportunity to conduct archaeological investigations in one of the most beautiful areas in the world. I would also like to thank Superintendent Jim Masyk and Chief Warden Larry Tremblay for their interest, assistance and cooperation during the survey. Without it the success of this report would surely have been diminished. I am also indebted to Chuck Hume; his wilderness experience and knowledge of grizzly bear behavior was in part responsible for the completion of this thesis. Ron Chambers, Brent Liddle and other Kluane National Park wardens and naturalists provided invaluable information and assistance as well, ensuring the success of the project. I am also grateful to Marina McCready for proving to be a most able and knowledgeable field assistant.

Lynn Hill and Brenda Baker deserve credit for suffering through typing the original manuscript, a thankless job at best. I owe a very special debt of gratitude to Linda Sears for typing and editing the final draft. Her many constructive suggestions have greatly enhanced this report.

I am especially indebted to my supervisory committee:
Dr. H. L. Alexander, Dr. J. D. Nance and Dr. H. S. Sharp. Herb Alexander, as my supervisor, encouraged me throughout the writing of this thesis. His recommendations concerning a number of structural changes and methodological and theoretical issues have aided immeasurably in this work. Likewise, Jack Nance provided some very useful and constructive criticisms regarding several of the more substantive and theoretical areas in this thesis. Several conversations with Steve Sharp also indirectly aided this work. Fellow graduate students Jeff Hunston, Milt Wright and David Burley also offered a number of useful comments concerning several issues raised in Chapters 5 and 6.

To the faculty, students and staff of the Department of Archaeology, Simon Fraser University, especially Ingrid Bell, I owe a debt of gratitude for providing a most interesting and stimulating intellectual and social environment during my graduate years there. I would also like to thank my estranged wife Pat for admirably attempting to support two people on one salary while at the same time coping with the trials and tribulations of graduate student life.

Lastly, I am deeply obligated to Kathie Walton for her assistance and support in the writing of this thesis. She not only drafted the original maps and illustrations but she encouraged me and suffered through long nights of proofreading the original manuscript. Without her practical assistance and moral aid, this work would not have been possible.
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In late June of 1978 I received a phone call from John Combes, Chief of Archaeological Research, Parks Canada, Prairie Region, asking if I would be interested in directing an archaeological survey of historic gold mining sites in Kluane National Park, southwest Yukon. Proposed plans to develop and provide public access to several interior areas of the park, and the destruction of a number of archaeological sites by erosion had prompted the Federal Government to request that a team of archaeologists be sent to the park to inventory and assess its historic archaeological resources. Because of the sudden and unexpected nature in which this job opportunity was presented, I told John Combes I had to have time to think about accepting the contract and would call back in several hours. An hour later I returned the call and told him I would gladly take the position. Apart from the punctuality with which the call was returned, this decision was not arrived at hastily. Other than the obvious monetary considerations, which incidentally in my financial condition seemed quite considerable at the time, I accepted the contract for a number of reasons.

Firstly, I had never been in the Yukon, or the sub-Arctic for that matter, let alone been involved with any archaeological research north of 60 degrees latitude. All my previous archaeological field experience had been in southern British Columbia, and other diverse places such as central Texas and southern Germany. Secondly, I had never done any historic sites
archaeology, and knew only a handful of archaeologists who had. My total field experience was restricted to excavating the material remains of prehistoric hunters and gatherers ranging from interior and coastal groups in British Columbia to late Upper Paleolithic hunters in Germany, to PaleoIndian, Archaic and neo-American cultures in Texas. Thirdly, at the time the position was offered to me I was also becoming aware, mainly through the works of James Deetz and Stanley South, of the potential historic sites archaeology offered, with its expanded data base, for the formulating and testing of hypotheses relevant to the understanding of culture formation processes and culture process in general. This, perhaps more than any other consideration, was the prime motivating factor influencing my decision to accept the job. I felt that with the added control afforded by historic documentation and oral histories, I would be able to test ideas about past cultural systems and processes involved in the formation of archaeological sites. And I generally agreed with South (1977b: 5) that the more we understood about cultural systems for which we have some documented control of the variables, the more confident we could become about explaining those phenomena operating in prehistoric systems for which no documentation is available.

Another consideration, albeit small and insignificant when compared with the others, was the same one that stimulated one hundred thousand people to set off for the Klondike goldfields in 1897-98. However, in retrospect, the belief that the opportunity the project would provide me with to pan for gold after hours, and perhaps even to recover it archaeologically, was
unsophisticated. We were simply too tired after most workdays to do much of anything, let alone pan for gold, and our research did not entail any controlled excavation, thus eliminating almost all chance of recovering it in an archaeological context.
"There are strange things done in the midnight sun
By the men who moil for gold..."

(Robert Service, The Cremation of Sam McGee)
CHAPTER 1
INTRODUCTION

The survey of Kluane National Park's historic resources began at Park headquarters in Haines Junction, southwest Yukon, in early July. Several conversations with Superintendent Jim Masyk and Chief Warden Larry Tremblay revealed that very little was known about prehistoric and historic activity and settlement within the park, and that they wished to document, for interpretive reasons, a tentative culture history of the Kluane area. No human activity pertaining to the prehistoric period had ever been found within the park. What little historic information that was available was restricted mainly to direct and indirect contacts, over the past several decades, with several miners and small mining companies on a number of creeks and lode-ore deposits. They were also aware of a few reports of activity on Bullion and Sheep Creeks in 1903-04 (McConnell 1905, 1906) and a single account of early gold mining activity on Shorty Creek in 1898 (Sawatsky 1975). There were, however, many other signs of historic mining activity in Kluane, some of them obviously quite early, but their age and significance were unknown.

Although documenting a culture history of the southwest Yukon and the park was not considered to be in agreement with the specific conditions and immediate goals of the contract, it was soon realised that the establishment of a tentative culture history of Kluane's recent past appeared to be critical in order
to assess the significance of the park's historic archaeological resources. This particular objective gradually became a primary interest as familiarity with the country and its people was gained and their apparent lack of knowledge regarding the human history of the Kluane area was realised.

While surveying in the field and writing the report for Parks Canada afterwards, it was not possible to pursue personal research interests since they were necessarily subordinate to the specific objectives of the contract. However, once the report was written (Stevenson In press) attention was redirected towards documenting a culture history of historic land use and settlement within the Kluane region and formulating and perhaps testing hypotheses relevant to understanding formation processes of the archaeological record and cultural process in general. These personal aspirations constitute the major objectives of this thesis.

For sake of convenience and clarity of presentation, this thesis, which is best viewed as being comprised of two complementary sections, is organized into seven separate chapters and one appendix. The following three chapters are essentially descriptive in nature while Chapters 5 and 6 make more of an attempt to synthesize and explain the historical and archaeological data presented in Chapters 3 and 4. The next chapter briefly discusses Kluane National Park's setting, with specific reference to its geography. The discussion of Kluane's physiography is particularly relevant to this thesis as it seems to have been the major factor influencing (restricting) movement and settlement
within the park. Because historic occupation of the Kluane area could not be adequately understood without reference to the events which led to its settlement, a brief summary of the major historic developments occurring in the Yukon prior to and during the initial populating of the Kluane area is presented at the beginning of Chapter 3. The second part of that chapter documents a tentative summary of historic land use and settlement within the Kluane region. Historical documents, specifically Whitehorse newspapers, Geological Survey of Canada publications and N.W.M.P. Reports to the Auditor General, formed the basis of this culture history. Chapter 4 presents the empirical findings of the 1978 historic sites survey of Kluane National Park. The first part of the chapter describes methods of survey, data collection and site presentation. All historic sites and their significant features and artifacts are described in the second part of this chapter, in an effort to ultimately determine the age and function of each site. Site maps accompany most descriptions and, where appropriate, major artifacts and features are illustrated.

The historic spatial and temporal settlement patterns, as derived from the archaeological and historic records, of Kluane National Park and Bullion Creek (the most extensively mined and inhabited creek in the park) are discussed in Chapter 5. This chapter also details a discussion centered around the apparent contradiction between the historic documentation and the archaeological record of the Kluane gold rush. This contradiction provides the basis for a brief treatise involving some of the inherent problems common to both data sources. Chapter 5 also
presents a discussion concerning the major differences between the two main socioeconomic groups known to have participated in the Klondike and Kluane gold rushes. Documenting the similarities and differences between the archaeological components of the sourdough and cheechako social groups is recommended to guide further historic sites research in the park. Chapter 6 presents an initial attempt at understanding one type of culture formation process. A number of historically documented gold mining sites in Kluane provide an excellent data base for understanding of site abandonment behaviour. Abandonment processes for these sites are reviewed and the implications that they may have for the broader field of anthropological archaeology are discussed.

Chapter 7 presents the summary and conclusions of this thesis. Following this chapter, a list of the major technological changes occurring in the canning industry between 1850 and 1930 is appended, as this has provided the most reliable dating technique for determining the age of Kluane's historic sites.
CHAPTER 2
KLUAINE NATIONAL PARK - THE NATURAL SETTING

Kluane National Park's geologic history, weather patterns, biotic communities and present geomorphology are so complex and diverse that any attempt to discuss these topics in detail would require considerable documentation and presentation. Such an exercise would be far beyond the scope of this thesis. The purpose of this chapter is to familiarize the reader, in the broadest terms only, with the area's natural history and resources, so that human occupation of the park can be viewed in proper perspective. Those wishing more detailed information regarding these topics should consult Scace and Associate's (1975) excellent bibliography.

The Kluane region is located in the southwest corner of the Yukon (Figure 1) on the northwestern edge of the North American Tectonic Plate. Kluane National Park and the Kluane Game Sanctuary, a smaller geographically defined area outside the park, occur within this region. Kluane National Park is bound by Alaska on the west and southwest, British Columbia on the south and the Game Sanctuary and Haines Highway on the north and east (Figure 1).

Over 60 percent of the park's 8500 square miles is covered by snow and ice, forming the largest non-polar icefield system in the world. Except for recreational activities (mountain climbing) and meteorological studies, the icefields have remained unused and unoccupied. Eighty percent of the area adjacent to
Figure 1. The Kluane region and the southwest Yukon area.
the icefields is also uninhabitable and impenetrable due to high relief. Glacially scoured valley bottoms and mountain passes, river and stream valleys, fluvial plains, and alpine and sub-alpine plateaus, accounting for an estimated 10 percent of Kluane's total area, are the only regions in the park conducive to human movement and/or occupation.

For the past 400 million years the Kluane area has been subjected to intense geological forces and processes resulting in a unique sequence of landforms and geological events (Scace and Associates 1975). During the past, through various stages of crustal adjustment, the massive St. Elias Range, the park's most significant physiographic feature, was formed. Quaternary glacial activity, characterized by vast accumulations of snow which recrystalized into masses of ice that flowed down valleys from these ranges in the form of massive and complex systems of glaciers, has further modified Kluane's topography, accentuating peaks and valleys into their present form (ibid.).

The Kluane National Park area can be subdivided into a number of distinct physiographic areas. From west to east these include: the Icefield Ranges and the St. Elias Mountains; the Duke Depression; the Kluane Ranges, and the Shakwak Valley. The Icefield Ranges form the main body of the St. Elias Mountains. They embrace some of the highest peaks in North America, including Mt. Logan (19,520 ft.) and Mt. St. Elias (18,008 ft.). In their general form they resemble a high plateau deeply dissected and surmounted by remnants of an older, still higher plateau (Scace and Associates 1975: 7). Mountain ridges, reaching elevations of 10,000 feet or more, are common in the heart of
the Icefield Ranges. The Duke Depression, lying between and parallel to the Icefield and Kluane Ranges, is an upland valley characterized by broad smooth slopes. The Kluane Ranges form a narrow front or outer ridge for the St. Elias Mountains. Although they can be divided into nine short distinct ranges by large cross-cutting valleys, their front is so straight and abrupt for most of its length that, when viewed obliquely, the breaks in it are not conspicuous and the general impression is that of a continuous mountain wall rising from the Shakwak Valley (Scace and Associates 1975: 6). The easternmost portions of Kluane National Park (along the Haines Highway) take in the western flanks of the Shakwak Valley, a long straight valley separating the St. Elias Mountains from the Yukon Plateau. In cross section it is broadly U-shaped with locally significant glacial fluvial and aeolian landforms present (Scace and Associates 1975: 9).

Glaciers originating out of the Icefields ultimately provide most, if not all, of the water for rivers flowing from the park. Kluane's rivers flow either north into the Yukon River system and eventually into the Bering Sea, or south via the Alsek River into the Gulf of Alaska. The Slims River, the major contributing source of water for Kluane Lake, and the Donjek and Duke Rivers flow north, while the Kaskawulsh, Dusty, Dezadeash and Tatshenshini flow south via the Alsek. The Kaskawulsh glacier terminus which supplies water to both the Slims and Kaskawulsh Rivers dramatically marks the drainage divide in Kluane National Park. Mush and Bates Lakes and the Kathleen Lakes, the major lakes within the park, occupy glacially scoured valleys in the south-
east corner of Kluane. Both lake systems eventually flow into the Alsek--Mush and Bates Lakes via the Bates River and the Kathleen Lakes via the Dezadeash.

Dark grey quartz-mica schists, massive granite outcroppings resembling Coast Range granites, and volcanic andesites and basalts are common rock formations in the Kluane area. Although coal, asbestos, gypsum, fluorite and several other trace minerals are known to occur in Kluane National Park, only gold, which is found in varying quantities in most creeks in the area, and copper and nickel are present in sufficient concentrations to warrant commercial interests.

The climate of the Kluane region is quite variable and subject to change, through temperature inversions and shifts in established weather patterns. Pacific air rising over the St. Elias mountains deposits moisture in the form of snow on the ice-fields. However, most of the Duke Depression and the Kluane Ranges, which lie in the shadow of the mountains, escape this precipitation. By the time the air reaches the Shakwak Valley it is relatively dry. The Kluane area usually receives less than 13 inches of precipitation annually with July and August being the wettest months. The coldest and warmest months are January and July, respectively, with mean daily maximum temperatures of 4.5 degrees Farenheit and 67.5 degrees Farenheit. Frost-free days in Kluane, which vary considerably with altitude, range from less than 40 to more than 120 days annually. Mean daily air temperatures are below freezing from about November to early June each year.

Three major biotic zones--boreal forest, alpine forest and
upland tundra—and their characteristic wildlife populations occur within the Kluane National Park area. Boreal forests, which account for less than 10 percent of the park area, are found throughout Kluane in river, lake and stream valleys below 3500-4000 feet (Theberge n.d.). White spruce, aspen and balsam poplar as well as willow and birch shrubs are the major species represented in the boreal forest, with spruce predominating. Trees characteristic of the boreal forest are rare and give way to willow/birch in the sub-alpine and alpine above 3500-4000 ft. Flowering plants typical of tundra conditions commonly grow beneath these shrubs (Theberge n.d.). Alpine conditions yield to true tundra above approximately 4500-5000 feet. Throughout much of the early summer a great number of colorful tundra species flower however plant growth in this area rarely exceeds 15 inches.

Big game species common to Kluane National Park include moose, Dall sheep, Mountain goat and upland caribou. The latter three species are usually found above timberline, while moose frequently occur in all three biotypes. Although none of these big game species could be considered as particularly abundant in the Kluane area, moose, sheep and goat are seen frequently. Caribou, however, seem to be relatively rare and venture into the northern end of the park from the Burwash Uplands only occasionally. Kluane's major carnivores include wolf, coyote, fox, lynx, wolverine, grizzly and black bear. Other small or important furbearing animals in the park are ground squirrel, marten, mink, otter, weasel, hare, marmot, pika and muskrat.

It is evident from the above discussion that the Kluane
National Park area imposes certain physical and biological constraints upon human movement and settlement within the park. Movement throughout the area, which is severely restricted by high relief and rugged wilderness terrain, is limited mainly to river valleys and upland plateaus. Yet, because of the large volume of water drained by most of Kluane's rivers, travel along and across river valleys often necessitates the use of watercraft. The climate is typically sub-arctic and it is not uncommon to have freezing temperatures and snow on the ground during the summer months. Protective clothing and substantial living accommodations are required for survival throughout the area during most of the year. With the exception of a number of large game species and several minerals, which are not overly abundant, Kluane National Park offers few resources which adjacent areas such as the Shawak Valley could not provide. Even timber, which covers many river valleys in the park, is not available in sufficient quantities or concentrations to warrant commercial interests.
CHAPTER 3

HISTORIC SETTLEMENT OF THE SOUTHWEST YUKON AND KLUANE REGION WITH SPECIFIC REFERENCE TO KLUANE NATIONAL PARK

For at least ten thousand years, and perhaps as many as thirty thousand years (Irving and Harrington 1973), before the appearance of Eurocanadian culture, the Yukon was occupied by indigenous hunting and gathering bands. As previously stated in the introduction, the treatment of this aspect of the Yukon's past will not be considered. The problem, for the moment, is left to other prehistorians. This chapter is concerned with documenting the settlement of the southwest Yukon and the Kluane region during historic times. Those readers wishing more detailed information regarding the ethnography and prehistory of the southwest Yukon area and its native peoples are referred to Clark (1976), Johnson and Raup (1964), MacNeish (1964), McClellan (1975), Morlan (1974) and Workman (1978).

The first part of this chapter documents some of the more significant historic events and developments occurring in the southwest Yukon prior to and during the initial historic occupation of the Kluane region. The second part presents a summary of historic land use and settlement in the Kluane region with specific reference to Kluane National Park. The early historic period in the region will be emphasized and treated in greater detail than later periods owing to the apparent lack of knowledge relating to this time period.
Although the primary purpose of this chapter is to document a tentative culture history of the area, it is also designed to aid in the analysis of data on archaeological sites, interpretation of historic land use and settlement patterns, and delineation of other areas of theoretical and processual investigation presented in the following chapters.

Significant Historic Developments in the Southwest Yukon

Although the Russian-American Fur Trading Company and the Hudson's Bay Company were in Alaska and the MacKenzie Basin and Great Slave Lake regions, respectively, prior to 1840, the interior of the Yukon remained unexplored until this time. In the early 1840s Robert Campbell of the Hudson's Bay Company, in an attempt to locate the Yukon River, established the trading post of Fort Selkirk at the confluence of the Pelly and Lewes (later to be known as the Yukon) Rivers. Almost simultaneously, the Hudson's Bay Company, having received information regarding the presence of furbearing animals, dispatched John Bell and a party of men to the Peel River area (Duerden 1971). In the early 1840s Bell established another trading post, Fort McPherson, on the Peel, while A. H. Murray built Fort Yukon at the junction of the Porcupine and Yukon Rivers in 1847 (Ogilvie 1913: 24).

While Campbell found traces of gold at Fort Selkirk, he did not seriously consider its exploitation. Isolation, combined with a relatively lucrative trading economy (Duerden 1971) and the Hudson's Bay Company's attitude towards gold—which discounted
their traders' tales of gold as furs were the far richer treasure (Berton 1972: 4) -- precluded any attempts to investigate these discoveries. Sixteen years later, this attitude was reflected in a letter by a clerk at Fort Yukon when he wrote that "only as a last resort, when he could do no better, would he consider digging for gold" (Ogilvie 1913: 86).

The sacking of Fort Selkirk in 1852 by the Tlingit traders (who felt their position as Interior Tutcheone-Russian middlemen threatened by Campbell and the Hudson's Bay Company) ultimately led to the abandonment of the Liard-Pelly Rivers, the major route into the interior until that time (Duerden 1971). The Porcupine-Peel route, which was longer but less arduous, soon became the major trading route to markets outside the Territory, until the introduction of power vessels on the Yukon estuary placed greater emphasis upon the penetration of the Yukon interior from the river mouth. The fur trade was not only the major industry in the Yukon during the 1840s, 1850s and 1860s, it was the only economically important one.

Gold did not begin to assume a significant role in the development of the Yukon until after 1867 when the United States purchased Alaska from Russia. This event, which ultimately resulted in the Hudson's Bay Company's withdrawal from the Yukon area, together with the establishment of the Yukon estuary as the major route into the interior, initiated the decline of the fur trade while giving birth to a new era of mineral (gold) exploration in the Yukon.

The first prospectors to penetrate the interior of the Yukon entered by a number of different routes. While Arthur Harper
travelled down the Porcupine via the Peace and MacKenzie river valleys in 1873, George Holt and Ed Schieffelin entered from the seacoast; Holt via the Chilkoot Pass in 1878 and Schieffelin via the Yukon River in 1882.

Almost simultaneously, in 1880, hardrock gold was discovered on the Alaskan Panhandle and the mining town of Juneau sprang up. Wanderers, adventurers, Indian fighters and frontiersmen from all over the American west (Berton 1972: 5) came to Juneau. Also to Juneau and the panhandle came prospectors who, in a kind of capillary action (ibid.), worked their way from gold discovery to discovery up from California, Nevada, Colorado, Idaho and the Fraser Canyon, Cariboo and Cassiar sof British Columbia. From shortly after the time Holt scaled the Chilkoot Pass and returned to Sitka (the panhandle capitol) in 1878 with two small nuggets, small groups of prospectors began to trickle in ever increasing numbers over the Chilkoot Pass to the interior.

In response to gold mining development and exploration which started on the Yukon, Sixtymile, Fortymile and Stewart Rivers in 1885 and 1886, three men--Jack McQuesten, Al Mayo and Arthur Harper--established a number of posts in the Yukon area. The first of these, Fort Reliance, became the focus for future river settlements. Other settlements, which sprang up as they followed internal stampedes of prospectors to each new discovery, were Stewart, Ogilvie and Fortymile. After 1887, Fortymile became the major focus of mining activity in the Yukon, only to be abandoned in 1893, when gold was discovered on Birch Creek near Circle City in Alaska. Circle City, whose population of 1200 was reported to
have taken out more than one million dollars of gold in 1896, thrived until the winter of that same year when strange rumours began to filter down from upriver about an almost unbelievable discovery on a little stream whose name no one could pronounce (Berton 1972: 30).

On August 17, 1896, George Carmacks, Skookum Jim and Tagish Charley discovered gold on Bonanza (Rabbit) Creek. Unknown to them, this discovery was to initiate the last, and perhaps greatest, gold rush in the history of the mineral's exploitation. Although rumours of the strike drifted up and down the Yukon River that fall, it was not until winter that news of its richness was confirmed. Stewart, Fortymile and Circle City almost immediately were abandoned. From all over Alaska and the Yukon miners and prospectors, upon hearing the news, flocked to the Klondike goldfields. Several thousand people were reported to be in Dawson and the goldfields in the winter of 1897-98. However, it was not until July of 1898 when two ships, the Excelsior and Portland, arrived in Seattle that news of the strike reached the outside world. Unlike many earlier gold rushes, the stampede started instantly and reached a fever pitch at once, and remained that way until the following spring (Berton 1972: 93). By the late summer of 1898 close to 30,000 persons were reported in the Yukon, headed for the goldfields (Duerden 1971). In all, some 100,000 people attempted to reach the Klondike area (Innis 1936; Berton 1972).

They came from all directions. Many tried to get to the goldfields by travelling up the Yukon from its mouth, or down the Liard and MacKenzie from the east. Some even tried to reach
the Klondike from the interior of British Columbia over the Stikine and Ashcroft Trails, while still others attempted to traverse the great Valdez and Malaspina glaciers. However, the most popular routes, in descending order of importance, were the Chilkoot and White Passes, and the Dalton Trail.

The many important and significant events that occurred in the Klondike between 1897-99 will not be treated in detail here. Rather, the reader is referred to Berton's Klondike. The Last Great Gold Rush 1896-99. Needless to say, Dawson and the goldfields flourished in 1897-99. However, by 1899 falling gold output combined with increased cost of extraction, as well as other factors which will be discussed later, began to force small-scale operators in the Klondike to return to the outside world or seek minerals elsewhere (Duerden 1971). As the more accessible gold had been removed, larger companies with the capital and equipment to harvest the increasingly elusive gold began to dominate production in the Klondike goldfields. After 1899-1900 the population of the Yukon declined rapidly. The rapid population decrease of Dawson and concomitant reinterest in prospecting in other areas of the Yukon has to be considered the major factor responsible for the discovery of gold and subsequent rush to Bullion Creek and the Kluane goldfields in 1903-04. The history of the Eurocanadian settlement of the Kluane regions shall now be considered.
The first white man to penetrate into the Kluane region was Arthur Harper. In an unsuccessful attempt to locate a source of native copper, a sample of which was shown to him by a Southern Tutchone Indian, Harper was forced to winter on the upper reaches of the White River in 1873-74. For the next 16 years the interior and interior routes into the Kluane region would remain unexplored.

In 1886 a casual mountain climbing expedition, originating from the Alaskan panhandle, headed by F. Schwatka, W. Libbey and H. W. Seton-Carr and sponsored by the New York Times, made an unsuccessful ascent of Mount St. Elias in the southwest corner of the park. Mount St. Elias was again unsuccessfully assaulted in 1888 by W. H. Tompham, G. Borca and W. Williams. These attempts were soon followed by two other unsuccessful expeditions led by I. C. Russell and M. B. Kerr, under the joint auspices of the National Geographic Society and United States Geological Survey in 1890 and 1891. Not until 1897 did a well-organized Italian climbing party under the leadership of Prince Luigi Ameleio Di Savoia, Duke of Abruzzi, successfully ascend Mount St. Elias. Once the peak was conquered, mountaineers turned their attention to Mount McKinley in Alaska. It was not until 1925 that climbers returned to the St. Elias Mountains (Wright 1978).

In 1890, the first of two journeys made by E. J. Glave and Jack Dalton touched on the southeast corner of present park boundaries. Supported by Frank Leslie's Illustrated Newspaper of New York the party crossed over the Chilkat Pass to Kusawa Lake. From there they reached Neshataheen fishing village and
the Tatshenshini River via Klukshu Lake. They then descended the Tatshenshini-Alsek rivers to the coast. Glave and Dalton's second expedition left Klukwan in Pyramid Harbour the following year (Glave 1892). Travelling along an old, established Tlingit trading route to the interior, later to be known as the Dalton Trail, they reached Neshataheen village. This expedition marked the first time pack horses were employed in the Yukon. From Neshataheen village they travelled to an Indian village on the shores of Aishihik Lake, via the Shakwak Valley. Several days later they left Aishihik camp for Kluane Lake to hunt for sheep with the Aishihik Indians. Although Glave (1892: 878) noted the presence of gold and silver in the surrounding canyons of Kluane Lake he did not stop to exploit these minerals. From Kluane Lake they travelled in a southwestern direction up the Slims River Valley and past the Kaskawulsh glacier. Descending the Kaskawulsh River they reached the Dezadeash River where it joins with the Kaskawulsh. From this point they crossed the Kaskawulsh by raft and ascended the Dezadeash to the Shakwak Valley and, finally, to Neshataheen village and the coast.

While Glave and Dalton were approaching the interior of the Kluane region from the south in 1890 and 1891, F. Schwatka and C. H. Hayes (Hayes 1892) were nearing the area from the north. Under the sponsorship of the National Geographic Society the party crossed the Skolai Pass in the St. Elias Mountains in 1891 via the Donjek River, the headwaters of the White and the Klutan glacier.

In 1896 Jack Dalton returned to the area and improved upon the Indian trail that he and Glave had used five years earlier.
Although the mainstream of the Klondike gold rush in the next year would pass him and the trail by, Dalton emerged from this venture a moderately wealthy man (Wright 1976: 239) as he charged $250.00 to anybody wishing to use it at the peak of the stampede (Berton 1972: 350). In the following year the increased flow of traffic caused by the Klondike gold rush necessitated the establishment of a N.W.M.P. post on the trail at Dalton Post, 1.5 km south of Neshataheen village, to control smuggling, collect custom duties and discourage crime. Several police buildings, a trading store and numerous log cabins were constructed at Dalton Post in 1897 and 1898. Dalton Post remained the center of activity in the area during the late 1890s and early 1900s. The construction of the White Pass and Yukon railway from Skagway to Whitehorse in 1900 initiated the abandonment of Dalton Post and the Dalton Trail in 1906.

Although the Dalton Trail was to be a tertiary route into the Yukon it proved beneficial to the Klondike gold rush in the summer of 1898, when two thousand beef cattle successfully traversed it en route to Dawson to relieve the city's famine of 1897-98. The Dalton Trail was also the scene of the Klondike Relief Expedition, a quixotic reindeer drive that travelled the trail the same year. Also in an effort to relieve Dawson's famine, the U. S. Congress in 1897 purchased a herd of 540 reindeer and hired 68 Lapps, Norwegians and Finns to herd them from Pyramid Harbour to the Klondike. However, through a number of mishaps on the trail and en route to Dawson, the herd, reduced to one-fifth its original size, staggered into Dawson in January of 1899, eight months after the danger of starvation had passed.
One of the greatest paradoxes of the Klondike gold rush was that the real victims of starvation were the reindeer themselves and that, in the end, it was the Klondike Relief Expedition itself that required relief (Berton 1972: 184).

Dalton's Trail is important in understanding historic settlement and land use in Kluane National Park not only because it was the main route into the Kluane region during the late 1890s but because it also led to the establishment of Porcupine City, a community which figured prominently in the first stampede into the Kluane National Park area in 1898-99.

In March of 1898 ex-Lieutenant Adair of the U. S. Cavalry and a party of 36 men with provisions and equipment passed over the Dalton Trail en route to the "Last Chance Mining District", an area which included Alder and Shorty Creeks in Kluane National Park. In April, the "Mysterious 36", as they later came to be known because the lieutenant swore them all to secrecy as to their destination and intentions, built a bunkhouse, dining hall and several cabins on Shorty Creek, 12 miles northwest of Klukshu Lake. The party, which seems to have represented the Standard Oil Company and some eastern Canadian capitalists, took up 40 claims in the district, principally on the Kha-sha River (Jarvis 1899). Other creeks found to bear gold in the district were Alder, Shorty, Union Gulch, Roberts and Victoria. Adair's men and an unknown percentage of 40 passengers who abandoned the Alice Blanchard when she ran into a rock at Haines Mission en route to Dawson (ibid.) recorded most, if not all, of eighty claims staked in the area in 1898. Although the lieutenant and
his men were intent on coming back to the district that winter with $75,000 worth of mining equipment for hydraulic mining operations, they never returned. The "Mysterious 36" left for Seattle in the fall of 1898, with only a pitifully small amount of gold (Sawatsky 1975: 73).

Alder and Shorty Creeks and several other creeks in the district were almost totally abandoned in following years, owing to rich quartz strikes at Rainy Hollow in British Columbia and the wealth of the placer deposits in the Porcupine district (Jarvis 1900). As well as these discoveries, difficult access to most creeks in the "Last Chance Mining District", which were situated over 150 miles from the coast, made transporting heavy hydraulic machinery and equipment—the only profitable method of recovering gold in the area, in the opinion of most prospectors—a very expensive proposition (Fraser 1901).

Gold was also discovered in the fall of 1898 on Mush Creek, 15 miles southwest of Shorty Creek, by a C. Towl and his partner. The news of this discovery, unlike previous strikes in the area, initiated a stampede to the creek which drained the unified population of Porcupine, Alaska, a small mining community seven miles below Pleasant Camp on the Dalton Trail (Jarvis 1902). The discovery of an $8.00 gold nugget, the occurrence of a large amount of green and dry timber, a short distance to bedrock (2 to 6 feet) and a large admixture of quartz in the creek's gravel seemed to have been the difference which provided the stimulus for the stampede. Although Martin (1901) reports that 250 people were in the Porcupine District in 1899 and that Porcupine City had a trading store, four saloons, and a hotel
as well as a number of other log buildings, it is uncertain what percentage of this population actually participated in the stampede to Mush Creek. Over the winter, cabins and tent frames were built and placer test trenches were excavated. However, by the late spring and early summer of the next year it was discovered that not enough gold was present in the bed and banks of the creek to warrant further work. The area was soon abandoned. During the following years only three men were known to have worked the creek in 1902 (McDonell 1903).

By 1903 the gold-bearing potential of many creeks in the district was still unknown, as there had not been enough testing done on any of the creeks to demonstrate their value, and the few prospectors in the area did not have the time or the means to do any extensive excavation (McDonell 1903). The decline of the Klondike gold rush which resulted in fewer prospectors coming into the area via the Dalton Trail probably has to be considered the major factor responsible for the lack of work in the district up to 1903. Many creeks in the "Last Chance Mining District" were not to be tested again until the 1930s.

Concurrently with the initial period of mining activity in Kluane National Park between 1898 and 1902, a number of geological surveys were being conducted in the region. J. B. Tyrrell of the Geological Survey of Canada studied the geology of the Dalton Trail and explored an area westward from Hutshi Lake to the White River in 1898 (Tyrrell 1899), while D. L. Dunn visited Shorty Creek and made some geological and mining notes of the area (Brooks 1900). W. S. Peters and A. H. Brooks of the United States Geological Survey (en route to explore the headwaters of
the White Tanana, Donjek and Copper Rivers) crossed the Kaskawulsh River by boat and traversed the Kaskawulsh and Slims River Valleys to Kluane Lake in 1899. In 1900 J. J. McArthur from the Department of the Interior conducted a topographical exploration of the Chilkat Pass (McConnell 1905).

One of the more significant developments occurring in the region at this time was that a large area of land which had been previously recognized as United States Territory became Canadian after a survey of the International Boundary Commission in 1900 (Fraser 1901).

As the day of the individual miner ended in Dawson's gold fields many of the more experienced prospectors and oldtimers who had been in the area prior to and during the Klondike gold rush fanned out over the surrounding countryside to continue the search for gold (Wright 1978). While the discovery of gold on the beach at Nome was one of the more important discoveries in Alaska during these years, some of the more significant discoveries in the Yukon took place in the Kluane region.

In July of 1903 gold was discovered on Ruby Creek, 15 miles east of Kluane Lake, by Skookum Jim and Dawson (Tagish) Charley, co-discoverers of the Klondike goldfields (Daily Evening Star [Whitehorse] 1 March 1904). Their return to Whitehorse a number of days later initiated a general stampede of 500-600 internal prospectors to the area (Brook 1904; Snyder 1905). However, because there was an initial and general feeling of disappointment in the richness of the area, few stampeders remained to work their claims. Other creeks on which gold-bearing deposits were found and staked in the Ruby Range and Kluane Hills included
Fourth of July, Twelfth of July, Dixie, Allie, McMillan, Lamoureaux, McKinley, Marshall, Gladstone and Granite Creeks. Later in the season some of the original prospectors eventually returned and found several of the creeks to be sufficiently productive, after considerable labor investment. However, it was not until the approach of winter that people began to realise the extent and potential wealth of the district.

Near the end of October, four men--Smith, Bone, Ater and Altermore--reached Whitehorse with 43 ounces of gold that they had worked from a stream they had called Bullion Creek, 40 miles west of Ruby, by the most primitive methods in nine days; at the same time they were handicapped by cold weather, ice and other drawbacks (Daily Evening Star [Whitehorse] 1 March 1904). While the rush to Ruby, Fourth of July and several other creeks in the Kluane Hills and Ruby Ranges discouraged and disgusted most prospectors--some even returning to Whitehorse without staking claims (McDonell 1904)--news of the Bullion Creek Strike renewed the interest and faith of the people in the wealth of the Kluane region. Notwithstanding the fact that winter was setting in, this discovery initiated another large stampede to the area. By 1 March 1904, 300 men were reported in the district and over 2000 claims were recorded on Bullion, Sheep, Metaline, Multi-Metal, Canada, Coin, Congdon, Kimberley, Telluride and other creeks in the district.

Once news of the strike reached the outside world it was anticipated that there would be a great influx of people into the area. The Daily Evening Star (Whitehorse 7 March 1904) estimated that 10,000 men would be heading to Kluane and Alsek
goldfields that summer. Victoria's newspapers and steamboat agents predicted that there would be a "big exodus" of people to Bullion Creek and the goldfields within a month, and that the rush of travel would surpass anything seen in Victoria since the days of the Klondike excitement (Victoria Times [Victoria] 12 March 1904). Although these predictions were never realized, 500 men and 1200 men were reported in the district on 19 March 1904 and 11 May 1904, respectively, with the latter figure expected to more than double within the next two months (Daily Evening Star [Whitehorse]). Bullion Creek was also reported to be the scene of the most activity in the Yukon at this time (ibid. 26 March 1904).

Although many prospectors participating in the Bullion Creek stampede came to the Kluane mining district (Alsek goldfields) from many destinations all over the Yukon, the majority of the internal stampede originated from Dawson, Skagway and Whitehorse. Daily parties of stampeders (Daily Evening Star [Whitehorse] 3 March 1904) were also reported leaving for the new diggings from Victoria and Vancouver (Victoria Colonist [Victoria] 10 March 1904) via steamship, the White Pass and Yukon Railway and the Whitehorse-Kluane wagon trail.

With the availability of first class water, timber and dumpage prospects, tent cities sprang up on Bullion, Sheep and Ruby Creeks in the Kluane mining district. The center of activity, however, was Bullion City at the mouth of Bullion Creek. Numerous tent camps, a row of substantial cabins and a large hotel, which was reputed to be the finest building in the district, were reported under construction at this site in May of 1904.
Another fine hotel and several cabins were also constructed at Sheep Camp on the mouth of Sheep Creek. One hundred tents were reported to have been erected at Kloo Lake by men relaying supplies from Whitehorse across to the goldfields (ibid. 7 April 1904). Almost daily there were stampedes to new creeks, most of which were tributaries of Kluane Lake (ibid. 15 April 1904). By early May owners of every claim on Bullion were busily engaged in building sluice boxes in anticipation of cleanup. Those few claims sluicing by mid-May were averaging up to 31¢-60¢ per pan, with a number of pans yielding $2.00 or more (Daily Evening Star [Whitehorse] 20, 24 May 1904). Prospects for the district, according to the Daily Evening Star, looked so good that a company secured capital of one million dollars to build a railway from Whitehorse to the Kluane mining district.

However, this cultural fluorescence was short-lived. The Kluane and Bullion Creek gold rush seems to have ended even more suddenly than it started; the discovery of considerable gold-bearing deposits on Burwash Creek, 40 miles to the north, concurrently with high water resulting in poor working conditions (a common occurrence on most creeks in the district) and the destruction of many mining operations on Bullion, forced almost every miner to rapidly evacuate the area and stampede to Burwash to stake a claim (Daily Evening Star [Whitehorse] 24 June 1904).

Although most miners were planning to return to Bullion when the water level fell, few did. Never again were Bullion and several other creeks in the Slims River valley as densely occupied, or the scene of as much activity, as the late spring
months of 1904. For the rest of the year and decade, Burwash Creek remained the main center of gold mining activity in the Kluane district, and Silver (Kluane) City at the south end of Kluane Lake became the main distributor of supplies for the area. An R.N.W.M.P. detachment and, eventually, a Post Office were set up at Kluane City to service the miners on Burwash and other creeks in the district.

Only $20,000 worth of gold was taken out of the Kluane mining district in 1904, nearly all of which came from Ruby, Bullion and Burwash Creeks (McConnell 1905). However, this figure probably did not accurately reflect the wealth of the district at the time, as only a few claims were worked for any period and while there was a considerable mining population in the area, most prospectors spent the summer assessing several claims rather than thoroughly testing one claim (McConnell 1906). The discovery of coarse gold in varying quantities in almost every creek in the district has to be considered as much a factor for this low yield as the poor working conditions, as with the frequent stampedes from creek to creek, no single creek was worked long enough to determine its real value as a gold producer (Snyder 1905).

In September, with winter approaching and supplies becoming scarce, most prospectors abandoned the Kluane mining district. Only a handful of miners planned to remain on Burwash, as it was the only creek in the district suitable for winter digging. However, near the end of the year, all the claims on Bullion from one above Discovery claim to 84 below, were pooled and placed under the control of W. L. Breeze and the Bullion Hydraulic Company. It was Breeze's intention to install a hydraulic plant
on Bullion to wash the side hills of the creek. In late November, 15 men were reported clearing sites and laying building foundations on Bullion (Dawson Daily News [Dawson] 28 November 1904). The company moved a 75-ton sawmill outfit, an electric plant and over 100 tons of equipment and supplies to Bullion in February and March of 1905 with 30-40 horses and a large force of men (ibid. 13 February 1905). By early April the Bullion Hydraulic Co. began manufacturing lumber for a bedrock and hillside flume, a warehouse and several other buildings. Between claims 26 and 40, a distance of about one mile, 300,000 feet of lumber were used in the construction of a 5 x 3.5 feet flume (McConnell 1906: 149)(Frontispiece). Although the Bullion Hydraulic Co. was getting 3¢ to 50¢ a pan by midsummer (Dawson Daily News [Dawson] 21 July 1905), preparations for the flume were not sufficiently completed in time before the season ended to conduct a satisfactory test of the creek (McConnell 1905). In 1906 the Bullion Hydraulic Co. ceased operation on Bullion Creek, after employing about 20 men for the summer (Daily Evening Star [Whitehorse] 4 May 1906). It is certainly strange, definitely tragic and perhaps even ironic that after less than three years of operation and an initial outlay of close to $300,000 (Cairnes 1915), Breeze and the Bullion Hydraulic Co. took out less than $1,000 in gold.

After the 1903-04 stampedes, the number of men actively engaged in placer mining decreased from a reported 1200-1400 or more in 1904 to less than 100 in 1905 and 40 in 1906 (Daily Evening Star [Whitehorse] 11 May 1904, 12 August 1905, 4 May 1906). While placer mining remained the most significant activity in the district after 1904, copper and quartz mining also became
The dramatic decline in Kluane's mining population after 1904 seems to have resulted from a combination of a number of factors. Firstly, although gold was found in varying quantities on most creeks in the district, it did not occur in sufficient concentrations to support the individual pick and shovel prospector--several geologists including McConnell (1905, 1906) held the opinion that gold could only be effectively mined in the area by hydraulic machinery. Frequent flooding, thawing and freezing of most creeks in the district, resulting in inadequate working conditions, as well as the costs of transporting supplies and equipment to the area, also have to be considered important secondary variables affecting the decision of most miners to abandon the area in 1904.

Although the Kluane mining district remained virtually abandoned (in comparison with the area population in 1904) between 1905 and 1914, those prospectors who stayed, urged on by chances of new discoveries, were more actively engaged in mining their claims. As well as the 20 men on Bullion, several men were reported on Sheep and Burwash in 1906. In 1907, 14 men were working on Burwash, while at the same time Kluane City was reported to have had a population of 50 (Weekly Star [Whitehorse] 27 September 1907).

Mining activity increased more in 1908 than any previous year since 1904, as 50 men were seen on Ruby, Fourth of July, Bullion, Sheep and Burwash Creeks in mid-April (ibid. 17 April 1908) and 150 prospectors were reported in the district in July (ibid. 3 July 1908). During the following year, however, mining
activity in the area decreased once again, as no more than 20 men were recorded on Burwash while only a few men were reported on Bullion and Sheep Creeks. The Jacquot brothers were reported to be the only miners working in the district in 1910. They apparently took out close to $4,000 from Burwash, a figure which surpassed the annual output for the creek from any previous year. Twenty-one prospectors were reported working Burwash Creek and 5 men (Doc Sugden and two crews) mined Bullion Creek the following year. The population of Kluane City was also reputed to be in the neighbourhood of 90 in 1911 (Duerden 1971), a figure which had remained more or less constant since 1906. While little or no mining activity was reported in the district in 1912 and 1913, it is probably safe to assume that the number of miners in the district did not significantly differ from previous years.

Two other events occurring in the Kluane Region between 1905 and 1914 were the passage of the International Boundary Commission through the area in 1909 and again in 1913, en route to survey the headwaters of the White River.

By 1914 only $5,000 worth of gold had been taken from Bullion, $10,000 from Sheep (most of it mined by two men in 40 days) and $30,000-$40,000 from Burwash (Cairnes 1915). Most, if not all, of these amounts were derived from the post gold rush period in the district.

In 1913-14 the Chisana, Alaska gold rush inadvertently re-stimulated mining activity in the district. While the strike attracted most miners in the Kluane area, the stampede to Chisana also brought a number of prospectors through the district en route to the Chisana goldfields; some remained to prospect on
several creeks in the area (Cairnes 1915: 359). Ten men were recorded on Bullion, while 14 miners were reported on Burwash in 1914 (ibid.). Fourth of July Creek was also reported to have had more work done on it in 1914 than several years previously (Weekly Star [Whitehorse] 1 May 1914). A minor strike by Ed Benson initiated a small stampede to Bighorn Creek in October of the same year. Close to 40 claims were recorded, 22 of those by Indians (ibid. 23 October 1914). However, only Benson worked the creek with any degree of intensity in 1915. During the decade after 1915, mining activity in the Kluane mining district was more sporadic and depressed than it had ever been, with less than 10 prospectors working at any one time.

During the early 1910s many of those miners left in the area turned to guiding, hunting and trapping for secondary sources of income. Although these activities did not immediately replace placer mining during the mid 1910s, even after the small surge and subsequent decline in mining activity in 1914, they became more economically important to the Kluane district as a whole. However, during the late 1910s the shift in emphasis from mining to guiding, hunting and trapping became more evident. In 1916, only two men were recorded on Burwash, while a small number of trappers and big game outfitters were reported on the south end of Kluane Lake and headwaters of the White, respectively. Numerous hunting expeditions and only sporadic mining activity were conducted in the region during the late 1910s and early 1920s. Nine prospectors, the largest number of miners reported in the district since 1914, worked Burwash and several other creeks in the area in 1924. Several experiments to breed cattle and
grow grain were also attempted by the Jacquot brothers in 1924 (Weekly Star [Whitehorse] 24 March 1924). In 1924 Kluane City, whose population in 1921 was reported to be 42 (Duerden 1971), was finally abandoned and mining activity in the district ceased altogether.

Mountain climbers returned to the St. Elias Mountains in 1925 to climb Mt. Logan. Canada's highest peak was jointly ascended by an American-Canadian team sponsored by the Alpine Club of Canada (Wright 1978).

In 1927-28 the discovery of gold on Squaw Creek in the vicinity of Dalton prompted the most activity in the Kluane region since 1914 and perhaps 1908. Eighty-four claims were staked and there was a general consensus of opinion that the strike was the most important since the days of the gold rush (Whitehorse Star [Whitehorse] 15 June 1928). Six thousand dollars, $7,000 and $11,800 were taken out of three claims on Squaw Creek in 1928.

Although trapping activities remained more or less constant in the Kluane region during the 1920s and 1930s, hunting and mining activities increased dramatically over previous years during the mid 1930s. At least 14 major hunting expeditions from California and several large eastern American cities were reported in the area between 1935 and 1938 (Whitehorse Star [Whitehorse]) while the success of two miners working above the canyon on Bullion Creek in 1934 was reported to have led to considerable staking in the upper part of the creek in that same year (Bostock 1936: 6). Victoria, Burwash, Sheep and several other creeks in the Jarvis River country, as well, saw increased exploitation during this time. In 1936, Shorty Creek was reported
to be the scene of much mining activity (Whitehorse Star [Whitehorse] 25 September 1936) and Squaw Creek was reported to have over 100 operators on it (ibid. 29 January 1937). Unlike stampedes to the Kluane region in 1903-04, this increase in activity had its roots solely in the indigenous peoples of the area. No new or significant strikes were made to attract outside attention to the area. Most people reported mining in the district (such as Doc Sugden on Bullion in 1938 and the Jacquot brothers on Bullion and Burwash in 1935 and 1938 [ibid. 15 March 1938, 19 August 1938]) were prospectors and outfitters who had been in the area before or had lived in the Kluane region for years.

Mountain climbing and exploration also experienced a minor resurgence in the Kluane region during the 1930s. The National Geographic Lowell glacier expedition, led by Bradford Washburn, mapped an uncharted area of over 1,000 miles between the Alsek and Alaska Boundary in 1935, while the Walter Ward climbing party ascended Mt. Gibson and Mt. Steele in the same year. This event heralded the last time in which aircraft were not used in climbing expeditions of the St. Elias Ranges (Wright 1978). Ascents of Mt. Bence, Equinox, Luciana and Wood were also attempted during the 1930s.

Hunting and mining were still being conducted in the Kluane region in the early 1940s. By the mid 1940s less than 10 miners were reported in the Kluane mining district, with only Sheep, Bullion and Burwash Creeks being worked. A few scattered individuals were also reported prospecting west of Burwash at the same time (Bostock 1952).
Perhaps the most significant development to occur in the Kluane region during the 1940s was the building of the Alaska Highway in 1942. In response to the possibility of Japanese attack in Alaska, the U. S. Army Corps of Engineers overcame many engineering problems in the construction of a road from Haines to Fairbanks, Alaska. The access to the Kluane region afforded by the highway was immediately utilized by many people with scientific research and planning interests (Wright 1978). Some of the more noteworthy among these were James Smarts' assessment of the area for potential park purposes in 1943, and Fredrick Johnson's archaeological survey of the Alaska Highway, which yielded the first evidence of prehistoric man in the area, in 1944. The Federal government, also in 1942, passed an order which protected a reserve of over 10,000 square miles in the Kluane region. However, mineral exploitation was still allowed and mining rights were still issued.

In an effort to test the agricultural potential of the northern territories, the government established the Pine Creek Experimental Farm in 1945. The project, which was designed to determine the feasibility of growing crops and raising livestock in the area, met with only minimal success. Mt. Wood, Walsh, Tempest and Vancouver were also ascended for the first time during the 1940s.

With the completion of the Alaska Highway in 1942, Haines Junction became the main center of activity in the Kluane region and by the early 1950s it was incorporated. Numerous mountain climbing expeditions to Mt. Logan and Mt. Elias, as well as several other peaks in the Icefield Ranges, were conducted during
the late 1950s. At the same time, Bullion and Shorty Creeks continued to be worked by a few men with large bulldozers and drag lines.

Some of the more significant developments occurring in the Kluane region during the 1950s were the construction of an oil pipeline from Haines to Fairbanks, Alaska, in 1955; the Canadian Infantry's occupation of Kluane Lake for training activities in 1954, and the British Columbia and Yukon's Chamber of Mines objection to the possible creation of a national park in the Kluane region in 1954. Apparently the Chamber of Mines felt that the establishment of the park, and subsequent termination of mining activity within its boundaries, would adversely affect the mining industry of the Yukon.

Mountain climbing became a predominant activity in the Kluane region during the 1960s. One of the more notable expeditions was the first attempted assault of Mt. Kennedy, by Senator Robert Kennedy in 1967. In recent years many successful ascents of Mt. Logan and several other high peaks in the St. Elias Mountains have been made.

Although Bullion and Sheep Creeks continued to be worked sporadically during the 1960s, the Johobo copper mines, near Sockeye Lake, were the principal mining operation in the park between 1960 and 1963. Also during the 1960s, the ongoing Icefield Ranges Research Project was created to monitor climatological and glacial conditions in high elevations in the interior of the park.

In the early 1970s, in anticipation of the Federal government establishing a national park in the Kluane Game Sanctuary, mining
activity on Bullion, Sheep and several other creeks in the Park increased once again. In 1972 Kluane National Park finally became a reality and mining activity was terminated within its boundaries. Although Burwash is still worked from time to time, tourism has become the major industry in the Kluane region today.

Conclusion

Although not mutually exclusive, historic land use and settlement within the Kluane region and specifically, Kluane National Park, can be broadly subdivided into: exploitation of mineral resources; exploitation of faunal resources; recreational activities, and exploration/scientific research.

The initial period of mineral exploitation and concentrated settlement in the Kluane region took place in the "Last Chance Mining District" (in the southeastern corner of the park) in 1898-99. A general stampede of perhaps less than 100 men to Mush Creek represents the largest aggregate of people in the area during this time. Prospecting activities were to remain virtually nonexistent in the district for the following three decades. The next, and perhaps most significant event in the mining history of the Kluane region, occurred in 1903-04, when gold was discovered on numerous creeks in the Kluane Ranges and foothills, 100 km northwest of the abandoned "Last Chance Mining District". These discoveries, which were reported to have brought as many as 1200-2400 or more prospectors to the area, caused the largest aggregation of people ever assembled in the Kluane area at any one time. However, for a variety of reasons just presented, the population
of the Kluane mining district rapidly declined the following year. Kluane's mining industry between 1905 and the mid 1930s was depressed and sporadic, with only minor increases of activity in 1908, 1914-15 and 1927, and decreases during the early and mid 1920s. Mining activity increased dramatically in the middle and late 1930s. While the Johobo copper represents the largest single mining operation in the park after 1940, sporadic placer mining, employing heavy bulldozing equipment, on Sheep, Bullion, Shorty and Burwash Creeks characterized mineral exploration in the district up to 1972. In 1972, in anticipation of the official designation of Kluane National Park and subsequent termination of mining activity within its boundaries, placer mining once again accelerated, finally to be terminated the same year.

Trapping, hunting and outfitting (the guiding and supplying of big game expeditions) began as important, albeit secondary, sources of income to prospectors in the early 1910s. These activities, especially outfitting, replaced mining as major economic pursuits in the area during the late 1910s and early 1920s. Outfitting, like mining, increased substantially during the mid 1930s. Although uncertain, the acceleration of these activities may have been a function of economic depression (see Chapter 5 for discussion). After 1942, trapping, hunting (except for natives) and outfitting were restricted to areas outside the reserve.

Following the initial ascents of Mt. St. Elias between 1885 and 1897, no climbing expeditions were conducted in the Icefield Ranges until 1925. Mountain climbing also experienced an increase during the 1930s. From this time up until the present, climbing
and wilderness backpacking dramatically grew as recreational sports in the Kluane area.

Although Harper approached the Kluane area in 1874, Glave and Dalton's 1890-1891 expedition represents the first real attempts to explore the interior of the Kluane region. With the construction of the Dalton Trail and the Alaskan-Canadian boundary disputes, numerous surveying parties explored or passed through the Kluane region in the late 1890s. Concomitant with the stampedes to the Kluane district in 1903-04, geologists continued topographical surveys of the area, while surveys of the Alaska-Yukon boundary near the headwaters of the White were conducted in 1909 and 1913. Except for a few scattered occurrences, from this time up until the early 1940s exploration, survey and scientific research remained dormant in the Kluane region. The planning and construction of the Alaska Highway restimulated survey and research in the area after 1942, as did the possibility of establishing a national park in the area. Exploration and scientific research reached a climax in the 1960s when the Icefield Ranges Research Project was established, and extensive planning for Kluane National Park was initiated.
This chapter introduces and describes in some detail 66 historic archaeological resources recorded during the 1978 historic site survey of Kluane National Park. The locations of the sites or, more specifically, site areas, are presented in Figure 2. Methods of survey, data collection and site presentation are detailed in the first part of the chapter; these are then followed by the presentation of archaeological sites.

Sampling Design and Survey Methods

Having no previous knowledge of the natural or cultural history of Kluane National Park and very little time with which to develop a research design, no a priori sampling strategy was implemented. After talking with superintendent Jim Masyk, a number of wardens and other informed individuals, it soon became apparent that most of Kluane's archaeological sites, specifically those related to gold mining activities, were concentrated in and around the two areas in the park slated for development--the Slims River Valley and the Mush-Bates Lakes-Alder Creek Corridor and adjacent areas. A few park wardens, Larry Tremblay in particular, having flown over most unglaciated areas of the park during the past seven or eight years, were quite confident that they knew the locations of most, if not all, log cabins and historic sites in these and other remote areas in the park. As
Figure 2. Kluane National Park: location of historic site areas.
a result, it was felt that with information supplied to the project by the wardens, together with the assistance of a helicopter provided for the project by the park at their convenience, we could record and photograph most, if not all, known archaeological sites in Kluane National Park within a two-month period. The ultimate goal for each site was to determine its age and function. A site's age was usually determined by recovering and analyzing a number of datable diagnostic artifacts, while site function was inferred, by on-site analysis of its features and artifacts.

Sites occurring in close proximity to each other in spatially defined areas, such as creeks or lake shores, were first surveyed by helicopter in an effort to record their location on a map. A base camp would then be established in an area where most sites were easily accessible by foot. The project then proceeded to map, photograph and record each site on foot. Archaeological sites in the more remote and inaccessible areas of the park were recorded with the aid of a helicopter. This procedure normally involved landing near the sites and recording them, while the helicopter waited. It was felt that because of the considerable temporal and financial constraints, and the energy demands of getting a three-man survey team to these remote areas on foot, the helicopter would be the most economical way to record the sites. It was soon discovered that the combination of both foot and aerial surveys in areas having more than one site, especially where vegetation was dense, proved to be a most adequate recording procedure, as some sites not usually seen from the air were recorded on the ground and vice versa. Although little confidence
can be placed in the statement that most of Kluane's historic archaeological sites were recorded during the survey, the project may have approached this goal. However, further probabilistic sampling procedures, perhaps based on a stratified random sampling design, are required before the validity of this proposition can be determined.

Cataloguing System

In accordance with Parks Canada site cataloguing procedures and for clarity of presentation, sites occurring in geographically defined areas such as creek drainages and lakeshores are presented under the name of that area (i.e., Bullion Creek, Mush Lake). Individual sites within these areas are given an additional designation to distinguish them from other sites in the same local area. For example, 14 sites, numbered 10y1 through to 10y14, were recorded under the name of Bullion Creek (10y), while 6 sites numbered 11y1 through to 11y6 were recorded under Sheep Creek (11y).

Site Description

Each site is described with respect to its age, function and location. Site descriptions are divided into three sections—a general site description, a discussion of artifacts and their potential for dating, and conclusions regarding the age and function of each site.

Site narratives usually entailed a description of all prominent site features and artifacts. Their location within the
site and spatial relationship to other features on the site were also noted. Artifacts are discussed only in terms of their potential for inferring the age of a site, or occupation of a site. Time-specific attributes on artifacts (i.e., end seams on tin cans, valve marks on bottles) are usually the only artifact attributes described. It is important to note that a date generally refers to a time when an artifact was manufactured and not necessarily the time it was used or its contents consumed. Conclusions normally include a statement regarding the age and function of the site. A map of each site and, where appropriate, photographs and figures of all pertinent features and artifacts, are presented.

Three types of features, in varying degrees of preservation, were observed to be the predominant dwellings or living accommodations in the park. To aid the reader in his perusal of the site description section of this chapter, log cabins were defined by the presence of roofs, or an abundance of logs; tent cabins (tent frames) were distinguished from cabins by the absence of roof support logs, and having less than five logs laid on top of each other in a rectangular arrangement; tent foundations were identified by a single row of logs arranged in a rectangular shape with no other logs in association. A number of historic artifacts and features not directly recorded on the survey are described at the end of the chapter.

Maps

The location of each site within each locally defined site
area, and the spatial relationship of these areas with respect to the rest of Kluane National Park, are presented on a map at the beginning of each new descriptive section, for convenience and quick reference.

Most archaeological sites, with few exceptions, were mapped, photographed and recorded on the ground. However, because of certain constraints (specifically, the time limits imposed upon the survey by the helicopter's fuel capacity) several sites were rather hurriedly recorded from the air. Where this was done prominent site features and artifacts are described and the overall site area estimated. Sites recorded on the ground, on the other hand, were sketched. These sketch maps, which accompany the description of each site, make no pretenses to be accurate. Time limits, the purpose and goals of the survey, and the restrictions of travelling on foot in the rugged mountainous terrain of Kluane National Park did not warrant the use of precision mapping instruments and techniques. The function of these maps is to indicate the approximate size of the site, its associated features, and the general spatial relationship between and among major cultural and natural features within the site area.

Distances between features and prominent artifacts, and between features and major topographic landmarks, were usually paced off by foot or visually estimated. A north arrow, which indicates the direction of true north, and a metric scale accompany all maps.
Artifacts

Time and the limitations imposed upon the survey by what could be conveniently carried while on foot, as well as the weight and size restrictions of the helicopter, reduced the quantities of artifacts that could be recovered from any one archaeological site. Consequently, an attempt was made to collect only those cultural materials which could aid in dating a site. Artifacts considered as indirectly datable or time-specific included such items as ceramics, tin cans, bottles and nails with, in descending order, ceramics providing the greatest and nails the least potential for dating a site. In a few instances, field personnel were able to collect cultural materials which could directly date a site or occupation of a site (i.e., newspapers, magazines). There was a systematic effort to recover only a limited number (usually one or two) of most types of datable materials from each occupation represented on a site. That is, rather than collecting each tin can or bottle at a site only one or, in a few instances, several of each type of datable diagnostic artifact from each occupation was recovered. This method potentially enabled sites to be dated with a minimum amount of site disturbance and inconvenience in transporting artifacts from site location to site location.

Archaeological Site Presentation
Bullion Creek

Bullion Creek is located on the north side of the Slims River Valley 8.5 km southwest of Kluane Lake. A combination of foot and aerial survey permitted the recording of 14 archaeological sites representing gold mining activity relating to the 1904 gold rush, the 1930s and the near-present (Figure 3). Most sites were located on the banks of Bullion Creek at or near its mouth. Although Bullion Creek was staked from the mouth to its source in 1903-04 (Daily Evening Star [Whitehorse] 1 March 1904), evidence of this early gold rush activity was restricted to only the mouth and south end of the creek. Later mining activity, with few exceptions, was noted only on the central and upper headwaters of the creek. Although not yet conclusively demonstrated, flooding and later large scale mining operations, characterized by heavy bulldozing equipment, may have destroyed much of the earlier 1904 gold mining evidence on the creek.

10yl

Site 10yl is located at the mouth of Bullion Creek, 2.5 km north of the Slims River. The seven recorded features on this site include a log cabin, a root cellar, a possible cache, a lean-to, a campfire, a bench seat and the outline of a three-room log foundation (Figure 4). The log cabin is approximately 6 m long and 5 m wide and is in fair condition (Figure 5), as the roof has caved in. Three windows, a door and a small cellar in the center of the cabin's planked floor, under the collapsed roof, were recorded. A root cellar, which was once supported by several
Figure 3. Location of Bullion Creek sites.
Figure 4. Map of 10yl.

wooden planks, had been dug into the hill 4 m northeast of the log cabin. Although its exact function remains uncertain, the three closed-in walls indicate that it was built to accommodate or store equipment and supplies. A lean-to log structure, approximately 3 m wide and 4.5 m long, 18 m east of the log cabin, may have once functioned as a platform, cache or whipsaw stand. Only the foundation or sill logs remain of what was once a three-room structure, 23 m east of the log cabin. The lack of any logs associated with the feature seems to indicate that this structure may have been a tent cabin (frame) rather than a log cabin. Its contemporaneity with the construction of the log cabin and other features on the site is probable, but uncertain, given our present knowledge of the site. A wooden bench was
Figure 5. Log cabin on 10y1.

Figure 6. Rough-dressed plank from log cabin bearing 1904 date and other inscriptions.
located 3 m west of the log cabin; the ends were notched into two trees and subsequently covered by tree growth, suggesting that a considerable period of time has elapsed since its construction.

**Artifacts/Dating.** Two separate major occupations of the log cabin and associated features are indicated by several torn pages from a Saturday Evening Post magazine and a whipsawn plank. The word "building" and a date of 1904 are clearly identifiable in white paint on the plank (Figure 6), while other words and a possible etching are not so easily decipherable. Although there are no dates on the two recorded pages of the Saturday Evening Post magazine, the style of car in the Studebaker advertisement suggests a date of 1935 ± 3 years for the magazine, while a Campbell's soup advertisement displaying a vacuum packed sanitary can dates the magazine to the post 1922 period of tin can manufacture (see Appendix A for discussion). Recent camping activity, evidenced by a campfire and a number of modern tin cans, was also noted within site boundaries.

**Conclusions.** The log cabin and most associated features were probably constructed in 1903-04 during the initial period of intense gold mining on Bullion Creek. Later occupation of the log cabin and site does not seem to occur until the mid 1930s. Recent camping activity (probably by hikers) was also recorded.
This site, which is approximately 1.5 km east of 10y1, seems to represent the largest and most heavily populated site recorded in the 1978 survey (Figure 7). Twenty-three identifiable features, most of which were root cellars, platform caches and tent frames or log tent foundations, as well as a three-hole privy, attest to this. Of considerable interest are the privy, the large log foundation, the double room log cabin, the tent cabin and adjacent log foundation, a similar tent cabin with an adjacent rectangular outline, and two log piles and two rectangular moss-covered areas, on the east side of the small dry creek that divides the site.

The 2 x 3 m, unpartitioned, three-hole privy on the west side of the site is not only the site's most visible structure but it also seems to have withstood the ravages of time much better than any other feature, as it is in excellent condition (probably owing to its fine craftsmanship) and is completely functional (Figure 8). The condition of the privy seems to suggest the builders had priorities in terms of the amount of energy employed in the construction of basic living facilities. The fact that the privy contains three holes suggests that a considerable population lived at the site at one time. However, the lack of graffiti and use-wear around the holes and the relatively small accumulations of fecal matter seem to indicate that the site was not occupied for very long by the number of people it was intended to accommodate. The privy's unpartitioned interior also suggests that the people who built the privy were either very sexually homogeneous or very informal, or both. The large log foundation, 20 m south of the privy, represents the largest
Figure 7. Map of 10y2.
Figure 8. Three-hole privy on 10y2.

Figure 9. Tent cabin on 10y2.
recorded feature on the site. The dimensions--12 m x 6 m--seem
to indicate that it was a foundation for a large tent-like
structure, possibly a mess hall, dance hall, or bunkhouse. The
4 m x 8 m double room log cabin, 30 m southwest of the large log
foundation, appears to be the only log cabin on the site.
Although the roof has fallen in, the walls are still intact. One
large, rectangular tin bucket was recorded in each room of the
structure. The tent cabin and adjacent log foundation, 10 m
southwest of the privy, probably represent two different types of
living accommodations--a semi-permanent tent frame with floor
boards, log walls and built-in entrance (Figure 9) and a temporary
tent structure with a log foundation. Numerous hole-in-top tin
cans and broken bottles were recorded within the smaller tent
frame's interior suggesting perhaps a kitchen area. A smaller
tent cabin with an adjacent rectangular outline, 20 m southwest
of the privy, is similar to the last feature except that it is in
relatively poorer condition indicating, perhaps, a difference in
function and/or craftsmanship. Two cut and peeled log piles, one
of which is illustrated (Figure 10), seem to indicate that these
logs never served the function they were intended for, before the
site was abandoned. Although uncertain, two rectangular moss
covered areas, on the west side of the site, 30 m and 45 m west
of the privy may be the remains of sod houses.

Five root cellars, four rectangular log arrangements (which
may have served as foundations for tents), two collapsed lean-to
structures (whipsaw stands?) and a standing platform cache, as
well as a grinding wheel bench (Figure 11), numerous whipsawn
planks, a collapsed lean-to with two associated wash basins
Figure 10. Cut and peeled log pile on 10y2.

Figure 11. Grinding wheel bench on 10y2.
Figure 12a. Collapsed lean-to with associated wash basins on 10y2.

Figure 12b. Close up of wash basins on 10y2.
(Figure 12), a pack saddle, a whipsawn wooden box and many fragmented and complete bottles and ceramic tablewares, were also recorded on the site.

Artifacts/Dating. Seven ceramic tableware items, four glass bottle fragments and one hole-in-top tin can were collected from the site. One complete white earthenware plate manufactured by "Charles Meakin of Hanley, England" suggests the age of the site to be 1890+ (Godden 1964: 427). One whole saucer and 25 other white earthenware sherds representing three tableware items, manufactured by "J. and G. Meakin of Hanley, England", also date the site to some time after 1890 (ibid.: 427). Associated with these ceramics were two other white earthenware plates. Although their makers' marks were partially present, the manufacturer and date of manufacture could not be identified (see Figure 13 for ceramic tableware makers' marks). Three turn-moulded food and liquor bottle fragments, one of which was produced by the Houtart system of manufacture (Alyluia 1973: 36), date the site somewhere between the 1870s and 1920s (Toulouse 1969: 532) (Figure 14). A cylindrical hole-in-top food can with lapped end seams and locked side seam suggest the site is no older than the late 1890s or early 1900s and no younger than 1922 (see Appendix A). Nine other artifacts collected by Kluane National Park interpretive staff are also consistent with the above age estimates. These include two complete turn-moulded liquor bottles, one rusted gold pan and a set of six recently broken white earthenware plates manufactured by Doulton of Burslem, England between 1891 and 1902 (Godden 1964: 213) (Figure 15).
Figure 13. Ceramic Tableware from 10y2; makers' marks and dates of manufacture.
Figure 14. Food and liquor bottles from 10y2.
Figure 15. Gold pan, liquor bottles and ornately decorated ceramics from 10Y2.

Figure 17. Two storey log cabin on 10Y3.
Conclusions. This site appears to have been a large tent camp briefly occupied by a substantial number of people some time during the late 1890s or first decade of this century. Even though a considerable amount of time was spent in recording this site, artifacts characteristic of earlier or later time periods were not observed. The tent camp probably represents one of the 10 encampments reported on Bullion Creek in the 7 April 1904 edition of the Whitehorse Daily Evening Star. Because of its size and location near the mouth of Bullion Creek the possibility that 10y2 may represent the site of Bullion City should also be considered.

Concomitant with historic documentation (Daily Evening Star [Whitehorse] 14 June 1904), a number of artifacts and facilities including numerous complete ceramic dishes, wash basins, a gold pan, two log piles, a privy and other cultural materials, and their distribution within the site, suggest that 10y2 was rapidly abandoned (see Chapter 6 for discussion).

10y3

Site 10y3 is located on Bullion Creek approximately 6 km northwest of 10y1. It is immediately southeast of the steepest canyon on Bullion Creek (Figure 16). Two features—a two-storey log cabin and an outhouse—are the most visible cultural remains on the site. Two piles of boards, a sleigh and an accumulation of artifacts were also recorded. The log cabin is in fairly good condition, as the walls are well chinked with mud and the roof is still in place, although it seems to be rapidly deteriorating (Figure 17). The interior of this 4 x 6 m cabin displays a
planked floor on both the first and second stories, as well as a stove support, shelves and china cabinet, stairs, a root cellar and numerous tin cans (Figure 18). A walled tent frame, 2 x 3 m, is attached to the northwest wall of the log cabin. A wooden sleigh with metal runners was recorded immediately adjacent to the southeast wall of the cabin. A planked outhouse, on the verge of falling over, was observed 8 m southeast of the log cabin. Two small sawhorses, an improvised wheelbarrow, several tin cans, and a pile of boards were located 8 m northwest of the cabin. Two piles of boards in front of the cabin on the creek bed probably represent the remains of flumes or sluice boxes.

**Artifacts/Dating.** A bent wire nail dates the construction of the log cabin to the post machine-cut era of nail manufacture, some time after the late 19th century. A double crimped end and
Figure 18. Interior of two storey log cabin on 10y3.

Figure 21. Remains of Bullion City Hotel on 10y5.
side seamed Schillings sanitary coffee container date an occupation of the site to the post 1922 era of can manufacture, although the trade mark on the can is characteristic of a period around 1885 (Toulouse 1969: 52). A Chicago-based Scandinavian newspaper, Skandinaben, with a date of 27 November 1936, is probably the best estimate of the site's antiquity.

Conclusions. The coffee can, the relatively good condition of the log cabin and, more specifically, the 1936 newspaper suggested that an occupation of the site occurred during the mid 1930s. Although it is uncertain whether the construction of the log cabin occurred at this time, it is highly probable; artifacts of earlier or later time periods were not recorded on the site. The well-constructed two-storey log cabin was probably built in the middle or late 1930s by a gold miner or group of miners who were willing to invest a considerable amount of time and effort in gold mining activities. The possibility that this site represents Olaf Wickstrom's mining operation of the middle 1930s should be considered in light of the Scandinavian newspaper and the fact that he was reported working on this area of the creek during this time (Bostock 1952).

This site is located approximately 1.5 km southeast (downstream) of 10y3, on the east side of Bullion Creek (Figure 19). Two features, a 4 x 5 m log cabin in good condition and a possible mining pit, 10 m northwest of the cabin, were the only observable cultural facilities on the creek bank. Six tailing piles, however, were recorded on the creek bed immediately south of the cabin and
are probably associated with the above features. Unlike the V-notched corners of the two-storey log cabin at 10y3 and most other cabins in Kluane National Park, the cabin's corners are reminiscent of the Hudson Bay or post-on-sill style of log cabin construction. One noticeable difference, however, is that vertical corner logs are nailed rather than notched to the horizontal timbers. Two glass window panes, two beds, a root cellar, two tables, a shelf, a bench seat and a stove pipe, as well as numerous tin cans and boxes were recorded within the interior of the cabin. Two boxes, one bearing the brand name Swift, the other Nabob-Taylor and Drury Store Whitehorse, were among those noted in the cabin. Although the function of the
large depression northeast of the cabin is unclear it probably represents a gold mining pit or shaft.

**Artifacts/Dating.** The Nabob baking powder can indicates that an occupation of the site occurred some time after 1922; it is characteristic of the post 1922 period of can manufacture. The box from the Taylor and Drury Store in Whitehorse dates to after the late 1900s. Probably the best estimate of the site's age comes from a part of a calendar with no month or year indicated on it. Although specific calendrical information is lacking, the italicized number "1" under Wednesday suggests that the site may have been occupied on July 1st in 1925, 1931, 1936 or 1942. The probability that the site was inhabited in 1936 is greater than the other alternative dates, when one considers that there was an increase in mining activity on Bullion in the mid 1930s and that site 10y3 was also occupied in 1936.

**Conclusions.** This site appears to have been occupied some time after 1922, probably during the 1930s, by two or possibly three gold miners, or perhaps a family of three (indicated by the sleeping accommodations). The significance of the different style of log cabin has yet to be determined.

10y5

This site is located 1 kilometer west of 10y2 and 300 metres east of 10y1, 2.5 km north of the Slims River-Bullion Creek junction. Four features—a root cellar, a corral, a picket fence and a large log structure—were recorded on the site (Figure 20). All features, with the exception of the root cellar, 20 m northeast of the log cabin, appear to be overlain by 50-100 cm
of creek silt, as the first storey of the large log structure is 1.5 m high and only the top 10 cm of the corral and picket fence in front of the cabin are visible. The 15 x 7 m cabin was unquestionably the largest log structure recorded during the survey (Figure 21). A number of lateral floor joists or cross beams resting on top of the cabin and an abundance of structural support logs above the first storey logs, in the southeast corner of the building, seem to indicate that the structure was designed to accommodate a second storey at one time. However, no evidence was found, such as remains of a roof, roof supports, or more second storey logs to indicate that the building was ever completed before the site was abandoned. Even a test pit in the southwest corner of the structure failed to locate any evidence of a second storey. Although the cabin walls are in relatively poor condition
and deteriorating rather rapidly (as is borne out by the fact that in the intervening time period between the first and second visits to the site--approximately 3.5 weeks--creek silt washing down from uphill pushed the structure's vertically standing walls over on an acute angle), decay probably does not account for the apparent lack of evidence of a second storey.

Artifacts/Dating. Taken from the log structure were three wire nails, whose bulbous and eccentrically aligned heads (with respect to the shank) date this feature to the early period of wire nail manufacture, around the late 1890s or early years of the 20th century (see Nelson 1968: 11 for discussion). No other datable artifacts were recorded on the site.

Conclusions. Although the exact function of the large two-storey log structure has not been determined it is probably safe to assume that it was the Bullion City Hotel reported to be under construction in the 14 May 1904 edition of the Daily Evening Star (Whitehorse). Its location at the mouth of Bullion Creek and an estimated age from the nails, as well as the unique size, two storeys and large entrance, are supportive of this interpretation. Like 10y2, this site appears to have been abandoned before a number of features became functional.

10y6

Site 10y6 is located about 1 km northwest of 10y1, on the west side of Bullion Creek. Two partially collapsed 3 x 3 m log structures, which appear to be tent cabins, were the only features recorded on the site (Figure 22). The northernmost of these is
in poorer condition than the other, owing to its having shifted significantly downslope from the original location.

**Artifacts/Dating.** While evidence of a key tab opener on a badly corroded rectangular hole-in-top tin can date an occupation of the site some time after 1895 (May 1938: 221), the lapped end seams and locked side seams date the site to the first decade of this century (see Appendix A). A wire nail, characteristic of the early wire nail manufacturing period during the late 1890s and 1900s, with a bulbous and eccentrically aligned head, was also recorded. A thick layer of underbrush covered most of the site and, as a result, no other datable artifacts were observed.

**Conclusions.** These artifacts indicate that the features were occupied in the first or perhaps second decade after 1895. Although not yet conclusively demonstrated, this site is probably
representative of the 1904 stampede to Bullion Creek or later gold mining activity during the first decade of the 20th century.

10y7

Site 10y7 is located about 500 m northwest of 10y6, on the west side of Bullion Creek. It is situated on the creek bank directly above two tailing piles (Figure 23). Only two rows of three logs, forming a 4 x 6 m rectangle, remain of what may once have been a tent frame. A rectangular depression or root cellar was visible in the center of this structure. Two meters north of this feature a number of small, bound logs, possibly representing the roof of a root cellar, were recorded. Directly adjacent to

![Figure 23. Map of 10y7.](image)
the south side of the tent frame a small, rectangular outline, which may be the remains of what was once an outhouse or shed, was observed. All three features have been partially destroyed by later road construction activity.

**Artifacts/Dating.** No reliable estimates concerning the site's antiquity can be offered at present, as no datable artifacts were observed in direct association with this site.

**Conclusions.** Although the age of the site cannot be estimated, it is highly probable that it was occupied before the construction of the road. The possibility that the site relates to the 1904 Kluane gold rush should be considered. It is uncertain whether the two tailing piles on the creek bed are associated with the log features or the road, for that matter.

10y8

Site 10y8 is located about 150 m northwest of the 10y7 on the west side of Bullion Creek (Figure 24). Six features, including two possible tent frames, a garbage dump, an outhouse, a large cross and a small tripod of logs, were recorded on the creek bank, while three tailing piles were recorded in front of these features on the creek bed. Only two vague 4 x 4 m and 6 x 4 m outlines remain of what may have once been tent frames. A large log, partially covered with dirt, in the larger outline seems to support this interpretation. The garbage dump adjacent to the northernmost tent frame is a rather flat area strewn with bottles, cans, shoes, boxes, bed springs and a collapsed table. Although uncertain, the large cross 5 m west of the garbage dump may represent a grave marker. The small privy 3 m northwest of
the garbage dump is made of boards and is in relatively poor condition. The function of the small tripod beside the cross is also not known. As well as these features, between 50 and 60 tin cans were observed lying on the surface in an area immediately southwest of the 4 x 4 m tent frame. It is uncertain whether the tailings are associated with the features on the bank.

Artifacts/Dating. Two bottles, one made by the Dominion Glass Company, the other by the Carr-Lowrey Glass Company, date the site to the post 1913 era of Dominion glass manufacture and to the post 1920 era of Carr-Lowrey glass production (Toulouse 1969: 135, 154), while a lapped and soldered end and side seamed tin can argue for a relatively early occupation of the site. However, a solder-drop vent hole in the end of the can seems to indicate that it may have functioned as an evaporated or condensed
milk container, suggesting a later and perhaps broader time range for the can, since lapped seams and solder-drop vent hole milk cans are still being produced today (see Appendix A for discussion). Yet, the way the can was opened suggests that it was used as a food rather than a milk container. However, this may be the result of secondary reuse of the can. In any case, the tin can is probably not a reliable indicator of the site's age.

Conclusions. This site probably represents a mining operation dating to some time after the early 1920s. Although the milk can is probably not early, it is not late either, as the large drop of solder on the vent hole is not characteristic of recent milk can manufacture. Unlike most other mining operations recorded in Kluane National Park, a number of children's and women's shoes seem to suggest that this was a family as opposed to a male-oriented mining operation.

10y9

Site 10y9 is a wooden hillside flume located directly across from 10y10 and 10y11 on the east side of Bullion Creek (Figure 25). It runs for approximately 1.5 km at an average height of about 30-40 m above the creek (Figure 26). The lowest point of travel occurs in the most northerly section, 0.5 km east of 10y12. The flume is in relatively poor condition, as several sections have either collapsed or disappeared altogether.

Artifacts/Dating. Access was not gained to this site. As a result, no artifacts which could aid in determining its age were collected. However, the deteriorated condition suggests a considerable antiquity.
Conclusions. The location of the flume, with respect to its position on and above the creek, and its length, as well as its condition, leave little doubt that this feature represents the remains of W. L. Breeze's and the Bullion Hydraulic Company's hillside and bedrock flume, built on Bullion Creek in 1905 (see Chapter 3 for discussion) (also see Frontispiece).

10y10

Site 10y10 is located on the west creek bank, directly across from the most southerly section of the flume on Bullion Creek (Figure 27). This site is represented by a 4 x 7 m irregularly shaped collapsed log or tent cabin (frame) on the creek bank and three tailing sites on the creek bed. The interior of the major structure contains a great deal of dirt and many
Figure 26. Remains of Bullion Hydraulic Company's wooden hillside flume on 10y9.

Figure 31. Metal sluice box with associated mining equipment on 10y13.
logs. A window sill cut into the top of this four log structure seems to indicate that it was a log cabin, rather than a tent frame. The smaller adjoining structure is made of whipsawn boards and small logs, and may be the remains of a tent frame or a porch. However, it is difficult to recognize because of its poorly preserved condition.

**Artifacts/Dating.** A large, cylindrical hole-in-top can lid that has been sealed with a large amount of solder dates the occupation of the site to well before 1922. A smaller hole-in-top can with lapped end seams and a locked, exterior-soldered side seam also dates this feature to some time after the early 1890s and before 1922. Four wire nails with a bulbous and eccentrically aligned head fit the description of the earlier type of wire nail produced in the late 1890s and early 1900s.

**Conclusions.** This site was probably built and occupied during the 1900s, possibly in 1904 or the later years of the first
decade. Its temporal association with the tailing piles which appear to have been machine made (bulldozed) is questionable, whereas its contemporaneity with the flume directly across the creek is more probable. The possibility that the site represents the accommodations of W. L. Breeze and the Bullion Hydraulic Co. should be considered.

10y11

Site 10y11 is a fairly recently occupied site, located about 600 meters northwest of 10y10 on the west side of Bullion Creek (Figure 28). A boarded and tarpapered cabin, a boarded outhouse 7 m southwest of the cabin, a purple panel truck, a pile of 27 oil drums 15 m west of the cabin, as well as a number of rusted tin sheets, were recorded on the site. The interior of the cabin is in excellent shape and contains three beds, chairs, tables, a sink, stove and cupboards, as well as numerous

Figure 28. Map of 10y11.
kitchen artifacts.

Artifacts/Dating. The style of the panel truck, 10 m west of the cabin, dates to around the early 1950s. The most recent signs of occupation in the cabin are a number of magazines and a calendar dating to 1972. The cabin has apparently been even more recently occupied by backpackers and scientific research teams (Larry Tremblay, pers. comm.).

Conclusions. This site was probably built and occupied in fairly recent times and has been used periodically after its initial abandonment by people not involved with or interested in gold mining. Its temporal association with the tailings in front of the cabin is probable but not known at this present time.

10y12

Site 10y12 is located 1 km northwest of 10y11 and about 4 km northwest of 10y1 on the west bank of Bullion Creek (Figure 29). A root cellar, an outhouse, a bed frame, a barrel heater or furnace, a clothesline and a children's play swing were recorded at this site, as well as a foot trail and a gravel road. Living accommodations, such as cabins or tent frames, were not found on the site.

Artifacts/Dating. No artifacts with the exception of several modern wire nails which may aid in determining the age of the site were recorded. However, the nails and the relatively good condition of both the root cellar and the rope on the swing do not argue for an early occupation of the site.

Conclusions. Although not yet substantiated, road construction and further mining activity may have destroyed
(obliterated) any signs of living accommodation or garbage areas. Albeit not proven, this site probably represents an occupation dating to some time after 1930. The children's swing and perhaps the clothesline suggest that it was a family rather than a male-oriented gold mining operation.

10y13

Site 10y13 is located immediately above the steep canyon on Bullion Creek 1.5 km upstream from 10y12 (Figure 30). A small 2 x 2 m tool shed, an outhouse 20 m west of the tool shed, a 4 x 2 m plywood shack 10 m northeast of the privy, a metal junk pile on the creek bed and a 12 x 1 m metal sluice box, were recorded on the site. The sluice box immediately in front of the tool shed contained shovels, iron pipe, rifts, oil drums,
mesh screens, small wooden sluice boxes and other associated mining equipment (Figure 31) and represents an excellent example of recent small scale gold mining activity.

Artifacts/Dating. No artifacts, with the possible exception of a shovel with a riveted handle, were observed to indicate that the site is any older than late 1950s or 1960s, as most artifacts were recent in appearance. This site was apparently occupied up until the government purchased the claim in the early 1970s.

Conclusions. Site 10y13 was probably occupied during the 1960s by a small mining outfit. The large number of artifacts and mining equipment stored in the sluice box suggests that the miner(s) who had worked the site had planned to return but failed to do so (see Chapter 6 for discussion).
Site 10y14 is located 400 m east of 10y5 in a dense willow thicket midway between 10y5 and 10y2. Three 4 x 3 m tent frames and a standing platform were recorded on the site. These features were discovered by Brent Liddle (park naturalist) in a dense willow thicket several weeks after the termination of the survey in September.

**Artifacts/Dating.** Although we did not directly record the site, Brent Liddle (pers. comm.) reports that several hole-in-top tins and a wooden bench were the only artifacts he observed. The cans date to some time before 1922. However, not having directly inspected the cans, estimates of how long before 1922 cannot be rendered.

**Conclusions.** The tent frames and associated cache were probably constructed during the initial stampede to the Bullion Creek area in 1904. Its location at the mouth rather than on the creek seems to support this interpretation (see Chapter 5 for discussion).
Sheep Creek

Six sites were recorded on Sheep Creek (Figure 32). Like Bullion Creek, this creek was staked from its mouth to its source in 1903-04. However, unlike Bullion, no direct evidence of early mining activity was recorded on the creek itself. One site--llyl--at the mouth may date to the early gold rush period. The other historic sites on the creek appear to represent later mining periods well after 1904.

llyl

llyl is located at the mouth of Sheep Creek, 1 km west of the old Alaska highway bridge on the Slims River. Three log structures, an outhouse, a garbage dump, a rectangular log arrangement and a number of other artifacts were recorded on the site (Figure 33). The 6 x 5 m log cabin is in excellent condition and appears to have been recently occupied (Figure 34). The 3 x 3 m log shed, 10 m southwest of the log cabin, is also in excellent condition, but differs from the log cabin in being smaller and having square-notched as opposed to V-notched corners, a flat rather than a peaked roof, and no windows (Figure 34). Padlocked entrances did not permit access to either structure. However, the log cabin's glass windows and cloth coloured curtains argue for a relatively recent occupation of the site. The large 6 x 5 m log cabin 20 m southeast of the log shed is also in excellent condition (Figure 35). The interior of this structure contained parts of a wringer-style washer, an engine block, and numerous other artifacts including many engine parts and wooden boxes. The doorjamb exhibited many inscriptions,
Figure 32. Location of Sheep Creek and Coin Creek sites.
the clearest of which was a 1938 date with an undetermined associated name. Because the door of this feature, with its extensive record of names and dates and obvious historical significance, was apparently in danger of being removed, Parks interpretive staff relocated it to Parks headquarters in the spring of 1978. The door was photographed and recorded, and was found to contain the following names, dates and inscriptions:

Geological Survey
1914
July 27th to 30th
J.J. Gairnes [D.D.Cairnes?] ) geologists
F. Barlow )
E.C. Annes
Bartlett
A.E. Patterson
W. Shor_e Cook
Figure 34. Log cabin and log shed on llyl.

Figure 35. Large log cabin on llyl.
U.S.A.
Alaska-Canada
Boundary June 1909

[22 names listed under this heading are partially or entirely illegible. Most of these names have the word topographer after them.]

June 25th 1937
Jaln Al

R.M. MacKenzie
RNWMP
August 28th, 19__

[MacKenzie's visit to RNWMP may date to January 3rd or 4th, 1911 (Hill 1912)]

Big Lake Jim
June 5/15

T.A. Dickson
May 1919

Geo Wright
July 15, 1914

R.W. Lamb
Toronto Canada

M.E. Bones
May 19 1912

M.S. Boss
A. Allen
J.E. McAllister
RCMP 17/2/34

Bob Kane

Larry Joe

1914

Sept 19, 1911

Aug 29, 1913

"You are too fresh"

The above list represents an estimated 40 percent of the total number of inscriptions on the door. Most of the names and dates on the door are too faded to decipher with only the aid of
the naked eye. Twenty-five meters west of this log cabin, a 12 x 8 m rectangular log arrangement, possibly representing the remains of a large tent frame, was recorded. A number of hole-in-top cans was observed within the limits of this structure. A planked and canvassed outhouse 10 m northeast of the log cabin, a garbage dump with a large percentage of recent artifacts 12 m east of the cabin, as well as an engine head, a barrel of rivets, an exhaust stack, several sawhorses and numerous oil drums were recorded about the site.

Artifacts/Dating. A lapped single end seamed and locked side seamed, hole-in-top, key tab opening corn beef tin lid date an occupation of the site to the late 1890s or early 1900s. Another hole-in-top can with lapped end seams and double-crimped side seam supports the above age estimate. A machine manufactured crown cap soft drink bottle and a drop-soldered milk can with lapped end seams and locked side seam date to later occupations of the site. Numerous dates from 1909 to 1934 also indicate that the site was reoccupied many times between these periods. The garbage dump is also an excellent reflection of the site's history as it seems to demonstrate artifacts characteristic of the early 1900s up to the near present, with all intervening time periods represented.

Conclusions. Although the earliest decipherable date on a door from one of the log cabins was 1909, two tin cans seem to indicate a slightly earlier occupation of the site. This site may represent the hotel and cabins built at Sheep Camp in May of 1904 (Daily Evening Star [Whitehorse] 5 May 1904). The site also seems to have been quite extensively occupied by a number
of groups with varying interests from the early 1900s up until the near present. This is probably a reflection of its location and the quality construction of the cabins.

lly2

Site lly2 is located 4 km northwest or upstream of llyl on the west side of Sheep Creek. The one log cabin and two related sluicing operations recorded on the site (Figure 36) are in excellent condition. The large section of flume and associated sluicing apparatus is one of the best examples of sluicing activity recorded in the park, as this equipment is virtually

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**Figure 36. Map of lly2.**
intact and functional (Figure 37). A number of flume sections, sluice boxes and hand-operated winch were also noted approximately 10 m southeast of the aforementioned sluicing operation. The 4 x 4 m log cabin is located approximately 30 m southwest of these sluicing operations on the creek bank (Figure 38). The log cabin appears to be an excellent example of a prospector's cabin; it has what appears to be a very representative assemblage of small scale mining artifacts which include shovels, gold pans, pick axes, tool boxes, leghold traps, buckets, sledges, saws and rope, as well as a stove (Fosters Wide Awake 122), wooden chairs, a table, a bed and an iron bedspring.

Artifacts/Dating. The most recent signs of occupation are a 6/25/78 inscription on a note pad in one of the tool boxes and a 1961 Haines Junction calendar. Numerous spiral wire nails, pop cans and canvas also suggest a relatively recent occupation of the site. The embossed lettering "CAN 11-10-25" (November 10, 1925 or October 11, 1925) on the winch probably represents the earliest possible occupation of the site. An open top can also dates an occupation of the site to a time during or after the open top or sanitary can became popular (ca. 1922).

Conclusions. The log cabin and its associated features were probably not built before 1925. Artifacts characteristic of the 1950s and 1960s seem to dominate most of the assemblage on the site and may date to the site's construction. The two bunk beds indicate that this site probably represents a two-man operation.
Figure 37. Flume and sluice boxes on lly2.

Figure 38. Log cabin on lly2.
A wooden bridge or retaining rock wall on the west side of Sheep Creek and two sluice boxes directly across the creek (Figure 39) were recorded 0.5 km south of lly2. Both features probably represent the same mining operation.

Artifacts/Dating. A shovel with a riveted handle attachment from near the sluice boxes indicates that these features are not of recent construction. However, several spiral wire nails do not argue for an early construction either.

Conclusions. At present, very little can be said about this site except that it is probably not representative of either early or recent mining activity in the park.

Figure 39. Map of lly3.

One and one-half kilometers south of 10y3 a burnt cabin or tent frame, a table and chair, a sawhorse and numerous boards and debris 10 m west of the burnt feature were recorded (Figure 40).
The burnt structure contained shovels, kettles, nuts, bolts, stove piping and tin cans. A great deal of lumber and metal debris (tin sheeting) was observed embedded in the creek immediately in front of the burnt feature. The sawhorse, as well as the painted table and chair 5 m southeast of the burnt cabin, are in good condition, suggesting a relatively recent occupation of the site.

Artifacts/Dating. A machine manufactured, continuous-threaded melted bottle and several recently manufactured tin cans indicate that the site has been fairly recently occupied. Several shovel fragments support this interpretation as they appear to be exclusively of the modern variety.

Conclusions. Very little can be said about the site except that it probably represents a small mining operation dating to well after the early 1920s.
Approximately 0.5 km downstream from lly4, a small 2 x 2 m planked cabin on the west side of the creek bank was recorded. An accumulation of mining related equipment including steel cable, rubber hose, lumber, oil drums and a metal sluice box was observed lying on or embedded in the creek bed, 5 - 8 m directly in front of the cabin (Figure 41). Among the artifacts recorded in the cabin were two iron cots, a wood stove, a metal washtub, Schick blades and a number of recent canning jars and tin cans. A swede saw, a milk can, a table, an oil can and rope were noted in front of the cabin.

Artifacts/Dating. A 1967 Astrology book and a 1970 claim post, 20 m south of the cabin, suggest a very recent occupation of the site. Artifacts indicative of earlier time periods were not recorded.
Conclusions. This site appears to represent a recent small scale (two man) mining operation dating to the late 1960s.

lly6

Two plywood platforms, 5 x 5 m and 4 x 4 m, were recorded about 1 km northwest of llyl on the Sheep-Bullion Plateau road, 80 m from its junction with the Bullion Creek Road (Figure 42). Associated with both features were numerous recently manufactured cans, bottles and magazines. Immediately adjacent to the larger platform an oil drum barrel stove and an apparently unstable box of dynamite (Figure 43) were recorded.

Artifacts/Dating. Several issues of Mechanics Illustrated date an occupation and perhaps the construction of the site to 1959 and 1960. Artifacts characteristic of earlier time periods were not recorded.

Figure 42. Map of lly6.
Figure 43. Unstable box of dynamite on 1ly6.

Figure 45. Log cabin on 12yl.
Conclusions. Although not directly located on the creek, this site may be associated with a recent mining operation on Sheep Creek.

Coin Creek

Although Coin Creek was surveyed on foot and by helicopter, only one site was discovered. This site appears to have been occupied at least twice.

12yl

The Coin Creek site is located between Sheep and Bullion Creeks, 2.5 km north of 10y2 and 1300 feet above the Slims River Valley (Figure 32). Seven features--two log cabins, a mine shaft, a whipsaw stand, a corral, a small animal enclosure and a square depression immediately adjacent to the north wall of the larger cabin--were recorded on the site (Figure 44). The

Figure 44. Map of 12yl.
larger 5 x 4 m cabin is in relatively good condition; the walls are structurally sound and well chinked with mud (Figure 45). However, the center support beam for the roof is broken and is about to cave in. The interior of the cabin contains shelves, bench seats, a planked floor with a cellar door in the center of it, a large raised bunk bed, several boxes and tin cans. Outside the cabin a prospector's stove, a washboard, a pack saddle, several wooden boxes and numerous tin cans were recorded.

Of considerable interest are the washboard, pack saddle, two unidentified wooden artifacts found inside the cabin (Figure 46), and a map of Illinois (on the back of which appears a shopping list). Heavy use-wear marks and secondary maintenance of the washboard's lower right corner seem to indicate that it was used quite extensively at one time. The well-worn condition of the pack saddle also indicates extensive use for some time. Although uncertain, the two wooden artifacts--a calibrated box with a sliding arm and a box with a circular depression in the center--may have served functions relating to gold mining activity. The partial shopping or grocery list on the back of the map not only demonstrates some of the goods and supplies that were probably brought to the site but also lists some of their prices as well. These include:

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 shovels</td>
<td>$ 4.50</td>
</tr>
<tr>
<td>2 pairs of shoes</td>
<td>11.50</td>
</tr>
<tr>
<td>1 box of candles</td>
<td>4.50</td>
</tr>
<tr>
<td>1 case of eggs</td>
<td>16.50</td>
</tr>
<tr>
<td>10 lb. of Klim</td>
<td>6.50</td>
</tr>
<tr>
<td>25 lb. of Prunes</td>
<td>4.15</td>
</tr>
<tr>
<td>25 lb. of Rice</td>
<td>2.27</td>
</tr>
<tr>
<td>2 1/2 lb. of Baking powder</td>
<td>1.20</td>
</tr>
<tr>
<td>1 doz. Laundry Soap</td>
<td>7.90</td>
</tr>
</tbody>
</table>
Items on the shopping list for which prices were not listed or were indecipherable include:

- 1 pick axe
- 5 packets of yeast
- 20 lb. of Tobacco
- Shirt 15 1/2
- Shirt 16 1/2
- 20 lb. of Bacon
- 100 bean (lbs.?)
- 1 can of milk
- 1 case of Plums

The small 2 x 2 m log cabin 8 m west of the larger log cabin is similar to it in construction in that it has a planked floor and sloped roof. The small corral which has been built around a group of trees may have served to contain a mule or a horse. A 5 m hole and a ladder, 10 m south of the small cabin, probably represent a winter mining shaft. A bucket and a collapsed hoisting structure were recorded adjacent to the edge of this shaft. A small animal enclosure 5 m east of the larger log cabin may have contained a dog or chickens at one time, while the collapsed log structure 7 m northwest of the log cabin probably functioned as a whipsaw stand or platform cache. Although the square depression behind the larger log cabin may have been a cache or storage pit, the earth removed from it may have served in the construction of the cabin's sod roof. The sod on the roof and the feature's proximity to the cabin seem to suggest this.

Artifacts/Dating. A hole-in-top tin can with lapped end and locked side seams probably dates an occupation of the site to before 1922. Although condensed and evaporated milk cans with these characteristics were being manufactured long after 1922, the size of the cap and the method by which it was opened suggest
it was a food rather than a milk can, lending some credibility to the above age estimate. A machine-cut nail from the wooden pack saddle seems to indicate considerable antiquity for the construction of the pack saddle, probably pre 1890 (see Nelson 1968 for discussion). However, it probably does not date an occupation of the site. An Empress Vanilla Extract bottle manufactured by Dominion Glass Co. dates an occupation of the site to after 1913. A. G. Brackman of Empress Foods Ltd. (pers. comm.) states that this bottle is a product of the late First World War or early 1920s. An open top vacuum packed condensed milk can dates an occupation of the site to the post 1922 period of can manufacture. A torn newspaper page dated 28 September 1934 and the National Geographic Map of Illinois with a 1931 copyright date an occupation of the site to the middle 1930s.

Conclusions. The hole-in-top can indicates that this site was first occupied some time after the late 1890s and probably before the early 1920s. Whether or not the construction of the log cabin and other associated features date to this time is uncertain. At least one occupation of the site occurred during the middle 1930s. The shopping list seems to indicate that the site was once occupied for a rather long time (perhaps over the winter) by at least two individuals.
Shorty Creek

Six sites relating to mining activity during the 1930s or 1940s and near present were recorded on Shorty Creek (Figure 47). Although Shorty Creek was first discovered and worked in 1898 by ex-Lieut. Adair of the U. S. Cavalry and the "Mysterious 36" (Sawatsky 1975), the only possible evidence of this early activity on the creek may be a hand built tailing pile at 13y3.

13y1

Thirty meters north of the confluence of Shorty and Alder Creeks four features, which include two hoisting structures, a collapsed plywood cabin and a pile of oil drums, were recorded (Figure 48). The two hoisting features, 5 m west of the tent frame and 5 m south of the oil drums, probably functioned as lifting devices for heavy equipment and machinery. The areas

Figure 48. Map of 13y1.
Figure 46. Pack saddle, washboard, broom and two unidentified wooden artifacts found in or near the log cabin on 12y1.

Figure 50. Recent tent cabin on 13y2.
Figure 47. Location of Shorty Creek sites.
around both these structures were littered with tin cans, nails, bolts, 20 gallon oil drums and a number of broken hand tools. A bed frame, several tin cans and a cast iron stove were noted in the collapsed plywood and board tent frame. Canvas is stretched over the back and one of the sides of the structure.

Artifacts/Dating. The stove, which displays a patent date of 1906-10, indicates the maximum antiquity for the site. Several sanitary tin cans and modern wire nails, however, suggest that one of the last occupations of the site occurred after the early 1920s. No artifacts suggesting a recent occupation were recorded on the site.

Conclusions. This site probably represents a mining operation which employed the use of heavy equipment, some time during the 1930s, 1940s or 1950s.

Two tent cabins, an outhouse and a small log cabin were observed 30 m upstream from 13y1 (Figure 49). It is uncertain whether this mining operation was associated with 13y1. The southernmost tent cabin is represented by a 3 x 4 m plywood floor, while the other, 5 m north, appears to be virtually intact. This latter feature is 3 m wide by 4 m long, and has one meter high log walls. The upper wall and roof frames are still covered in canvas, although it is ripped in places (Figure 50). The interior of the cabin contained two metal bed frames, shelves, a stove and numerous kitchenware and tableware items. The area around the cabin is littered with wooden boxes, tin cans and plywood, as well as several sluice box sections and hydraulic
hose. The small log cabin, 3 m north of this tent cabin, is very squat, standing only 1.5 m at its peak. The walls are made of logs and the roof is constructed of plywood signs, one of which reads:

Vets Cabs
Phone 4666
Twenty-four hour
Service

The outhouse 5 m north of the small log cabin is made of boards and is leaning at an acute angle. An older-style wagon cart was noted 50 m upstream from the privy and may be associated with the site.

Figure 49. Map of 13y2.
Artifacts/Dating. A brass coupling on the hydraulic hose, which reads "1942 Emergency Alternate", represents the earliest datable evidence recorded on the site. A number of tin cans, including "Fanta" pop cans and beer cans, suggest a relatively recent occupation of the site. This site was apparently occupied up until a few years ago by an old prospector (Chuck Hume, pers. comm.).

Conclusions. This site appears to represent a recent small scale (single or two man) mining camp/operation.

A sluice box, five ore car track supports and a small tailing pile were recorded 0.5 km upstream from 13y2 (Figure 51). Although no rails were directly observed, the patterned spacing of spikes on the bridges indicates that these features functioned as supports for ore car tracks. The ore car bridges were laid in a north-south direction and spaced 4-5 meters apart. The

Figure 51. Map of 13y3.
sluice box and other associated planks 10 m west of the track supports lie on what appears to be a hand-made tailing pile (Figure 52).

**Artifacts/Dating.** Several wire nails collected from the sluice box are not characteristic of either recent or early wire nail manufacture. No other artifacts were observed in direct association with these features.

**Conclusions.** Although the age of the site has not been determined, the construction of the tailing pile by means of human energy is considered to be a phenomenon relating to early gold mining activity, since later mining operations usually employed the use of heavy machinery and equipment. If so, the possibility that these features on the site represent two separate occupations should be considered.

13y4

Site 13y4 is located on the south bank of Shorty Creek, 300 m upstream from 13y3. A wooden flume (sluice box), a tent frame or log foundation, a square depression and a number of artifacts were recorded at this site (Figure 53). Associated with the 7 x 1 x 1 m sluice box on the creekbed were several metal rifts. The square 2 x 2 x 1.5 m depression 10 m southwest of the sluice box may have been a cache pit at one time. However, a small pile of cobbles on the south lip of the depression may indicate a different function. A 3 x 3 m log foundation 12 m north of the pit probably represents the remains of a tent frame. A small rock accumulation whose function was
Figure 52. Sluice box and hand built tailing pile on 13y3.

Figure 55. "grizzly" on 13y6.
not determined was observed in the southeast corner of this feature. A wooden bench, table, box and a hand pick were also observed on the site.

**Artifacts/Dating.** Although I would hesitate to describe several of the wire nails recovered from the site as fitting Nelson's (1968: 10) description of early wire nails, it is quite obvious they are not recent in manufacture.

**Conclusions.** This small mining camp probably post-dates the early 1900s and predates recent mining activity in the park.

13y5

The foundation logs of a tent frame and an oil drum were observed from the air on the south bank of Shorty Creek at the confluence of its two tributaries. Time did not permit the
Artifacts/Dating. An associated orange oil drum indicates that the site is not representative of the early gold mining activity on the creek.

Conclusions. Little can be said about the site except that it probably post-dates the early period of mining on the creek.

A total of 11 features was recorded about 500 m upstream from 13y5, on the south bank of Shorty Creek's south tributary (Figure 54). Four features appear to be the collapsed or bulldozed remains of plywood and board shacks. Kitchenware, tableware, bedspring, wash tubs, stoves and hundreds of tin cans and

Figure 54. Map of 13y6.
bottles were associated, to varying degrees, with each of these four structures. Twenty-two oil barrels and a large amount of miscellaneous metal artifacts were recorded 15 m east of the largest collapsed cabin. A large woodpile was also observed 35 m north of the large collapsed cabin in the area of the shacks. Most of the heavy mining equipment was located at the northern end of the site 100 m northwest of the collapsed cabin. Two sluice boxes or flume sections, a pile of rails and two heavy pieces of mining equipment, one of which is a "grizzly" (a wood or metal device used to keep large rocks and boulders out of a sluice box)(Figure 55), the other a gravel rake, were recorded in this area.

**Artifacts/Dating.** A plastic cream pitcher top and a drop-soldered milk can with concentric rings and lapped-end seams probably date the site to after the 1920s. A ceramic plate fragment made by the Taylor-Smith-Taylor Co., U.S.A., bearing a date code of "8 36 2" indicates that the plate was made in August of 1936 (Jennifer Hamilton, pers. comm.). The later number refers to the workman or kiln in which the object was fired (ibid.).

**Conclusions.** This site seems to represent the single largest campsite and mining operation in Kluane National Park. The site was probably occupied by a fair-sized group of people (a small company) during the middle and late 1930s or early 1940s. Its temporal association with 13y1 and 13y2 seems likely, but is not known at present.
Goat Creek

Four archaeological sites were recorded on Goat Creek (Figure 56). With the exception of one site at the mouth of Goat Creek all sites appear to be mining camps and operations probably dating to the 1930s or 1940s.

14yl

Three features—a log cabin, a platform cache and a whipsaw stand—were recorded at the mouth of Goat Creek on Kathleen Lake (Figure 57). The roof of the 4 x 5 m cabin has collapsed backwards away from the entrance but has not caved in. The walls of the structure are in relatively good condition as they appear structurally sound and well chinked (Figure 58). A stove and several cans were observed in the interior of the cabin. Both

Figure 57. Map of 14yl.
Figure 56. Location of Goat Creek sites.
the platform cache, the whipsaw stand and associated whipsawn planks 125 m south of the cabin are also in good condition.

**Artifacts/Dating.** A Blue Ribbon coffee can collected from the cabin dates to after 1919, the year when Blue Ribbon Ltd. was incorporated (Ukers 1935b: 202). Three wire nails from the log cabin are more characteristic of recent rather than early wire nail manufacture.

**Conclusions.** The location of this site on Kathleen Lake at the mouth of Goat Creek and the apparent lack of any artifacts or equipment relating specifically to placer mining seems to indicate that the function of the log cabin may have been other than to accommodate a gold miner(s) or prospector(s). The cabin may have served as a trapper's cabin or even a vacation retreat. The site was probably constructed and first occupied some time after the early 1920s.

14y2

Site 14y2 is located 4.5 km upstream from 14y1, on the opposite side of Goat Creek. A burned tent frame or cabin, a platform cache, several sluice boxes and some hydraulic mining equipment were recorded at the site (Figure 59). A considerable concentration of artifacts including kitchenware, clothing, cans, shovels, picks, bottles and numerous other domestic and household items were observed in and immediately north and adjacent to the tent frame. The platform cache, 10 m southeast of the tent frame, which appears to be in good condition, supports a substantial length of hydraulic hose (Figure 60). An older-style 2.5 inch gate valve and a coupled length of 2.5 inch cast iron
Figure 58. Log cabin on 14y1.

Figure 60. Platform cache and hydraulic hose on 14y2.
pipe were recorded 5 m west of the cache. A pile of wooden planks and associated lumber, 10 m north of the tent frame, probably represent the remains of a sluice box or flume. A hydraulic pump and motor, a number of hand tools (Figure 61), and a sluice box were recorded on the creek bank 25 m north of the artifact accumulation. The pump and motor appear to be unused, as they are still packaged in the packing case.

**Artifacts/Dating.** A medicine bottle manufactured by the Dominion Glass Co. post-dates 1913, while a Nabob pepper can, three wire nails and several sanitary cans are modern in appearance. However, the presence of a magneto on the pump and motor indicates that this equipment is not of recent manufacture.

**Conclusions.** Most of the mining equipment at this site, such as the pump and motor, and the hydraulic piping and hose,
Figure 61. Hydraulic pump and motor and associated mining equipment on 14y2.

Figure 63. Collapsed platform cache and associated cultural material on 14y3; arrow points to silver coffee pot.
which are either in excellent condition or unused, strongly suggest that the site was abandoned before heavy exploitation of the creek's gold-bearing deposits began. The hydraulic equipment also suggests that the occupants of the site were preparing to wash down the hills above the banks on the creek. The site is obviously not representative of the earlier gold mining era in the area. However, the older style of gate valve and the motor seem to indicate that the site is not recent either. This site was probably briefly occupied some time during the 1930s and 1940s.

14y3

Approximately 1.5 km upstream from 14y2, on the south side of Goat Creek canyon, a collapsed platform cache and ten stacked flume sections or sluice boxes were recorded (Figure 62). The collapsed 3 x 4 m cache on the creek bank contains a large number of gold mining artifacts and other related equipment (Figure 63) including such items as gold pans, picks, whipsaws, cans, anvils, and flume sections. The site is not typical of the earlier gold mining era in the area. However, the older style of gate valve and the motor seem to indicate that the site is not recent either. This site was probably briefly occupied some time during the 1930s and 1940s.

Figure 62. Map of 14y3.
hammers, shovels, woodworking tools, axes, sledges, dishes, tin stoves, pots, frying pans and cutlery, as well as numerous artifacts of personal or monetary value. Some of these items include clothing, an alarm clock, shoes, boots and a silver plated copper coffeepot. The sluice boxes lie on a tailing pile 25 m downstream from the cache (Figure 64). The tailing piles and the worn condition of the sluice boxes suggest that the creek was mined quite extensively at one time.

Artifacts/Dating. A Westclox alarm clock with a patent date of 1927 provides a maximum age estimate of the site. Numerous sanitary open top tin cans including a Blue Ribbon coffee can similar to the can from 14y1 support this estimate.

Conclusions. All the functional and still usable mining equipment and artifacts on the site were located in the collapsed platform cache; this, and the stacked condition of the sluice boxes, suggest that the miners who worked the site were planning to return to this small scale mining operation when they last left it, some time in the 1930s or 1940s, but failed to do so (see Chapter 6 for discussion).

14y4

Four hundred meters downstream from 14y3, two tent frames and a collapsed platform cache were recorded (Figure 65). Unlike the platform cache at 14y3 there seem to be very few artifacts associated with the cache at this site. However, the larger 3 x 3 m tent frame 5 m east of the cache contained a shovel, a gold pan, several tin cans, cupboards, canvas and a
Figure 64. Remains of stacked sluice boxes on 14y3.

Figure 71. Remains of log cabin on 15y3.
Figure 65. Map of 14y4.

table and chair. No associated artifacts were found with the smaller 2 x 2.5 m tent frame, 15 m southeast of the cache.

**Artifacts/Dating.** No artifacts, other than several sanitary open top tin cans, which would aid in dating the site were recorded. These cans are indicative of the post 1922 era of can manufacture.

**Conclusions.** Although no mining equipment, other than a gold pan and shovel, was observed in the area this site probably represents the dwellings of several miners who worked the creek some time during the 1920s, 1930s or 1940s. Sections of a scarcely visible trail between 14y3 and 14y4, the scarcity of mining activity on the creek at 14y4 and the lack of any dwellings at 14y3, combine to suggest that these features may have been the accommodations of those miners who worked the creek at 14y3.
Mush Creek

Nine sites dating to the late 1890s and after the early 1920s were recorded on Mush Creek (Figure 66). Most of the features on Mush Creek appear to have been first constructed and occupied during the stampede to the area in 1898-99. A later, smaller occupation of several cabins on the creek occurred some time after the early 1920s.

15yl

Site 15yl is located approximately 8 km upstream from Mush Creek's mouth, on Mush Lake. Several mining trenches, a cache pit, a lean-to, a log cabin, a tent frame and a number of tin cans and several whipsawn planks were recorded at the site (Figure 67). Although the walls of the 4 x 6 m log cabin remain structurally sound, the roof, which was constructed of logs and axe-cut planks, has collapsed over most of the interior of the cabin. However, several large tin cans and wooden boxes from this feature and a prospector's tin stove beside it were recorded. Two trenches, 15 m northeast and 30 m southeast of the cabin dug into the creek bank, probably represent placer test trenches. A square area of grassy vegetation, 10 m south of the cabin, may represent the remains of a burnt tent frame or cabin. The presence of a foundation or sill log in this feature supports this interpretation. A number of barely observable grassy burnt areas between the log cabin and rectangular lube oil and coffee cans 25 m west of the cabin may also be the remains of tent frames or cabins. Also recorded in this area was a large wooden
Figure 66. Location of Mush Creek sites.
artifact whose function was not determined. The function of the lean-to was also not determined. An oval depression across the stream probably represents an associated cache pit.

Artifacts/Dating. A number of large Nabob sanitary, vacuum packed cans and two Swifts Brookfield butter cans, as well as several other sanitary cans, probably date an occupation of the site to the post 1922 period of can manufacture. However, a large hole-in-top milk can with lapped end and side seams dates an occupation of the site to an earlier time during the 1890s or early 1900s (Figure 68). A rectangular vent-holed food can with a key tab opening and lapped side and single crimped end seams, post-dates 1895 and may predate the late 1890s (see Fontana and Greenleaf 1962 and May 1938: 438 for discussion) (Figure 68). Three wire nails which probably date to the construction of the log cabin are characteristic of early wire nail manufacture during the 1890s and the first decade of this century.
Figure 68. Hole-in-top milk can and food container, with lapped side seam and key tab from 15yl, ca. 1895-early 1900s.
Conclusions. The log cabin and its associated features were, in all likelihood, first constructed and occupied in the late 1890s or early 1900s. The site was reoccupied some time after the early 1920s, probably during the 1930s or 1940s. However, a large lapped end and locked side seam food can may date to an occupation between these periods. The earlier artifacts suggest that the site was probably constructed by a group of miners who participated in the stampede to Mush Creek in 1898-99 (The Weekly Star [Whitehorse] 16 November 1917). Numerous high (1-1.5 m) tree stumps on the hill behind the site seem to indicate that the cabin and other features were built over the winter, when snow covered the ground to a depth of several feet.

15y2

Two claim posts and a structure represented by two horizontal timbers built into a group of trees were recorded on Mush Creek's south bank, about 1 km upstream from 15yl (Figure 69). Any inscriptions on the claim posts (axe-cut trees about 1 m high) have since disappeared. The structure 15 m southeast of the claim posts may have been a platform cache at one time.

Figure 69. Map of 15y2.
Artifacts/Dating. No datable artifacts were found in direct association with this site.

Conclusions. The location or spatial proximity of these features to 15y8 and 15yl may indicate a temporal association with the former or one of the occupations of the latter site.

15y3

Approximately 7 km upstream from Mush Lake on the east bank of the creek a whipsaw stand, a log cabin, a platform cache, a cache pit, a square log foundation and some mining equipment were recorded (Figure 70). The 4 x 6 m log cabin is in relatively poor condition; the roof has collapsed and most of the side logs are rotting (Figure 71). Although the platform cache 10 m east of the log cabin has collapsed, it appears to be in better

Figure 70. Map of 15y3.
condition than the cabin. A number of artifacts including gold pans, wooden boxes, enameled dishes and tin cans was observed within this feature. A 1 x 1 x 1 m depression one meter south-east of the log cabin may represent the remains of a cache pit or privy. A 2 x 2.5 m log foundation is best interpreted as a blacksmith's workshop or metalworking area rather than a tent frame, due to the large amount of forged steel in and around this feature. Use-wear, in the form of parallel cut marks on a horizontal timber and a number of whipsawn planks associated with a feature 20 m south of the tent frame, indicates that it once functioned as a whipsaw stand. The considerable number of whipsawn planks used in the construction of the platform cache and lack of whipsawn planks in and around the cabin seems to suggest the whipsaw stand's temporal relationship with the construction of the cache rather than the log cabin. Several large belt pulleys and associated machinery, a sawhorse and a metal box made from saw blades were also noted on the site.

Artifacts/Dating. A Burns pure pork sausage sanitary can with a 1923 "Canada approved" government stamp indicates than an occupation of the site occurred some time after this date. A tapered hole-in-top corned beef can, with single crimped end seams, a locked side seam and a key tab opening date an earlier occupation of the site to the late 1890s or the early 1900s (Figure 72). Another corned beef tin lid with identical characteristics, but with a larger and indented hole-in-top cap, probably dates to the same time period.

Conclusions. Like 15y1, this site appears to have been
Figure 72. Shaker top powder or spice can from 15y5 and hole-in-top corned beef can, 1895-early 1900s, from 15y3.
occupied at least twice, once during the late 1890s or early 1900s and again some time after 1923. The condition of the log cabin and several associated nails characteristic of the early wire nail period of manufacture date the cabin's construction to the earlier occupation, while the relatively better preserved platform cache, with its associated sanitary tin cans and modern type of wire nail may date to the later one. The earlier occupation probably dates to the stampede to Mush Creek in 1898-99.

15y4

A rectangular log foundation or tent frame and a placer test trench were recorded at the head of the small canyon on Mush Creek, 0.5 km upstream from 15y3 (Figure 73). The 3 x 3 m log foundation is represented by several rows of logs, the lower of which are rotten. Also recorded from in front of this feature were several tin cans and a broken door latch. A placer test trench was excavated in the bank of the creek, 100 m downstream from the log tent frame.

Artifacts/Dating. A cylindrical hole-in-top milk can with lapped end and side seams is identical to the milk can from 15y1

![Figure 73. Map of 15y4.](image-url)
and undoubtedly dates to the same time period, the late 1890s or early 1900s. Several early wire nails support the above age estimate.

Conclusions. Because no artifacts characteristic of later periods were found, this site appears to have been occupied only once for a brief time, during the late 1890s or early 1900s. The site was probably occupied by one or several prospectors who took part in the stampede to Mush Creek in 1898-99.

15y5

Two hundred meters upstream from 15y4, on the opposite side of the creek, a log cabin and a square depression were recorded (Figure 74). The 3 x 5 m log cabin is in fairly poor condition; several of the upper logs appear to be rotting and the roof has caved in. Several windows, a bunk bed, a table and two shelves, as well as a gold pan with a large 6 inch center hole, were the only recognizable contents of the cabin beneath the collapsed roof. A 1 x 1 m depression, 10 m uphill from the cabin, probably represents the remains of a cache pit or privy.

Figure 74. Map of 15y5.
Artifacts/Dating. A rectangular shaker top spice or powder can, with a locked exterior-soldered side seam and heavy-soldered lapped end seams, dates the occupation and construction of the site to the 1890s or early 1900s (Figure 72). Several early wire nails support this interpretation.

Conclusions. Like the 15y4 site and the earlier occupations at 15y1 and 15y3, these features are probably representative of the 1898-99 gold rush to Mush Creek. Artifacts suggestive of later time periods were not evident at this site.

15y6

Site 15y6 is located approximately 150 m upstream from 15y5 (Figure 75). Two claim posts and three rows of logs remain of what appears to have been a 2.5 x 2.5 m tent frame. No artifacts, other than several empty tin cans, were recorded on the site.

Artifacts/Dating. A small hole-in-top food can with lapped end side seams indicates that the site was constructed and occupied during the late 1890s or early 1900s.

Figure 75. Map of 15y6.
Conclusions. Although not conclusively demonstrated, this feature probably represents a campsite of one or several prospectors who stampeded to Mush Creek in 1898-99.

15y7

A collapsed cabin was the only feature recorded at this site, 1.5 km upstream from 15yl on the east bank of the creek (Figure 76). The 4 x 4 m log cabin, which is situated in the midst of a swamp 30 m above creek level, is in very poor condition (owing probably to its location); the roof and most of the walls have caved in.

Artifacts/Dating. Six wire nails and an external fitted (tobacco?) can lid were the only artifacts recovered from the feature. Although the can lid is virtually undatable, the wire
nails are characteristic of the early period of wire nail manufacture during the 1890s and the first decade of this century.

Conclusions. The lack of any artifacts relating to later periods and the early wire nails indicate that this site was probably built and occupied during the 1898-99 gold rush on Mush Creek.

15y8

A log cabin and a tent frame were recorded on the west side of Mush Creek 1.5 km upstream from 15yl (Figure 77). Although the roof of the 3 x 4 m log cabin has collapsed, the walls are in relatively good condition (Figure 78). Most of the interior contents of the cabin are covered by roof fall. However, a table, stove pipe, window and the headboard of a bed were recorded within the cabin.

Artifacts/Dating. A locked side seam and lapped end seam

Figure 77. Map of 15y8.
food can, which was recycled (flattened out to form a tin sheet) dates the site to the late 1890s or early to middle 1900s. Four early wire nails also date the construction of the log cabin to the 1890s and 1900s.

Conclusions. Although not yet conclusively demonstrated, these features were probably built and occupied by several miners who participated in the stampede to Mush Creek in 1898-99.

15y9

This site is located approximately 0.5 km upstream from 15y6. Two features--an oval depression and a trench--were recorded at the site (Figure 79). The oval depression may have been either a cache pit or test pit. The trench 15 m south of the oval depression, on the other hand, is almost certainly a placer test pit.

Artifacts/Dating. No datable artifacts were recorded on the site.

Conclusions. Very few conclusions can be drawn from the above evidence. It is not known whether these features are

Figure 79. Map of 15y9.
Figure 78. Log cabin on 15y8.

Figure 83. Small log cabin on 16y2.
associated with the early gold rush to Mush Creek in 1898-99. Several similar excavations at two other early Mush Creek sites, however, seem to suggest that this site may be associated with this earlier occupation.

Kaskawulsh and Alsek River Sites

Three sites were directly recorded on the Kaskawulsh and Alsek Rivers. Two sites were represented by log cabins and associated cultural materials, while the third site was found to be the remains of a wooden river boat located high above the present Alsek (Dezadeash) River level. A fourth site represented by a wooden oar located on a beach terrace of the Alsek River was recorded by a geological survey team (Figure 80).

A log cabin, an outhouse and a number of other artifacts including a table, sawhorse, several logs and a length of heavy cable wire were recorded at the mouth of Sugden Creek on the Kaskawulsh River (Figure 81). The 5 x 6 m log cabin appears to be in very good condition; both roof and walls are structurally sound. A root cellar, table, stove, wash tub, kitchenware and other tableware items, as well as buckets, picks and saws, were noted in the cabin. Heavy equipment tracks were observed several meters north of the cabin. The one-hole privy, 25 m north of the cabin, is also in very good condition.

Artifacts/Dating. A diary written on a piece of cardboard
Figure 80. Location of Kaskawulsh and Alsek River sites.
Figure 81. Map of 16yl.

found inside the cabin suggests the site was occupied during July and August of 1956 and 1958. Fresh rose hip tea and a bottle of cooking oil indicate that the site has been occupied perhaps more recently.

Conclusions. The diary, the condition of the features, and several modern tin cans combine to suggest that the site was built to accommodate one or several prospectors who mined the creek in the mid and late 1950s.

16y2

A small 3 x 3 m log cabin was recorded on the highest beach terrace of the Alsek River 100 m north of Beachview Creek (Figure 82). The cabin is unusual in that it is only 1 m high and has only one small window (Figure 83). The initials "A.B." were carved into the end of one of the logs on the doorway. Two
prospector stoves, a trap and a number of boxes and modern tin cans were also observed on the site.

Artifacts/Dating. An Embassy silver plated tablespoon dates an occupation of the site to some time after the introduction of this service plate in 1939 (E.P. Hogan, International Silver Co., pers. comm.). Whether or not this artifact dates to the cabin's construction is uncertain.

Conclusions. The location of the cabin in the broad river valley at the junction of the Kaskawulsh and Alsek (Dezadeash) Rivers and the lack of any artifacts or equipment relating specifically to mining suggest that the cabin may have been built by a person(s) with trapping rather than prospecting or mining interests some time after 1939.

The remains of a flat-bottomed river boat were recorded on
a beach ridge of a rock and gravel spit, 14 km west of Haines Junction. The boat, which is 15 m above the Dezadeash River, is estimated to have once been 6 m long and 1 m wide. A packing gland for a propellor shaft and an exhaust pipe indicate that it was once powered by an inboard motor.

Artifacts/Dating. The location of the boat, 15 m above the present river level, suggests that it may be relatively early. However, the occurrence of driftwood on a beach ridge 3 m higher than the boat indicates that the boat may be fairly recent. Numerous screws and boat nails associated with the boat are also modern in appearance. Whether this is a result of recent construction or the fact that these artifacts have not changed for a long period of time is uncertain.

Conclusions. Very little can be said at present about the boat except that it was probably used for river travel, perhaps by a small mining company or outfit, some time during the early or middle part of this century.

During the first week of August in 1978, members of a Canada Geological Survey team found an old axe-hewn oar on a high beach terrace near Marble Creek on the Alsek River. The oar's location, 30 m above the present river level, may indicate (assuming that river action rather than human activity deposited it there) a considerable antiquity for this artifact.

Artifacts/Dating. No other associated features or artifacts, datable or otherwise, were observed by the geological party.
Conclusions. Other than its suspected antiquity, very little information can be offered at the present about the oar. However, it is interesting to note that stories of Russian expeditions rafting the Alsek River during the last century still circulate among the older native peoples in Haines Junction and Burwash Landing. Whether this oar represents direct empirical support of these legends is uncertain. Further survey in an effort to locate associated cultural materials may clarify the situation. The possibility that the oar may date to Glave and Dalton's second expedition to the area in 1892 or other early geological expeditions should also be considered.

Mush Lake

Three sites--two cabins and their associated features, and a cache--were recorded on Mush Lake's west end and portage (Figure 84). The cabins appear to date to the 1940s or later.

17yl

A planked cabin, a large rectangular plywood floor, a privy and an associated garbage dump were recorded at the west end of the portage between Mush and Bates Lakes (Figure 85). The 3 x 6 m planked cabin is in good condition and appears to be of recent construction. Two bunk beds, shelves and a tin stove were observed inside the cabin. The 6 x 8 m plywood floor 10 m east of the cabin may have been the floor of a tent frame at one time. The garbage dump 10 m southwest of the cabin was found to contain many recent cans and bottles.
Figure 84. Location of Mush Lake sites.
Conclusions. The location of the site seems to suggest that it functioned as a trapper's cabin or a vacation retreat, rather than as a mining camp.

17y2

A log cabin and several associated artifacts were recorded. 0.5 km northeast of 17y1 on the north shore of Mush Lake (Figure 86). The 5 x 5 m log cabin's walls are structurally sound. However, the roof has collapsed and as a result covers most of
the interior of the cabin (Figure 87). A tin stove, a decayed sled or toboggan and several hundred tin cans were observed in the area directly in front of the cabin.

Artifacts/Dating. The tin cans are characteristic of the post 1922 era of can manufacture. A machine manufactured bottle with a valve mark on the base indicates that the site was probably not occupied before 1930 (Munsey 1970: 41-42); a U.S. Army bacon box end with a "July, 1942" date perhaps gives the best estimate of the site's antiquity.

Conclusions. This site was probably occupied during the early 1940s. Like 17y1, it may have functioned as a vacation retreat or a trapper's cabin, rather than a mining camp. The possibility that this site may have been built, or at least occupied, by the U. S. Army during the Alaska Highway survey or construction should not be discounted.

17y3

Site 17y3 is located 250 m west of 17y2 on the north shore of Mush Lake. A collapsed platform cache was the only feature recorded on the site (Figure 88).

Artifacts/Dating. Several sanitary open top tin cans indicate that the site is not early. Although not yet demonstrated, the poorly preserved condition of the platform cache may indicate an earlier construction than the log cabin at 17y2.

Conclusions. This feature's association with 17y2 has not yet been established. Few concrete statements can be offered about the site at the present time.
Figure 91. Small log cabin on 1871.

Figure 87. Log cabin on 1772.
Iron Creek

Seven sites were recorded on Iron Creek (Figure 89). Most of these are mining sites representing occupations dating to the 1920s or 1930s and later.

18yl

Site 18yl is located approximately 2 km upstream from the confluence of Iron Creek and Bates River. A small log cabin, a possible platform cache and two circular depressions adjacent to the south and east walls of the cabin were recorded (Figure 90). The 3 x 3 m log cabin is in relatively poor condition; the roof has collapsed and the walls, although structurally sound, are beginning to disassemble at the corners (Figure 94). A whipsaw blade and a shovel were the only artifacts noted in the interior of the cabin. Although not yet demonstrated, two circular depressions beside the cabin may have functioned as cache pits, and two trees interconnected by a horizontal pole 4 m south of the small cabin may represent the remains of a platform cache.

Artifacts/Dating. Several sanitary open top tin cans,
Figure 89. Location of Iron Creek sites.
including an Empress jam container with locked side and single crimped end seams, suggest that the site was occupied after the post 1922 era of tin can manufacture. However, an early type wire nail demonstrating a bulbous, eccentrically aligned head seems to indicate that the site may have been constructed some time before this occupation.

Conclusions. No direct evidence relating to mining activity was found. However, its location on the creek suggests that the site was built to accommodate one or several placer miners. The construction of the log cabin may also predate the occupation responsible for deposition of the tin cans.

18y2

A 3 x 2.5 m tent foundation was recorded about 150 m upstream from 18yl (Figure 92). This feature, except for a number of tin cans and a vague outline of its foundation, was all but impossible to recognize due to heavy willow undergrowth.
Artifacts/Dating. A sanitary can with locked side seams and single crimped end seams is similar to those recorded from 18y1 and may date to the same period (circa post 1922).

Conclusions. Although the accurate age of the site cannot presently be determined, it is doubtful whether the occupation associated with the tin can dates to before the early 1910s.

18y3

One hundred meters upstream from 18y2 at the junction of an old road and a foot trail, a 2.5 x 1.5 m collapsed platform cache was observed (Figure 93). A gold pan and several tin cans were recorded in or around this feature.

Artifacts/Dating. A sanitary open top milk can and an Empress coffee can, demonstrating the same trademark and label as the jam container at 18y1, probably date this feature to after the early 1920s. However, an earlier variety of wire nail may indicate that construction of the site occurred some time before this.

Conclusions. Like 18y1, the construction of the site may
predate the occupation associated with the tin cans. The identical label and trademark on a tin can from 18y1 and a can from 10y3 may indicate a temporal association of these two sites.

18y4

A log cabin, a tool shed, a tent frame, an elevated cache and a garbage dump, as well as numerous mining related machinery parts, were recorded 250 m upstream from 18y3 (Figure 94). Although the roof has collapsed the 4 x 5 m log cabin walls are structurally sound (Figure 95). An accumulation of mining gear was noted, 15 m west of the cabin. A keg of nails, several oil
Figure 95. Remains of log cabin on 18y4.

Figure 101. Recent tent cabin on 19y1.
drums and a number of aluminum caterpillar pistons were also observed on the site. The 2 x 3 m collapsed platform cache 20 m east of the cabin contains mainly explosive equipment, such as dynamite and blasting caps. A small garbage dump composed mainly of tin cans was recorded 3 m north of this feature.

**Artifacts/Dating.** A machine manufactured bottle produced by the Hazel-Atlas Glass Company indicates the site was occupied between 1920 and 1964 (Toulouse 1969: 239). Several sanitary open top tin cans with locked side and double crimped end seams suggest the site dates to after the 1922 era of can manufacture.

**Conclusions.** This site probably represents a mining operation which employed heavy machinery between the early 1920s and the early 1960s.

18y5

Seven prefabricated plywood structures were recorded about 150 m upstream from 18y4 (Figure 96). All these features have either collapsed or been pushed over. Most of the features, except one, are the same size—2 x 2 m—and appear to demonstrate the same types of artifacts as the largest plywood structure.

![Figure 96. Map of 18y5.](image-url)
The largest feature appears to be a series of adjoining plywood shacks. Many bottles, can, stoves, pots and other kitchenware items were noted in this and all features.

Artifacts/Dating. Several Dominion Glass Co. bottles date the site to after 1913, while a Consumer Glass Co. bottle and a Hazel-Atlas Co. bottle suggest maximum dates of 1917 and 1920, respectively (Toulouse 1969). Many sanitary open top tin cans indicate the site was occupied some time after the early 1920s.

Conclusions. The apparent lack of any placer mining related equipment seems to suggest that this site may have served a function other than that of a placer mining camp. An alternative explanation of site function is that these features may represent the temporary accommodations of the U. S. Army, during the early 1940s, when they were engaged in surveying routes for the Alaska Highway. The site's large size and noticeable absence of mining equipment, as well as the estimated age of the artifacts, are consistent with this interpretation.

18y6

A sluice box and several other flume sections were recorded 200 m upstream from 18y5 on the creek bed beside the east bank of the creek (Figure 97). Although it is uncertain whether the sluice box and flume section are associated, their location suggests that they represent equipment relating to the same mining operation.

Artifacts/Dating. Several wire nails from the sluice box
Figure 97. Map of 18y6.

are more characteristic of the modern style wire nail than of the early type. No other artifacts were observed in direct association with the site.

**Conclusions.** Although the exact age has not been determined, the site probably dates to after the middle period of mining activity in Kluane National Park in the 1930s.

18y7

Site 18y7 is located about 150 m upstream from 18y6. Four features—a platform cache, two tent frames and a flow gate or stream diversion—were recorded (Figure 98). Both 2.5 x 2.5 m tent frames are in relatively poor condition, as they are represented by only the lower two logs which are decaying rapidly. The wooden flow gate 20 m south of the tent frames was probably built into the bank to dam or control the flow of water in a sluicing operation. The platform cache 5 m east of the tent frames which has collapsed appears to have once been 3 m above the ground. A prospector's tin stove, several nails and a bottle were collected from this feature.

Conclusions. This site appears to have been a mining camp and operation, probably built and occupied during one of several intervening years between 1918 and the late 1930s or early 1940s.

Bates River

Two sites--one, a relatively recent gold mining camp, the other a cache site--were recorded on Bates River with the aid of a helicopter (Figure 99).

19y1

A planked cabin, a collapsed platform cache, a tent cabin, two tailing piles and mining equipment, which included a flow gate and several flume sections, were recorded on Bates River
Figure 99. Location of Bates River sites.
2.5 km southwest of Iron Creek (Figure 100). The 2 x 3 m tent cabin is in excellent condition; walls and canvas framework are still intact (Figure 101). Boxes, tin cans, pans, nuts, bolts, heavy link chain, wire and other mining related artifacts including a bellows, suggest that this feature was used as a tool shed and/or blacksmith's shop. The 5 x 4 m planked cabin, 10 m south of the tent cabin, is also in excellent condition and contains bunk beds, duffle bags full of clothing, boxes, buckles, bread pans, flashlights, and life preservers which appear to be Army issue. No associated equipment or supplies were recorded with the collapsed platform cache, 10 m southeast of the planked cabin. The sluicing equipment and tailing piles on the creek bed indicate that the site was extensively mined at one time. Numerous oil drums, cans, tire, bottles and rubber hoses litter most of the site area.

Artifacts/Dating. Many modern bottles and cans, as well as the excellent condition of the planked cabin and tent cabin, argue for a relatively recent occupation of the site. A Velvet pipe and

![Figure 100. Map of 19y1.](image-url)
cigarette tobacco can containing fresh cigarette papers also suggest the site was recently occupied.

Conclusions. A number of Army issue materials seem to indicate that the site was probably first constructed and occupied some time after the U. S. Army's involvement in Kluane National Park.

19y2

Site 19y2 is located on the south bank of the Bates River, 250 m from the southern end of Bates Lake. A standing platform cache and collapsed platform cache were recorded at the site (Figure 102). The standing cache, despite its 10 degree list, is in very good condition. However, because the ladder to the cache was judged unsafe, contents were not inspected. Although not yet demonstrated, the poorly preserved condition of the collapsed cache, 50 m west of the standing cache, may indicate that it was constructed before the standing cache.

Artifacts/Dating. A vacuum packed key tab opening Nabob coffee can from the collapsed cache dates this feature to some
time after the introduction of the key opening method for vacuum packed coffee cans in 1928 (Ward 1977: 6). It is not known whether the two caches are associated.

Conclusions. This site's spatial proximity to an old mining road, 100 m south of the platform cache, suggests that the features may be associated with mining activity rather than trapping activity. The construction of this site by the U. S. Army should also be considered.

Alder Creek

Two sites—a possible logging operation and a log cabin and associated features—were recorded on Alder Creek (Figure 103).

20yl

Site 20yl was recorded approximately 100 m south of the confluence of Alder Creek and the Mush Lake Road. A foot trail leads the way into a dense forest of spruce where a decaying footbridge and a large pile of cut logs were observed (Figure 104).

Artifacts/Dating. No datable artifacts or features were observed on the site.

Conclusions. Although a branch of the Dalton Trail passed through this exact area in 1898 it is uncertain whether these features relate to that time. The many large stumps in the area, which far outnumber the logs in the pile, indicates that this area was logged quite extensively at one time in the past.
Figure 103. Location of Alder Creek sites.
20y2

This site is located approximately 8 km downstream from 20yl, at the confluence of Dalton and Alder Creeks. A log cabin, a pile of logs, a small garbage pit and a standing platform cache were recorded on the site (Figure 105). The 4 x 4 m log cabin is in good condition and appears to be of recent construction. Two beds, a mattress, table, stove and a variety of pots and other kitchenware items were observed in the interior of the cabin. Several 45-gallon oil drums and a pile of scrap boards were noted beside the cabin. The garbage pit 3 m south of the cabin was found to contain only a few modern tin cans. The platform cache 5 m southwest of the cabin is also in good condition and the logs in the log pile appear to have been recently sawn.
Artifacts/Dating. The cabin, when first constructed, was chinked with moss. However, several newspapers (dated 1971) present in the walls indicate that rechinking was done during or after 1971. A calendar dated 1971 was also observed in the interior of the cabin. The last known occupation of the site occurred in 1977 (Chuck Hume, pers. comm.).

Conclusions. The cabin was probably built before 1971 and underwent maintenance activities during or after that time. Although the location of the site is not characteristic of gold mining site settlement location, the site, according to Chuck Hume (pers. comm.), was built by a prospector who did most of his mining on Mush Creek.

Figure 105. Map of 20y2.
**Congdon Creek**

Although this creek was surveyed extensively by helicopter, only one site—a mining camp—was recorded (Figure 106).

2lyl

This site is located on Congdon Creek 8 km upstream from the mouth, where it empties into Kluane Lake. A log cabin, a feature which may have functioned as a hanging or drying rack, a sawhorse and a number of older logs that once served as structural members of the cabin were recorded on the site (Figure 107). The 4 x 5 m log cabin, which is in very good condition, has post-on-sill corners and a tin roof (Figure 108). Some of the logs on the north wall and a few lower logs on the south and east walls of the cabin appear to be much more recent than other cabin logs. Three spliced logs on the south wall and several logs which appear to have once been used in the construction of the cabin peak indicate that this feature was extensively

[Diagram: Map of 2lyl]
Figure 106. Location of Congdon Creek site.
renovated in the past. Two beds, three chairs, a table, a stove, a 45-gallon drum, a wash stand and numerous kitchenware and tableware items were found inside the cabin.

Artifacts/Dating. A sanitary open top food can and a machine manufactured Carr-Lowrey Glass Co. bottle indicate the site was occupied some time after the early 1920s and probably before the early 1960s. The log cabin appears to have been occupied at least twice, once when it was built and again when it was renovated.

Conclusions. Gold-bearing deposits on Congdon Creek were first discovered and worked in March of 1904 (Daily Evening Star [Whitehorse] 22 March 1904). However, the creek was never worked by more than a dozen men (ibid.) and no direct evidence from this time period was recorded. The earliest evidence of occupation at this site may be the older logs in and around the cabin. Whether or not these date to the early mining period is uncertain.

Bighorn Creek

Two sites and their associated features and artifacts were recorded on Bighorn Creek in the northern area of the park (Figure 109). These cabins and features appear to be the only well documented mining sites characteristic of the period between the early 1900s and 1930s in Kluane National Park.

22y1

Site 22y1 is situated on the west bank of Bighorn Creek,
Figure 109. Location of Bighorn Creek sites.
approximately 11 km upstream from its confluence with the Donjek River. A collapsed cabin, several adjoining tent frames, and some sluicing equipment were recorded at the site (Figure 110). Seven flume sections, a length of fire hose, several wooden poles and an improvised wheelbarrow were among the sluicing equipment recorded, 40 m northeast of the cabin and tent frames. Immediately below this equipment in the base of the rock bluff a large hole or excavation was noted. Whether this was the result of natural phenomena or gold mining activity was not determined. Only the sill and bottom three logs remain of the walls of the collapsed 3 x 5 m cabin. A small 2 x 2.5 m structure was observed immediately adjacent to the south end of the cabin. The roof of the cabin has collapsed on both features. The 3 x 5 m two room

Figure 110. Map of 22yl.
tent frame foundation and an adjoining collapsed cache, 15 m north of the cabin, appear to be in relatively better condition than the cabin (Figure 111). Numerous tin cans, glass bottles, wooden boxes, boots and a small wooden pail, as well as four wooden bunks, were found in the interior of this feature. Two shovels, a pry bar, several wooden boxes, boots, stove pipe, an enamelled tin coffee pot and a number of medicine bottles were observed amidst the collapsed cache beside the tent frame.

**Artifacts/Dating.** A cylindrical hole-in-top milk can with lapped end seams and locked side seams and a half-inch hole and cap appears to be typical of the transitional style of Carnation milk can, between the 1899 three-quarter inch hole-in-top milk can and the later matchstick size filler milk can (see Fontana and Greenleaf 1962: 74 for discussion). A Braids coffee can and a Bluenose butter can with a lapped side seam also postdate the early 1900s. Although eleven wire nails meet one of the two criteria of early manufactured wire nails established by Nelson (1968) by demonstrating eccentrically aligned heads, the heads are not considered to meet the other criterion--being bulbous. Perhaps these represent a transitional phase between the early wire nails produced in the 1890s and early 1900s, and those of today. A turn-molded liquor (beer or wine) bottle, manufactured by the Houtart system, dates between the 1870s and 1920s, while an amethyst-tinted medicine or food flavoring bottle probably dates before 1915 (Figure 112). The purple tint in this latter bottle results when the manganese decolorizing agent in the glass is exposed to ultra-violet rays of the sun. Because manganese
Figure 108. Log cabin on 21yl.

Figure 111a. Remains of two-room tent frame on 22yl.
Figure 111b. Plan view of two-room tent frame.

Figure 114. Small log cabin on 22y2.
Figure 112. Medicinal or food flavoring bottle and liquor bottle from 22yl.
was the major decolorizing agent until 1915, at which time World War I cut off the main supplier of the chemical (Germany) from North America (Munsey 1970: 65), and because selenium then became the main decolorizing agent used in glass manufacture after 1915, the manufacture of this bottle probably predates the breakdown in communications between the Germans and North Americans at the outset of World War I.

Conclusions. This site probably represents a mining operation worked by four to eight men for a brief time between the early 1900s and late 1910s. Historical documentation, together with the age estimates of the artifacts and the fact that no reference to mining activity, either from earlier or later time periods, was recorded archaeologically or historically, combine to suggest that this site may have been Ed Benson's 1914-15 mining operation.

Approximately 8 km downstream from 22y1 on the opposite bank of Bighorn Creek one small log cabin was recorded (Figure 113). No other features were noted at this site. The 3 x 3 m feature is in fair condition with about half of the flat sod-covered roof caved in. The log cabin is unusual in that it lacks windows and has a number of large rocks in the north corner, underneath an opening in the roof (Figure 114). A bunk, three log stumps and several tin cans and wooden boxes were observed lying on the dirt floor of the cabin.

Artifacts/Dating. A rectangular hole-in-top meat can with a key tab opening and lapped end and locked side seams dates the
Figure 113. Map of 22y2.

site to some time after 1895 and before 1922. A rectangular Liptons tea can with a circular compression lid was apparently in use prior to 1915, but not before the late 1900s, as tins of this type were first imported to Canada in 1908 (Figure 115) (Thomas J. Lipton Ltd., pers. comm.). After 1915 Lipton tea cans were of the square overlap lid type. Liptons (pers. comm.) feel this can dates somewhere between 1908 and 1912. However, the can has been reused as a coin bank and probably does not date to the exact time when the contents were consumed.

Conclusions. Because no evidence of earlier or later mining activity was recorded archaeologically or historically at this site, and because the discovery of Bighorn Creek's gold bearing deposits did not occur until the mid 1910s, it is suggested that this site probably represents an occupation by one or several men who staked claims on Bighorn in 1914-15. The possibility
Figure 115. Lipton tea container, 1908-1915. Top: perspective view. Bottom: plan view of bottom of container. From site 22y2.
that the unusual style of the cabin reflects ethnic differences should be considered in light of the fact that most of the forty-odd claims on Bighorn Creek were staked by native peoples.

**Donjek River**

Only one site was recorded on the Donjek River (Figure 116). Time did not permit the project to record it directly from the ground.

**23yl**

Site 23yl was recorded on the Donjek River approximately 10 km south of the mouth of Bighorn Creek. A large number of stakes and logs rising vertically out of the ground, enclosing an area of approximately 300 m², may represent the remains of an outfitter's corral. No recognizable pattern in the arrangement of the logs could be delineated from the air. The possibility that this site may have once been an aboriginal caribou surround or drive should not be discounted.

**Artifacts/Dating.** Although this site was recorded from the air, the weathered condition of this feature may indicate that it is not of recent construction.

**Conclusions.** The age, as well as the function, of this site remains to be determined. It may have functioned as an outfitter's corral or as an aboriginal caribou drive.
Figure 116. Location of Donjek River site.
Hoge Creek

Only one site, a recent gold mining camp, was recorded on Hoge Creek by helicopter (Figure 117). Time did not permit us to record the site on foot.

24yl

Site 24yl is located on Hoge Creek about 8 km upstream from its mouth on the Donjek River. A number of propane bottles, the remains of a plywood tent frame, a "grizzly" and many scattered boards were recorded on the creek, scattered over a distance of about 200 m.

Artifacts/Dating. The propane bottles indicate the site has been recently occupied. Apparently the site was in operation until a few years ago (Larry Tremblay, pers. comm.)

Conclusions. This site seems to represent a relatively recent mining operation.

Grizzly Creek

Only one site, a possible outfitter's camp, was recorded on Grizzly Creek by helicopter (Figure 118). Time did not permit the recording of the site on foot.

25yl

Several log posts and 45-gallon oil barrels occurring over an area of approximately 150 m² were recorded on Grizzly Creek, 1.5 km upstream from the Duke River. The site may have once been
Figure 117. Location of Hoge Creek site.
Figure 118. Location of Grizzly Creek site.
a corral and outfitter's camp (Ron Chambers, pers. comm.). The log posts are similar to those at 23y1, in that they appear to be of the same dimension and height above the ground.

Artifact/Dating. The site was apparently occupied some time in the 1950s (Ron Chambers, pers. comm.). The good condition of the oil drums seems to support this interpretation.

Conclusions. The site may have functioned as a guide or outfitter's corral during the 1950s. The similar appearance of the logs at 23y1 supports the interpretation that 23y1 may have been an outfitter's corral.

Silver Creek

Only one site—a relatively recent gold mining site—was recorded on Silver Creek (Figure 119).

26y1

Site 26y1 is located on Silver Creek, approximately 8 km north of the Tatshenshini River. A log cabin, a garbage dump, a collapsed platform cache and an animal enclosure were observed on the site (Figure 120). The 5 x 6 m log cabin is in excellent condition and appears to have been recently occupied. An iron bed spring, a wooden bed frame, several cupboards and an oil drum stove were recorded in the interior of the cabin. A chicken-wire fence and small 1 x 2 m shelter, 5 m north of the cabin, may have functioned as a chicken coop or another animal enclosure. While no artifacts were noted in direct association
Figure 119. Location of Silver Creek site.
with the collapsed platform cache 3 m northwest of the cabin, numerous modern tin cans and bottles were observed in the garbage dump located 3 m southeast of the cabin.

Artifacts/Dating. The many modern bottles and cans, as well as the excellent condition of the site, argue for a fairly recent occupation, probably during the 1950s or 1960s. The cabin has also been recently used by Park wardens and backpackers (Chuck Hume, pers. comm.).

Conclusions. The site seems to represent a later mining operation, recently occupied by backpackers and wardens.

Figure 120. Map of 26yl.
Victoria Creek

Although Victoria Creek was prospected in 1898, only one site—a relatively recent mining camp and operation—was recorded on the creek (Figure 121).

28yl

A tent cabin, a log shed, four tailing piles, a large log shed or stone boat, a sluice box, as well as five oil barrels and other related mining equipment and artifacts were recorded on Victoria Creek, 12 km upstream from Kathleen Lake (Figure 122). The 4 x 5 m board tent frame is in very good condition. A cast iron stove and many modern tin cans were recorded in and around this feature. A large wooden flume and associated rail tracks (grizzly) 35 m north of the tent cabin represent intensive

Figure 122. Map of 28yl.
Figure 121. Location of Victoria Creek site.
sluicing activity. The large log sled 15 m north of the tent cabin was probably built to transport heavy equipment, while the log shed (Figure 123) 200 m north of the tent cabin appears to have been built to accommodate equipment and/or animals rather than people, as the door resembles a barn door in size and no domestic materials were observed in the structure. Other mining equipment on the site includes a "grizzly", numerous other rail tracks and several large grater blades.

Artifacts/Dating. Many modern tin cans and a 1956 Yukon license plate indicate that the site has been recently occupied, probably during the mid 1950s or 1960s.

Conclusions. This site appears to represent a recent, intensive gold mining operation which employed the use of heavy equipment, during the 1950s or 1960s.

Other Historic Artifacts and Features

A number of historic artifacts and features was not directly recorded during the survey, because of temporal and/or financial considerations. Consequently, they were not presented in the main text of this chapter. These features include: the old Alaska Highway bridge on the Slims River; an abandoned mine shaft on the south side of Kathleen Lake; numerous mining roads to creeks and lode-ore deposits in the Slims River Valley and the Mush Lake-Bates Lake and Alder Creek areas, as well as a cache on the gravel fan east of Beachview Creek. Whether the cache, which contained a gold-plated pocket watch (Brent Liddle, pers. comm.),
is associated with 16y2 is uncertain. Three artifacts—a wooden sleigh, relocated to Park headquarters from Mush Creek by park wardens in 1978, an old ice pick discovered by a Japanese climbing party on Mt. St. Elias in the interior of the park (Figure 124), and a wooden ski from the Bates River area—were also recorded. The weathered condition and makeshift construction of the sleigh from Mush Creek, as well as its fastenings, which appear to be characteristic of the early type of wire nail, suggest that this artifact is associated with the 1898-99 occupation of Mush Creek. The ice pick is unlike modern climbing equipment in that it is hand forged and filed. The pick probably dates to one of the five attempted assaults on Mt. St. Elias between 1885 and 1897.
Figure 123. Vertical log shed or barn on 28yl.

Figure 124. Hand-forged ice pick from Mt. St. Elias circa 1885-1897.
CHAPTER 5
DISCUSSION

In an effort to ultimately aid understanding of land use and settlement within the Kluane area, this chapter first details several spatial and temporal patterns of historic settlement of Kluane National Park, with specific reference to Bullion Creek. Similarly, it investigates the apparent contradiction between the historic documentation and archaeological record of the Kluane gold rush. Using this introduction as a platform, it presents a brief discussion involving the various problems inherent in interpreting both the archaeological and historic records. Finally, after considerable discussion, a research design based upon documenting the sociocultural differences between the two groups known to have participated in the Klondike and Kluane gold rushes is presented. This is recommended to guide further historic sites investigation in Kluane National Park.

Patterns of Settlement

Because sampling procedures were intensive in areas where historic sites were known to occur, rather than extensive throughout most areas, the present pattern of site locations, as derived from the archaeological record, should not be considered as an accurate approximation of the actual spatial patterning of historic sites in the park. Although the observed pattern may approach the real settlement pattern within the park, without probabilistic sampling there is no way to substantiate this
statement. Consequently, the present spatial patterning of historic sites should be considered tentative and subject to change until future probabilistic inquiry rejects or fails to reject this pattern.

Upon close examination of Table 1, the reader will note that most (84%) sites recorded in the park relate specifically to placer mining. Other historic activities include trapping (7.5%), exploration (4.5%), outfitting/hunting (3%) and logging (1.5%). Although the observed archaeological record generally agrees with the expected frequency and occurrence of sites suggested by historic documentation, there are some noticeable differences. For instance, it was expected that evidence relating to outfitting and/or hunting would outweigh trapping activities. The larger and more visible amount of material refuse or residue left behind by trapping (i.e., log cabins) as opposed to outfitting and hunting activities, as well as the lack of survey, other than by helicopter, in northern areas of the park (the region where most historic hunting activities were noted to have taken place) probably account for much of this apparent discrepancy. Another noticeable inconsistency was the lack of evidence pertaining to exploration and scientific research. Again, like outfitting and hunting, exploration and the types of scientific research that have been conducted in Kluane (see Chapter 3 for discussion) do not leave highly visible archaeological records. This, together with the fact that many later exploration and research parties seem to have reused a number of existing trapping or mining cabins for accommodation (i.e., lly1, 10y11, 17y2) may account for the poor representation of these activities in the
Table 1. Summary of site location, function and age.

<table>
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<th>Site No.</th>
<th>Location</th>
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<th>Secondary Function</th>
<th>Suggested No. of Occupations</th>
<th>Hypothesized Date of Occupation(s)</th>
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<td>recr. camping</td>
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<td>1904, 1935±3, recent?</td>
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<td>post 1922-mid 1930s</td>
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<td>creek</td>
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<td>10y11</td>
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<td>recreation/research</td>
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<td>Suggested No. of Occupations</td>
<td>Hypothesized Date of Occupation(s)</td>
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<td>----------------</td>
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<tr>
<td>11y1</td>
<td>creek mouth</td>
<td>mining camp (Sheep Camp?)</td>
<td>recreation/exploration/research</td>
<td>13?</td>
<td>1904, 1909-1939, recent?</td>
</tr>
<tr>
<td>11y2</td>
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<td>--</td>
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</tr>
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<td>--</td>
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</tr>
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<td>late 1960s</td>
</tr>
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<td>--</td>
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<tr>
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<td>2-3?</td>
<td>?, pre 1922, mid 1930s</td>
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<td>13y1</td>
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<td>1-2?</td>
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<tr>
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<td>creek</td>
<td>mining camp/operation</td>
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<td>not recent</td>
</tr>
<tr>
<td>13y5</td>
<td>creek</td>
<td>mining camp</td>
<td>--</td>
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<td>not early</td>
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<tr>
<td>13y6</td>
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<td>mining camp/operation</td>
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<td>mid 1930s - early 1940s</td>
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<tr>
<td>Site No.</td>
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<td>Secondary Function</td>
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<td>Hypoththesized Date of Occupation (s)</td>
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<tr>
<td>14y1</td>
<td>creek mouth/lake shore</td>
<td>trapping/recreation</td>
<td>--</td>
<td>1</td>
<td>post 1922</td>
</tr>
<tr>
<td>14y2</td>
<td>creek</td>
<td>mining camp/operation</td>
<td>--</td>
<td>1</td>
<td>1930s-1940s</td>
</tr>
<tr>
<td>14y3</td>
<td>creek</td>
<td>operation area</td>
<td>--</td>
<td>1</td>
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<tr>
<td>15y1</td>
<td>creek</td>
<td>mining camp/operation</td>
<td>--</td>
<td>2</td>
<td>1898-99, 1930s-40s</td>
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<tr>
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<td>operation area</td>
<td>--</td>
<td>1</td>
<td>1898-99?</td>
</tr>
<tr>
<td>15y3</td>
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<td>mining camp/operation</td>
<td>--</td>
<td>2</td>
<td>1898-99, post 1923</td>
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<td>1898-99</td>
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<td>1898-99</td>
</tr>
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<td>mining camp/operation</td>
<td>--</td>
<td>1</td>
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<td>16y2</td>
<td>river valley</td>
<td>trapping/recreation</td>
<td>--</td>
<td>1</td>
<td>post 1939</td>
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<tr>
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<td>river valley/</td>
<td>mining?</td>
<td>--</td>
<td>1</td>
<td>not recent?</td>
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<td></td>
<td>beach ridge</td>
<td></td>
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<tr>
<td>16y4</td>
<td>river valley/</td>
<td>exploration</td>
<td>--</td>
<td>1</td>
<td>1890-91?, early?</td>
</tr>
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<td></td>
<td>beach ridge</td>
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<td>Site No.</td>
<td>Location</td>
<td>Primary Function</td>
<td>Secondary Function</td>
<td>Suggested No. of Occupations</td>
<td>Hypothesized Date of Occupation(s)</td>
</tr>
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</tr>
<tr>
<td>17y1</td>
<td>lakeshore</td>
<td>trapping/regrn.</td>
<td>--</td>
<td>1</td>
<td>recent</td>
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<tr>
<td>17y2</td>
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<td>trapping/regrn.</td>
<td>exploration?</td>
<td>2</td>
<td>?, 1942</td>
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<td>17y3</td>
<td>lakeshore</td>
<td>trapping/regrn.</td>
<td>--</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>18y1</td>
<td>creek</td>
<td>mining camp</td>
<td>--</td>
<td>1-2</td>
<td>pre 1920, post 1922?</td>
</tr>
<tr>
<td>18y2</td>
<td>creek</td>
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<td>--</td>
<td>1</td>
<td>post 1922</td>
</tr>
<tr>
<td>18y3</td>
<td>creek</td>
<td>mining camp?</td>
<td>--</td>
<td>1-2</td>
<td>pre 1922, post 1922?</td>
</tr>
<tr>
<td>18y4</td>
<td>creek</td>
<td>mining camp/operation</td>
<td>--</td>
<td>1</td>
<td>1920-1954</td>
</tr>
<tr>
<td>18y5</td>
<td>creek</td>
<td>campsite/exploration?</td>
<td>--</td>
<td>1</td>
<td>mid 1940s</td>
</tr>
<tr>
<td>18y6</td>
<td>creek</td>
<td>operation area</td>
<td>--</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>18y7</td>
<td>creek</td>
<td>mining camp/operation</td>
<td>--</td>
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<tr>
<td>19y1</td>
<td>small river</td>
<td>mining camp/trapping</td>
<td>--</td>
<td>1</td>
<td>post mid 1940s</td>
</tr>
<tr>
<td>19y2</td>
<td>river-lake</td>
<td>mining?/exploration?</td>
<td>--</td>
<td>1</td>
<td>post late 1920s</td>
</tr>
<tr>
<td>20y1</td>
<td>creek</td>
<td>mining camp/operation</td>
<td>--</td>
<td>2</td>
<td>?, 1920-1960</td>
</tr>
<tr>
<td>22y1</td>
<td>creek</td>
<td>mining camp/operation</td>
<td>--</td>
<td>1</td>
<td>1914-15</td>
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<tr>
<td>22y2</td>
<td>creek</td>
<td>mining campsite</td>
<td>--</td>
<td>1</td>
<td>1914-15</td>
</tr>
<tr>
<td>23y1</td>
<td>river valley</td>
<td>outfitting/hunting</td>
<td>--</td>
<td>1</td>
<td>?</td>
</tr>
<tr>
<td>24y1</td>
<td>creek</td>
<td>mining camp/operation</td>
<td>--</td>
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Table 1. (continued)

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Location</th>
<th>Primary Function</th>
<th>Secondary Function</th>
<th>Suggested No. of Occupations</th>
<th>Hypothesized Date of Occupation(s)</th>
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<tr>
<td>25y1</td>
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<td>26y1</td>
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<td>warden patrol</td>
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</tr>
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<td>28y1</td>
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<td>mining camp/operation</td>
<td>--</td>
<td>1</td>
<td>1950s</td>
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</table>
archaeological record. Mountain climbing, like outfitting/hunting, was also recorded to be rare archaeologically because of the lack of survey in areas where this activity was known to have taken place and the low visibility of the archaeological record left behind by this activity.

In general, the major discrepancy between the expected and observed number of several types of archaeological sites in Kluane National Park can be attributed to the highly visible nature of the refuse and residue left by mining, trapping and logging activities and the low visibility and low impact which activities such as outfitting, hunting, exploration, research and mountain climbing have on Kluane's environment. It is apparent from the above that, although mining was the major documented and recorded activity in the park, the sample was grossly biased towards the more visible mining site.

The derived spatial settlement pattern of Kluane National Park is not overly complex. The constraints imposed by high relief and rugged wilderness terrain upon human land use have been the major factor restricting movement and settlement within unglaciated areas of Kluane National Park. Most sites appear to be either concentrated on several creeks in the Slims River Valley and the northern areas of the park or on several tributaries of the Kathleen Lakes and Mush and Bates Lakes in the southern end of the park. The location of potential and actual placer gold deposits on creeks appears to be the major variable determining the location of most mining sites within the park. Other variables of lesser importance affecting the settlement of mining sites, especially those of the earlier period, along creek
drainages in the Kluane area were the availability of a good water supply for sluicing, the presence of green and dry timber for the construction of flumes, sluice boxes, tent frames and cabins, and the distribution of suitable areas on creek beds for the disposal of tailings. The latter two variables, however, were probably not important considerations in determining the location of later mining sites after the introduction of heavy bulldozing and earth moving equipment and prefabricated buildings in the 1940s and 1950s. A linear settlement pattern also initially developed on most creeks in the park in response to the restrictive topography of creek drainages and the Northwest Territory Mining Act, which allowed only one person in each mining district to record only one claim, 250 feet in length along a stream.

Campsites (defined by the presence of living accommodations and absence of mining equipment or activity areas), mining operations or extraction areas, and a combination of the above two sites comprise the three major types of mining sites in Kluane. Most mining sites, however, are represented by the latter campsite/mining operation combination. Their location was restricted exclusively to areas immediately adjacent to the creek. While tents probably lined the floor and sides of Bullion and other creeks at the height of the gold rush in 1904, frequent flooding and the desire to live away from activity areas resulted in the construction of cabins, tent frames and other basic living facilities on the banks of the creek above the point of extraction. Evidence of a road or trail, which connected and serviced individual operations, was often noted behind and in front of these dwelling units. This type of settlement pattern, also
documented in the Klondike gold fields (Duerden 1971: 72-75), seems to have characterized most, if not all, campsite/mining operation sites in Kluane National Park after the gold rush period.

While the emergence of large companies with very high levels of extractive efficiency led to the development of nucleated company settlement and the demise of linear creek settlement in the Klondike gold fields (Duerden 1971: 21), this type of settlement pattern continued to characterize Bullion and other creeks in Kluane long after the initial gold rushes in 1903-04, albeit at a much reduced population density. The lack of sufficient gold bearing deposits combined with the expense of transporting heavy extractive equipment and machinery to the area, is considered to be the major factor responsible for the continuation of the linear settlement pattern in the area.

With few exceptions (i.e., 14y4, 15y5, 15y8, 15y7) most campsites were restricted to the mouths of creeks, specifically Bullion Creek. While the settlement of Bullion was initially linear, the large number of prospectors on the creek in the spring months of 1904 also necessitated that a service center be established at its mouth. The location of Bullion City, like the service centers and nucleated settlements of Grand Forks and Granville in the Klondike gold fields, was allied to communication rather than proximity to the site of extraction (Duerden 1971). The location of this type of settlement appears to be a compromise between proximity to the mineral resource and an attempt to minimize discomfort in inhospitable areas (ibid.: 75).
After 1904 Bullion City lost its functional utility or purpose of servicing miners, perhaps even before it started, when high water and new gold discoveries initiated abandonment of the area. Being some distance away from the actual area of extraction, the cabins and tent frames of Bullion City were never used again by people with mining interests. Archaeological evidence indicates that extractive site and campsite/mining operation combinations were the major types of mining sites in use on Bullion and other creeks in the Kluane area after 1904.

Mining operations or extraction sites without related camps or dwellings occur infrequently on creeks in the park. Most sites of this type probably represent extended activity areas of other campsite/mining operations along the creek, or campsite/mining operations whose dwellings were not detected.

Following mining, inferred trapping cabins were the most common historic sites recorded in the park. This type of site was defined by the lack of any evidence pertaining to gold mining, and the location away from placer mined creeks. Without exception, this type of site was restricted to lake shores and river valleys--areas known to have considerably better trapping potential than creek drainages. However, because it was often difficult to ascertain whether a cabin functioned only as a trapper's cabin--the view offered by the location of a number of cabins and their proximity to hiking trails, boating, fishing and other recreational activities jeopardized the interpretation that these sites were used solely as trapper's cabins--the possibility that some of these sites were vacation or recreational retreats
should be considered. Trapping, like mining in the Kluane area, was seasonal. While many miners who worked the creeks for gold in the summer spent most of the winter in Kluane City or in Whitehorse, many also periodically hunted and trapped during the winter months (Allen Wright, pers. comm.). Therefore, the possibility that most trapping cabins in the park represent the winter accommodations of miners should also be considered.

Sites relating specifically to outfitting/hunting, of which only two were recorded, were located in the northern areas of the park, the region where this type of activity was historically documented. However, it is uncertain whether these sites represent outfitter's corrals or aboriginal caribou surrounds (drives). The presence of an oil drum at one of these sites and the similarity between the two sites seems to support the former interpretation.

While the location of mineral and faunal resources was the primary determinant of Kluane's historic settlement pattern in space, changing access routes into the area influenced the settlement of the park through time. During the late 1890s the western branch of the Dalton Trail which ran along Alder Creek provided the only major route into the Kluane area and the "Last Chance Mining District". The trail concentrated historic land-use and mining activity in the southeast corner of the park during this time. However, by 1900 the decline in the number of people traversing the trail en route to the Klondike gold fields and the construction of the White Pass and Yukon railway, led to the eventual extinction of the Dalton Trail in the mid 1900s. After the discovery of gold in the Kluane Mining District in
1903-04 a trail and eventually a road was constructed from Whitehorse to Kluane in an effort to service the mining population. The extinction of the Dalton Trail and the construction of the Kluane-Whitehorse road, 100 km northwest of the "Last Chance Mining District", which focussed mining activity in the central and northern areas of the park, have to be considered the primary reasons why creeks in the district were not prospected or worked again until the late 1920s or 1930s. The discovery of gold at Squaw Creek on the B.C./Yukon border restimulated mineral exploration in the district in the late 1920s and early 1930s. The Whitehorse-Kluane road remained the major supply and access route into the area up until the construction of the Alaska Highway in 1942. For the first time access to the area was provided by two alternative routes--from the east via Whitehorse and from the south via Haines, Alaska. The construction of the highway also resulted in the decline of a number of road houses, initially established during the Kluane gold rush on the former Whitehorse-Kluane road, which it bypassed. The gradual decline in Kluane's mining industry and the construction of the Alaska Highway are responsible for the emergence of Haines Junction and the contemporary settlement pattern of the Kluane area (Duerden 1971).

The first of two patterns which also characterized the settlement of the park through time was a gradual shift away from the predominantly male-oriented mining site and operation to a more family-oriented one. The Kluane gold rush in 1904 attracted primarily a male population. Although not yet demonstrated, after the district's initial depopulation the same year,
some of those remaining to prospect and settle in the area may have brought in their families or taken wives. These men were the more serious and realistic prospectors who, realizing that no creek in the district really had enough work done on it to prove its value as a gold producer, were willing to invest a considerable amount of time and energy prospecting and mining gold. Rather than constructing makeshift dwellings which had characterized the gold rush, these men now built better cabins, engaged in more efficient mining operations and spent greater lengths of time mining gold. Doc Sugden and family on Bullion Creek in the winter of 1910-11 (Hill 1912) seems to be one of the first to exemplify this trend. Although not historically documented, archaeological evidence (women and children's clothing and accessories) suggests that this pattern continued well into the 1930s and 1940s, only to be briefly interrupted by a substantial increase in male-oriented mining activity during the mid 1930s.

The interruption of this trend in the 1930s represents the second of these patterns. Evidence, primarily archaeological, indicates a dramatic increase in the amount of gold mining activity and number of people on Kluane's creeks over previous years. Although uncertain, the substantial increase in mining and other activities, specifically outfitting/hunting, in the Kluane area during the 1930s may have been a function of economic depression. Like the Klondike where Dawson's population of miners increased by more than several hundred (Duerden 1971), the number of men and mining activity in the Kluane gold fields
also seems to have been paradoxically reinvigorated by the depression. Economic depression as well appears to have been, in part, responsible for the great Klondike gold rush three and one-half decades earlier.

During the late 1890s deterioration of economic conditions in western industrial centers seems to have made the Klondike as attractive as gold. Not only did world depression create an abnormal demand for money, it also left much of the working population with free time on their hands. The repulsive forces of deteriorating domestic conditions caused by economic depression combined with the attractive forces of frequently and grossly exaggerated newspaper accounts (Weppler 1969a), as well as improved methods of communication and transportation, appear to be the major factors responsible for the size and speed of the Klondike gold rush.

While newspaper accounts of considerable gold discoveries provided sufficient attraction to draw a large population to Bullion Creek and the Kluane gold fields in 1904, improving world economic conditions and employment opportunities after 1900 provided none of the repulsive force required to initiate a large stampede. Although it was predicted that the Kluane gold rush would rival Dawson's (Edwards 1904: 106), improved domestic conditions have to be considered one of the major reasons why the Kluane gold rush never approached the same epidemic proportions as the Klondike gold rush. Knowledge of the fate (i.e., lack of success) of most, if not all, of the Klondike stampeders may have also acted as an added deterrent. Later in the season the pro-
hibitive cost of transporting supplies into the areas (McConnell 1905), poor working conditions and low returns virtually halted migration into the district.

The repulsive/attractive force formula also seems to have provided the catalyst for a number of other unpremeditated stampedes, including the Fraser River gold rush in 1858. Deteriorating conditions and opportunities for the individual placer miner in California and exaggerated news of the richness of the discoveries in the Fraser (Morrell 1940: 120) seems to have stimulated the rapid immigration of more than 25,000 people into the area. High water and flooding, resulting in poor working conditions, and the destruction of many small mining operations on Bullion Creek, concurrently with the discovery of considerable gold bearing deposits on Burwash Creek, also seems to have provided the necessary contraposed forces needed to initiate the rapid abandonment of Bullion Creek and subsequent stampede to Burwash Creek.

While the acceleration in gold mining during the 1930s can best be accounted for by greater unemployment, increased demand for money and other effects of the depression, the dramatic increase in outfitting/hunting activities is not as easily explained. Most, if not all, members of the 14 or more major hunting expeditions coming into the Kluane area between 1935 and 1938 were not just the well-to-do, but they appear to have been the very wealthy of Boston, Philadelphia, St. Louis, California and other Eastern American and Canadian cities. Among others, they were managers of tobacco companies, trustees and members of
the Philadelphia Academy of Natural Sciences and American Museum of Natural History, and bank presidents (Whitehorse Star [Whitehorse] 27 September 1935, 23 April 1937, 23 July 1937, 16 September 1938). While the introduction of the airplane made the Kluane area more accessible to the more affluent during the depression, only the very rich seem to have taken advantage of the opportunity it presented to engage in hunting activities. Although not yet substantiated, the accumulation of big game trophies and wilderness experience may not only have served to maintain the status and position of these people within the upper wealthy class, but it also may have functioned to reconfirm the solidarity of the group with respect to other wealthy social classes during the depression.

Historic Documentation vs. the Archaeological Record - a basic contradiction in the Kluane gold rush

As discussed in a previous section of this chapter, the discrepancy between the expected and observed frequencies of a number of Kluane's historically documented activities can be predominantly accounted for by the low visibility of the archaeological record left behind by these activities. However, the cognizant reader may also be becoming increasingly aware of another basic contradiction, not as easily explained by this phenomenon. It should be evident to most that the fit between archaeological evidence relating to Kluane's 1904 gold rush and its historic documentation is an uncomfortable one. This can
best be illustrated by estimating the absolute maximum population of the Kluane Mining District in 1904, as derived from the archaeological record, and comparing it with the minimum number of people reported in the area in 1904.

Employing three, as the average number of men known to have occupied a tent (tent frame) on Ruby Creek in 1904 (Daily Evening Star [Whitehorse] 7 April 1904) and four, as the maximum number of men reported to have inhabited a typical 18 foot square log cabin in Fortymile during the 1890s (Berton 1972: 78), the combined archaeological populations of Bullion and Sheep Creeks (approximately 100) nowhere near approaches 1200, the minimum number of people recorded in the district in early May of 1904 (Daily Evening Star [Whitehorse] 11 May 1904). Sampling error at the site and intrasite level, which is considered to be minimal because of the considerable amount of time (approximately 100 man hours) spent surveying these creeks and sites by helicopter and foot, is not thought to be a significant variable contributing to this apparent contradiction. Even, if for the sake of argument, doubling the archaeological population estimate to account for sampling error and adding this figure to the 90 men reported on Ruby Creek in April (ibid. 7 April 1904), the 62 claims worked on Bullion by an average of 2 men per claim in May (ibid. 1 June 1904) and the inflated estimate of 160 men on Sheep in April--derived from the length of the creek known to have been staked (see map, McConnell 1905) and the territorial law of allowing only 250 feet per claim per man--the revised estimate (approximately 575) still falls short of the minimum number of
people reported to be on Bullion, Ruby and Sheep Creeks in the spring of 1904. While flooding and later mining activity may have destroyed much of the early gold rush evidence on these creeks, much as it did in the Klondike fields, the basic contradiction still exists and cannot be ignored. Other explanations must be sought.

As alluded to earlier, although as many as 10,000 men were predicted to be in the Kluane gold fields by the summer (Daily Evening Star [Whitehorse] 7 May 1904), only 1200 were reported to be in the area in May with this number expected to more than double in the next two months (ibid. 11 May 1907). While 500-600 resident Yukon prospectors were reported to have participated in the original stampede to the area in 1903 (Brook 1904) (Snyder 1905), 1200 men represents the only documented estimate of Kluane's mining population during the gold rush of 1904. This population estimate, as well as numerous other newspaper accounts from Victoria and Whitehorse, in which 300 men on 3 March 1904, a good proportion of 400 men on 25 March 1904, and 275 men on 28 March 1904, were reported heading for Bullion Creek and the Kluane gold fields to join those already in the area, may be overinflated in light of the archaeological record. If they are, as the archaeological evidence and some contradictory historic documentation suggests, these exaggerations are hypothesized to be a function of promotion and optimism concerning the size and significance of the Kluane gold rush.

To understand the apparent reason(s) why news of the Kluane gold rush may have been inflated, one must look to Whitehorse's
socioeconomic situation at the time. Whitehorse, formerly known as Closeleigh, was first established as a resting place for migrants travelling to the Klondike gold fields in the late 1890s. After 1899, exhaustion of the more accessible gold in the Klondike, which resulted in increased cost of extraction for the individual placer miner, and an improving world economy initiated a dramatic decline in the population of Dawson and most of the Yukon in general. However, the opening of the White Pass and Yukon railway in 1900, combined with the construction of a winter road from Whitehorse to Dawson in 1902, postponed at least for the time being depopulation of Whitehorse. These two developments not only seem to have temporarily contributed to Whitehorse's relative stability and permanence (Duerden 1971), they also forced this settlement, which became the major distribution point on the Yukon's most important waterway (ibid.:18), to become even more dependent upon Dawson's questionable future. However, if Whitehorse was to remain a viable community over the long term it had to become, in part, independent of servicing the White Pass and Yukon railway and a city whose economy and population continued to decline because of decreasing gold production in the Klondike gold fields, after the early 1900s.

While several copper mines in the hills adjacent to Whitehorse (McConnell 1909) and silver, lead and zinc mines near Mayo aided Whitehorse's economy (Koroscil 1971), the discovery of gold in 1903-04 on Ruby and Bullion Creeks--150 miles west of Whitehorse--and Livingstone Creek--a tributary of the Teslin River--provided Whitehorse with the first real opportunity to become self-sufficient. Consequently, the Whitehorse newspaper
(Daily Evening Star), perhaps encouraged by those merchants, retailers and residents who stood to lose the most by Whitehorse's decline and to gain the most by its growth, appears to have promoted and overemphasized the significance of the Livingstone and especially the Kluane gold strikes and subsequent rushes. Almost daily during the months of March, April and May newspaper accounts of considerable length reflected a certain element of promotion and optimism concerning the Kluane mining district. This is most evident in statements such as "nothing but good news comes to Dawson about the richness of the Alsek gold fields" (Daily Evening Star [Whitehorse] 7 March 1904), "there is an estimated 10,000 men going to the Alsek gold fields" (ibid.), "the district will most likely be the center for gold seekers for some time to come" (ibid. 19 March 1904), "there are great possibilities for productive placer diggings in the area" (ibid. 23 March 1904), "...the area is Eden for prospectors" (ibid.), "there ought to be room for 5,000 or 6,000 miners on the creeks this summer" (ibid. 28 March 1904). The Victoria Times (Victoria 12 March 1904), also in an apparent effort to stimulate the city's economy, seems to have promoted the Kluane gold rush. This is reflected in such reports as "the steamboat agents are looking for a big exodus of people to Bullion Creek and the Alsek gold fields this summer" and "it is safe to predict...that the rush of travel will surpass anything seen here since the days of the Klondike excitement."

Newspapers, however, cannot be held totally responsible for the exaggerated accounts of the Kluane gold rush. Some miners
and prospectors, although encountering difficult working conditions, also seem to have expressed a certain degree of optimism about Bullion Creek and the Kluane gold fields, since even before any one area of Bullion Creek was thoroughly tested, owners on every claim were busily building sluice boxes and preparing for clean up (Daily Evening Star [Whitehorse] 2 May 1904).

While this optimism is well documented in the following personal accounts, "the discoverers of Bullion expect to take out $100,000.00 by the end of the season" (ibid. 11 May 1904), and "the Kluane gold strike now expects to rival Dawson's" (Edwards 1904: 106), W. L. Breeze and the Bullion Hydraulic Company's $300,000 venture on Bullion Creek in 1905 (see Chapter 3 for discussion and Frontispiece) has to be considered the epitome of unrealistic optimism.

To depart from the major issue for a moment, not only is optimism reflected in personal reports and newspaper accounts, it also appears to be represented in the archaeological record of one and possibly two sites at the mouth of Bullion Creek. A significant level of optimism seems clearly demonstrated in the construction of the picket fence, root cellar and corral at 10y5 before the completion of the hotel; the functioning of these features would probably not begin until the parent feature was finished. Yet the site was abandoned before the hotel was completed. Optimism seems to clearly manifest itself in the archaeological record of this site in the inefficient use of time and energy by builders. Even the construction of the hotel and other substantial accommodations may reflect a certain degree
of optimism on the part of their builders, in light of the fact that stampedes from creek to creek were common and the wealth of the creek had yet to be determined.

While the discovery of gold at the outset appears to have given rise to a new optimism concerning the future development of Whitehorse (Duerden 1971: 25), Duerden points out that because of the prohibitive costs of transporting supplies into the area such optimism was unrealistic. Combined with the fact that not enough gold was ever found in sufficient quantities to warrant the introduction of heavy extractive equipment, such optimism was also unwarranted. Optimism, it should be pointed out, is not unique to the Kluane gold rush. As a matter of note, optimism, representing its ultimate form in "gold rush fever", appears to be a component part of many other gold rushes, especially the Klondike gold rush where it is without parallel. In fact, an optimistic nature appears to be prerequisite for most gold rush stampeders (Berton 1972).

After the Kluane gold rush and subsequent population decline Whitehorse appears not to have considered reports and news from Kluane mining district topical or significant, and as a result, the contradictory nature of historical documentation and the archaeological record of 1904 reverses itself in the 1930s when much more activity related to placer mining was recorded in the archaeological record than might otherwise have been expected from written accounts.

The contradiction between the archaeological and historic records of the Kluane gold rush serves to illustrate that if
critical examination of either record, but especially the historic record, had not been undertaken, weak and/or faulty interpretation may have resulted, thus handicapping explanation of past cultural events and processes. While most of the discrepancy can be accounted for by the inflation of the size and significance of the rush by certain newspapers and individuals, rather than the falsification of events and the destruction of the earlier mining record by later mining activity and flooding, the basic contradiction instructs the historical archaeologist to critically examine the formation processes of both records before he attempts to interpret their meaning at face value.

Schiffer (1976: 27) points out that most evidence of the cultural past exists in either the written record or the archaeological record. However, both records, as has been seen, are not necessarily accurate reflections of the past. They are abstractions of reality. Each has inherent within its own nature or character barriers or noise which obscure the search for cultural history and cultural process. It is not only the task but the duty of the investigator employing either or both data sets to identify and understand how these obstacles operate before he attempts to explain the cultural past.

Almost without exception, the written record of the past is a record of the few and not society as a whole. The written record also not only appears to be the expressions of a small and deviant class within a society, but it also tends to concentrate on a few striking personages and events at the expense of commonplace reality (Glassie 1975: 9-10). It is a rationalization
and may not only be wrong, but is definitely shallow and incomplete (Glassie 1975: 10). As a result, the synchronic account of any past era can rarely be assembled (ibid.: 8).

On the other hand, contrary to the claims of Lewis Binford (1964: 425), among others, the loss, breakage and abandonment of implements and facilities at different locations within a site does not leave a fossilized record of the actual operation of an extinct society, for the proveniences of artifacts in a site often do not correspond to their areas of use (Schiffer 1972: 156). By the time an archaeologist excavates a site of past human activity, the arrangement and representation of archaeological remains usually reflects a number of cultural (depositional) and non-cultural formation (post-depositional) processes, rather than the actual spatial patterning of past activities. While erosion, animal activity and chemical action constitute a few major processes which alter the archaeological record after materials are transferred from the systemic (cultural) context to the archaeological context, loss, discard and abandonment are the major processes conditioning the kinds and quantities of materials deposited from the cultural system into the archaeological record (Schiffer 1976). However, although a few general laws relevant to the understanding of cultural formation processes (C-transforms in Schiffer 1976) have been forwarded (Schiffer 1972, 1976; Hildebrand 1978; Fehon and Scholz 1978), little is still known about how different loss, discard and abandonment behaviors and events affect what kinds and quantities of materials are deposited in the archaeological record. This, in part, is the purpose of
the next chapter--to attempt to derive a number of law-like propositions relevant to the understanding of abandonment behavior by analyzing how differing abandonment conditions affect what is left behind in the archaeological record. Other processes which alter archaeological deposits in many parts of the world are activities which transform materials back from the archaeological context to systemic context, such as scavenging and pot hunting, and activities which transform materials from state to state within the archaeological context, such as plowing and other land modification practices (Schiffer 1976: 29).

While some general non-cultural formation laws (N-transforms in Schiffer 1976) and cultural formation laws (C-transforms) are becoming available to aid the archaeologist in understanding how various depositional and post-depositional events affect the archaeological record, few laws have been explicitly forwarded to help the historical investigator determine how the written record he is observing deviates from reality. Following Glassie (1975: 10), it is proposed that if a document deals with the author's society, it is more apt to be accurate than if it deals with a people he knows less well and a document that is unintentionally informative such as the probate inventory is likely to be less purposefully falsified than one meant to sway readers' thoughts, such as newspaper accounts of the Kluane gold rush. Other general cultural formation laws of the written record remain to be explicitly stated and tested.

For too long historical archaeologists, presented with the dilemma of a contradiction between historical documentation and
the archaeological record, have, without critical examination of either, but especially the historic record, dismissed the discrepancy to sampling error, pot hunting, decay or other inherent faults of the archaeological record. They have failed to criticize the written record, and have viewed the artifact as only an illustrative adjunct to the literary narrative (Glassie 1975). I would hope that this brief discussion has demonstrated that before the investigator can use either data set to explain past cultural events and processes he must first determine how these records were formed and why. In other words, as Carr (1962: 16-17) refers to when speaking of history, "our first concern should be not with the facts but with the historian who wrote them."

Sourdoughs and Cheechakos - An Avenue of Research Recommended to Guide Further Historic Sites Investigation in Kluane National Park

Recently, it has been recognized (Weppler 1969b)(Power 1976) that, although the resident Yukon prospector prior to 1896 was physically and linguistically indistinguishable from the majority of gold seekers who participated in the Klondike gold rush in 1897-98, the society of which he was a part was socioculturally different from that of the stampeder. Power (1976) has noted that cooperation, sharing of food and shelter, reciprocal exchange of information, and mutual dependence seems to have characterized the oldtimer or "sourdough" community. Honesty, generosity, modesty, self-reliance, strength of character, and a high degree of adjustability were values highly revered by this frontier society.
The stampeder or "cheechako", on the other hand, seems to have displayed neither the characteristic egalitarian behavior of the oldtimers nor shared their values. The search for gold and the prospects of striking it rich appear to be the sole concern of the majority of newcomers. The oldtimers' motto of "Do unto others as you would be done by" no longer held precedence over the pursuit of gold, since helping a neighbour represented time lost in the race for the bonanza (Weppler 1969b). In short, the oldtimer community seemed to have been based on principles of egalitarianism and communal integration, while the stampeders placed more emphasis on individualism and the capitalistic ideals of competition and wealth accumulation (Burley 1979).

While Burley, following the cognitive approaches of Deetz (1977, 1978), Glassie (1975) and Leone (1973), explains these differences as a reflection of differing world views or cognitive structure, Hayden (1979) believes these differences may have resulted from specific adaptations to different socioeconomic (environmental) conditions and pressures. Although both explanatory mechanisms have some merit, neither alone may be sufficient in attempting to account for the observed sociocultural diversity between the cheechako and sourdough. Both Power (1976) and Weppler (1979b) see the egalitarian system of the oldtimer rapidly evolving in response to the formidable Yukon environment, where resources were few and survival was hard. The selection of a system based on mutual dependence, cooperation, exchange, sharing and other community integrating principles seems to have been the most effective behavioral adaptation in response to coping with
the harsh reality of living in the Yukon at a low population density.

Conversely, the main surge of the Klondike gold rush in 1898 was exposed to very different conditions and pressures than those which shaped sourdough society several years earlier. At the time the bulk of the stampede descended upon Dawson, the original community of prospectors and their ways of sharing information, food, shelter and gold discoveries was well on the way to becoming extinct through sheer weight of numbers coming into the Yukon after 1895 (Weppler 1969b:32) and improving logistics and communications.

Although the influx of people into the area in 1896 nowhere near approached that of the Klondike gold rush the following year(s), it was sufficient to initiate the destruction of the sensitive egalitarian nature of oldtimer society. No longer was it possible to know everyone personally, and it became impossible to bring the opprobrium of the community against transgressors of tacitly understood laws (Weppler 1969b: 32). The moral code no longer held.

Improving logistics and communication with the outside world also presented those who were to participate in the Klondike gold rush in 1897-98 with a different situation with which to adapt, as supplies could now be obtained by anybody with money. Resources were more predictable and stable. Survival was no longer dependent upon the egalitarian principles of exchange, cooperation and sharing. The system of the earlier prospecting society became unnecessary if not unworkable. With increasing numbers of
people coming into the Yukon after 1895 and improving logistics and communication, competition, individual commitment and wealth accumulation not only became the prescribed norms, but they also seem to have been the more adaptive behavioral response in the years just preceding and during the Klondike gold rush.

Also, Dawson, at the time it received the bulk of the gold rush, unlike the towns of Circle City and Fortymile--the settlements from which many oldtimers came--was a boom town in progress. Although Circle and Fortymile had considerable populations, they had begun to stabilize. Dawson, on the other hand, was exploding; hotels, saloons, brothels and other service-oriented facilities had been built or were in the process of being built. There was competition for space, money and status. Although smaller and muddier, Dawson was also livelier, richer and better equipped than many larger Canadian and American cities (Berton 1972: 354).

As well as encountering different adaptational pressures, the cheechako and sourdough also seem to have possessed differing world views or cognitive structures (Burley 1979). The oldtime Yukoner, unlike the stampeder, did not come to the Yukon only for gold and the concomitant benefits it could acquire in the industrial world outside the Yukon. Although gold was a major concern or raison d'être for the prospector entering the Yukon before 1895, many appear to have come as much for the way of life and living on the last frontier as for profit (Weppler 1969b: 36). The oldtimers were not so much a society of miners, but frontier-men who were always running one step ahead of civilization. They were wanderers, adventurers, buffalo-hunters, civil war veterans
and experienced prospectors who had worked their way north from
gold strike to gold strike (Berton 1972: 17). The way they
perceived the world was not only shaped by life in the Yukon and
vice versa, it brought them there in the first place.

The majority of the Klondike gold rush, however, was the
young, restless and unemployed of the western industrial centers
of Canada and the United States who possessed a cosmopolitan
psychology ill-suited for adaptation to northern life (Burley
1979) but one, as it turns out, that was adaptive for survival
in Dawson, as the values and beliefs of this society were
partially responsible for creating its socioeconomic environment.
They were the escapees from justice, the dreamers who had only
read about the frontier, and the desperate who had nothing to
lose but all in the world to gain when they left for the Klondike.

It should be pointed out that while the original prospecting
way of life was on the verge of extinction by 1896, the values
and perceptions shared by this former community were not. Even
during the height of the stampede the sourdough, still upholding
certain intrinsic values and beliefs, viewed the cheechako
differently from members of his former, now extinct society.
Their perception of the gold-fevered stampeder was not without a
certain degree of indifference or disdain, as is most evident
in the naming of the first bench claim in the Klondike gold
fields, Cheechako Hill, as only a newcomer would be fool enough
to look for gold on a hill (Berton 1972: 180). The cheechako,
on the other hand, usually after a brief rite of passage, did
not perceive of himself as much, or any, different than the
sourdough.
The retention of some of the old beliefs and values by small remnant groups of oldtimers not only gave rise to the Yukon Order of Pioneers in Circle City in 1895—an order established to set early prospectors apart from the immigrants and preserve the old ways (Burley 1979)—but it also led to the development of an ingroup (former members of the oldtimer community) and an outgroup (the cheechako or newcomer) in the Klondike gold fields in 1898-99. And, while the stampeders' and oldtimers' perception of each other was not mutually exclusive, it seems obvious that the two differ and that these differences may be recognizable in the archaeological record of each population.

How does this affect archaeological investigation in Kluane National Park? By 1901 most, if not all, stampeders, disappointed and out of money, were gone. Many of those remaining in the gold fields were either the oldtimers who had been in the area before the gold rush or the newcomers who, after their illusions of grandeur had been dispelled, were willing to invest a considerable amount of time and energy mining gold. However, because of several reasons discussed in previous sections of this thesis, they too were to abandon the area to search for gold elsewhere. It was this type of person who first discovered and participated in the rush to Ruby and Bullion Creeks in 1903-04. Although they were not to remain unaffected by the Klondike gold rush, they nonetheless still possessed the frontier ethic (see Marshall 1933, for example) and were different from those that followed them to the Kluane gold fields.

While Allen Wright (pers. comm.) believes that most participants in the Kluane gold rush were the oldtimers who had been in
the Yukon prior to the gold strike, historical evidence (Whitehorse and Victoria newspapers) indicates that many people were leaving for Bullion Creek and the Kluane gold fields from Victoria and Vancouver. As mentioned earlier in a previous section of this chapter, the discrepancy between Kluane's historical record and archaeological record is not so much that events were falsified, but rather that newspapers and personal accounts tended to exaggerate the size and significance of the Kluane gold rush. Therefore, it would probably be safe to assume that some component of the 400 reported passengers heading for Bullion Creek and the gold fields aboard the Princess Mary, S.S. Dolphin and City of Seattle (Daily Evening Star [Whitehorse] 25 March 1904) actually participated in the Kluane gold rush. A certain percentage of 64 passengers (ibid. 3 March 1904) and the daily parties of men reported going to the area in March (Victoria Colonist [Victoria] 10 March 1904) probably also made it to the Kluane gold fields.

As in the Klondike, two populations from different socio-economic backgrounds took part in the Kluane gold rush. Although they were not an exact mirror image of the sourdough and cheechako--the Klondike stampede was to leave no one unaffected in the Yukon or North America--they may have shared the same basic distinctions. What type of person typified the Kluane cheechako is unclear. However, he probably proportionately represented the same cross section of people that formed the bulk of the Klondike stampede--the dreamers, the young, the restless and the unemployed--and the ones that for some reason or another missed
out on the rush to the Klondike. The resident Yukoner, on the other hand, finding neither the original system of the oldtimer nor the individualistic system of the Klondike stampede particularly adaptive in post-Klondike years, may have been a revised version of the sourdough. Although still basically egalitarian, he may have incorporated some capitalistic ideals of the cheechako. Whatever distinguishes the resident Yukoner in Kluane from the oldtimer in the Klondike and the Kluane tenderfoot from the Klondike cheechako is uncertain. What is obvious, however, is that while both groups were aware of the Klondike Tragicomedy (Weppler 1969a) and its effects, the resident Kluane Yukoner (regardless of whether he was an oldtimer or landed immigrant from the Klondike gold rush) still possessed more knowledge and experience of life and hardship in the Yukon than the stampeders who were to follow him to Bullion Creek and the Kluane gold fields.

However, unlike the Klondike gold fields, where later large scale dredging and mining operations destroyed most, if not all, of the earlier evidence relating to the gold rush (John Gould, pers. comm.), the Kluane gold fields, especially on or near the mouth of Bullion Creek, still retain a considerable amount of its gold rush record. These archaeological sites, then, seem to provide a unique opportunity to investigate the basic differences between the archaeological components (Burley 1979) of each gold rush culture type. They may also represent an ideal situation in which to investigate the interaction spheres of two contemporaneous societies with differing levels of complexity, living in
close proximity to each other—an avenue of research that has considerable potential to build upon migration theory, as well as ingroup/outgroup theories of interaction and behavior.

The differences in the archaeological records left behind by these two populations are expected to be manifested in a number of ways. Firstly, it is proposed that the Kluane old-timer, having more experience and possessing greater knowledge of life and living in the Yukon, would have made a much more efficient and effective adaptation to the immediate local environment than the Kluane cheechako. While it is expected that the stampeder would tend to mirror the oldtimers' adaptation, he would not be as proficient with his use of resources or time and energy allocation. In light of this, the hotel and a number of other features discussed in the previous section of this chapter may reflect the hand of the stampeder as opposed to the oldtimer, as the latter presumably would not have gone to the expense of investing that amount of time and energy without first determining the value of the exercise, or the creek, for that matter. For the same reason, the ornately decorated and costly set of ceramics (see Chapter 6 for discussion) from site 10y2 may also echo the stampeder rather than the oldtimer. Given the undetermined richness of Bullion Creek, the Kluane oldtimer may have also been less optimistic and more realistic about the prospects of the area than the newcomer. The stampeder travelling from Vancouver and Victoria, on the other hand, was virtually forced into being optimistic as he had considerably more invested than the resident Yukoner, who came
from areas around Dawson, Whitehorse and Skagway. In short, the resident Yukoner's adaptation would have been characterized by a more proficient, yet expedient, use of resources, time and energy.

Although the oldtimer who participated in the Kluane gold rush may not have been as egalitarian as the pre-Klondike sourdough, he still had more in common and was more socioculturally homogeneous than the Kluane stamperder. Accounting for functional and other differences, following Burley (1979), one would expect to find more community integration and less cultural diversity between assemblages of the oldtimer culture types. Alternatively, it is proposed that dwellings and sites of stampeters would reflect more class distinctions and tighter social and spatial boundaries. Concomitantly, one would also expect to find, once features and sites of these two groups could be distinguished, that investigation of the internal arrangement of artifacts and external association of features may lead to interpretation of differences in spatial order and perception between the two populations (Burley 1979).

Because Bullion Creek's archaeological record presents a rare opportunity to investigate differences between members of the oldtimer and stamperder cultural groups, documenting how the archaeological components of the two populations differ, determining if these differences might reflect not only differing adaptational efficiency, but differing cognitive perception, and detailing what types of interaction occurred between them is recommended to guide further research in Kluane National Park.
Concluding Remarks

The purpose of this chapter was threefold. First, in an effort to aid understanding of recent settlement within Kluane National Park it served to illustrate several patterns of historic land use. Second, using the contradiction between the records of the Kluane gold rush as a base, it was designed to point out the liability of attempting to document culture history and explain culture process from the historic and archaeological records without first critically examining how these records were formed. Finally, it served to detail a specific avenue of processual research recommended to guide further historic sites investigation in Kluane National Park.

The first section of this chapter documented several spatial and temporal patterns of historic settlement within the park with specific reference to Bullion Creek. Although Kluane's high relief and rugged wilderness terrain restricted random movement and settlement within the area, the distribution of placer gold appears to have been the major variable determining the location of most historic sites in the park. Other variables such as the availability of water, timber, dumpage localities and the restrictive topography of creeks, further modified settlement of most mining sites in the Kluane area. While the distribution of small fur bearing animals and/or the location of areas proximal to potential recreational activities in river valleys and lake shores were the major variables determining the settlement of most trapping or non-mining cabins in the park, the distribution of big game in the northern areas of the park was the primary determinant guiding the location of outfitting/hunting sites in
the Kluane region. Notwithstanding the fact that rugged terrain and the distribution of mineral and faunal resources influenced the historic settlement pattern of the park in space, changing access routes into the area initiated differential settlement and land use of the Kluane area through time. While the Dalton Trail initially concentrated land use in the southeast corner of present park boundaries in the late 1890s, its demise and the construction of the Whitehorse-Kluane road focused settlement in the central and northern areas of the park between 1903 and the late 1920s. Two processes or patterns which also characterized the settlement of the park through time—the shift away from a male-oriented to a family-oriented mining operation and the correlation between economic depression and increased mining and outfitting activities during the 1930s—were also discussed in this section.

The second section of this chapter attempted firstly to explain the contradiction between the archaeological and historic records of the Kluane gold rush. It was suggested that this apparent contradiction was not so much a function of the destruction of early mining evidence by flooding and later mining activity, but exaggerated personal and newspaper accounts. Using this discrepancy as a platform, this section also presented a brief discussion of the problems inherent in both records of the cultural past. It was concluded that before the historical or archaeological investigator can explain past cultural events and processes he must first attempt to understand the formation processes of his data set.

The third section of this chapter detailed a rather lengthy
discussion concerning the differences of the two main socio-economic groups participating in the Klondike and Kluane gold rushes. It was postulated that the main differences between the two populations resulted not only from adaptations to different environmental pressures or socioeconomic conditions, but also different cognitive structures. Documenting these differences archaeologically and determining whether these differences might not reflect differing cognitive perception, as well as adaptational efficiency, is recommended to guide further historic sites research in Kluane National Park.
discussion concerning the differences of the two main culture types participating in the Klondike and Kluane gold rushes. It was postulated that the main differences between the two populations resulted not only from adaptations to different environmental pressures or socioeconomic conditions, but also different cognitive structures. Documenting these differences archaeologically and determining whether these differences might not reflect differing cognitive perception, as well as adaptational efficiency, is recommended to guide further historic sites research in Kluane National Park.
It has long been recognized that historic sites archaeology with its expanded data base may offer a considerable potential for formulating and testing hypotheses relevant to understanding the dynamics of past cultural systems. With the added dimensions of historic documentation, ethnography, ecology, folklore, interviews and observations of contemporary society the archaeologist has at his command a potential far greater than that provided by data for which no control, independent of archaeological data, is available (South 1977b: 5). However, only recently and then only briefly, has this potential been realized (South 1977a, and others in South 1977b, for example). Unfortunately, the major body of literature in historic sites archaeology is still concerned with narration, description and synthesis of data. Although there is nothing inherently wrong with this, most still fail to recognize or comprehend historic archaeology's potential; if they have, they have not gone beyond traditional particularistic endeavours.

Historic sites archaeology may not only provide the archaeologist with an excellent opportunity to better understand culture process (see Chapter 5), but it also presents an inimitable data base against which hypotheses concerning the processes involved in the formation of archaeological sites may be tested. As noted in Chapter 5, accurate interpretation of archaeological remains not only requires but is dependent upon the explication of
cultural formation processes (Fehon and Scholz 1978: 271).

The major type of cultural formation processes affecting the archaeological record are those activities which transform cultural materials from the systemic context to the archaeological context (Schiffer 1972, 1976). Although some attempts have been made to elucidate certain laws or regularities in the formation of archaeological sites (Fehon and Scholz 1978; Hildebrand 1978), our understanding of the ways in which, and the reasons why, materials participating in a cultural system enter the archaeological record is still unclear.

Of the four major processes responsible for the formation of the archaeological record (loss, discard, disposal of the dead and abandonment [Schiffer 1972, 1976]), loss and abandonment are the chief processes by which most functional or useable cultural materials enter the archaeological record. However, the principal set of variables accounting for the presence of most useable tools, facilities and other materials and de facto refuse in the archaeological record is that having to do with the abandonment of a site (ibid.)

Although entreaties have been forwarded (Schiffer 1972: 160), models designed to account for the effects that processes of abandonment have on the formation of archaeological sites have not been forthcoming. While a few descriptive archaeological and ethnoarchaeological observations on abandonment behavior are becoming available (Longacre and Ayres 1968; Bonnichsen 1973; Baker 1975), what we understand, or believe we understand, about abandonment processes is based on weak, inexplicit assumptions
and propositions. Such information remains to be synthesized, systematized and tested (Schiffer 1976: 33). This chapter, in part, attempts to do this as a number of historically documented gold mining sites in Kluane National Park provide an excellent opportunity for the investigation of several variables of site abandonment behavior.

Abandonment Behavior on Mush Creek

The discovery of gold on Mush Creek in 1898 resulted in the first stampede of resident Yukoners to the Kluane area. The entire population of Porcupine, Alaska, a small mining community located 35 miles southwest of Mush Creek on the Alaska-Canada boundary, rushed to stake claims on the creek (Jarvis 1902). Although the exact size of this emigrating population remains to be documented, 250 people were reported in the Porcupine mining district in 1899 (Martin 1901). Alternately, archaeological evidence suggests that no more than 50 people participated in the Mush Creek stampede (assuming that 3-4 miners occupied each recorded dwelling on the creek). However, the archaeological estimate is probably somewhat conservative when one considers that, due to sampling error and differential preservation, the number of recorded structures on Mush Creek may not represent the total population of dwellings or occupied accommodations built in 1898-99.

Archaeological evidence, however, suggests that during the winter and following spring, cabins and tent frames were built
and numerous test trenches were excavated along the banks and gravel bars of the creek. As was standard placer mining procedure (Berton 1972), when the snow and ice thawed in the late spring a number of potentially productive gold-bearing deposits were cleaned up (i.e., run through the sluice boxes). However, in light of the known wealth of the placer diggings in the Porcupine district (Jarvis 1900), it soon became apparent that no matter where the creek was tested not enough gold was present to warrant continuing work on the creek. Because Mush Creek and the area was virtually abandoned during the following year (ibid.) it is suggested that, as people began to realize the limited productive potential of the creek, they soon left the area to return to Porcupine or to seek gold elsewhere. Only sporadic activity, with several men working the creek at any one time, occurred in the decade following the Mush Creek gold rush.

Abandonment Behavior on Bullion Creek

Gold was first discovered on Bullion Creek in the summer of 1903. By midwinter an internal stampede of about 300 resident Yukoners staked Bullion from its mouth to its source (Daily Evening Star [Whitehorse] 1 March 1904). Over 2000 claims were recorded on Bullion and other creeks in the surrounding vicinity. When news of this latest discovery reached Vancouver, Victoria and other populated centers to the south the following spring, another rush of unknown size ensued. While it was anticipated that this discovery would result in a stampede that would surpass
anything seen in the Yukon since the great Klondike gold rush of 1897-98 (Victoria Times [Victoria] 12 March 1904) and that over 10,000 men were predicted to be in the area by the spring (Daily Evening Star [Whitehorse] 7 May 1904), these predictions were never realized. However, Bullion Creek may have been the scene of the most activity in the Yukon at this time (ibid. 2 May 1904). By March of 1904, 1200 men were reported to be on Bullion and several other creeks in the Kluane gold fields, with this number expected to more than double within the next month (ibid. 11 May 1904). Although the above population estimate must be considered suspect (see Chapter 5 for discussion), numerous tent camps, log cabins and a hotel were built at the mouth of the Bullion Creek in April, May and June of 1904.

However, this cultural fluorescence was shortlived for just as soon as it began, it ended. By mid-June high water and flooding in the creek which resulted in poor working conditions, a low return for one's energy investment, and the destruction of many small mining operations, as well as news of considerable goldbearing deposits elsewhere, forced everyone on Bullion to rapidly abandon the area (ibid. 14 June 1904, 24 June 1904). Believing that they would return to Bullion when the water level fell, almost every miner stampeded to stake a claim on Burwash Creek, 40 miles to the north (ibid.). However, Burwash's gold-bearing deposits proved to be richer (ibid. 20 June 1904) and more easily worked (ibid. 24 June 1904) than Bullion's. The richness of this creek, the better working conditions as well as a short mining season and an 80 mile round trip to Bullion and
back, kept most miners from returning to Bullion even though many appear to have still had possessions there. Archaeological evidence and historical documentation combine to suggest that never before or since was Bullion Creek as heavily populated or the scene of as much activity as the late spring months of 1904. Many sites on Bullion Creek, especially on or near the mouth, were never reoccupied.

From an archaeological perspective Bullion's apparent lack of gold has provided it with its greatest wealth. Not only do Bullion Creek's early historic sites present a well-documented record of gold rush phenomena, but they also provide an excellent opportunity to formulate and test hypotheses relevant to the understanding of site abandonment behavior. What is important at the moment is not the reasons why the creek was abandoned, but the conditions under which abandonment occurred. Bullion Creek is considered to have been abandoned under fairly rapid or catastrophic conditions. In fact, other than abandonment stimulated by impending natural disasters (e.g., Pompeii) or conquest, it is hard to conceptualize a more catastrophic condition. More than several hundred and perhaps as many as 1200 people abandoned Bullion Creek and the area within a relatively brief period.

Two Variables of Abandonment Process Affecting Bullion and Mush Creek's Archaeological Records

It is apparent from the above discussion that Bullion and Mush Creeks were abandoned for different reasons, under different
conditions. The abandonment of Bullion Creek was rapid and unplanned, with return anticipated; Mush Creek's abandonment appears to have been characterized by a more gradual and planned emigration with no anticipated return. The conditions under which these sites were abandoned and whether or not return was anticipated are considered to be the major variables affecting the kinds, quantities and distributions of most useable, functional and valuable elements on these sites. It is anticipated that both Bullion and Mush Creek's archaeological records will differ and that these differences will reflect the manner under which abandonment took place and whether or not return was considered.

Following Schiffer (1972: 160), it is proposed that sites which were rapidly abandoned, such as Bullion Creek, will demonstrate relatively greater numbers of artifacts, features and other cultural materials in manufacture, use and maintenance activities, while sites abandoned under more gradual or normal conditions, such as Mush Creek, are expected to yield relatively fewer kinds and quantities of these items. Cultural materials on Mush Creek, on the other hand, are anticipated to be more characteristic of discard processes, or loss, since there was 1) sufficient time to plan for departure—which is suggested to result in decreased manufacture and maintenance of most items not intended for future use at the next site(s), and consequently increased output of discarded items—and to clean most sites of all valuable and required supplies and materials, and 2) there was no stimulus (other than a low return for one's energy
investment) such as recent gold discoveries on other creeks, which necessitated a more rapid abandonment.

Concomitant with the above proposition, de facto refuse on sites which have been rapidly as opposed to gradually abandoned are anticipated to be highly associated with or distributed within their intended areas of use. Again, sufficient time and consequently planning would probably not have been available for site occupants to terminate, or perhaps even initiate, collecting or caching activities before abandonment became necessary. Likewise, sites abandoned under more gradual conditions are also expected to yield cultural material located within or near their areas of use. However, these materials are proposed to be almost exclusively broken and exhausted items, or waste by-products—products of purposeful discard behavior.

Closely related to, and perhaps not distinct from de facto refuse as it is normally defined (Schiffer 1972, 1976), is the presence of normally curated materials on sites. With but one exception, which will be discussed below, sites which have been rapidly abandoned are anticipated to yield relatively more curated items than sites which were gradually abandoned. Under more normal conditions it is proposed that most portable items of potential future use or value (functional, personal, monetary, aesthetic or otherwise) would probably have been taken during abandonment. However, because rapid abandonment often imposes certain temporal constraints and organizational restrictions on the abandonment of a site, some artifacts and materials are anticipated to have been taken at the expense of others.
Briefly, rapid and unplanned abandonment as opposed to gradual and planned abandonment is hypothesized to result in:

1) a high incidence of artifacts, features and other cultural materials in manufacture, use and maintenance processes (Schiffer 1972, 1976); 2) a high spatial association between de facto refuse and activity areas, and 3) a high occurrence of material that would have been the focus of curate behavior under more normal conditions.

It is important to note that for a variety of reasons not all sites on Bullion or Mush Creek can be used to test these and other hypotheses to be tendered later in this chapter. Of the 12 recorded archaeological sites on Bullion Creek not significantly affected by flooding or later mining activity, 7 are considered to date to, or to have an occupation dating to, the Kluane gold rush. However, at least one, and perhaps two sites, have two or more occupations. Consequently, it was uncertain what cultural materials (other than those which could be dated) were associated with what occupations. Other than major features, one site revealed very little cultural materials, as the original ground surface had been covered with a substantial layer of vegetation. Another site was not directly recorded during the survey, while still another site represents a flume (mining operation) and not a campsite. Without excavation, sites 10y2 and 10y5 are the only sites on Bullion Creek at present that can be used to test hypotheses relevant to understanding abandonment behavior in this context, as both sites demonstrate single occupation components dating to the 1904 gold rush.

Alternately, most of the nine sites on Mush Creek appear to
date to the 1898-99 Mush Creek stampede. However, only four of these sites are considered useful for testing these hypotheses as two sites are multi-component, two sites represent mining activity areas, not campsites, and one site's original land surface has been grown over with a thick layer of moss and swamp grass.

The hypothesized archaeological outcome of sites undergoing rapid abandonment is, in part, empirically substantiated by the occurrence of a considerable quantity of de facto refuse or functional features and useable elements on Bullion Creek site 10y2. Many materials are considered to be still in various stages of manufacture and use. Maintenance activities, however, seem to be relatively rare and probably reflect the short period of time, 3-5 months, the site was occupied in 1904. Some of the more significant artifacts and features in manufacture and use include: several large cut and peeled log piles (Figure 10) which were probably destined for use in the construction of tent frames or log cabins, but appear to have never served their intended purpose before the site was abandoned; numerous complete ceramic dishes, recorded in various localities around the site; a 3-hole privy of fine craftsmanship (Figure 8) in excellent shape and functional condition, and a collapsed wooden structure with several associated wash basins which appears to have once been a laundering facility (Figure 12). A number of other facilities and artifacts, including two large rectangular tin cans which were recycled into carrying buckets, a grinding wheel bench (Figure 11), a large wooden box, several root cellars, a platform
cache and tent frame (Figure 9) are also considered to be completely functional and still in use when the site was abandoned. The hypothesized archaeological outcome of sites undergoing rapid abandonment also seems to be demonstrated on 10y5, as the site's largest and most visible feature (the Bullion City Hotel?) appears to have been still under construction when the site was abandoned (see Chapters 4 and 5 for discussion).

Mush Creek, on the other hand, yielded very little cultural material considered to be still in manufacture, use or maintenance activities (Table 2). No artifacts, with the possible exception of a sleigh and a small hand-forged crampon, were considered to be participating in these activities when Mush Creek was abandoned. However, the size of the hand-forged artifact, as well as the possibility that it might not have been considered useable at the next site--the crampon was specifically designed to improve footing across streams (Chuck Hume, pers. comm.)--suggests that the artifact may have entered the archaeological context through loss or discard. Notwithstanding the fact that the sleigh was still functional, it was probably deposited on the site during abandonment as de facto refuse. However, its presence on the site may reflect the season of movement (ibid.), summer, and not the gradual conditions under which the site was abandoned. Unfortunately, it was all but impossible to determine the original abandonment conditions of most features on Mush Creek because of their presently poor and deteriorating state. Although the apparent differences between the conditions of features on Mush and Bullion Creeks (e.g.
Table 2. The effects of rapid and gradual abandonment on the archaeological records of Bullion and Mush Creeks, respectively.

<table>
<thead>
<tr>
<th></th>
<th>Gradual Abandonment</th>
<th>Rapid Abandonment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mush Creek (1899)</td>
<td>Bullion Creek (1904)</td>
</tr>
<tr>
<td>1. Materials in manufacture</td>
<td>absent</td>
<td>present (cut and peeled log piles, Bullion City Hotel?)</td>
</tr>
<tr>
<td>Materials in use</td>
<td>absent (with the possible exception of the sleigh and crampon—see text)</td>
<td>present (ceramics, wash basins, privy, tent frame, gold pan, buckets, grinding wheel bench, etc.)</td>
</tr>
<tr>
<td>Materials in maintenance</td>
<td>absent</td>
<td>absent (although this type of material is not present on Bullion Creek it is expected to occur on most rapidly abandoned sites)</td>
</tr>
<tr>
<td>2. Association of de facto refuse and activity loci</td>
<td>absent</td>
<td>present (collapsed lean-to and wash basins, numerous food/drink containers and eating facility, several tent frames and unintentional primary refuse concentrations)</td>
</tr>
<tr>
<td>3. Occurrence of normally curated items</td>
<td>absent</td>
<td>present (decorated set of dishes, wash basins, gold pan, other ceramics, etc.)</td>
</tr>
</tbody>
</table>
compare Figure 8 and Figure 71] may be instructive, it is important to note that these differences may result from differential preservation due to local environment, function or craftsmanship, rather than the degree of maintenance or condition of features at time of abandonment. In any event, most artifacts on the four single component 1898-99 Mush Creek campsites appear to have entered the archaeological record through discard processes, as those few elements recorded were either exhausted (e.g., recycled gold pan-chimney plate from 15y5, recycled [flattened] tin can from 15y8) or broken (e.g., broken door latch from 15y4), or located in secondary refuse locations (e.g., tin cans outside log cabins and tent frames).

Site 10y2 also demonstrated the hypothesized archaeological result of sites undergoing rapid abandonment as a number of cultural materials were found to be directly associated with general activity areas. Numerous tin cans (20-40) and bottles (10-15?) which appear to have been primary refuse awaiting transformation into, or in the process of becoming, secondary refuse (primary de facto refuse?), were recorded within the interior of the tent frame illustrated in Figure 9. Similarly, several tent frames also yielded concentrations of tin cans and other cultural materials that probably would have been deposited as secondary refuse under more normal conditions. Several wash basins were also found in direct association with a collapsed lean-to, indicating that this feature may have served as a laundering or washing facility. Conversely, Mush Creek yielded little de facto refuse, or other types of refuse for that matter, let alone any that were associated with their loci of use, manufacture, or maintenance. As just discussed,
most of those few materials (tin cans) recorded were considered to be secondary refuse.

Bullion and Mush Creeks also met the third proposed condition of sites undergoing gradual and rapid abandonment, respectively, as very little cultural material of any potential value which would have initiated its curation (with the possible exception of the sleigh and crampon) was recorded in direct association with the sites on Mush Creek, while a number of valuable and/or functional items which would probably have been taken under more normal or gradual conditions were discovered on Bullion Creek. One such item included a very elaborate and decorative set of ceramic plates made by Doulton of Burslem, England (Figure 15). Nowhere else in the park has this type of ornate artifact been observed in this condition or quantity. Although their aesthetic and perhaps personal value may have been considerable, the exact monetary value of these ceramics is uncertain. However, their value must have been substantial when one considers that this porcelain earthenware with its fine artistic treatment and exquisite finish is a product for which Doulton has become internationally famous (Godden 1971: 12-13) and after 1882, Doulton productions were considered to rank with the very best (ibid.).

Many other whole ceramic dishes of equivalent functional/utilitarian value, but perhaps less aesthetic or monetary value, were also recorded at the site. Several wash basins, a gold pan and a wooden box must also be considered of some value when the site was abandoned. It is suggested that because time and speed were the major concerns of those stampeding from
Bullion to Burwash, artifacts and supplies which were more portable and utilitarian in nature (i.e., materials which could be easily transported and could satisfy the basic necessities and tasks at hand) were taken, while those artifacts and supplies which were less portable and functional, but perhaps more aesthetically or monetarily valuable, were left behind (e.g. tin plates as opposed to ceramic dishes). From a slightly different perspective, the perceptions of what the prospectors considered to be valuable appear to have changed, as functional/utilitarian and portable items may have momentarily assumed greater significance than heavier, more expensive items.

Another type of valuable artifact recorded in quantity on 10y2 was whipsawn planks. Berton (1972: 205) indicates that in terms of the amount of energy, sacrifice and hardship that went into producing rough-dressed lumber it was, next to tracking upstream, the cruelest toil of all, for it played out the strongest after just a few hours and caused the end of hundreds of comradeships during the Klondike gold rush. In light of Berton's assertion, it is tempting to speculate why whipsawn planks did not approach their weight in gold. However, as well as being recorded in several random locations within the site, whipsawn lumber was also observed in the construction of root cellars, door jambs, window sills, wooden boxes and the privy bench seat and floor boards. Although rough-dressed lumber appears to have been a valuable commodity, it may not have been curated because time and speed were the major concerns of most miners stampeding from Bullion to Burwash; as a result, the
long-term benefits of producing lumber at Burwash may have outweighed the benefits of removing and transporting whipsawn planks from Bullion.

Thus far only the conditions under which sites were abandoned and their proposed and observed effects on intra-assemblage variability have been discussed. However, the other major variable considered to affect the kinds, quantities and distributions of most usable and valuable cultural materials entering the archaeological context during abandonment is whether or not return is planned. While it appears that Mush Creek was abandoned with little intention of return by most of its former occupants, Bullion Creek was abandoned with most people intent on returning to the area (Daily Evening Star [Whitehorse] 24 June 1904). Yet, for reasons discussed above, many failed to return.

Ignoring the effects of gradual abandonment for the moment and accounting for loss, it is hypothesized that archaeological sites which have undergone abandonment where return is not anticipated will demonstrate relatively fewer curated items of value and little cultural material in manufacture, use or maintenance processes. Conversely, sites which have been abandoned where return is anticipated should yield relatively more materials in manufacture, use and maintenance and a higher percentage of normally curated items. This is expected to be especially true in seasonally occupied sites or peripheral activity loci where still functional and usable materials are not required for the journey to or use at the next site(s).

Because the hypothesized effects of anticipated return
appear to outwardly approximate those proposed for rapid abandonment, and the expected effects of no anticipated return seem to initially parallel those proposed for gradual abandonment, it would perhaps be clearer if these variables were considered in combination. Logically, this also makes sense because rarely is a site abandoned without an accompanying decision to return to it or not.

While sites which were gradually and rapidly abandoned with anticipated return are expected to demonstrate similar archaeological results; in terms of the kinds of materials deposited as de facto refuse, the distributions of these materials are expected to differ (Table 3). It is proposed that occupants of sites undergoing gradual abandonment with anticipated return would generally begin to store, cache and prepare most functional/useable and valuable items not immediately required for use at the next site(s) in such a way that they might be reused on their return. Protection from deterioration, loss through pilfering by other social groups and ease of relocation are considered to be some of the reasons why people would perform storing activities at sites where return is anticipated (Baker 1975). Concomitant with caching activities on sites gradually abandoned with anticipated return, little de facto refuse is expected to be found in direct association with, or randomly distributed within, activity loci. This of course must ultimately depend on other considerations, not the least of which is determining the value of such an exercise. A short expected time away from the site, good conditions of preservation, and friendly relations with
Table 3. Two major variables of abandonment process and their proposed effects on the archaeological record.

<table>
<thead>
<tr>
<th>Condition of Abandonment</th>
<th>Rapid</th>
<th>Gradual</th>
</tr>
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<tbody>
<tr>
<td>Return</td>
<td>- materials in manufacture, maintenance and use as well as normally curated items found associated with their activity loci are expected to characterize this type of abandonment (e.g. Bullion Creek)</td>
<td>- still functional, useable and valuable materials left on sites undergoing this type of abandonment are anticipated to have been stored so that they might be used on return (e.g. 10y13, 14y3, Baker's novaculite quarry site)</td>
</tr>
<tr>
<td>Anticipated Return</td>
<td>- this type of abandonment, like rapid abandonment with anticipated return, is proposed to yield materials in manufacture, maintenance and use and normally curated items, in association with activity loci. However, the kinds and perhaps quantities of curated items are expected to differ (e.g. Taye Lake Phase sites?)</td>
<td></td>
</tr>
<tr>
<td>No Return</td>
<td>- little material in manufacture, maintenance and use and few normally curated items are expected in sites undergoing this type of abandonment (e.g. Mush Creek)</td>
<td></td>
</tr>
</tbody>
</table>
neighbouring groups would be some of the reasons why people might not engage in caching activities on sites gradually abandoned where return is anticipated. Cultural materials on rapidly abandoned sites where return is planned, on the other hand, are anticipated to be associated with their actual areas of use, manufacture or maintenance since sufficient time and consequently planning would probably not have been available for site occupants to terminate (or perhaps initiate) collecting activities before abandonment became necessary.

Although the proposed archaeological effects of rapidly abandoned sites with and without anticipated return appear to be outwardly similar (both are expected to produce materials in manufacture, use and maintenance processes, normally curated items and a high association between de facto refuse and activity loci) the kinds, and perhaps quantities, of items taken from these sites are anticipated to differ. It is proposed that occupants of sites undergoing rapid abandonment where return is not anticipated would direct their attention towards removing different kind(s) of items than would be the case if return was anticipated. It is expected that rapid abandonment without anticipated return would result in the curation of more personal and, over the long term, more valuable commodities at the expense of others. Although uncertain, this type of abandonment may also yield relatively fewer curated items than rapidly abandoned sites where return is anticipated, assuming of course there was sufficient time and means available to gather most valuable goods before abandonment became necessary.
Gradual abandonment without anticipated return, on the other hand, is expected to yield very few normally curated items and little de facto refuse since there would have been enough time to plan and prepare for departure.

While most 1898-99 Mush Creek sites demonstrate an excellent example of the proposed effects of gradual abandonment without anticipated return, no sites relating to either the Mush Creek stampede or the 1904 Kluane gold rush exhibited the proposed archaeological outcome of gradual abandonment with anticipated return. However, a fairly recently occupied site on the upper headwaters of Bullion Creek, 10y13, displayed the effects of this type of abandonment, as a large metal sluice box was found to contain a number of shovels, several small wooden sluice boxes and metal rifts, numerous lengths of iron pipe, several mesh screens of various sizes and other associated mining equipment (Figure 31). Occupation of the site, which was built and occupied in the 1960s and early 1970s, terminated when the government purchased the land for the park in 1972 (Larry Tremblay, pers. comm.). In July of 1978 the previous owner of the site specifically forwarded a request to remove the sluice box and its associated mining equipment for use at another site (ibid.). The price of gold during the summer of 1978 (sometimes as high as $245.00 U.S. an ounce) seems to have provided the stimulus needed to return to the site and reclaim his former possessions.

The hypothesized result of gradually abandoned sites with anticipated return is also demonstrated on Goat Creek, where a considerable quantity of de facto refuse and normally curated
items were found stored in a collapsed platform cache. Numerous whipsaws, shovels, gold pans, axes, hammers, woodworking tools, picks, anvils, tablewares, cookwares, washbasins, pots, pans, as well as a silver coffee pot, an alarm clock and many personal accessories including footwear and clothing were recorded in the cache (Figure 64). No other cultural materials, with the exception of a few scattered empty tin cans and 10 or 12 stacked sluice boxes on a tailing pile (Figure 65), were observed on the site. Although not yet documented, the caching activity and, as a result, the low association between de facto refuse and activity loci, strongly suggests that the site was abandoned under gradual conditions with return anticipated.

Baker (1975) has also recently documented an empirical case for gradual abandonment with an anticipated return from an aboriginal novaculite quarry site in Arkansas. Several groups of whole, not fragmentary, and thus still useable hammerstones, which were arranged in orderly groupings, as opposed to being randomly strewn about their activity areas, suggested to Baker that return was planned to the site when it was last abandoned. From this evidence he hypothesized that the orderly arrangement of de facto refuse proximal to identified activity areas reflects anticipated return to archaeological sites (Baker 1975: 11). In light of the above, most caching of still useable and valuable materials may be a function of gradual abandonment where return is anticipated and not other processes transforming cultural materials from the systemic to the archaeological context, as Schiffer (1976: 33) suggests.
Although no recorded sites in Kluane were considered to demonstrate the expected outcome of rapid abandonment without anticipated return, 10y2 exhibited all the characteristics of rapid abandonment with anticipated return. Taye Lake phase sites in the southwest Yukon, however, just prior to and during impact of the White River ash fall, are suggested to exhibit the proposed outcome of sites rapidly abandoned with no return (see Workman 1974 for discussion). Sites rapidly abandoned as a result of conquest or other impending natural disasters are also anticipated to demonstrate these results. Site 10y2, on the other hand, seems to represent an excellent example of rapid abandonment with anticipated return. Not only was the site found to contain a considerable quantity of de facto refuse, some of which was associated with activity loci, but it also yielded a number of valuable commodities (e.g. gold pans, decorated set of ceramic plates) that presumably would have been removed if return was not anticipated. Although uncertain, even though abandonment was rapid it is suggested that the ornate set of dishes would have been taken at the expense of other ceramics less aesthetically, personally or monetarily valuable, if return was not anticipated.

Although characteristic of gold rush phenomena, where frequent and rapid movement from discovery to discovery was common, rapid abandonment with and especially without anticipated return is expected to be rare archaeologically. On the other hand, gradual abandonment with and without anticipated return is expected to characterize most archaeological site abandonments.
Other Variables of Abandonment Process Affecting the Archaeological Record

Presently, only the conditions under which sites were abandoned and whether or not return was anticipated have been discussed. However, other variables such as distance to next site(s), means of available transportation and season of movement are also considered by some (Schiffer 1972, 1976; Lange and Rydberg 1972) to directly affect the kinds and quantities of cultural materials curated or deposited as de facto refuse in sites during abandonment. Distance to the next site(s) and means of available transportation limit what can be taken and what is left behind at a site. Where transport is limited to what people can carry on land, heavy objects and stationary facilities will be deposited as refuse, especially when the distance to the next site(s) is appreciable (Schiffer 1976: 33; adapted from Lange and Rydberg 1972). That the relative portability of an item when considered in combination with its functional utility at the next site directly affects its probability of being removed or left behind seems obvious.

Season of movement can also indirectly affect what is deposited in archaeological sites by altering the means or energy requirements of transportation. For example, the sleigh on Mush Creek, although still functional, was left behind because summer and not winter was the season of movement. As well, season of movement can dictate what is left behind at a site and what is taken if a group's subsistence and settlement patterns are dependent upon seasonal resources.
These variables, however, were not thought to differentially affect the archaeological records of the Mush Creek stampede and Bullion Creek gold rush to any significant extent because the season of movement during the abandonment of both creeks was the same (early to mid-summer), the available means of transport for both groups was restricted to foot and pack animals and the distances to the next sites in both cases were considered to be appreciable. The effects of these and other variables of abandonment process, such as size of emigrating population which, like means of available transportation and distance to next site, is considered to affect the quantity of material that can be taken from sites, remain to be synthesized and tested using empirical data.

Although each of these variables may account for a significant portion of intra-assemblage variability on most sites during abandonment, they are not independent of the major variables that have remained the center of discussion in this chapter. In the majority of cases, they are not only considered after but during the formation of the decisions to rapidly or gradually abandon a site and whether or not to return to it. For example, while a temporary means of more efficient transportation may influence the speed with which a site is abandoned, distance to next site(s) often determines whether or not return will be considered. However, it is also important to note that the manner in which sites are abandoned and whether or not return will be anticipated may also condition other variables, such as distance to next site, size of emigrating population, etc.
Clearly, whether a site is gradually or rapidly abandoned, with or without anticipated return, is dependent upon those forces necessitating abandonment as well as those variables, among others, discussed above.

Concluding Remarks

A number of historically documented gold mining sites in Kluane National Park have provided an excellent avenue for formulating and testing hypotheses relevant to an understanding of site abandonment behavior. In some detail two major variables of abandonment process--the condition under which a site is abandoned and whether or not return is anticipated--and how they affect the kinds, quantities and distributions of cultural materials deposited in the archaeological record during abandonment, have been discussed. Several hypotheses were formulated using historic documentation and tested with archaeological data on the same sites. Although this procedure may not constitute a true independent test of these hypotheses, since the archaeological record of these sites is just another representation or cultural formation process of the same phenomenon, the archaeological record exists independent of the historic record. From these results, a number of law-like propositions concerning abandonment behavior in historic gold mining sites and perhaps other historic and prehistoric contexts as well have been advanced (Table 3).

It is important to note that the laws governing those
cultural formation processes which transform materials from the systemic to the archaeological context should not be uniquely characteristic of these sites or even historic sites, for that matter. For, although the specific content of the archaeological record may change from site to site and differ through time and space, the processes responsible for its formation should remain generally the same. While the exact nature of these processes may vary with the level of technology, cultural conditioning material availability, etc. (J. Nance, pers. comm.), cultural materials are still predominantly transformed from the systemic context to the archaeological context by processes of loss, discard, abandonment and disposal of the dead, regardless of what is being transformed and why.

Of the four proposed archaeological outcomes of the situations presented by these two variables, three have been tested and substantiated. The other, rapid abandonment where return is not anticipated, remains to be tested and validated or rejected.

Theoretically, since the range of the four proposed results of the combination of these two variables vary, it may be possible to determine the manner under which other archaeological sites were abandoned and whether or not return was anticipated--assuming of course a fair degree of confidence in sampling procedures and data recovery. However, because several cultural formation processes often produce similar effects (e.g. processes of loss may sometimes approximate those of rapid abandonment if a large quantity of lost materials are allowed to remain in the archaeological context), inferring abandonment processes directly from
the observed material results is cautioned. Similarly, numerous
non-cultural formation processes (e.g. scavenging, erosion,
differential preservation, etc.) may also obscure delineation of
site abandonment processes. However, while the effects of
erosion and preservation have been discussed elsewhere in this
chapter, any impact which scavenging may have had on the archaeo-
logical records of Mush and Bullion Creeks is immeasurable,
although it may be expected to have occurred to a greater degree
on Bullion Creek due to its higher accessibility to hikers and
miners during Kluane's recent past. It is important, even
crucial, that before inferences concerning the abandonment of
a site can be made based upon the archaeological record, other
explanations which may produce similar material results must be
sought out and accounted for, then subsequently rejected.
Otherwise, statements relevant to understanding the abandonment
of a site must be considered suspect.

It is also important to point out that while a specific
material result (e.g. caching) may imply a specific process or
set of conditions (e.g. gradual and planned abandonment with
anticipated return), the absence of this type of result does not
necessarily imply that such was not the case. Clearly, other
phenomena such as time away from site, material availability,
etc. have some bearing on the formation of the archaeological
record during abandonment and must be considered. Finally,
documenting the manner under which archaeological sites were
abandoned and whether or not return was anticipated to them will
not necessarily explicate the reasons or even events causing
site abandonment. Rather, once these conditions are properly understood the number of alternative explanations causing site abandonment should be dramatically reduced.

Although this chapter represents an initial attempt to formulate and test hypotheses relevant to understanding site abandonment behavior, it is hoped that it has also demonstrated that certain regularities of abandonment process can be identified and interpreted in the archaeological record. And, while further testing of these law-like generalizations is desirable and perhaps even warranted, if they are to be applied to other historic and prehistoric contexts, the data presented here should provide an inimitable data base for comparative studies of site abandonment behavior.

It is hoped that this chapter has also demonstrated the potential of historic sites archaeology to formulate and test hypotheses relevant to understanding the processes involved in forming the archaeological record. For, only through the investigation of these and other cultural formation processes can archaeologists hope to substantially increase their understanding of how the archaeological record is formed (Fehon and Scholz 1978: 273).
CHAPTER 7
SUMMARY AND CONCLUSIONS

The past six chapters have sought to attain a number of goals outlined in the introduction of this thesis. Firstly, a tentative culture history of historic land use and settlement within the Kluane area was documented. Secondly, under the assumption that historic sites archaeology would provide some documented control of a number of variables not usually managed in prehistoric archaeology, this thesis has sought to formulate and test hypotheses relevant to understanding formation processes of the archaeological record and culture process in general.

Chapter 2 described the natural setting of Kluane National Park. Kluane's general physiography, climate, important minerals and floral and faunal communities were briefly discussed. The discussion of Kluane's geographical setting was particularly relevant to this thesis, as rugged terrain and high relief seem to have been the major factors restricting movement and settlement within most unglaciated areas of the park. The general impression one should have been left with after reading this chapter is that Kluane National Park is an inhospitable, yet ruggedly beautiful area, which offers few resources, with the possible exception of several minerals and big game animals, that adjacent areas could not provide.

Hopefully, this chapter has also demonstrated some of the significant historic events and developments occurring in the
southwest Yukon prior to and during the initial settlement of the Kluane region. Both the Klondike gold rush and its aftermath appeared to have been the major factors responsible for opening the Kluane area to historic occupation. Concentrating on the early historic period, the second part of this chapter presented a summary of historic land use and settlement within Kluane National Park and the Kluane region in general. Numerous events and individuals, specifically those relating to the exploitation of gold, were seen to condition historic occupation of the Kluane area over the past 80 years.

Chapter 4 outlined the results of last year's historic sites survey in Kluane National Park. While the first part of the chapter described how data were collected and presented, the second part described all recorded historic sites and their significant features and artifacts. Where appropriate, important cultural materials were illustrated. This chapter should not be viewed as a supplement or illustrative adjunct to Chapter 3. Rather, it should be considered as another primary data source which, in combination with historic documentation, provides a better understanding of settlement and land use during Kluane's recent past. Both chapters 3 and 4 formed the basis for attempting to realize the remaining objectives of this thesis.

Chapter 5 served to: 1) illustrate several patterns of historic land use and settlement within Kluane National Park; 2) point out the liability of attempting to explain past cultural events and processes from the historic and archaeological records without first attempting to examine how these records were formed, and 3) detail a specific avenue of processual research
recommended to guide further historic sites investigation in Kluane National Park.

Although Kluane's high relief and rugged terrain restricted random movement and settlement, the location of placer gold and the distribution of small fur bearing animals and large game appear to have been the major variables determining the location of most historic sites in the park. While Kluane's rugged wilderness and the distribution of mineral and faunal resources influenced the settlement pattern of the park in space, changing access routes into the area initiated differential patterns of settlement through time. Both the Dalton Trail and the Whitehorse-Kluane wagon road were seen to differentially condition land use in two areas of the park at different times. A gradual shift away from a male-oriented to a family-oriented mining operation and a dramatic increase in mining and outfitting activities during the depression also characterized the settlement of the Kluane area through time. While the upsurge in mining activity was suggested to be a direct function of economic depression, it was hypothesized that increased outfitting/hunting activity was the result of the very wealthy attempting to maintain their position and the position of their social class during the depression.

The contradiction between the archaeological and historic records of the Kluane gold rush, which seemed to have been more a function of exaggerated newspaper accounts than the destruction of early mining sites by flooding and later mining activity, provided a platform from which to discuss a number of problems inherent in both records of the cultural past. It was concluded
that before the historian or archaeologist can explain past cultural events and processes he must first attempt to understand how his data set was formed.

A discussion centering around the differences between the two main socioeconomic groups or culture types participating in the Klondike and Kluane gold rushes served to formulate and illustrate an explicit avenue of future processual investigation. Documenting these differences archaeologically and testing to see if they not only reflect different adaptational efficiency but also cognitive structure is recommended to guide further historic sites research in Kluane National Park. Such a research design may also potentially serve as a basis for future processual investigations for gold rush archaeology in the Yukon and, perhaps, other areas as well.

Chapter 6 presented an initial attempt at understanding how different abandonment processes affect the archaeological record. A number of historically documented gold mining sites provided an excellent opportunity to formulate hypotheses relevant to an understanding of abandonment behavior in archaeological sites. Theoretically, since the proposed archaeological models or outcomes of the two variables of abandonment process differ, it was suggested that abandonment conditions and behaviors for other archaeological situations might also be realized. However, before these models could be applied to other historic and prehistoric situations, further testing was considered to be desirable and perhaps even warranted.

In reference to the title of this thesis and to one of the
minor considerations influencing my decision to direct the historic sites survey of Kluane National Park, the project failed to recover any gold. However, what was found, at least from an archaeological perspective, was just as if not more inherently valuable. The archaeological and historic records of Kluane's historic mining camps not only presented a well-documented and well-preserved record of "gold rush" phenomena which afforded an excellent opportunity to formulate models of abandonment behavior, but they also provided a rare opportunity to investigate the differences in the archaeological components of the oldtimer and stampeder social groups.
Appendix A. Chronological Indicators in Tin Can Morphology

Many changes took place in the canning industry between 1850 and 1930. The desire for increased productivity and safer, hermetically sealed cans caused the industry to switch from hand-crafted to semi-automated, and then finally to fully automated machinery during the 1880s, 1890s and the first decade of this century. Documenting those technological changes occurring in the morphology of the tin can over the past century may offer the historical archaeologist a useful dating technique which, in combination with other diagnostic artifacts such as ceramics and bottles, should provide a sound basis for establishing the age of historic sites. It should be pointed out than an age estimate derived from the morphology of a tin can dates to the time the can was manufactured and not necessarily to the time its contents were consumed. What follows are some of the major and minor changes, particularly useful in dating Kluane's historic sites, which took place in the canning trade between these time periods.

1868: enamels put on can interiors to halt corrosion or discoloration of food (Sacharow and Griffin 1970: 9).

1875: first production of tapered can for corned beef and other meats (Fontana and Greenleaf 1962: 73; May 1938: 216).

1876: "Hume" Floater is introduced to float solder onto the end of cans, resulting in more economical use of solder (May 1938).
1890: first use of lacquered or coated tin can in America to protect contents from lead present in the tin and solder inside the can (May 1938: 438).

1890: soldering the side seam of the cans is prohibited in England and the passage of a similar law in the U.S. is proposed. Brannt (1890: 377) predicts that soldering will soon be done away with in North America if only for competitive reasons.

1895: development of key method of opening tin cans (May 1938: 221).

1897: improved crimping of the top and bottom of the body by a double seam instead of a single seam (May 1938: 438; Fontana and Greenleaf 1962).

1898-1900: first vacuum packaging of food (Can Manufacturers Institute n.d.).

1899: first production of hole-in-top can with 3/4" cap for milk cans. Later Carnation developed the 16 oz. can while competition still used a 12 oz. can. Soon after Carnation went to a 1/2" hole. Later, Carnation introduced the "matchstick" size filler closed by one drop of solder (Fontana and Greenleaf 1962: 74-75).

early 1900s: the sanitary tin can with its double-seamed ends was introduced in the early 1900s. The term sanitary refers to the fact that solder was applied only to the outside of the side seam and not to the end or inside of the side seam (Meyer 1975: 74).
1900-1903: Fairport canner, first cannery to gradually shift from the old style hole-in-top can to the open top can, while other companies were manufacturing the former type (May 1938: 90).

1903: first commercial use of vacuum packed coffee (Ukers 1935a: 377).

1903: the sanitary or open top tin can first appeared on the national market (Stevenson 1914: 93).

1906-07: automation of locked side seams by Sanitary Can Co. Although locked side seams were used as early as 1824 (Lewis 1939: 58) it was not until the middle 1900s that the locked side seam was automated (May 1938: 95). Locked side seams prior to this time should demonstrate solder on the inside and possibly the outside of the can.

1910-11: California became the first state in the Union to begin the general use of sanitary or open top cans as opposed to hole-in-top tin cans (Stevenson 1914: 36).

1913: the sanitary can was the generally accepted can for packing perishable foods (Stolk 1960: 15).

1918-20: use of sanitary style of can became practically universal (Lueck 1943: 31).

1922: final disappearance of hole-in-top can (Sacharow and Griffin 1970: 70; May 1938: 95). Due to high fees of licensing agreements and cost of new equipment, it was not until 1922 that the open top can had general acceptance in the industry (Fontana and Greenleaf 1962: 73).
1928: first use of key opening vacuum cans for coffee
(Ward 1977: 6).
Open top tin cans were first produced in the late 1890s but did not become popular until after the early 1910s. This type of can totally replaced the hole-in-top can by 1922.

Lapped side seams have been used for side closing since the early 1800s. With the adoption of semi-automated and automated machinery the amount of solder on the inside and outside of the side seams decreased through time in the last half of the 19th century. Solder finally disappeared from the inside of tin cans in the middle 1900s.

Locked side seams were produced in the early and middle 19th century. However, locked side seaming did not become fully automated until the middle 1900s.

Although some recent milk cans still have lapped end seams, this type of seam on food cans is typical of cans from the early and middle 19th century.

Single seamed ends were being used in the 1860s, 1870s and 1880s in Europe and were used in North America up to the first decade of this century.

Double seamed ends, first introduced to America in 1897, did not become popular until the early 1910s.

Figure 125. Changes in tin can morphology.
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